

Economic and social costs of reoffending Analytical report

Alexander Newton, Xennor May, Steven Eames & Maryam Ahmad Ministry of Justice

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Executive summary

The appraisal and evaluation of policies and interventions is a key part of the decisionmaking process in government. Assessing the costs and benefits of these allows evidencebased decisions that enable the government to use its limited budgets to best effect and to ensure interventions deliver value for money.

This report therefore fills a key evidence gap by estimating the economic and social costs of reoffending¹ in England & Wales. It can be used by policy makers to assess the value for money of interventions that aim to reduce reoffending. Furthermore, the analyses by reoffence group and index disposal² provides a level of granularity which enables a firmer understanding of the potential impacts of policy decisions and the feasibility of future options compared to previous estimates.

In 2018, the Home Office (HO) published an updated version of the economic and social costs of crime³ which has provided a valuable starting point to estimate the costs of reoffending.

Cost estimates are based on a cohort of offenders that had either been released from custody or had received a caution or non-custodial⁴ conviction between January to December 2016, and who then went on to reoffend over a 12-month follow-up period, as defined in the proven reoffending official statistics.⁵

These proven reoffences are counted from a cohort which spans offenders released from custody or who received a caution or non-custodial conviction (hereafter, known as the index disposal) in 2016. Reoffences, as counted in this report, could therefore take place from January 2016 to December 2017 but are only counted if they take place within a 12-month follow-up period from the index disposal. This is used to approximate the number of reoffences over a 12-month period. Therefore, it does not capture reoffending where reoffences occur over a longer period after the index disposal.

¹ A National Audit Office (NAO) report published in 2010 estimated the economic and social costs of reoffending to be £15 billion. However, it only captured the cost of reoffending by ex-prisoners and therefore does not include the cost of reoffending for those that receive non-custodial convictions or out of court disposals. NAO (2010) 'Managing offenders on short custodial sentences': www.nao.org.uk/wp-content/uploads/2010/03/0910431.pdf.

² Index disposal refers to the disposal that leads to an offender being included in the cohort.

³ Home Office (2018) 'The economic and social costs of crime': https://assets.publishing.service.gov.uk/government/ uploads/system/uploads/attachment_data/file/732110/the-economic-and-social-costs-of-crime-horr99.pdf.

⁴ Including a court order, fine, discharge, reprimand, final warning or offences taken into consideration.

⁵ Ministry of Justice (2019) 'Proven Reoffending Statistics': https://www.gov.uk/government/collections/provenreoffending-statistics.

Estimates have subsequently been uplifted to 2017/18 prices by using a Gross Domestic Product deflator.⁶

Assumptions and limitations outlined in Section 3 of the report should be considered when interpreting the results. In particular, total costs of reoffending presented will be underestimates given that figures associated with certain offence groups represent partial costs only. Furthermore, the estimates do not capture reoffending where reoffences occur over a longer period after the index disposal.

Main results, which are based on a cohort of offenders identified in 2016 who subsequently went on to reoffend over a 12-month follow-up period, show that:

- The total estimated economic and social cost of reoffending was £18.1 billion.
- The estimated economic and social cost of reoffending by adults was £16.7 billion.
- Theft reoffences made up most of the estimated costs for adults compared to other offence groups, at £9.3 billion, followed by violence against the person reoffences, at £4.2 billion.
- In terms of index disposal type, adult offenders who had previously received a court order⁷ or custodial sentence accounted for the largest portion of estimated costs, at £6.5 billion and £6.0 billion respectively.
- The cost of reoffending by children and young people (i.e. those under the age of 18 at the time of entry into the cohort) was £1.5 billion, with theft comprising the largest portion compared to other offence groups, at £532 million.
- Reoffences committed by children and young people who had previously received youth rehabilitation orders or first tier penalties as their index disposal type incurred most of the costs, at £510 million and £468 million respectively.
- The cost of reoffences committed by adults who had previously received a custodial sentence of less than 12 months was £5.0 billion whilst those who had served a sentence of 12 months or more cost £1.0 billion. The cost difference is primarily driven by the greater number of offenders receiving shorter sentences compared to those receiving a longer sentence. The equivalent costs for reoffending by children and young people were £52 million and £22 million respectively.

⁶ HM Treasury (2019) 'GDP deflators at market prices, and money GDP March 2019 (quarterly National Accounts': https://www.gov.uk/government/statistics/gdp-deflators-at-market-prices-and-money-gdp-march-2019-quarterly-national-accounts.

⁷ Court orders include community sentences, community orders and suspended sentence orders supervised by the Probation Service. They do not include any pre- or post-release supervision from a custodial sentence.

1. Introduction

1.1 Background

The appraisal and evaluation of policies and interventions is a key part of the decisionmaking process in government. Being able to assess the costs and benefits of these facilitates evidence-based decisions that enable the government to use its limited budgets to best effect and to ensure that interventions deliver value for money. This report therefore fills a key evidence gap by estimating the economic and social costs of reoffending in England & Wales. It can be used by policy makers to assess the value for money of interventions that aim to reduce reoffending.

Box 1: Example of how to use the estimated costs of reoffending

- Research shows a 10% reduction in reoffending (across all reoffence types) committed by adult offenders previously sentenced to custody for less than 12 months can be attributed to a particular intervention.
- The policymaker would like to know what the estimated economic benefit would be if this intervention were to be rolled out to the rest of England and Wales assuming this 10% reduction.
- The total estimated cost of reoffending over a 12-month follow-up period amongst those who had been released from custody following a sentence of less than 12 months is £4.9 billion. There would therefore be an estimated economic benefit of £490 million if the intervention were to be rolled out.

The previous publicly quoted figure associated with the economic and social cost of reoffending⁸ (hereafter, 'cost of reoffending') was £15 billion. This was based on a report published by the National Audit Office⁹ (NAO) in 2010, which estimated that reoffending by recent ex-prisoners cost between £9.5 billion and £13 billion in the financial year 2007/08. This was determined by combining figures in the original Home Office (HO) economic and social costs of crime (ESCC) report, along with those in a 2002 Social Exclusion Unit (SEU)

⁸ Ministry of Justice (MoJ) (2016) 'Prison Safety and Reform': https://assets.publishing.service.gov.uk/ government/uploads/system/uploads/attachment_data/file/565014/cm-9350-prison-safety-and-reform-_web_.pdf.

⁹ NAO (2010) 'Managing offenders on short custodial sentences': www.nao.org.uk/wpcontent/uploads/2010/03/0910431.pdf.

study,¹⁰ which estimated that 18% of recorded notifiable offences were committed by recent ex-prisoners. The upper bound was subsequently uplifted by inflation to give an estimated cost of reoffending by recent ex-prisoners of £15 billion in 2017/18 prices.

However, this figure is now outdated as it does not capture more recent trends in reoffending and costs of crime. Furthermore, it only captures the cost of reoffending from ex-prisoners and therefore does not include the cost of reoffending for those who received non-custodial convictions or out of court disposals.

In recent years, reoffending rates have stabilised (see Figure 1) with the total number of reoffences decreasing (Figure 2). However, the average number of reoffences per reoffender has gradually increased since 2009,¹¹ suggesting reoffending is committed increasingly by offenders who have offended a number of times previously.





Cohort of offenders with initial offence occurring during year ending

https://www.bristol.ac.uk/poverty/downloads/keyofficialdocuments/Reducing%20Reoffending.pdf.

¹⁰ SEU (2002) 'Reducing reoffending by ex-prisoners': https://www.bristol.ac.uk/poverty/downloads/keyofficia

¹¹ MoJ (2019) 'Proven reoffending statistics': https://www.gov.uk/government/collections/proven-reoffendingstatistics.



Figure 2: Number of reoffences per reoffender and total number of reoffences in England & Wales from 12-month cohorts March 2010 – March 2017

Cohort of offenders with initial offence occurring during year ending

Forty-eight per cent of those who spend time in one of Her Majesty's prisons will go on to reoffend within a year.¹² There are alternatives to imprisonment, in particular with regards to lower severity offences which tend to be associated with short custodial sentences. Further, there is some evidence that alternative disposals work better in terms of lowering an individual's propensity to reoffend once they have completed their sentence.¹³ Policy makers must understand what works to reduce reoffending and which options are most cost-effective. Fewer reoffences will make us all safer, and will reduce the economic and social costs of reoffending.

This research will enable cost benefit analyses to be undertaken and allow decision makers and practitioners to understand the differences in estimated costs of reoffending due to policy decisions or interventions. Although these differences could be used to estimate economic benefit, they are unable to be used to draw out direct financial savings to the Criminal Justice System (CJS) as a result of policy decisions.

¹² MoJ (2019) 'Proven reoffending statistics': https://www.gov.uk/government/statistics/proven-reoffendingstatistics-april-to-june-2017.

¹³ MoJ, Mews et al. (2015) 'The impact of short custodial sentences, community order and suspended sentence orders on re-offending': https://assets.publishing.service.gov.uk/government/uploads/system/ uploads/attachment_data/file/399389/impact-of-short-custodial-sentences-on-reoffending.PDF.

Furthermore, the findings presented in this report estimate the economic and social costs of reoffending disaggregated by reoffence type committed and, separately, by type of previous conviction or caution received. This level of granularity in the results enables a firmer understanding of the potential impacts of policy decisions and the feasibility of future options.

1.2 Broad approach

Figure 3 below outlines the different ways to measure crime. Wider crime prevalence levels comprise first-time offences, reoffences within a 12-month follow-up period and reoffences over a longer period. They also encompass both crime that ends up being reported, recorded and proven, and crime that does not. For example, although 5.7 million offences were recorded by the police in the year to September 2018, the Crime Survey for England & Wales (CSEW), a wider measure of the experience of victimisation in England and Wales, estimated 10.7 million crimes took place in the same period.^{14, 15}

Figure 3: Different measures of crime



Notes:

- 1. Diagram for illustrative purposes only not reflective of scale.
- 2. Statistics quoted based on year ending September 2018.
- 3. Recorded crime and proven offence figures based on notifiable offences only.

¹⁴ ONS (2019) 'Crime in England and Wales: year ending September 2018': https://www.ons.gov.uk/people populationandcommunity/crimeandjustice/bulletins/crimeinenglandandwales/yearendingseptember2018.

¹⁵ To note, CSEW is a victimisation survey and does not cover all crime types recorded by the police. Further details regarding the two data sources can be found at: https://www.ons.gov.uk/peoplepopulationand community/crimeandjustice/bulletins/crimeinenglandandwales/yearendingseptember2018.

The analysis set out in this report is based on proven reoffences committed by a cohort of offenders released from custody or who received a caution or non-custodial conviction (hereafter, known as the index disposal)¹⁶ in 2016. Reoffences referred to in this report could therefore have taken place from January 2016 to December 2017, but have only been counted if they took place within a 12-month follow-up period from the index disposal or a further six-month waiting period to allow the offence to be proven in court as shown in Figure 4.





In 2018, the HO published an updated version of the ESCC,¹⁷ which breaks the unit costs down by costs in anticipation of crime, costs as a consequence of crime, and costs in response to crime. This provides a valuable starting point to produce updated cost of reoffending estimates. In addition, we have been able to draw on more granular reoffending data which has allowed estimation of the costs of reoffending by the type of disposal offenders are sentenced to, and by the offence groups of the reoffences they commit.

¹⁶ Index disposal refers to the disposal that leads to an offender being included in the cohort.

¹⁷ HO (2018) 'The economic and social costs of crime': https://assets.publishing.service.gov.uk/government/ uploads/system/uploads/attachment_data/file/732110/the-economic-and-social-costs-of-crime-horr99.pdf.

Based on the ESCC publication, we have therefore estimated:

- The unit cost for offence groups (given this is based on 2015/16 cost data, these have then been uplifted to 2017/18 prices using a Gross Domestic Product (GDP)¹⁸ deflator).
- The total number of wider reoffences (i.e. both unrecorded and recorded) by offence type occurring over a 12-month follow-up period.

Section 3 of this report provides further details on the methodology used to construct the costs of reoffending model.

It is important that the limitations and assumptions are considered when interpreting the results in this report, to ensure the net benefit from sentencing policies is calculated correctly. These estimated costs aim to capture all reoffences within a 12-month follow-up period and not just reoffences which may have been recorded by the police, so should only be used directly with reductions in all reoffending crimes (i.e. including estimates of unrecorded crime from the CSEW).

¹⁸ The GDP deflator provides a measure of general inflation in the economy; it is an index that is formed from many component price indices that are for products that contribute to GDP. HM Treasury (2019) 'GDP deflators at market prices, and money GDP March 2019 (quarterly National Accounts)': https://www.gov.uk/government/statistics/gdp-deflators-at-market-prices-and-money-gdp-march-2019quarterly-national-accounts.

2. Main results

This section presents the estimated economic and social costs of wider reoffences committed in a 12-month follow-up period by offenders identified in 2016. The results are broken down for adults and for children and young people (i.e. those under the age of 18 at the time of entry into the cohort), and are presented in terms of the three major cost categories as used by the ESCC – costs in anticipation of crime, as a consequence of crime, and in response to crime (see Section 3 for more details on these). Further breakdowns are available in Annex B and wider reoffence volumes are presented in the accompanying supplementary tables. Estimated costs have been uplifted to reflect 2017/18 prices. Results¹⁹ are shown in this section for:

- Overall estimated social and economic costs of reoffending (including by offence group).
- Estimated economic and social costs of reoffending by index disposal²⁰ type.
- Estimated economic and social costs of reoffending by those who had received a prior custodial sentence.

Readers should note that given the impact of different counting rules, the approach adopted to estimate the total costs of reoffending (including by offence group) is different to the one used to generate the costs by index disposal type. Consequently, figures presented in the tables below that show the total estimated costs of reoffending will not match with the sums of estimates for the costs of reoffending by index disposal type. For full details of the different methodologies and the rationale for adopting them in these cases, refer to Annex A.

Proven reoffences are based on a cohort which spans offenders released from custody or who received a caution or non-custodial sentence (hereafter, known as the index disposal) in 2016. Reoffences are only counted if they take place within a 12-month follow-up period from this index disposal. Reoffences, as counted in this report, may happen from January 2016 to December 2017 but are limited to a count of reoffences over a 12-month period from when the index disposal was received.

Assumptions and limitations outlined in Section 3 should be considered when interpreting the findings in this section. Total costs of reoffending presented throughout this report will be underestimates given that figures associated with

¹⁹ Further breakdowns of the estimated costs can be found in Annex B.

²⁰ An index disposal refers to the proven offence disposal that leads to an offender being included in the cohort.

certain offence groups represent partial costs only. Furthermore, the estimates do not capture reoffending where reoffences occur over a longer period after the index disposal.

2.1 Overall estimated social and economic costs of reoffending

The total estimated economic and social cost of reoffending, hereafter cost of reoffending, over a 12-month follow-up period was £18.1 billion for the 2016 offender cohort.

The cost of reoffending for adults in the 2016 cohort was estimated to be £16.7 billion (Table 1). Costs vary by crime type. For example, despite having a lower unit cost (refer to Annex B), theft reoffences made up most of the estimated social and economic costs compared to other offence groups at £9.3 billion, whilst violence against the person reoffences came in at £4.2 billion (see Figure 5). Costs as a consequence of crime (i.e. the direct costs to individuals and services due to a crime taking place) accounted for over half of the total estimated cost, at £10.0 billion.



Figure 5: The estimated economic and social costs of reoffending by adults in England & Wales, for the 2016 offender cohort (expressed in 2017/18 prices)

Offence group	Costs in anticipation of crime	Costs as a consequence of crime	Costs in response to crime	Total cost
Theft offences	2,198	4,865	2,247	9,310
Violence against the person	102	3,235	869	4,206
Fraud offences	199	735	202	1,136
Robbery	32	539	397	968
Sexual offences	16	516	114	646
Public order offences	7	58	50	115
Summary non-motoring	0	0	84	84
Criminal damage and arson	6	42	30	77
Miscellaneous crimes against society	15	0	60	76
Drug offences	0	10	25	35
Summary motoring	0	0	7	7
Possession of weapons offences	0	0	5	5
Total cost	2,575	9,999	4,091	16,665

Table 1: Estimated economic and social costs of reoffending by adults in England & Wales, for the 2016 offender cohort²¹ (expressed in 2017/18 prices, in £millions)

Notes:

1. Figures rounded to the nearest £1 million.

2. Cost figures for each category may not sum to total cost due to rounding.

 Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

4. Cost figures for summary non-motoring and summary motoring only include costs associated with the courts, legal aid, prisoner escort service, prison, probation and electronic monitoring. They do not include any costs as a consequence of crime or costs in anticipation of crime, nor do they include costs for the Crown Prosecution Service (CPS).

²¹ Costs associated with the following reoffences capture only the recorded crime element and do not include costs associated with wider crime: drug offences, possession of weapons offences, public order offences, miscellaneous crimes against society and certain theft offences (i.e. aggravated vehicle taking, vehicle interference, theft from the person, theft or unauthorised taking of a pedal cycle, shoplifting, blackmail, theft in a dwelling other than from an automatic machine or meter, theft by an employee, theft of mail, dishonest use of electricity, theft from automatic machine or meter, other theft, making off without payment).

Figure 6 and Table 2 show that the cost of reoffending by children and young people, for the 2016 cohort, was estimated to be £1.5 billion. As with reoffending committed by adults, theft reoffences made up the largest proportion of the costs compared to other offence groups, at £532 million. Costs as a consequence of crime (i.e. the direct costs to individuals and services due to a crime taking place) accounted for over half of the total estimated cost, at £869 million.



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Table 2: Estimated economic and social costs of reoffending by children and young people in England & Wales, for the 2016 offender cohort (expressed in 2017/18 prices, in £millions)

Offence group	Costs in anticipation of crime	Costs as a consequence of crime	Costs in response to crime	Total cost
Theft offences	126	278	128	532
Robbery	16	270	199	485
Violence against the person	6	199	53	258
Fraud offences	13	47	13	73
Sexual offences	2	57	12	71
Criminal damage and arson	2	11	8	21
Summary non-motoring	0	0	15	15
Public order offences	1	6	5	12
Miscellaneous crimes against society	1	0	5	7
Drug offences	0	2	4	5
Possession of weapons offences	0	0	1	1
Summary motoring	0	0	1	1
Total cost	166	869	445	1,480

Notes:

1. Figures rounded to the nearest £1 million.

2. Cost figures for each category may not sum to total cost due to rounding.

 Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

4. Cost figures for summary non-motoring and summary motoring only include costs associated with the courts, legal aid, prisoner escort service, prison, probation and electronic monitoring. They do not include any costs as a consequence of crime or costs in anticipation of crime, nor do they include costs for the CPS.

2.2 Estimated economic and social costs of reoffending by index disposal type

The analysis allows for the calculation of the cost of reoffending depending on the index disposal – the disposal for which the offender was included in the cohort. Table 3 shows that for adults, reoffences committed by those who had previously received a court order²² or custodial sentence accounted for the largest amount of estimated costs: £6.5 billion and £6.0 billion respectively, as shown in Figure 7 and Table 3.

²² Court orders include suspended sentences and community sentences only.





Table 3: Estimated economic and social costs of reoffending by adults in England & Wales, by index disposal type and major cost category, for the 2016 offender cohort (expressed in 2017/18 prices, in £millions)

Index disposal	Costs in anticipation of crime	Costs as a consequence of crime	Costs in response to crime	Total cost
Court order	988	3,915	1,566	6,469
Custody	979	3,527	1,469	5,975
Fine	478	1,891	788	3,157
Absolute/Conditional discharge	252	911	386	1,550
Other	211	767	317	1,295
Caution	135	559	230	924

Notes:

1. Figures rounded to the nearest £1 million.

2. Cost figures for each category may not sum to total cost due to rounding.

3. Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

4. Cost figures for summary non-motoring and summary motoring only include costs associated with the courts, legal aid, prisoner escort service, prison, probation and electronic monitoring. They do not include any costs as a consequence of crime or costs in anticipation of crime, nor do they include costs for the CPS.

Equivalent figures, as in Figure 8 and Table 4, showed that reoffences committed by children and young people who had previously received youth rehabilitation orders and first tier penalties incurred most of the total cost, at £510 million and £468 million respectively.

Figure 8: Estimated economic and social costs of reoffending by children and young people in England & Wales, by index disposal type and major cost category, for the 2016 offender cohort (expressed in 2017/18 prices)



Table 4: Estimated economic and social costs of reoffending by children and young people in England & Wales, by index disposal type and major cost category, for the 2016 offender cohort (expressed in 2017/18 prices, in £millions)

Index Disposal	Costs in anticipation of crime	Costs as a consequence of crime	Costs in response to crime	Total cost
Youth rehabilitation order	60	295	155	510
First tier penalty	51	276	141	468
Reprimand, warning or caution	40	212	103	355
Other	26	132	69	228
Custody	8	43	22	73
Youth community penalty	1	3	1	5

Notes:

1. Figures rounded to the nearest £1 million.

2. Cost figures for each category may not sum to total cost due to rounding.

3. Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

4. Cost figures for summary non-motoring and summary motoring only include costs associated with the courts, legal aid, prisoner escort service, prison, probation and electronic monitoring. They do not include any costs as a consequence of crime or costs in anticipation of crime, nor do they include costs for the CPS.

2.3 Estimated economic and social costs of reoffending by those who had received a prior custodial sentence

The cost of reoffending for those offenders who had previously received a custodial sentence can be further broken down by sentence length. The results, as in Table 5, indicate that it is offenders who had previously received a shorter custodial sentence length who account for the largest proportion of the associated costs – especially those who had received a custodial sentence of less than or equal to 6 months. The cost difference is primarily driven by the greater number of offenders receiving shorter sentences relative to those receiving a longer sentence. The estimated cost of reoffending by adults who had previously received a custodial sentence of less than 12 months was \pounds 5.0 billion whilst those who had served a sentence of 12 months or more cost \pounds 1.0 billion. The equivalent costs for youth reoffending were \pounds 52 million and \pounds 22 million respectively.

Figure 9: Estimated economic and social costs of reoffending by adults who had received a prior custodial sentence, by sentence length, for the 2016 offender cohort (expressed in 2017/17 prices, in £millions)

Less than 12 months		12 months and over
Less than or equal to 6 months £4,412	Between 6 and 12 months £601	12 months and over £962

Notes:

1. Figures rounded to the nearest £1 million.

Table 5: Estimated economic and social costs of reoffending by individuals who had received a prior custodial sentence in England & Wales, by sentence length, for the 2016 offender cohort (expressed in 2017/18 prices, in £millions)

Custodial sentence length	Reoffending by adults	Reoffending by children and young people
12 months or more	962	22
Less than 12 months	5,013	52
of which, less than or equal to 6 months	4,412	37
Total cost	5,975	73

Notes:

1. Figures rounded to the nearest £1 million.

- 2. Cost figures for each category may not sum to total cost due to rounding.
- Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.
- 4. Cost figures for summary non-motoring and summary motoring only include costs associated with the courts, legal aid, prisoner escort service, prison, probation and electronic monitoring. They do not include any costs as a consequence of crime or costs in anticipation of crime, nor do they include costs for the CPS.

2.4 Sensitivity analysis

Further consideration has been given to the assumption which is likely to have the greatest impact on the estimated costs of reoffending presented in this report. This main assumption is considered to be that for any category of crime, the proportion of all proven offences that are reoffences is the same as the proportion across all crimes including those that are unproven, undetected or unreported. This can be interpreted as meaning that reoffences are just as likely to be proven as all offences. The impact on the costs of reoffending of this assumption has been determined by varying the extent of reoffending among wider crime against the extent among proven crime between -10% and +10%. This generated a range of £15.0 billion to £18.3 billion for reoffending by adults and a range of £1.3 billion to £1.6 billion for reoffending by children and young people, as a linear response. For a longer discussion of sensitivity analysis, including the consideration of other assumptions, please see Annex C.

3. Methodology

This section outlines the approach used in developing the costs of reoffending model to estimate the social and economic costs of reoffending, including the key assumptions that have been made. The methodology consists of two broad elements:

- Identifying unit costs
- Estimating how much crime is committed by reoffenders

The unit costs are multiplied by the relevant volume of reoffences to get a total cost.

3.1 Identifying unit costs

The HO ESCC report has been used as the starting point for this analysis. It disaggregates the unit costs of crime into three broad cost categories as described below:

Costs in anticipation of crime

This covers cost baskets associated with the actions taken by individuals and businesses to reduce the chance or risk of becoming a victim (e.g. spend incurred on crime detection and prevention, defensive equipment, cost of insurance administration).

Costs as a consequence of crime

This covers cost baskets associated with the direct costs to individuals and services because the crime has taken place, and includes the human and emotional cost (in terms of physical or psychological injury); the value of property stolen; lost output from reduced effectiveness at work; and NHS and victim services costs.

Costs in response to crime

This covers cost baskets associated with the CJS, such as police investigation costs, court costs, and costs for holding offenders in prison.

These unit costs are based on all crimes that take place during a one-year period i.e. both crimes that are classified as a reoffence and crimes which are not. By drawing on these costs, a key assumption is made that the cost of a reoffence – committed by someone defined in this analysis as a reoffender – is equal to the cost of an offence committed by

anyone, including both those who have not been defined as a reoffender and those who have.

Unit costs included in the ESCC are not provided for every type of crime; it concentrates on more serious victim-based offences which are likely to have the largest economic and social costs. Costs have been estimated for crimes against individuals and, for a limited number of sectors, businesses. Those crimes which are not committed against an individual victim have been excluded – so-called 'crimes against society'. The following offence categories have not been included in the ESCC: drug offences, miscellaneous crimes against society, possession of weapons offences, and public order offences; as well as certain theft offences.²³

For offences that are not featured in the ESCC, an alternative approach has therefore been used to estimate unit costs for these crimes using the Office for National Statistics' (ONS) Crime Severity Score (CSS).²⁴ The CSS is a weighted measure of crime intended to reflect the relative harm of an offence to society and the likely demands on the police. It is based on average sentence outcomes which reflect legislation and sentencing guidelines.

It was assumed that the CSS and the unit costs, as in the ESCC, were correlated, and therefore that the CSS was a good proxy for economic and social costs. The CSS provides scores on an individual offence basis, rather than for broader offence categories such as those for which unit costs are given by the ESCC. Therefore, severity scores for these categories were calculated by taking the average across the scores for each individual offence within each category, weighted by their police recorded crime volumes (e.g. the severity score for the violence without injury category overall was based on the average of the scores of all offence types under this category multiplied by their respective recorded crime category allowed those offences not already covered by one of these categories to be matched to one with which they had a similar severity score.

A judgement was then made for each offence group that was not included in the ESCC report, as to whether each cost basket within the three broad cost categories was relevant. Where this was deemed not to be the case the figure for that cost basket was set at £0 cost.

²³ Refer to footnote 21 for a list of these theft offences.

²⁴ ONS (2016) 'Research outputs: developing a Crime Severity Score for England and Wales using data on crimes recorded by the police': https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/ articles/researchoutputsdevelopingacrimeseverityscoreforenglandandwalesusingdataoncrimesrecordedbythep olice/2016-11-29.

Table 6 below sets out the cost baskets attributed to each offence category.²⁵ For a further discussion of the reasoning behind adopting this approach and the assumption on which it is based, please see Annex C.

	Defensive expenditure	Insurance administration	Physical and emotional harm	Value of property stolen/ damaged	Victim services	Lost output	Health services	CJS
Drug offences	1	x	x	x	1	√	1	✓
Possession of weapons offences	x	x	x	x	x	x	x	✓
Public order offences	4	1	✓	x	1	1	1	~
Miscellaneous crimes against society	1	x	x	x	x	x	x	✓
Other theft offences ²⁶	4	~	4	1	1	1	1	1

Table 6: Cost baskets attributed to offence groups not included in the ESCC report

Note:

1. CJS category includes police and all other CJS costs.

Furthermore, the CSS will reflect all offences (i.e. both offences that are classed as a reoffence and those that are not), so it is assumed that the severity scores for a reoffence are the same as for all offences.

For some HO sub-offence groups, separate unit costs are presented in the ESCC depending on whether the crime is of a commercial or personal nature. However, these were not disaggregated in the same way in police recorded crime statistics (which was used to estimate wider crime prevalence and hence the weights). Therefore, an assumption was made that the split was proportional to the split in volumes between the Crime Survey for England and Wales (CSEW) and the Commercial Victimisation Survey (CVS), for those affected offence groups.²⁷

As with personal and commercial crime, cybercrime and fraud offences were also difficult to disaggregate in the police recorded crime statistics. However, recorded fraud statistics were

²⁵ Refer to Annex C for an estimation of the impact of these choices on the analysis.

²⁶ Refer to footnote 14 for a list of these theft offences.

²⁷ These data were drawn from the HO ESCC report.

available²⁸ which allowed estimation of the prevalence of cybercrime compared to fraud offences. These estimates allowed cybercrime to be dealt with in a similar way to personal and commercial crime (i.e. by using the fraud statistics to determine the split) and so it was assumed that the split was proportional to the split in volumes between the fraud statistics.

Unit costs for individual offences were then aggregated up to form weighted average unit costs for the MoJ offence groups as used in the proven reoffending statistics. The weights were determined by the share of crime prevalence for each sub-offence that makes up the major offence group - this measure of crime prevalence is simply equal to police recorded crime (PRC) volumes multiplied by the relevant HO multipliers.²⁹ For offences not included in the ESCC report, only the level of police recorded crime was used to calculate the weights as the wider measure of crime prevalence cannot be determined for these offences.

3.2 Estimating how much crime is committed by reoffenders

Interest is drawn to the cost of all reoffending (i.e. proven and unproven) and not just those reoffences that end in a conviction or out of court disposal (i.e. proven). To calculate the cost of reoffences that are not 'proven', we must therefore first estimate how much of the wider 'unrecorded offending' is in fact specifically reoffending. The ESCC report includes multipliers, which demonstrate the ratios between police recorded crime and wider crime prevalence levels.³⁰ These are used to estimate the wider level of reoffending. Given published reoffending statistics only include proven reoffences, there is no straightforward way of obtaining figures related to wider reoffending. Instead they must be estimated by drawing on the data sources set out in Table 7 below.

²⁸ Refer to Table A5 of the ONS (2019) 'Crime in England and Wales: Appendix Tables': https://www.ons.gov.uk/ peoplepopulationandcommunity/crimeandjustice/datasets/crimeinenglandandwalesappendixtables.

²⁹ Multipliers have been produced by the HO ESCC report to estimate the amount of wider crime. Detailed methodology on how these have been constructed can be found at: https://assets.publishing.service.gov.uk/ government/uploads/system/uploads/attachment_data/file/732110/the-economic-and-social-costs-of-crimehorr99.pdf.

³⁰ For detailed methodology on how the multipliers to estimate the costs of wider crime, refer to: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732110/theeconomic-and-social-costs-of-crime-horr99.pdf.

Dataset	Description	Time period used	
Proven reoffences, England and Wales (Source: MoJ)	Tracks the number of proven reoffences over a 12 month follow up period (an extra 6 months is allowed for the offence to be proven) which are committed by a cohort of offenders that have been either released from custody, or who received a caution or non-custodial conviction over a 12-month period.	January 2016 – December 2016	
 Proven offences, England and Wales: Criminal Justice statistics (Source: MoJ) Police outcomes (Source: HO) 	 These are defined as the sum of offences that lead to: Convictions Certain out of court disposals (OoCDs)³¹ or taken into considerations (TiCs)³² 	April 2016 – March 2017	
Police recorded crime, England and Wales (Source: ONS)	These are all crimes recorded by the police, and will include all notifiable offences, which are defined as the offences that can possibly be tried by a jury (regardless of whether they tend to be in practise).	April 2016 – March 2017	
Crime Survey for England and Wales (Source: ONS)	This is a survey completed by individuals which estimates crime prevalence. It is designed to estimate the extent both of crimes that are recorded by the police and of those that go unreported to the police, and those that are reported but go unrecorded. It is based on offences where individuals are direct victims, so does exclude some major offence types. The ESCC report calculates wider crime using the CSEW as a starting point. The main adaptations that are made are widening the scope of victims included (as the CSEW covers only crimes committed against persons aged 10 and above). Also for certain offences against individuals such as homicide it is not possible for the CSEW to capture these offences, so they have been added.	April 2016 – March 2017	
Commercial Victimisation Survey, England and Wales (Source: Home Office)	A sample survey that examines the extent of crime against business premises. In each year since 2012 it has surveyed 3 or 4 sectors. In the latest ESCC report, the latest data for each sector surveyed between 2012 and 2015 is used, in order to increase data completeness.	2012–2015	

Table 7: Datasets used for the estimation of the number of wider reoffences

To estimate the number of wider reoffences, the proportion of proven offences (i.e. those offences that end up receiving a court conviction, OoCD, or TiCs) that are reoffences must first be calculated for each offence group by drawing on published statistics. Proven reoffences by offence group are drawn from the MoJ published reoffending statistics for proven reoffences by group³³. MoJ convictions statistics³⁴ and HO data on police outcomes

³¹ These are cannabis/khat warnings, community resolutions, Penalty Notice for Disorder and cautions.

³² Taken into consideration (TiCs) is where an offender admits a crime by way of a formal police interview and asks for it to be taken into consideration by the court. There must be an interview where the suspect has made a clear and reliable admission of the offence and which is corroborated with additional verifiable auditable information connecting the suspect to the crime.

³³ MoJ (2019) 'Proven Reoffending Statistics': https://assets.publishing.service.gov.uk/government/uploads/ system/uploads/attachment_data/file/774864/proven-reoffending-jan17-mar17-3-monthly.ods and https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/797424/Re offence_type_data_tool.xlsx https://www.gov.uk/government/statistics/proven-reoffending-statistics-april-tojune-2017.

³⁴ MoJ (2017) 'Criminal Justice System statistics quarterly: March 2017': https://www.gov.uk/government/statistics/criminal-justice-system-statistics-quarterly-march-2017.

data³⁵ are used for proven offences. Once the proportions of proven offences that are reoffences are determined, the key assumption is that these proportions then hold true among wider crime.

For instance, if 10% of violence against the person proven offences are proven reoffences committed by adults, then the assumption is that 10% of wider violence against the person offences are reoffences committed by adults. Wider offences are calculated as police recorded crime multiplied by the HO multipliers. For offence groups that are not covered by the ESCC report – drug offences, miscellaneous crimes against society, possession of weapons offences, public order offences, or certain theft offences – and as such do not have an associated multiplier, the methodology instead calculates the number of police recorded crimes that are reoffences (and so does not attempt to calculate wider crimes that are reoffences).

The multipliers in the ESCC report that lead from police recorded crime to wider crime need to be adjusted when being used with volumes figures for years other than 2015/16, as the difference between police recorded crime volumes and volumes estimated in the CSEW changes. The multipliers from police recorded crime to wider crime in 2016/17 (for the purposes of this report) have been estimated by adjusting the ESCC multipliers by the relevant CSEW and police recorded crime volumes. The latter has been accounted for by offence group.

Finally, for each major offence group, the total cost of reoffending is calculated by multiplying together the relevant unit cost and the estimated number of reoffences, and then summing to provide an overall estimate. However, given the impact of different counting rules, the approach to estimate the total costs of reoffending is different to the one used to generate costs by index disposal type.³⁶ Consequently, summing over costs by index disposal type will lead to different total costs of reoffending compared to the results as presented in Table 1 (for adults) and Table 2 (for children and young people). Refer to Annex B for further details.

³⁵ HO (2017) 'Police recorded crime and outcomes open data tables':

https://www.gov.uk/government/statistics/police-recorded-crime-open-data-tables.

³⁶ Data used in analysing costs of reoffending by index disposal have been generated using a methodology that corresponds to that used in generating the 'C' tables of the MoJ Proven Reoffending National Statistics, whilst those data used in analyses not considering index disposal are generated using the methodology employed in creating the 'B' tables of the same quarterly statistical publications. Details on the methods used can be found at the MoJ (2019) 'Guide to Proven Reoffence Statistics': https://assets.publishing.service.gov.uk/government/ uploads/system/uploads/attachment_data/file/775009/guide-to-proven-reoffending-statistics-Jan19.pdf.

Given the ESCC estimates unit costs for 2015/16, the costs of reoffending have been uplifted to reflect 2017/18 prices using the Gross Domestic Product (GDP) deflator.

3.3 Summary Offences

In addition to the main limitations outlined above, it has not been possible to use our main methodology to estimate the cost of reoffending associated with summary offences. This is because most summary offences are not notifiable so are not identified in police recorded crime statistics.

As the ESCC paper is based on those offences included in CSEW then there are no unit costs for summary motoring and summary non-motoring offences. A different approach for summary offences is required.

A 'bolt-on' approach is employed instead, where MoJ cost data is utilised for summary offences and added on to the total costs of reoffending. This cost data is comparable to any MoJ costs for other offence groups which feed into the ESCC report.

Specifically, the MoJ unit cost for proven summary offences is calculated, and then multiplied by the number of proven summary reoffences. As such it is understood that this approach will lead to a large underestimate of the cost of summary reoffences, as only the costs specific to the MoJ are included, and all others are excluded. Furthermore, wider reoffending is not estimated for summary reoffences as there are no clear data available to estimate this. However, the authors of this report felt it would be more judicious to include some costs rather than none at all.

3.4 Limitations and caveats

There are some limitations and caveats that need to be taken into account when considering the findings. These are set out below and split into two subsections; the first covers limitations around the unit cost methodology and the second covers limitations around the reoffence volumes methodology.

Identifying unit costs

 For offence groups not included in the ESCC report (i.e. drug offences, possession of weapons offences, public order offences, miscellaneous crimes against society, and certain theft offences) unit costs were assigned based on offences with similar severity (using the CSS). However, not all cost baskets would apply to these offence groups as the offences not included in the ESCC report were primarily crimes against society. Judgements have been made as to whether cost baskets apply to each offence group or not. As an example, costs relating to physical and emotional harm for possession of weapons offences would likely not apply as no violence has taken place against any victims. Please refer to Section 3.1 for a breakdown of which cost baskets were included for each relevant offence category and to Annex C for a longer discussion of the choices made. Furthermore, estimated costs for these offences are based on recorded crime levels and not wider crime and so total costs of reoffending presented throughout this report will be underestimates.

- Cost figures for summary non-motoring and summary motoring offences only include costs associated with the courts, legal aid, prisoner escort service, prison, probation and electronic monitoring. They do not include costs associated with the CPS. Furthermore, given the lack of data, it is not possible to calculate the costs as a consequence and costs in anticipation of summary offences taking place. This will likely result in a large underestimate of summary offence costs.
- Reoffence costs related to violence against the person are likely to be underestimates given this category includes common assault which, being a highvolume, lower cost crime, drives the unit cost for the category down overall.
 Furthermore, many of these cases end up being classified as a summary nonmotoring offence at the prosecution stage, and therefore will appear as such in the reoffending statistics.
- The unit cost for fraud is only based on a subset of fraud offences, since the ESCC report based its calculation only on those fraud offences that were reported and progressed by the police. There are other bodies, such as the National Fraud Intelligence Bureau (NFIB) that deal with fraud offences. Hence it may be that those offences recorded by the police are not representative of all fraud cases, in terms of cost. In addition, unit cost estimates for fraud and cyber-crime are based upon experimental statistics and should be considered as partial estimates as they do not include some costs associated with each crime.
- The unit costs used in the ESCC are based on 2015/16 data. As reoffences can happen anytime in calendar years 2016 and 2017, then we have chosen the middle financial year to base nominal prices on, i.e. 2016/17. This therefore assumes that the costs in real terms have not changed between 2015/16 and 2016/17, which is certainly challengeable; for example, there have been significant changes to probation since 2015/16 and the costs arising from probation would be expected to

change. As a final step, we have inflated the nominal estimated costs of reoffending by the GDP deflator, in order to express the costs in 2017/18 prices.

Estimating how much crime is committed by reoffenders

- The time periods covered by the reoffending statistics used in this report, which are based on a follow-up period from release from prison or beginning another sentence, are not equivalent to the time periods chosen for the data used to calculate proven offences.
- Until recently the cohorts were defined as individuals who were either released from custody, or who received a caution or non-custodial conviction, within a specified one-year period. However, in October 2015 the cohort basis changed from an annual cohort to a quarterly one, with statistics for annual reoffending levels presented as a sum of the volumes from four quarterly cohorts.³⁷ The implication of this is that both the number of reoffences and reoffenders have some double counting. Refer to Annex A for a discussion of this.
- Police recorded crime and CSEW statistics do not distinguish between crimes committed by young or adult offenders, nor between first-time offences or reoffences. The offence distribution is based on all crimes committed by all offenders.
- To determine wider volumes of sexual offences, the ESCC draws on the selfcompletion module of the CSEW; the self-completion module for domestic abuse is not used as the offence categories presented are at a broader level of violence with and without injury. This may result in an underestimate to domestic abuse related crimes.
- Estimated costs generated through this work are associated with reoffending within a 12-month follow-up and so do not cover reoffences occurring over a longer period from the index disposal.

³⁷ Details on the changes made to the methodology used can be found at the MoJ (2017) 'How the measure of proven reoffending has changed and the effect of these changes': https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/658380/ho w-the-measure-of-reoffending-has-changed-and-the-effect-of-these-changes.pdf.

4. Further developments

This research not only presents more up-to-date figures on the estimated costs of reoffending overall, but allows readers to understand the extent to which these estimates differ by type of reoffence committed and by type of previous conviction or caution received. In so doing, it enables cost benefit analyses to be undertaken, better informs decision makers and practitioners where economic benefits may be gained, and illustrates the ways in which estimated costs differ due to policy decisions or interventions.

However, there are areas in which the costs of reoffending estimates could be developed further. The ESCC report highlights future improvements which could be made in estimating the costs of crime overall. In addition, potential areas for development on the cost of reoffending estimates specifically are listed below.

Drawing on the growing evidence base

More recently, the HO has produced reports with the aim of improving understanding of the cost estimates associated with certain crime types (such as organised crime, domestic abuse, modern slavery). Future work could look at incorporating elements of the methodologies used in these research pieces into any updated estimates on the costs of reoffending.

Estimating wider crime

Cost estimates for drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences, and certain theft offences featured in this report do not take account the wider crime prevalence element. Estimates associated with these offences are underdeveloped and only represent partial costs. Future work could look at ways of developing the methodology to allow for estimates to be determined based on a wider measure of crime prevalence.

Level of uncertainty around the cost estimates

This report includes point estimates for the costs by reoffence type and by type of previous conviction or caution received. Assumptions made in the development of the costs of reoffending model and the subsequent uncertainties inherent in the estimates produced have been discussed. However, future work could be undertaken to extend the sensitivity analysis presented and determine the overall ranges to produce upper and lower estimates.

Longer-term reoffending

Results presented in this report are based on a cohort of offenders who went on to reoffend over a 12-month follow-up period. Future work could look at the feasibility of estimating the costs associated with longer-term reoffending (i.e. reoffending committed over a greater follow-up period).

Summary offences

Cost estimates relating to summary motoring and summary non-motoring reoffences are limited. How they are included in the costs of reoffending model (i.e. appended to the costs for all other offences) means that there are substantial limitations in what can be drawn from the estimates for summary reoffences. Further work could look at how to better build summary reoffences into the model to provide more complete associated costs.

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Annex A Data quality and issues

Double counting of reoffending statistics

Whenever the same offence is picked up in more than one of the four follow-up periods, double counting will occur. For way of illustration:

- An individual is released from prison at time t = 0 months (and so is included in the first quarter's cohort).
- They then go on to commit an offence at t = 6 months and return to prison for this.
- Then, they get released in quarter 3 at t = 8 months, and commit an offence after a further 3 months (at t = 11 months).
- In this scenario, the reoffence that takes place at t = 11 months would be captured under both the first and third quarters' cohorts. In addition, the reoffending rate would also be overstated as the offenders and reoffenders variable would be double-counted.

Use of differing methodologies to understand proven reoffences

This report calculates cost estimates for reoffending broken down into total costs of reoffending and reoffending by index disposal type (that is, the disposal type for a proven offence that leads to an offender being included in the cohort) and reoffence type. However, these estimates draw from data sources that use differing methodologies to count the number of reoffences.

One method counts the number reoffences committed after an offender is released from custody or begins another sentence within a 12-month follow-up period. Thus, if an offender commits two further offences, Reoffence #1 and Reoffence #2, within 12 months of their original offence Crime #0, then both these are considered reoffences stemming from Crime #0. Even though Reoffence #2 is technically a reoffence of Reoffence #1, it is only counted with respect to Crime #0. This gives the best representation of the total number of reoffences being committed as it avoids counting Reoffence #2 for a second time as a reoffence of both Reoffence #1 and Crime #0.

However, this approach could lead to some disposals being underrepresented when looking at reoffences from different disposals. This is because reoffences often receive more severe sentences. For example, suppose Crime #0 received a disposal of a fine. Once the offender is convicted of Reoffence #1, they receive a short custodial sentence. Under the

methodology described above, Reoffence #2 would be counted as a reoffence stemming from the disposal type of a fine, but not the short custodial sentence. This is misleading, as it does not record subsequent offences after different disposal types. This does not allow the full picture of the costs of reoffending by disposal type.

Therefore, the data used for estimating these costs uses an alternative methodology where reoffences are counted with respect to the first offence for which the offender receives a disposal of each disposal group. If Crime #0 and Reoffence #1 both result in fines, then Reoffence #1 and Reoffence #2 are only counted as reoffences from Crime #0, as Reoffence #1 was not disposed of in a new way. However, if Reoffence #1 received a short custodial sentence, Reoffence #1 and Reoffence #2 are counted as reoffences of Crime #0, and Reoffence #2 is then counted again as a reoffence of Reoffence #1. This ensures that all disposal types are accurately reflected in the number of reoffences that follow them.

Taking the sum of reoffences by each disposal type will give a greater value than the total number overall, as some offences will be being counted as part of more than one disposal type. Therefore, when calculating the total cost of reoffending as a whole and by reoffence group, data compiled using the first methodology is drawn on to avoid this double counting, and the costs for each disposal type will not sum to our grand total.

Annex B Additional cost breakdowns

The following section presents further disaggregation of results from the costs of reoffending model.

Estimated costs of reoffending for index disposal type by offence group

Offence group	Absolute/ Conditional discharge	Caution	Court order	Custody	Fine	Other
Theft offences	928	476	3,583	3,614	1,706	773
Violence against the person	314	211	1,823	1,276	810	297
Fraud offences	101	68	419	395	226	89
Robbery	99	56	307	371	186	60
Sexual offences	67	80	202	199	124	42
Public order offences	10	6	41	46	29	12
Summary non-motoring	9	8	27	22	24	7
Criminal damage and arson	9	9	25	20	19	6
Miscellaneous crimes against society	8	6	26	22	19	6
Drug offences	3	4	11	8	11	2
Summary motoring	0	1	2	1	2	0
Possession of weapons offences	1	0	2	2	1	0
Total cost	1,550	924	6,469	5,975	3,157	1,295

Table 8: Estimated costs of reoffending by adults in England & Wales by index disposal type and offence group, for the 2016 offender cohort (expressed in 2017/18 prices, in £millions)

Notes:

1. Figures rounded to the nearest £1 million.

2. Cost figures for each category may not sum to total cost due to rounding.

3. Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

Table 9: Estimated costs of reoffending by children and young people in England & Wales, by index disposal and offence group, for the 2016 offender cohort (expressed in 2017/18 prices, in £thousands)

Offence group	Custody	First tier penalty	Other	Reprimand, warning or caution	Youth community penalty	Youth rehabilitation order
Theft offences	24,741	160,227	81,962	133,515	3,450	192,756
Robbery	25,641	158,974	81,318	96,703	1,099	173,992
Violence against the person	13,803	81,115	33,811	73,360	155	80,494
Fraud offences	3,521	21,287	15,525	12,644	0	28,169
Sexual offences	2,933	27,232	6,284	22,624	0	13,826
Criminal damage and arson	676	5,682	2,841	7,757	0	5,772
Summary non-motoring	455	4,602	1,920	4,064	77	4,776
Public order offences	896	3,643	1,819	1,492	68	5,485
Miscellaneous crimes against society	426	2,054	1,123	1,155	24	2,417
Drug offences	269	2,075	653	1,165	27	1,673
Possession of weapons offences	78	507	193	353	5	475
Summary motoring	50	242	113	113	5	272
Total cost	73,491	467,640	227,563	354,944	4,910	510,107

Notes:

1. Figures rounded to the nearest £1 thousand.

2. Cost figures for each category may not sum to total cost due to rounding.

3. Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

Estimated costs of reoffending for custodial sentence lengths by offence group

Table 10: Estimated costs of reoffending by adults in England & Wales who had received a previous custodial sentence by custodial sentence length and offence group, for the 2016 offender cohort (expressed in 2017/18 prices, in £millions)

Offence group	12 months or more	Less than 12 months	Less than or equal to 6 months	Total cost
Theft offences	463	3,151	2,798	3,614
Violence against the person	191	1,084	937	1,276
Fraud offences	107	289	251	395
Robbery	127	244	207	371
Sexual offences	54	145	131	199
Public order offences	5	41	37	46
Miscellaneous crimes against society	4	18	16	22
Summary non-motoring	3	18	16	22
Criminal damage and arson	4	16	14	20
Drug offences	2	5	5	8
Possession of weapons offences	0	1	1	2
Summary motoring	1	1	1	1
Total cost	962	5,013	4,412	5,975

Notes:

1. Figures rounded to the nearest £1 million.

2. Cost figures for each category may not sum to total cost due to rounding.

3. Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

Table 11: Estimated costs of reoffending by children and young people in England & Wales who had received a previous custodial sentence by custodial sentence length and offence group, for the 2016 offender cohort (expressed in 2017/18 prices, in £thousands)

Offence group	12 months or more	Less than 12 months	Less than or equal to 6 months	Total cost
Robbery	7,326	18,315	13,187	25,641
Theft offences	7,097	17,644	11,927	24,741
Violence against the person	3,877	9,926	7,445	13,803
Fraud offences	960	2,561	1,600	3,521
Sexual offences	1,676	1,257	1,257	2,933
Public order offences	168	728	564	896
Criminal damage and arson	271	406	271	676
Summary non-motoring	127	328	234	455
Miscellaneous crimes against society	86	340	204	426
Drug offences	99	170	108	269
Possession of weapons offences	24	54	38	78
Summary motoring	16	34	21	50
Total cost	21,728	51,763	36,856	73,491

Notes:

1. Figures rounded to the nearest £1 thousand.

2. Cost figures for each category may not sum to total cost due to rounding.

3. Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

Estimated costs of total reoffending

Table 12: Total estimated costs of reoffending in England & Wales by offence group, for the 2016 offender cohort (expressed in 2017/18 prices, in £millions)

Offence group	Reoffending by adults	Reoffending by children and young people	Total cost
Theft offences	9,310	532	9,842
Violence against the person	4,206	258	4,464
Robbery	968	485	1,453
Fraud offences	1,136	73	1,209
Sexual offences	646	71	716
Public order offences	115	12	127
Summary non-motoring	84	15	99
Criminal damage and arson	77	21	98
Miscellaneous crimes against society	76	7	82
Drug offences	35	5	40
Summary motoring	7	1	8
Possession of weapons offences	5	1	7
Total cost	16,665	1,480	18,145

Notes:

1. Figures rounded to the nearest £1 million.

2. Cost figures for each category may not sum to total cost due to rounding.

 Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

Estimated costs of community orders and suspended sentence orders

Table 13: Estimated costs of reoffending by adults in England & Wales who had received a previous court order index disposal, for the 2016 offender cohort (expressed in 2017/18 prices, in £ million)

Offence group	Community order	Suspended sentence order	Court orders total
Theft offences	2,141	1,442	3,583
Violence against the person	1,132	691	1,823
Fraud offences	233	186	419
Robbery	180	127	307
Sexual offences	135	67	202
Public order offences	22	20	41
Summary non-motoring	17	10	27
Miscellaneous crimes against society	17	10	26
Criminal damage and arson	17	9	25
Drug offences	7	4	11
Possession of weapons offences	1	1	2
Summary motoring	1	1	2
Total cost	3,903	2,568	6,468

Notes:

1. Figures rounded to the nearest £1 million.

2. Cost figures for each category may not sum to total cost due to rounding.

3. Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

Estimated unit costs of reoffences

Table 14: Unit costs of reoffences by offence group and major cost category, 2015/16 (expressed in 2017/18 prices, in \pounds)

Offence group	Costs in anticipation of crime	Costs as a consequence of crime	Costs in response to crime	Total cost
Robbery	400	6,600	4,900	11,900
Violence against the person	300	8,200	2,200	10,700
Sexual offences	200	8,000	1,800	10,100
Theft offences	900	2,000	900	3,900
Miscellaneous crimes against society	700	-	2,700	3,300
Criminal damage and arson	100	900	600	1,600
Fraud offences	200	900	200	1,300
Public order offences	100	500	500	1,100
Drug offences	-	300	800	1,100
Summary non-motoring	-	-	700	700
Possession of weapons offences	-	-	600	600
Summary motoring	-	-	200	200

Notes:

1. Figures rounded to the nearest £100.

2. Cost figures for each category may not sum to total cost due to rounding.

 Cost figures associated with drug offences, possession of weapons offences, miscellaneous crimes against society, public order offences and summary offences represent partial costs only. Total costs of reoffending presented will therefore be underestimates. Please refer to the methodology in Section 3 for details.

Annex C Sensitivity analysis

Extent of reoffending

It is assumed that the proportion of proven offences that are (proven) reoffences is the same as the proportion of offences overall (both proven and unproven) that are reoffences. This can be rephrased as reoffences are just as likely to be proven as offences in general. Thus, a reoffence is just as likely to be proven as a first-time offence. This is the main assumption underpinning this report.

Quality

It is plausible that reoffences do not have the same probability of being proven as first-time offences. On the one hand, if police concentrate their efforts on offenders already known to the justice system – on whom they hold photographs, DNA, fingerprint records, and soft intelligence – they might be more likely to be proven; on the other, experienced offenders may have become better at not getting caught, which might result in reoffences being less likely to be proven. There is little evidence on what extent of reoffending ends up proven. The best indication of unproven (including unreported) crime, the CSEW, cannot distinguish between first-time and reoffences. Studies (e.g. the Arrestee Survey and the Offending, Crime and Justice Survey) have been conducted to look at reoffending history/reoffending rates amongst offenders; however, these typically focus on certain cohorts of offenders (eg. drug misusing offenders) and so findings cannot necessarily be extrapolated to determine what this would mean for wider reoffending. Therefore, there is no clear indication of which direction or to what extent this assumption holds.

Impact

The proportion of offences that are proven offences is used as a multiplier to estimate the total number of reoffences from the proven reoffences figures. If reoffences are more/less likely to be proven than offences overall, then it would be this multiplier that would need adjusting to account for this. One can alter this by plus and minus 10%, to see how much impact a variation in this multiplier would have. This variation was linear with the final cost figure. The final costs after variation were 10% above and below the total estimate of the costs of reoffending, respectively.

Use of Crime Severity Scores

It is assumed that crime severity as given by the CSS is an accurate proxy for economic unit costs of offences.

Quality

A regression is not assumed, but correlation in ranking would strengthen the case for this assumption as offences requiring a proxy are given the unit costs of the closest neighbour in CSS. The main cause of uncertainty in the use of this mapping system is that inaccurate mappings might be made, such that offences with a low crime severity might be mapped to an unusually high unit cost. Fortunately, a strong correlation between ranks of unit cost and weighted CSS was found. This strengthens this assumption.



Figure 10: Correlation between ESCC unit cost ranks and their respective weighted average CSS ranking (Pearson's r = 0.69)

Crime severity of reoffences

It is assumed that for any offence type, the severity of that offence as measured by the CSS remains the same whether that offence is a reoffence or not. Alternatively, it is assumed that the proportional change in CSS between offences in general and reoffences is the same across all offence types, and thus the mapping would remain the same.

Quality

It would be possible to recreate a separate crime severity measure just for reoffences using the same methodology as the CSS, which builds on sentencing data and guidelines. However, that data would need to be available for each individual offence type, which would be too resource-intensive to commission. Therefore, it is difficult to ascertain whether this assumption is likely to be incorrect, and to what extent.

Cost of crime for reoffences

It is assumed that the average cost to society of a reoffence is no different to the average cost of all crimes.

Quality

It is known from the court outcomes data that, on average, reoffences receive more severe sentences than first-time offences. This would suggest that the CJS costs for a reoffence may be greater than for offences overall, and therefore the unit costs for reoffences are underestimated. However, for the other cost categories, there is no evidence to suggest that reoffenders commit crimes that are costlier in anticipation or as a consequence of them. Some concerns have been raised though regarding crimes such as domestic violence and/or sexual offences where repeated offences may have a larger cost associated as a consequence of them occurring. These could be a focus for future research.

Impact

As with the multiplier on the extent of reoffending, any change at the unit costs stage will translate linearly through to the final cost: if one assumes that reoffences of all types cost on average 10% more than offences in general for example, then the total cost turns out to be precisely 10% more than the current estimate.

Cost categories for offence proxies

When identifying a proxy for crime types for which there are no unit costs provided by the ESCC from one of the crime types that do have one, it is considered whether each of the cost basket breakdowns would apply to the offence that needs to be proxied. For example, for drug offences or possession of weapons offences it is reasonable to assume there would not be any cost attributable to "value of property damaged/stolen". Therefore, if these end up being matched against a theft or criminal damage offence for their proxy, it would not be appropriate to include that particular cost basket.

Quality

These assignments are based on judgment calls, and so will only be as accurate as the understanding the authors of this report have of the various crime types and how they impact society.

Impact

The impact of this assumption can be assessed by changing the assignment of cost categories considered relevant for each crime type which needs to be proxied. An upper bound can be obtained by taking all costs as relevant for all offence types that are proxied,

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and a sensible lower bound would be to set only the CJS costs as applicable to each group as given in this report. This gives a range of £270 million for reoffences by adults and £32 million for reoffences by children and young people. Therefore, the impact of this assumption is relatively low.

Disaggregation of personal and commercial crime

The ESCC report estimates that, for certain crime types, there is a strong difference between the unit costs when the victims are civilians and when they are businesses. As such, it provides two separate unit costs for these offences, to distinguish between personal and commercial crime. In all other instances of crime reporting however, such as in PRC and the reoffending statistics, all personal and commercial crimes are recorded together and not broken down in this way. Therefore, a method to apportion the PRC/reoffending volumes into the personal/commercial split is needed, to make meaningful use of the ESCC unit costs.

To do this, the Crime Survey for England and Wales (CSEW) is drawn upon for an indication of the levels of personal crime, and the Commercial Victimisation Survey (CVS) for commercial crimes – care must be taken with the latter however, as this does not cover all business sectors. These are estimates of wider crime (including those which go unrecorded by the police), so it has to be assumed that the percentage of PRC that is personal rather than commercial is the same of that of wider crime; in essence, that crimes against individuals are equally as likely to be recorded by the police as those against businesses.

Impact

If all reoffences by adults are committed against individuals and there is no commercial element, the total cost would change to £15.7 billion; if they were all against businesses and there was no personal element, it would be £18.8 billion. This gives a range of £3.1 billion, but with rather weak upper and lower bounds, as there will almost certainly be a mix of personal and commercial crimes within reoffending. This range for reoffences by children and young people would be £1.4 billion to £1.6 billion.



Figure 11: Range in cost estimates produced by variation in the proportion of personal crimes to commercial crimes for reoffences by adults

Disaggregation of fraud and cybercrime

In a similar vein to the split between personal and commercial offences described above, the ESCC provides separate unit costs for both fraud and cybercrime, whereas in the reoffending data this is all just grouped under fraud. To apportion this between the two, statistics generated from data by the National Fraud Intelligence Bureau (NFIB) are used, which collates the offences recorded by the various fraud agencies and breaks these down by type, including those that are computer misuse and cybercrime. This gives a proportion of fraud offences that are specifically cybercrime, which it is assumed will be the same among those fraud offences are reoffences.

Impact

If it is assumed that no fraud reoffences by adults are cybercrimes, the estimate would change to £16.7 billion - this is a very small difference of only £14.0 million, as not only does cybercrime have a smaller unit cost than other fraud offences, but the NFIB proportions that the main estimate uses have only a small proportion of cybercrime anyway. At the other end of the scale, assuming that all fraud reoffences are in fact cybercrimes gets an estimate of £16.0 billion - a much larger difference. Therefore, as any split between fraud and cybercrime would give an estimate within a range of £640 million, this assumption can be considered to be of low impact. This range for reoffences by children and young people would be £1.4 billion to £1.5 billion.