The Effect of Early Release of Prisoners on Home Detention Curfew (HDC) on Recidivism

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N.B. This is a long version of Ministry of Justice Research Summary Report 1/11. A more elaborate and 'academic' paper using the basic same results with the title "*The Best Ones Come Out First! Early Release and Recidivism: A Regression Discontinuity Approach*" will be prepared for the NBER presentation of this research on July 28th 2011

Implications

- Home Detention Curfew (HDC) was introduced across England and Wales in January 1999 and was aimed at enabling early release for offenders who had received shorter term custodial sentences and who also posed a less serious threat of re-offending upon release.

- The issue of early release from prison remains a highly charged and contentious one. Some argue that it may reduce the deterrent effect of custodial punishments and some offenders could commit crimes while they should still have been in incapacitated.

- The cost of managing an offender on HDC is much lower than that of keeping the offender in prison. Therefore, in terms of cost-benefit societal value, a minimum requirement for HDC would be that it does not *increase* the offending of those released early.

- This evaluation has shown that the impact of HDC exceeds this minimum requirement by reducing re-offending by 6 percentage points in the one year following completion of the programme.

However, when including individuals who failed to complete their time on HDC (recalls), the impact of the policy on recidivism falls to 4 percentage points and is no longer statistically significant.

- These findings suggest that HDC is a relatively successful policy to reduce re-offending which would benefit from improvements in the selection of prisoners into the programme to avoid recalls. The number and nature of the criminal history of individuals appear as good predictors of which prisoners will not complete HDC. .

Executive summary

Introduction

The issue of early release from prison remains a highly charged and contentious one. Some argue that it may reduce the deterrent effect of custodial punishments on post release criminal behaviour and also that some offenders could commit crimes while they should still have been incapacitated.

Home Detention Curfew (HDC) was introduced across England and Wales in January 1999 and was aimed at enabling early release for offenders who had received shorter term custodial sentences and who also posed a less serious threat of re-offending upon release.

There is a lack of evidence available on the impact of HDC on recidivism. One of the reasons for this is that the offenders selected for the scheme are those who are already the least likely to re-offend, making it difficult to do straight comparisons between those offenders given HDC and those who are not.

Methods

This research explored the issue of the effectiveness of HDC through using a variety of quasi-experimental evaluation techniques; assesses the advantages and disadvantages of these techniques and presents the findings in relation to the impact of HDC on re-offending. A combination of Ordinary Least Squares (OLS), Propensity Score Matching (PSM) and Regression Discontinuity Design (RDD) methodologies was used.

Through using a combination of OLS and PSM methods it was possible to conduct analysis that took account of the key characteristics of individuals that could be observed and affect selection for HDC. Through using the RDD method thanks to an administrative rule limiting eligibility to HDC for sentences over three months, it was possible to not only consider these observable characteristics but also the unobservable factors affecting selection for HDC such as behaviour whilst in prison.

Data and descriptive statistics

The study used data on the criminal history and sentence of every offender released from custody in England and Wales between January 2000 and March 2006. 318,000

individuals were released during this time. However, some had multiple discharges during this period but since HDC is only available after a first custodial sentence we only consider their first discharge from prison. Once those who had committed certain types of offence (e.g. sexual offences) and those who received sentences less than or greater than three months to four years (i.e. eligibility to HDC period) were all removed from the sample, this left a final sub-sample of 183,900 individuals.

The analysis showed that there were some important differences between offenders who were released on HDC and those who were not. For example there was a larger proportion of women released on HDC than those who were not. The prisoners selected for HDC were also on average older and had committed twice as few crimes in the past.

Two measures of re-offending are considered for HDC participants in the analysis: excluding and including time spent on HDC. The first measure counts any arrests once HDC prisoners have completed the programme successfully as recidivism. The second measure starts earlier and includes any crime committed wile on HDC and recalls to prison for breaches of curfew conditions. This is important since a little over 8 percent of HDC released prisoners in our sample are recalled.

Results

The OLS/PSM methodologies found very large differences in re-offending between those offenders released on HDC and those who were not, even when controlling for observable differences between the two groups. This is true whichever re-offending measure was used although the estimated impacts were relatively smaller when we included time spent on HDC. However, it is not possible to conclude that these large decreases in recidivism are a definite result of HDC in view of the possible differences in unobservable characteristics of the two groups of offenders (such as behaviour in prison).

The RDD methodology using a discontinuity in eligibility by sentencing length provided more robust findings as it also allowed for the potential unobservable differences between those who got HDC and those who did not.

The RDD methodology found that HDC caused a statistically significant 6 percentage point decrease in re-offending over the following one year period after successful completion of the scheme. The comparable estimated impact of HDC on two year recidivism was 3.2 percentage points but this was not statistically significant. When we

include time on HDC to measure re-offending, the estimated impacts 12 and 24 months after release fall to respectively 4 and 2.6 percentage points and are no longer significant.

These estimates suggest that when a prisoner is released on HDC, in the short term, it does significantly reduce re-offending if he/she is not recalled for breaching curfew conditions. The effect of the policy in the longer run and when time spent on HDC is included point in the same direction although they are not estimated precisely enough . Importantly these impact estimates are much smaller than when OLS and PSM were used. This is likely to be because the earlier analysis was not able to account for unobservable differences between those offenders who were selected for HDC release and those who were not.

Conclusion

This evaluation of the impact of early discharge from prison on Home Detention Curfew produced evidence that participants were less likely or at least no more likely to engage in criminal behaviour after release when compared to offenders with similar characteristics who were not eligible for early release on HDC. One should be still be careful not to conclude that extending the scheme to all prisoners discharged will have a similar impact on recidivism. The aim of this report is to establish of the effect of HDC on re-offending behaviour in its current state and the results indicate that it is a socially beneficial policy. They also suggest that certain improvements in the selection of prisoners for HDC to avoid recalls would further increase its success in reducing recidivism.

A natural question to ask is what is the reason that recidivism fell for HDC participants relative to their non-participating peers? One could suggest that the relatively small difference in the time spent in custody as a result of the scheme is crucial in avoiding ‘prisonisation’ or loss of contact with civil society while incarcerated. Another possibility is that reduced discharge on curfew orders are a form of ‘social contract’ with the released prisoner with strong positive effect for rehabilitation. The overall conclusion is therefore that HDC as an early release package works in reducing re-offending although the exact mechanism which achieves this remains uncertain.

1. Introduction

The issue of early release from prison remains a highly charged and contentious one. Some argue that it may reduce the deterrent effect of custodial punishments on post release criminal behaviour and also that some offenders could commit crimes while they should still have been incapacitated. The problems of prison over-crowding and very high recidivism rates after release have called for the consideration of other options than imprisonment. An alternative punishment should aim to maintain a level of control on the offender while improve rehabilitation to reduce recidivism. This is the aim of the Home Detention Curfew (HDC) scheme which was introduced across England and Wales in January 1999. Prisoners sentenced for at least three months and no more than four years in custody were eligible for early release on an electronic monitored curfew for up to half of their custodial sentence. That is provided they passed a risk assessment and were able to give a suitable residential address. Although the scheme had been ongoing for a decade, a House of Commons Committee of Public Accounts report in 2006 concluded that:

> "There is insufficient evidence available to determine whether electronic monitoring helps to reduce re-offending or promote rehabilitation. The Home Office should carry out further research to establish the role that electronic monitoring could play in minimising re-offending. It should make the results of the research available to courts and prisons, which make decisions on whether to place offenders on curfews."[1]

The reason for the lack of evidence on the impact of HDC on recidivism is due to the selection of prisoners into the program. The individuals with the lowest re-offending risk are the ones most likely to be chosen for early release. Consequently it is very difficult to generate estimates of the policy impact on recidivism which are not biased by this selection. Simple analysis which does not consider this issue is therefore likely to find that prisoners released on HDC are much less likely to re-offend than those who are not. However, this is not an accurate assessment of the impact of HDC as prisoners who are released early on electronic monitoring would be less likely to offend anyway. Results from analysis which controls and matches on observable characteristics of prisoners (such as age, gender, and previous criminal history) should improve the accuracy of an

[1] House of Commons Committee of Public Accounts (2006) "The Electronic Monitoring of Adult Offenders", Conclusion 6, p.4

assessment of the effectiveness of HDC. However, if individuals released on HDC are also selected on characteristics which cannot be observed in the available data (e.g. general behaviour in prison), then an evaluation may still yield biased results. Other methodologies to assess the impact of HDC therefore need to be considered.

The analysis of HDC reported here exploits a rule which makes offenders receiving sentences less than three months ineligible for the program. This allows the results to provide an unbiased estimate of impact using a methodology known as regression discontinuity design (RDD). This methodology controls for both observable and unobservable characteristics assuming that the latter are relatively randomly distributed around the three month sentence eligibility threshold.

Chapter 2 briefly discusses the HDC scheme and then focuses on issues to do with eligibility for selection and the methodological approach adopted to take into account this selection. Chapter 3 offers a description of the data used and presents some descriptive statistics. Chapter 4 presents the results from the statistical modelling. Chapter 5 contains a discussion of the main findings and other concluding remarks.

2. The HDC Scheme, Issues of Selection and Methodological Approach

The Home Detention Curfew (HDC) Scheme

The Home Detention Curfew (HDC) scheme applies to prisoners who are serving sentences of between three months and under four years. It allows them to live outside of prison providing they do not breach the rules of their curfew and is designed to help them prepare for life after their release. Prisoners released on HDC have to sign a licence enforcing the times when they need to remain at their home address or hostel (this is normally 7pm – 7am). An electronic tag is fitted to the individual and monitoring equipment installed at the residential address by a private contractor. If an individual does not respect these conditions or commits an offence he/she is recalled to prison to complete the rest of his/her sentence[2].

Table 1 describes the salient features of the HDC scheme in terms of sentence length, custodial period and the time spent on HDC. There are clear cut-off periods for eligibility and the time spent on HDC. These clear, discrete, cut-off thresholds are important for the methodological approach used here for evaluating HDC, which is described below.

Table 1: Sentence Length, Custodial Period, and Period on HDC

Length of sentence given by the court	Actual time spent in custody	Custodial period to be served if HDC granted	Period on HDC
< 3 Months	< 6 Weeks	Not eligible	-
3 Months	6 Weeks	4 Weeks	2 Weeks
6 Months	3 Months	6 Weeks	6 Weeks
12 Months	6 Months	3 Months	3 Months
18 Months	9 Months	4.5 Months	4.5 Months
2 Years	1 Year	7.5 Months	4.5 Months
< 4 Years	< 2 Years	1 Year 7.5 Months	4.5 Months
> 4 Years	> 2 Years	Not eligible	-

[2] The is a crucial issue which we carefully explore by considering a re-offending measure which includes time spent on HDC in our analysis of the impact of the policy below.

The majority of offenders with custodial sentences between three months and four years are, at least in principle, considered for early release on HDC. However, there are a number of statutory exclusions – in addition to the sentence time limit - which are that the scheme is sex offenders and individuals who have breached previous orders are disqualified[3] from taking part.

Most other prisoners are theoretically eligible for early release on HDC, but must first be assessed according to the two following essential criteria. Firstly, offenders must pass a risk assessment conducted by the prison where s/he is held. This takes into account previous offending history and other behavioural attributes which could indicate that the prisoner may be likely to breach trust (e.g. breach of bail conditions). The prison staff also looks at the general behaviour of the offender while incarcerated and participation in offending behaviour programs. These elements are taken into account to ascertain low risk of re-offending for eligibility for early release on HDC. The second criterion is the need to have an appropriate address which enables the National Probation Service to provide a home circumstances report. This report ensures that the proposed curfew address is suitable and that the risks of the prisoner to the public and of re-offending are acceptable at this address. This is then passed on to the prison which makes a final decision on HDC eligibility.

If at any stage in this assessment it becomes apparent that the individual is not eligible for HDC, the process is stopped and the prisoner will serve the rest of his/her sentence in prison. An average one third of prisoners who were eligible for HDC were released early and spent part of their custodial sentence on electronic monitoring curfew in the six years of data examined in this study. This represents a substantial number of prisoners going through the HDC scheme. However, there has been no robust evaluation of the impact HDC on future criminal behaviour.

Issues of Selection and Modelling Approach

As discussed earlier in the report, the reason why the impact of HDC on recidivism has `not yet been robustly evaluated is mainly because there are important selection issues for participation in the scheme which are very likely to bias estimation attempts that do not take these into account. The brief description on eligibility above makes it clear, for

[3] In practice, a proportion of individuals who had breached in the past were selected for HDC. This is likely to be due to lack of information on past criminal history from the prison services. These offenders were therefore included in this sample and previous breaches were controlled for.

example, that HDC is more likely to be granted to offenders with a low risk of re-offending. This means that the selection process for the scheme will certainly influence the outcome of interest, namely the probability of re-offending.

Conceptually an ideal empirical comparison would look at the prisoner's probability of committing a crime after early release on HDC to an identical prisoner who remained in custody until the end of his/her custodial sentence. However, in practice, even if the analysis controlled for a large number of *observable* characteristics of prisoners (e.g. related to their risk of re-offending), it is very clear in the case of HDC that some of the decisions on eligibility to the scheme are discretionary and hence *unobservable* (e.g. prison staff opinion of prisoner behaviour). It is therefore important to consider the best methodology to deal with these selection issues carefully.

Methodology

The main problem faced in estimating the impact of HDC on recidivism is that the characteristics (both observable and unobservable) of offenders which are used to decide eligibility are also likely to influence re-offending. This research therefore included two methods of assessing the impact of HDC on re-offending. The first uses Ordinary Least Squares (OLS) regression and Propensity Score Matching (PSM) to evaluate HDC controlling for observable selection factors such as age, gender, criminal history, etc. The second uses Regression Discontinuity Design (RDD) which potentially can also deal with the issue that offenders are also selected for HDC on unobservable factors such as their behaviour whilst in prison.

To use RDD, the analysis will focus on the fact that offenders with a sentence less than three months are not eligible for HDC while offenders with a sentence longer than three months (but less than four years) are eligible for HDC. The three month cut-off for eligibility/ineligibility is arbitrary in that the characteristics (observable and unobservable) of offenders on either side of the threshold should be relatively similar. This is despite the fact that sentencing length is a decisive factor affecting whether or not an offender is eligible for HDC. When using this methodology, it is essential to statistically inspect if the observable characteristics of offenders (such as past criminal history) above and below the sentencing threshold are similar or continuous and do not change significantly at the three month point.

If re-offending rates are analysed for all offenders on either side of the cut off and there is a clear 'jump' in terms of lower/higher re-offending around the three month sentencing point (the regression discontinuity) then this can be reasonably attributed to the impact of the policy. It is important to note that the RDD we are exploiting is not 'sharp' in the sense that eligibility above the minimum sentencing threshold does not mean certainty of release on HDC. This implies that, to measure the effect of the policy, we must divide any observed difference in recidivism around the cut-off by the proportion (0 to 1) of HDC releases after the three months threshold[4]. A more detailed description of the OLS/PSM and RDD methodologies is provided in the Appendix.

[4] It is important to note that RDD methodology will yield estimates which are Local Average Treatment Effects (LATEs) of the impact of HDC on recidivism. In the present setting, it will measure the effect on re-offending of extending the policy to the sample of prisoners sentenced to less than the three months eligibility threshold. These LATE estimates will therefore not measure the impact of HDC for the entire population of prisoners released on the scheme but they will be unbiased estimates of this impact.

3. Data and Descriptive Statistics

This chapter discusses the data that were used in this research and presents some descriptive characteristics for the individuals in the sample. The relevance of using RDD in view of the data is also discussed.

Data

This study used detailed information on the sentence of every offender released from custody in England and Wales between January 2000 and March 2006 from the Local Inmate Database System (LIDS). This data contained almost 500,000 discharges for about 305,000 unique individuals due to multiple releases over this period. Data on sentence length; the crime offenders were sent to prison for; whether or not he/she was released on HDC; date discharged; and date convicted, was matched to the Police National Computer (PNC) using the full name and date of birth of offenders, with a 95 percent success rate. The resulting dataset contained information on the arrest and conviction histories of all prisoners' pre and post-release (up to March 2008) in addition to sentencing details.

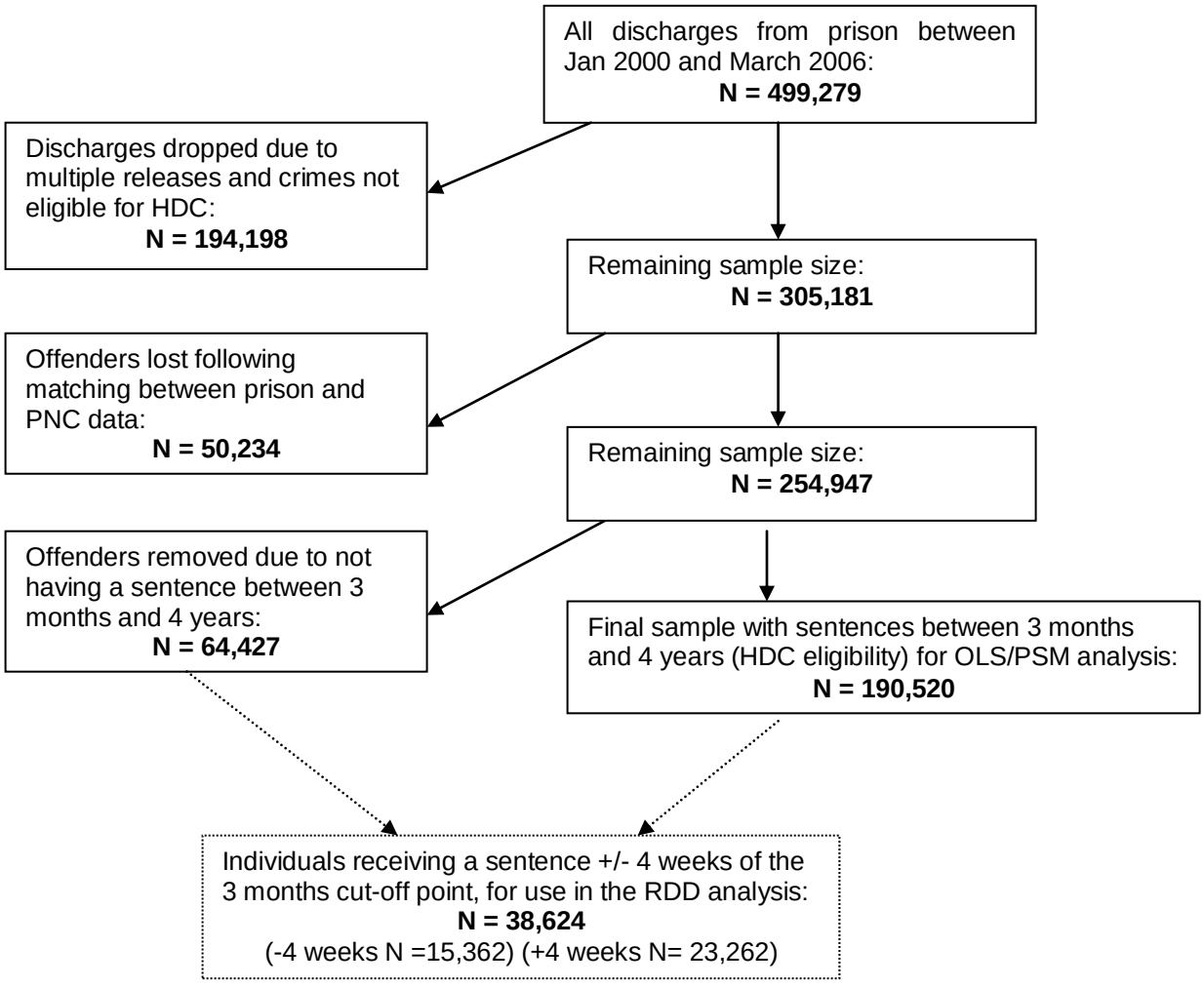
All but the first discharge for individuals that had multiple prison spells during the six year period studied were excluded from the research because eligibility for HDC is only available after a first custodial sentence[5]. All prisoners who were received custodial sentences for crimes which made them ineligible for HDC (e.g. sexual offences) were also excluded from the dataset. A difficulty arose in matching the crime for which individuals were serving a sentence in the prison data with the multiple crimes recorded for these same individuals on the PNC. Using various dates (charged, sentenced, initial remand) available in the data, and windows of +/- seven days to allow for imputing delay or error, a 94 percent match was obtained which resulted in a final sample of just under 255,000 individuals.

Eligibility for HDC is restricted to individuals sentenced to three months to four years. The first part of our analysis will therefore focus on this sub-sample which represents 75 percent of prisoners released during the period covered by this analysis, or 190,500 individuals.

[5] Table A1 of the Appendix shows the main differences in characteristics of prisoners with single and multiple discharges.

The use of the RDD model meant that different samples before and after the three month eligibility limit were considered. Individuals who received sentences greater than and less than four weeks on either side of the threshold were chosen for the final analysis (this is discussed below). This represents over 38,000 discharges, a relatively large sample.

Figure 1: Data Used and Sample Refinement



Recidivism Measures

The definition of re-offending we use is if an ex-prisoner reappears in the PNC because of an arrest within 12 or 24 months of discharge. For individuals not released on HDC this follow up time simply starts from the day of discharge from prison. For individuals released on HDC it is possible to consider two follow up periods: (i) including time on

HDC and (ii) excluding time on HDC. These different starting points for measuring recidivism are perhaps best graphically illustrated as in Figure 2.

Figure 2: Possible Recidivism Measures by HDC Discharge Status

<table>
<tr><td>No HDC</td><td>Prison</td><td>Prison</td><td>In community (no HDC)</td></tr>
<tr><td></td><td></td><td></td><td>12-24 months follow up:
recidivism measure for non-HDC discharges</td></tr>
</table>

<table>
<tr><td>HDC</td><td>Prison</td><td>On HDC in community</td><td>In community (no HDC)</td></tr>
<tr><td>(i)</td><td></td><td colspan="2">12-24 months follow up:
recidivism measure including time on HDC</td></tr>
<tr><td>(ii)</td><td></td><td>Not Recalled</td><td>12-24 Months follow up:
recidivism measure excluding time on HDC</td></tr>
</table>

Recidivism measure (i) for the HDC released prisoners starts on the day they finish their custodial sentence and includes the time they spend electronically monitored but in the community. This implies that a recall for breaching HDC conditions is counted as re-offending in addition to a PNC arrests during this period. This can be defined as a failure to complete HDC and this is the case for 10.4 percent of prisoners discharged on the scheme. This is a relatively high failure rate but one should note that more that 80 percent of recalls are due to breaches in curfew orders. It is also important to consider that this recidivism measure will not yield an impact of HDC completion on re-offending but rather the effect of early release from prison (with a monitoring period).

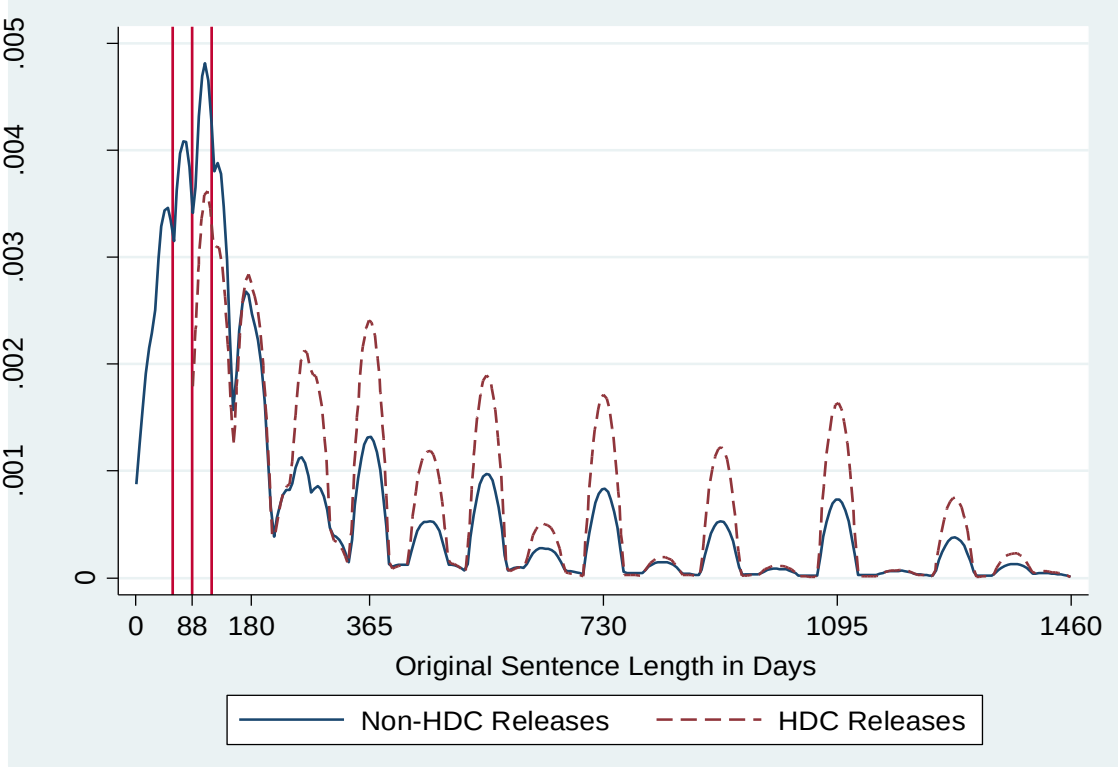
Recidivism measure (ii) for HDC released prisoners starts on the day they complete their electronic monitoring period. It excludes the time spent on HDC and is therefore only applicable to the almost 90 percent of individuals who are not recalled and complete the scheme.

Descriptive Statistics

Figure 3 below shows the distribution of original sentences given by the courts by non-HDC (plain line) and HDC (dotted line) discharge status. This graph confirms that no prisoners were released early on electronic monitoring if he/she received a sentence shorter than 88 days or 3 months. The graph also illustrates that the majority of sentences given in England and Wales were relatively short, with the largest proportion of prison sentences received being under eight months. There are also large peaks in the sentences given at particular numbers of days which correspond to the standard

lengths available to judges. The vertical lines on the graph show the three month threshold for being eligible for HDC and the sample to be used for the RDD analysis.

Figure 3: Distribution of Original Sentence Lengths in Days by Discharge Type



Note: Vertical lines show HDC eligibility threshold and sample before and after used for RDD analysis[6].

Table 2 reports the main descriptive characteristics for prisoners sentenced to between three months and four years by discharge type Non-HDC or HDC. For HDC releases, we consider the samples *excluding*, in column [2], and *including*, in column [3], time on electronic monitoring for our recidivism measures. It also reports the differences in the characteristics and recidivism rates across the Non-HDC and the two HDC groups in columns [4] and [5].

[6] The lines on all the graphs have been smoothed using 14 days local averages.

Table 2: Descriptive Characteristics of Prisoners by Discharge Type and Excluding or Not Recalled from HDC

Descriptive Characteristics of Prisoners Released on HDC or Otherwise who Receive Sentences Between 3 Months and 4 Years (HDC Eligibility Period)

	[1]	[2]	[3]	[4]	[5]
Discharge Type	**Non HDC**	**HDC Excluding**	**HDC Including**	**Difference [1] - [2]**	**Difference [1] - [3]**
Female	7.4%	10.7%	11%	3.3% (.1)	3.7% (.1)
Mean Age at Release	27.9	31.2	31	3.4 (.05)	3.1 (.05)
Incarcerated for Violence	25.4%	27.6%	27.7%	2.1% (.2)	2.3% (.2)
Breached in Past	25.2%	12%	12.9%	-13.4% (.2)	-12.3% (.2)
Mean Number Previous Offences	9.5	4.8	5.1	-4.7 (.3)	-4.4 (.3)
Proportion Sentence Custodial	42%	30.5%	30.3%	-11.4% (.2)	-11.6% (.0)
Re-offended within 12 Months	51.4%	14.8%	23.7%	-36.6% (.2)	-27.7% (.2)
Re-offended within 24 Months	68.5%	27.7%	31.9%	-39.7% (.2)	-35.6% (.2)
Proportion Recalled from HDC	-	0%	10.4%	-	-
Sample Size	126,906	56,974	63,584	-	-

Notes: Re-offending within 12 and 24 months is calculated *excluding* time spent on HDC for the HDC Excluding sample and *including* time spent on HDC Including sample. The 10.4 percent of HDC discharged prisoners which were recalled for breaching the terms of their curfew or re-offended while electronically monitored are excluded from the HDC Including sample. A recall is counted as re-offending in the HDC Including sample.

Table 2 shows the important differences in terms of observable characteristics between offenders who were released on HDC and those who were not. For example there were a larger proportion of women released on HDC and the prisoners selected for the scheme were on average three years older and had committed twice as few crimes in the past.

Looking at re-offending one and two years after release, there are very large differences between the Non-HDC and HDC released prisoners, whether we measure it including or excluding time spent on electronic monitoring. Recidivism rates for HDC released prisoners are obviously higher when we consider those who failed to conclude the

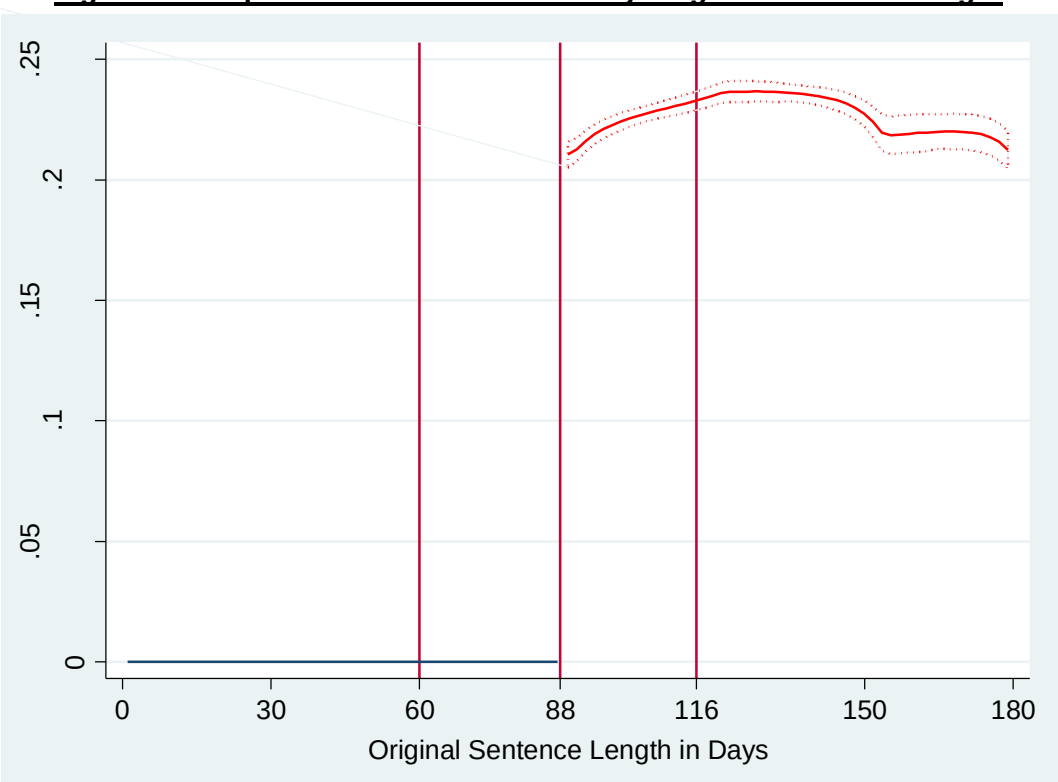
scheme since they are all counted as having re-offended. Still, the probability of being arrested one to two years after release was between 28 to 40 percentage points lower for HDC than Non-HDC released prisoners. It is not possible to conclude that these large decreases in recidivism are a result of HDC since they could be explained by the important differences in observable characteristics between the prisoners selected or not for the scheme..

The first step of the statistical analysis of the impact of the policy thus focuses on controlling for these characteristics. The OLS and PSM methodologies do this successfully. However it will not solve the selection problem if there are *unobserved* differences between the HDC and Non-HDC discharged prisoner (for example, differences in prison behaviour).

Suitability of Regression Discontinuity Design

The essential premise to applying RDD is to have a cut-off point at which there is discontinuity in the treatment variable (in this case, in eligibility for receiving HDC or not). Figure 4 plots the length of sentences received by offenders, against the proportion of offenders released on HDC. There is a clear discontinuity at 88 days (3 months) where none of the prisoners sentenced to less than 88 days are released on the scheme while a quarter of those after the threshold are.

Figure 4 : Proportion Released on HDC by Original Sentence Length



Note: Dotted lines show the confidence interval.

Figure 4 also features vertical lines at the three month threshold and twenty eight days before and after. This is the sample used for the RDD analysis. The time period of + and – four weeks (28 days) was selected to find the best match of offenders (in terms of observable characteristics) on either side of the three month cut-off point[7].

Table 4: Descriptive Statistics of Prisoners by Original Sentence Length

Characteristics of Prisoners Released Who were Sentenced to 4 Weeks Less than or 4 weeks more than the 3 Months Threshold for HDC Eligibility

	[1]	[2]	[3]	[4]	[5]
Discharge Type	**- 4 Weeks**	**+ 4 Weeks Excluding**	**+ 4 Weeks Including**	**Difference [1] - [2]**	**Difference [1] - [3]**
Female	11.4%	10.4%	10.4%	-1% (.3)	-1% (.3)
Mean Age at Release	29.9	30	30	0.1 (0.1)	0.1 (0.1)
Incarcerated for Violence	19.2%	20%	20%	0.8 (.4)	0.8% (.4)
Breached in Past	26.5%	26.5%	26.4%	-0.0% (.5)	-0.0% (.5)
Mean Number Previous Offences	8.3	8.6	8.3	0.3 (0.1)	0.3 (0.1)
Proportion Sentence Custodial	42.1%	39.7%	39.7%	-2.4% (.1)	-2.4% (.1)
Re-offended within 12 Months	47.5%	46.3%	46.7%	-1.2% (.5)	-0.8% (.5)
Re-offended within 24 Months	60.4%	59.8%	59.9%	-0.5% (0.5)	-0.5% (.5)
Proportion Released on HDC	0%	20.6%	21.1%	20.6% (.3)	21.1% (.3)
Proportion Recalled from HDC	-	0%	0.6%	-	-
Sample Size	15,362	23,115	23,262	-	-

Notes: The 2.3 percent of HDC discharged prisoners which were recalled to prison are excluded from the +4 Weeks Excluding sample. A recall is counted as re-offending in the +4 Weeks Including Sample. Re-offending within 12 and 24 months is calculated *excluding* time spent on HDC for the +4 Weeks Excluding sample and *including* time spent on +4 Weeks Excluding sample. Robust standard errors in parenthesis.

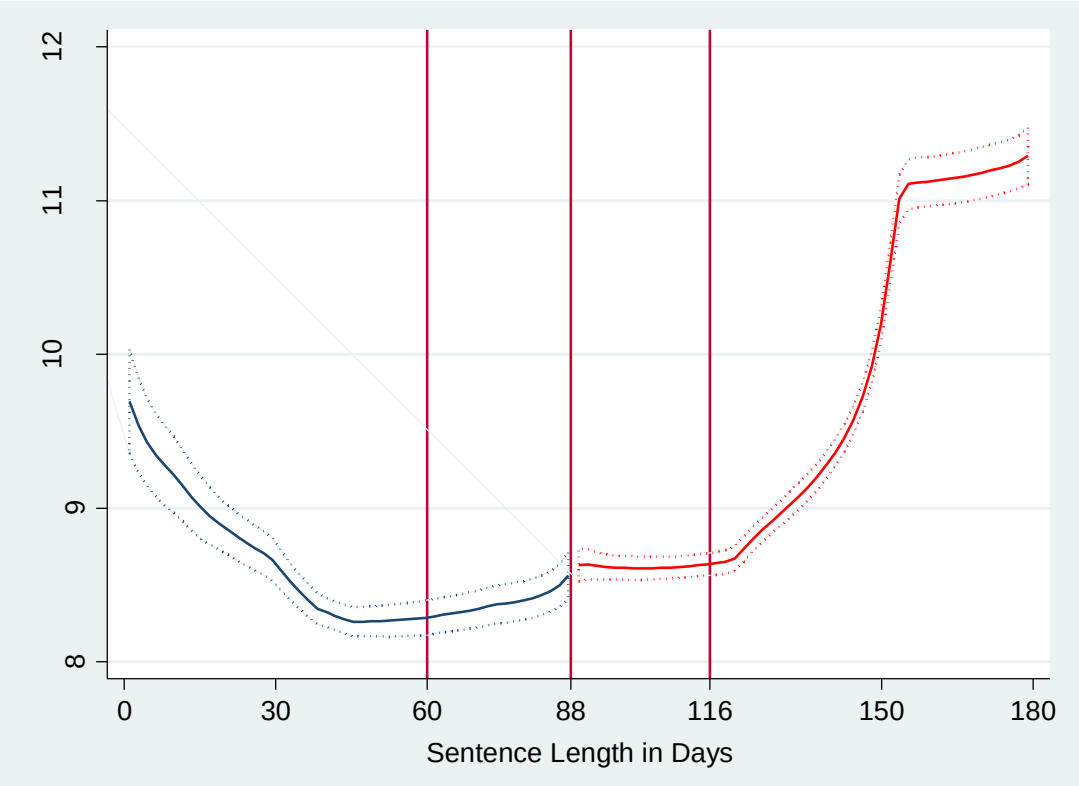
[7] See Appendix for an explanation and illustration of the methodology used to choose the best sample to use for this RDD.

Table 4 reports the main characteristics and recidivism rates of the individuals who received sentences 28 days less than and 28 days more than the 3 month threshold. We again distinguish between samples which exclude and include recalls to prison while on HDC in the +4 Weeks sample. Only 3 percent of HDC discharged prisoners who receive sentences between 3 and 4 months fail to complete the scheme representing 0.6 percent of offenders receiving sentences of this length.

Table 4 illustrates that the observable characteristics of our control group (- 4 weeks) and treated groups (+ 4 weeks excluding and including) of prisoners are very similar. If some differences are still significant, they are now very small relative to those in Table 3. For example on average the same proportion of women are released on either side of the threshold. Offenders in both groups are the same age in years and have committed on average the same number of offences in the past. Offenders who have sentences + 4 weeks of the threshold sentences spend slightly less relative proportional time in custody. However, this is expected as some of these offenders are released early on HDC. The recidivism rates of both groups are similar although somewhat lower for the + 4 weeks prisoners which is a first indication of a possible impact of the HDC scheme on re-offending behaviour.

To ensure the Regression Discontinuity design is appropriate, it is also important to ensure that there is no other variable (such as previous offending) which changes significantly at the three month point and might be related to future re-offending.

Figure 5: Mean Number of Previous Offences by Original Sentence Length



Note: Dotted lines show the confidence intervals.

Figure 5 shows the plot of mean number of previous offences by original sentence length. The distribution is U-shaped but clearly demonstrates that there is no discontinuity (or 'jump') around the 88 days threshold. All other observed prisoner characteristics display the same continuity graphically around the cut-off sentence length[8]. This is to be expected from the mean levels reported in Table 4 but these observable characteristics will control for to see if they make any difference to the RD estimates obtained.

[8] The figures of the distribution for all the prisoner observable characteristics are not reported here although they are available from the author on request.

4. Statistical Results

This chapter reports estimates of the relationship between HDC participation and recidivism using the two methodological approaches described above. The results from the OLS and PSM models using the whole HDC eligibility sample are reported first. The results from the RDD are then discussed. This enables a consideration of the difference in results obtained in view that the latter methodology should estimates which account for unobservable prisoner characteristics that may affect re-offending.

OLS and PSM Results

The first piece of analysis measured the raw effect of HDC on recidivism controlling for length of sentence but not for any other observed characteristics of prisoners selected into the scheme. The analysis was then augmented by controlling for a number of offender characteristics. These controls were: length of sentence in days, gender, age at release, number of previous offences, type of crime incarcerated for (burglary, drug offences, fraud and forgery, robbery, theft and handling, violence against the person, other offences, and offence not recorded), and month and year of discharge.

The results are given in columns [1] and [2],when time on HDC is excluded, and columns [4] and [5], when it is included, of Panels A (one year recidivism) and B (two years recidivism) of Table 5

When looking at the effect of HDC without controlling for any prisoner characteristics (columns [1] and [4]) the impacts are very large and statistically significant. They show decreases of at least one-fourth in recidivism rates for prisoners who were discharged on HDC. This is certainly an over-estimate of the impact of the scheme because it does not take into account that HDC selection depends on being a low re-offending risk prisoner.

The covariates included as controls (in column [2] and [5]) are used to take this into account. It is therefore not surprising to find that the estimated impacts of the policy on recidivism are therefore greatly reduced by the inclusion of prisoner characteristics. It remains large and significant with HDC cutting the chances of re-offending probability within one year of release by 12.1 percentage points including time on HDC and 20.1 percentage points when it is excluded.

Table 5: OLS and PSM Estimates of Impact of HDC on Recidivism

Panel A: Recidivism Within 12 Months of Release	**Estimation on Individuals Sentenced to Between 3 Months and 4 Years: HDC Eligibility**					
	Excluding Time on HDC			**Including Time On HDC**		
	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**
Original sentence length controlled for?	Yes	Yes	Yes	Yes	Yes	Yes
Offender characteristics controlled for?	No	Yes	Yes	No	Yes	Yes
Propensity Score Matching	No	No	Yes	No	No	Yes
Sample Size	183,908	183,908	183,908	190,518	190,518	190,518
Estimated Percentage Point Effect of HDC on Recidivism	**-35.1%** (0.2)	**-.20.5%** (0.2)	**-16.1%** (0.3)	**-26.3%** (0.2)	**-12.1%** (0.2)	**-8.4%** (0.3)
Panel B: Recidivism Within 24 Months of Release	**Estimation on Individuals Sentenced to Between 3 Months and 4 Years: HDC Eligibility**					
	Excluding Time on HDC			**Including Time On HDC**		
	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**
Original sentence length controlled for?	Yes	Yes	Yes	Yes	Yes	Yes
Offender characteristics controlled for?	No	Yes	Yes	No	Yes	Yes
Propensity Score Matching	No	No	Yes	No	No	Yes
Sample Size	183,908	183,908	183,908	190,518	190,518	190,518
Estimated Percentage Point Effect of HDC on Recidivism	**-38.6%** (0.2)	**-21.7%** (0.3)	**-17.2%** (0.4)	**-34.6%** (0.2)	**-18.6%** (0.2)	**-14.6%** (0.4)

Note: Excluding Time on HDC counts recidivism for HDC released prisoners from the time they have successfully completed the scheme. Including Time on HDC counts recidivism for HDC released prisoners from the time they are discharged from prison and include all recalls as re-offending. The Propensity Score Matching is done using 'nearest neighbours'. Robust standard errors in parenthesis.

Propensity Score Matching (PSM) is another method used to allow for the selection effects on observable factors in evaluating a programme or policy. This can allow for selection on a variety of observable factors to occur in a more flexible manner than in the

basic OLS design[9]. The resulting difference in recidivism rates between those receiving HDC and those not, when using propensity matching, are given in columns [3] and [6] of Table 5. HDC is shown to reduce recidivism probability by more than 16 percentage points when our reoffending measure for HDC released prisoners starts at the end of the electronic monitoring (column [3]). When the analysis includes time on HDC (column [6]) the estimated impact of the scheme is significantly smaller: reductions of 8.1 percent and 13.9 percentage points for one and two year recidivism respectively Overall, these PSM estimates are relatively consistent with the OLS ones although possibly more precise. However, they are still likely to be biased if there are unobservable characteristics impacting on the likelihood of being given HDC which might also affect recidivism[10]..

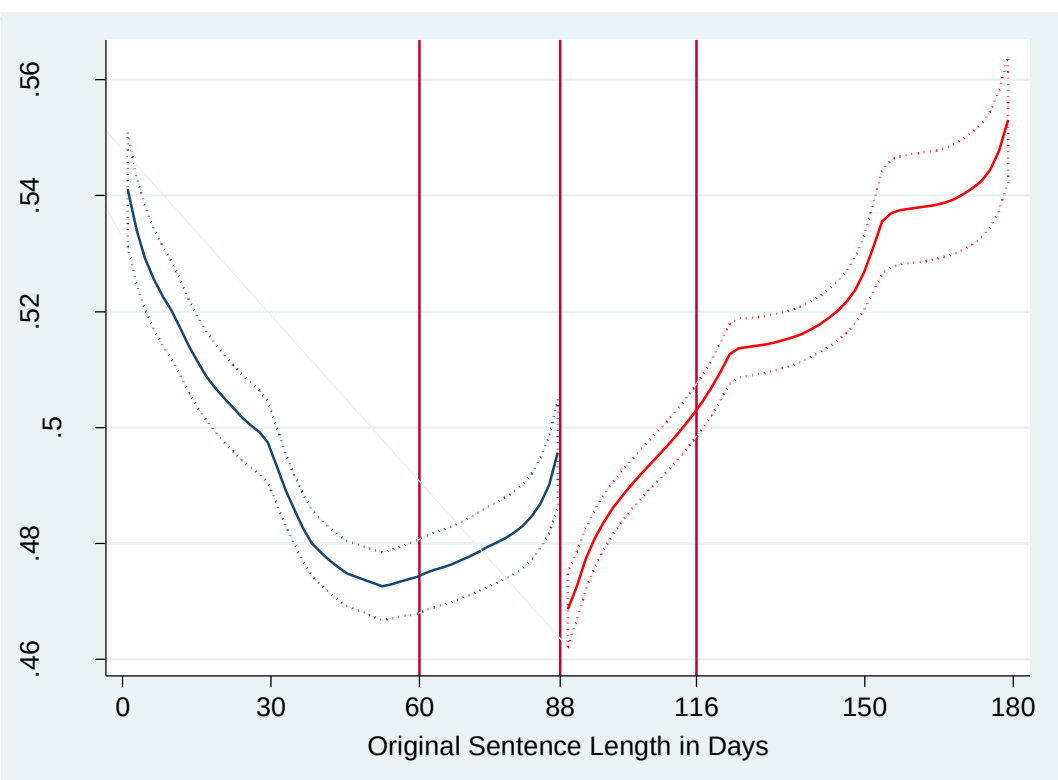
RDD Results

The RDD analysis looks at all offenders receiving a sentence of three months +/- four weeks. As discussed in the previous chapters, given that the cut-off of three months is arbitrary, it is very likely that prisoners are randomly distributed on either side of this sentencing threshold. Figure 6 plots the proportion of prisoners re-offending within a year of release by length of original sentence. It shows signs of a discontinuity around the three month threshold.

[9] A more detailed explanation of the propensity score matching methodology used here (i.e. nearest neighbour) is given in the Technical Appendix of the report. The marginal effects of each of the controls used to compute the propensity scores are given in Table A2.

[10] It is perhaps surprising to find that, for all specification, the estimated impact of HDC on recidivism appears to be stronger in the long (2 years) rather than in the short (1 year) run. A simple explanation for this could be that the importance of unobservable prisoner characteristics that influence both HDC selection and re-offending probability increase over time. The OLS and PSM models would not be able to take this mechanism into account.

Figure 6: Recidivism Rate within 12 Months of Release



Note: Dotted lines show the confidence intervals.

If everyone was discharged on HDC after 88 days then the estimated impact of receiving HDC on release would simply be the observed lower recidivism rates. However since only about one fifth of offenders with sentences over the threshold, are released on HDC, it is important to scale the measure of the impact. The results from this exercise are reported in columns [1] and [3] of Panels A and B of Table 5 below. For one year recidivism, HDC is shown to cause a statistically significant 5.8percentage points decrease in re-offending when time on HDC is excluded (column [1]). The equivalent estimated impact for two year recidivism in Panel B is 2.7 percentage points but this is not statistically significant. When measuring recidivism including time on HDC (column [3]), the effect of the policy is estimated to be reductions of 4 and 2 percentage points in one and two year re-offending probability respectively. Both these estimates are however not statistically significant and not much weight should be attributed to these findings.

Table 6: RD Estimates of HDC Impact on Recidivism

Panel A: Recidivism Within 12 Months of Release	**Estimation on Individuals Sentenced to Between 60 and 116 Days: +/- 4 Weeks**			
	Excluding Time on HDC		**Including Time On HDC**	
	[1]	**[2]**	**[3]**	**[4]**
Difference in percentage treated between offenders before and after the 3 month cut-off	20.6% (0.3)	20.5% (0.3)	21.1% (0.3)	21.0% (0.3)
Difference in Recidivism between offenders before and after the 3 month cut-off	-1.2% (0.5)	-1.2% (0.5)	-0.8% (0.5)	-0.9% (0.5)
Offender individual characteristics are controlled for?	No	Yes	No	Yes
Sample Size	38,477	38,477	38,624	38,624
Estimated Percentage Point Effect of HDC on Recidivism	***-5.8% (2.5)***	***-6.0% (2.3)***	***-4.0% (2.5)***	***-4.0% (2.3)***

Panel B: Recidivism Within 24 Months of Release	**Estimation on Individuals Sentenced to Between 60 and 116 Days: +/- 4 Weeks**			
	Excluding Time on HDC		**Including Time On HDC**	
	[1]	**[2]**	**[3]**	**[4]**
Difference in percentage treated between offenders before and after the 3 month cut-off	20.6% (0.3)	20.5% (0.3)	21.1% (0.3)	21.0% (0.3)
Difference in Recidivism between offenders before and after the 3 month cut-off	-0.6% (0.5)	-0.7% (0.5)	-0.5% (0.5)	-.0.5% (0.5)
Offender individual characteristics are controlled for?	No	Yes	No	Yes
Sample Size	38,477	38,477	38,624	38,624
Estimated Percentage Point Effect of HDC on Recidivism	***-2.7% (2.5)***	***-3.2% (2.2)***	***-2.2% (2.4)***	***-2.6% (2.2)***

Note: Excluding Time on HDC counts recidivism for HDC released prisoners from the time they have successfully completed the scheme. Including Time on HDC counts recidivism for HDC released prisoners from the time they are discharged from prison and include all recalls as re-offending. Robust standard errors in parenthesis.

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These estimates suggest that when a prisoner is released on HDC and is not recalled during the electronic monitoring period, it does reduce re-offending in the short term. The estimates are however not precise enough to be sure of its longer term effects or when failures to complete HDC are taken into account. Importantly these impact estimates are much smaller than the ones yielded by OLS and PSM. This is likely to be because the

earlier analysis was not able to account for unobservable differences between those offenders who were selected for HDC release and those who were not.

Columns [2] and [4] of table 6 use the RDD methodology but also control for observable characteristics of prisoners discharged around the threshold. Theoretically that should not change the estimates as it is expected that observable characteristics on either side of the cut-off are distributed randomly. The control variables used were the same as in the OLS analysis except that length of sentence was no longer controlled for[11]. This exercise yielded larger but not statistically different results to the previous column. This is reassuring since controlling for observable characteristics should not change the results and therefore confirms the validity of the use of the RDD methodology.

[11] This was because sentence length is automatically associated with whether or not an offender is before or after the three month sentencing threshold.

5. Conclusion

The most reliable estimates from this evaluation of the impact of early discharge from prison on Home Detention Curfew, based upon a Regression Discontinuity Design, produced evidence that successful participants were less likely to engage in criminal behaviour after release when compared to offenders with similar characteristics who were not eligible for early release on HDC. It is important to note that these estimates are smaller than those using other methods (OLS and PSM) which do not account for selection onto HDC based on unobservable factors which may also influence re-offending behaviour. The RDD analysis showed statistically significant 6 percentage points (or 12.8 percent) reduction in one year recidivism after release on HDC for prisoners who completed the scheme successfully. The results also suggest decreases in longer two year re-offending for this group but these estimates are not precisely determined. This presents tentative evidence that early release from prison on electronic monitoring appears to have succeeded in affecting future criminal behaviour positively.

One important caveat to this conclusion is that the individuals selected for HDC release are not recalled to prison for breaching their curfew conditions or re-offending while electronically monitored. This is the case for almost 90 percent of prisoners released early on the scheme and recalls represent only about 3 percent of HDC discharges in the + four weeks sample used for the RD analysis. Still, including this relatively small number of individuals renders the estimated impact of HDC on recidivism substantially smaller, at -4 percentage points, and no longer statistically significant. Even if the great majority of recalls are not for re-offending while electronic monitored but for breaching curfew conditions, this highlights one of the limitation of HDC.

To improve the efficiency of the policy would therefore entail reducing recalls by a better selection of prisoners for early release on the scheme. Comparing observable characteristics of recalled and not-recalled HDC discharged prisoners (Table A3 of the Appendix) shows that the latter are on average three years younger and were arrested half as often before their first custodial sentence. They were also substantially less likely to have breached curfew orders in the past and proportionally twice fewer were imprisoned for burglaries or robberies than those who failed to complete HDC. These

differences are quite marked and could be systematically included in the selection process for early release from prison on electronic monitoring[12].

The overall conclusion is therefore that HDC works as an early release package in reducing, or at least does not increasing, future re-offending even when considering individuals who complete their time on electronic monitoring. Its efficiency could however be improved by reducing the number of recalls to prison by enhancing the selection of prisoners to the scheme.

[12] All the criminal history variables used here are from the Police National Computer which may not be currently available to prisons who make the selection decision .

Technical Appendix

Ordinary Least Squares (OLS) regression and Propensity Score Matching (PSM)

For individual *i* a simple statistical model relating recidivism, the outcome of interest, to HDC, the policy treatment, participation can be written as:

$$REC_i = \alpha + \beta HDC_i + \delta Sent_i + u_i \quad (1.1)$$

where *REC* measures recidivism[13], *HDC* is a dummy variable for program participation and *u* is an error term. Length of sentenced received is controlled for, *Sent*. If assignment to HDC treatment was random, then *β* would be an unbiased estimator of the impact of *HDC* on *REC, re*cidivism.

However, as HDC participation is non-random a regression estimate from equation (1.1) will be biased – overestimating the decreases in re-offending due to the policy. One possible means to deal with this is to augment (1.1) by adding observable characteristics of prisoners to amend the equation as:

$$REC_i = \alpha + \beta HDC_i + \delta Sent_i + \gamma X_{ki} + u_i \quad (1.2)$$

Where *k* individual characteristic are included in the vector of control variables, *X*. The Ordinary Least Squares (OLS) estimate of *β* is then the relationship between *REC* and *HDC* holding constant the X's.

The PSM method gives a score of the probability of participation into the program based on a set of observable characteristics to each of the individuals. This is estimated using the following probit equation:

$$\Pr[HDC = 1]_i = \Phi(\alpha + \delta Sent_i + \delta X_{ki}) \quad (1.4)$$

where Φ(.) is the standard normal cumulative distribution function.

Equation (1.4) is a probit estimation of HDC participation on the characteristics in *X*. From (1.4) one generates propensity scores for each individual. These scores can be used to match prisoners which have not been released on HDC to others who were selected for the scheme with a similar score or the 'nearest neighbour' (i.e. who are similar in terms of the *X*'s). Once this is done a version of equation (1.2) can be run again to obtain an estimate of *β* but this time re-weighting each non-treated individual

[13] Two measures of recidivism are used: arrested within 12 and 24 months of release

depending on how similar they are to their treated match depending on their propensity scores. This can be expanded by also matching individuals on proportion of original sentence spent in prison. While again this should generate estimates of β more precise than the OLS models, it is still likely to suffer from bias.

The reason is that even after matching on, and controlling for, observable individual characteristics, there remains the problem of program selection on unobservable characteristics. $E[u|HDC] \neq 0$ or that the unobserved part that remains in the error term u is still correlated with the participation decision *HDC*. A strong assumption of PSM is that matched individuals have relatively similar unobserved characteristics and thus this problem is addressed. This has recently been shown not to be the case when an important part of the selection process relies on discretionary decisions.[14] As discussed in the main body of this report this appears to be the case for HDC participation.

The results do provide estimates for the three described models, however, it is not appropriate to conclude on the strength of a policy impact based on these. It is therefore important to consider another methodology which should better address the discussed selection problem: Regression Discontinuity.

Regression Discontinuity Design

Regression Discontinuity Design (RDD) has had a long history in statistics, but has recently gained prominence among economists for its success in dealing with the problem of unobservable characteristics and its conceptual simplicity. This method can only be applied when there exists a cut-off point of an assignment variable *Z* above and below which there is a strong difference in treatment probability. As is clearly illustrated below, this is the case for HDC treatment depending on the length of sentence received (*Z)* due to the 3 months minimum selection rule.

A widely researched and very intuitive example of RDD occurs for the 50 percent cut-off rule for winning or losing an election. The argument is that different units (areas, firms) which have had very close votes around the cut-off are likely to be very similar observed and unobserved characteristics. Still they will have opposite outcomes whether they were above or below the assignment cut-off making it very simple to compare the difference in impact of selection or not. In this case, an unbiased treatment effect on

[14] For a discussion on the strengths and weaknesses of PSM see for example Morgan and Harding (2006)

outcome, here *Rec*, with subscripts + and – indicating proximity to either side of the threshold can be written as: $\beta = \mathrm{Re}c^{+} - \mathrm{Re}c^{-}$

It is simple to estimate *β* here since being above the cut-off guarantees treatment and we only have to compare the means of the outcome around that point. This is called a *Sharp* RDD as the probability of treatment, or inclusion into a program, jumps from 0 to 1 on either side of the cut-off.

In the case of HDC treatment, as in many other programs, the change in the probability of treatment around the assignment variable threshold is not so sharp but does greatly increase. This type of set up is called a *Fuzzy* RDD and it is still possible to exploit the discontinuity to identify a treatment effect. In this case however the difference in outcomes around the cut-off will be a function in the difference in the jump in the proportion treated around this point. Mathematically and using average recidivism, *Rec*, mean proportion released on electronic monitoring, *HDC*, and the subscript + and – as before, can be written as $\mathrm{Re}c^{+} - \mathrm{Re}c^{-} = \beta(HDC^{+} - HDC^{-})$. This can be re-written as the RDD estimator:

$$\beta = \frac{\mathrm{Re}c^{+} - \mathrm{Re}c^{-}}{HDC^{+} - HDC^{-}} \tag{2.1}$$

If it is the case that offenders just below and just above the cut-off do have similar characteristics (observable and unobservable) then the estimator in equation (2.1) can legitimately be used to estimate the impact of HDC on recidivism[15]. This is because it simply compares the difference in re-offending rates of individuals which have been randomly assigned around an assignment threshold and which should consequently have similar characteristics. Of course since not all prisoners released above the three months cut-off are discharged on HDC, this must be scaled by the difference in the jump in the proportion that are treated around this point.

One important point for the validity of this method is that the discontinuity around the threshold only occurs in the treatment variable. It is important to show that other variables which could impact on selection, for example past criminal history, do not jump at this point. To justify the RD method, it is necessary to show that the observable

[15] As the estimate is similar to a local IV estimate of recidivism on HDC instrumented by being discharged after the cut-off, we are able to obtain standard errors.

characteristics of offenders above and below the sentence threshold are similar or continuous. This is done graphically (see figure 3 in the main body of the report). Matching techniques are also used in an innovative way to choose the optimal sample size for the estimation. This is important since it is likely that sentences given will be concentrated into certain fixed numbers of days, weeks or months.

Choice of Sample around RDD Threshold

A simple probit model is run of the chances of a prisoner receiving a sentence above the threshold, *After,* on his observable characteristics as in this equation:

$$\Pr[After = 1]_i = \Phi(\alpha + \delta X_{ki}) \quad \text{(A2)}$$

This is tried for different sample sizes and the propensity scores generated can be plotted to try and chose the best fitting sample. This is for example what is done in Figure A1.1 for + and -one week and Figure A1.2 for + and - four weeks below.

It can be clearly seen that the four weeks sample generates a far superior match on observables with the distribution of propensity scores of both groups impressively similar.

This may appear like as a relatively large sample for a RD approach. To explain this it is useful to note that judges are restricted to giving fixed length sentences (e.g. one or two months rather than 82 and 96 days). Still judges can be tougher or leaner and offenders may end up with very different sentences with similar observable characteristics[16]. Consequently the randomness of assignment around the threshold would 'jump' from one sentence length to another. This is likely to explain the extremely good match of individuals receiving three months + and – 4 weeks.

[16] This difference is well documented in the US. Kling (2006) exploits the difference in how tough judges are to identify the impact of sentence length on future employment.

Figure A1.1: Propensity Scores for Individuals Receiving Sentences +/- 1 Week of Three Months HDC Threshold

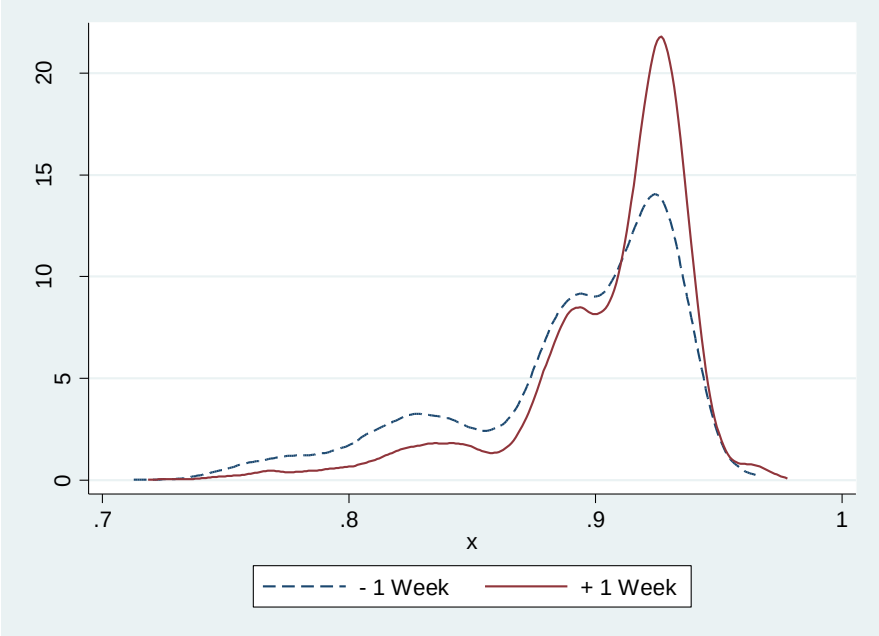
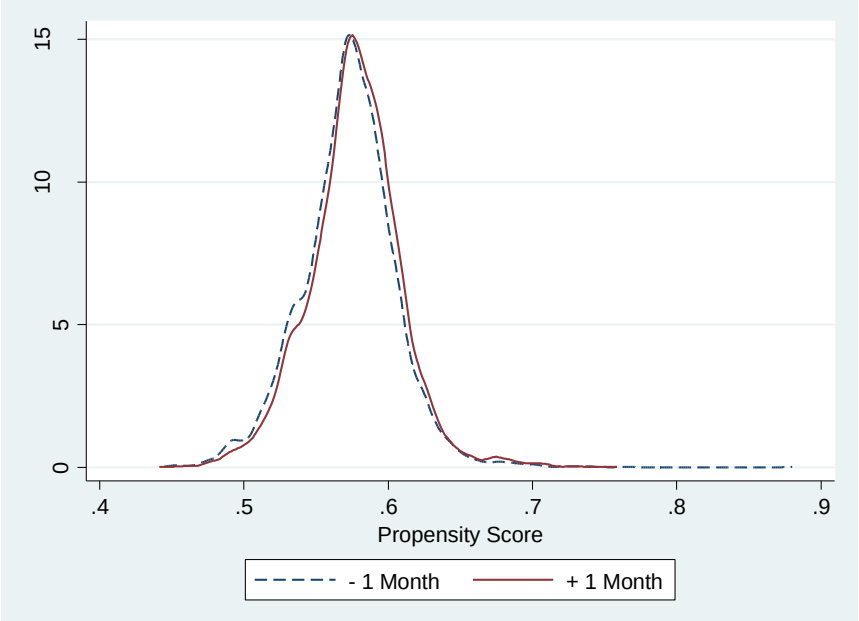


Figure A1.2: Propensity Scores for Individuals Receiving Sentences +/- 4 Weeks of Three Months HDC Threshold



The RDD methodology should deal with selection on observables and unobservables. To remain cautious this analysis also estimates the necessary differences in mean outcome and mean treatment around the cut-off controlling for observable characteristics. Theoretically this should not change the impact of HDC on recidivism, however it is worth testing.

RD with Controls

The formulae for estimation of β controlling for observable characteristics with Regression Discontinuity is as follows:

$$\beta = \frac{\mathrm{Re}\,c^{+} - \mathrm{Re}\,c^{-}}{HDC^{+} - HDC^{-}} = \frac{\mathrm{H}}{\Gamma} \quad \text{from equations (A1.1) and (A1.2) below} \tag{A1}$$

$$HDC_i = \alpha + \mathrm{H}After_i(+\gamma X_{ki}) + u_i \tag{A1.1}$$

$$Re\,c_i = \alpha + \Gamma After_i(+\gamma X_{ki}) + u_i \tag{A1.1}$$

The Xs are the same *k* controls as before.

Table A1: Descriptive Statistics of Prisoners with Single and Multiple Discharges

Descriptive Characteristics of First Sentence of Prisoners Released with Single or Multiple Discharges			
Discharge Type	**Single Discharge**	**Multiple Discharges**	**Difference**
Percentage Female	9.9%	6.7%	-3.2% (.1)
Mean Age at Release	30.8	26.9	-3.9% (.04)
Percentage Incarcerated for Violence	29.6%	20.5%	- 9.1% (.2)
Percentage Breached in Past	17.7%	29.4%	11.7% (.2)
Mean Number Previous Offences	6.6	11.7	5.0 (.04)
Proportion of Original Sentence Custodial	39.4%	40.2%	0.8% (.1)
Recidivism within 12 Months	26.6%	74.8%	48.3% (.2)
Recidivism within 24 Months	39.4%	90.2%	50.8% (.2)
Proportion Discharged on HDC	30.7%	11.0%	-19.7% (.2)
Sample Size	180,983	73,964	-

Note: The recidivism measures considered here include time spent on HDC Robust standard errors in parenthesis.

Table A2: Probit Models of HDC Participation as a Function of Prisoner Observed Characteristics – Sentenced to 3 Month to 4 Years

Prisoner Characteristics	**Probability[HDC = 1]**	
	[1]	**[2]**
	Excluding Time on HDC	Including Time on HDC
Original Sentence Length	.000 (.000)	.000 (.000)
Gender	.022 (.004)	.040 (.004)
Age at Release	.009 (.000)	.008 (.000)
Breached in the Past	-.026 (.003)	-.024 (.003)
Number of Previous Offences	-.019 (.000)	-.018 (.000)
Offence Sentenced for Dummies	Yes	Yes
Month of Release Dummies	Yes	Yes
Year of Release Dummies	Yes	Yes
Sample size	183,908	190,527

Notes: Marginal effects reported standard errors in parentheses.

Table A3: Descriptive Characteristics of HDC Discharged Prisoners and Recalled or Not From HDC

	Characteristics of Prisoners *Released HDC and Recalled or Not from HDC*			
	[1]	**[2]**	**[3]**	**[4]**
	HDC Discharge	**Recalled**	**Not Recalled**	**Difference [2] - [3]**
Female	11.0%	14.0%	10.7%	3.3% (.4)
Mean Age at Release	31.0	28.4	31.3	-2.9 (.1)
Mean Number Previous Offences	5.1	7.8	4.8	3.0 (.8)
Breached in Past	12.9%	22.6%	11.7%	10.8% (.4)
Percentage Sentence Custodial	30.3%	28.4%	30.5%	-2.1% (.1)
Violence Against the Person	22.2%	18.3%	22.6%	-4.4% (.6)
Drug Offences	16.7%	13.3%	17.1%	-3.8% (.5)
Theft and Handling	11.2%	12.2%	11.1%	1.2% (.4)
Fraud and Forgery	7.7%	3.6%	8.2%	-4.6% (.3)
Burglary	6.6%	13.5%	5.8%	7.7% (.3)
Robbery	5.6%	11.5%	4.8%	6.6% (.3)
Other Offences	26.5%	23.5%	26.8%	-3.3 (.6)
Sample Size	63,617	6,643	56,974	-

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