HMP Peterborough Social Impact Bond - learning exercise

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Executive Summary

In 2010, the world's first Social Impact Bond (SIB) was launched at Peterborough Prison. It was used to fund an intervention – 'The One Service' – aimed at reducing the reoffending among prisoners discharged after serving a sentence of less than 12 months. Under the terms of the SIB, investors are paid according to how successful the One Service is in reducing reconvictions. If a minimum threshold of a 7.5% reduction in reconviction events is reached across the pilot, payment is triggered. Additionally, there is an option to trigger an early payment if a 10% reduction is noted in the number of reconviction events in individual cohorts.

A propensity score matching (PSM) approach was used to estimate impact. For cohort 1, the impact was estimated, by a previous team of independent assessors, to be a reduction in reconviction events of 8.4% (Jolliffe and Hedderman, 2014). Anders and Dorsett (2017a) reviewed the PSM approach, prompted in part by the desire to understand the reasons behind the differences in reconviction rates between prisoners discharged from HMP Peterborough and prisoners discharged from other prisons. They were unable to replicate the results of Jolliffe and Hedderman (2014). This should perhaps be no surprise given the difficulties often encountered with replication attempts. However, the difference between the replication result and the Jolliffe and Hedderman (2014) result was not statistically significant.

Following their review, Anders and Dorsett (2017a) recommended that the cohort 1 methodology approach be maintained for cohort 2. They did recommend a change to the sample definition for cohort 2. This was adopted for cohort 2. It is important to note that matching was performed using a dataset that excluded reoffending data.

In order to learn more from the evaluation, a separate analysis examined the sensitivity of the estimated impacts to this change in sample definition. This report presents the findings of the sensitivity analysis. The main result is that estimated impacts can vary according to the definition of the sample. However, the differences between the estimates are not statistically significant.

We should be careful that the estimates in this document are not compared to the estimates used in the determination of outcome payments for the second and final cohorts because different prisons were used for the national comparison group. The figures presented in this document do not affect

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the published results of Cohort 1 (Jolliffe and Hedderman, 2014) or of cohort 2 (Anders and Dorsett, 2017b).

1 Introduction

In 2010, the world's first Social Impact Bond (SIB) was launched at Peterborough Prison. The Ministry of Justice (MoJ) and the Big Lottery Fund agreed to pay for the successful outcomes of the project if it reduced reoffending by 7.5% overall. There was also an opportunity to receive early payments if individual cohorts reduced reoffending by 10%. A SIB is a form of 'payment by results' (PbR) where funding is raised from private, non-government investors and used to pay for interventions to improve social outcomes. If these interventions are effective, this could result in savings to Government and wider benefits to society. As part of a SIB the Government agrees to pay a proportion of these savings back to the investors as a return on their investment. If the outcomes do not improve, investors lose their investment.

The Peterborough pilot uses a SIB to fund interventions to reduce reoffending among male offenders released from HMP Peterborough having served short prison sentences (less than 12 months). It is coordinated by Social Finance, a not-for-profit financial intermediary, who obtained investment funding from private individuals, trusts and foundations to finance the pilot. This investment is used to fund an intervention called the 'One Service'. This is a voluntary scheme offering through the gate support to reduce reoffending, meaning that contact is made with prisoners before release and continued in the community. It is delivered by a mix of paid caseworkers and volunteers. It takes a pragmatic and client-led approach, in which the mix of activities for each offender is determined by caseworkers according to individual need.

The Peterborough SIB pilot was originally intended to operate until 2017, funding the delivery of the One Service to three cohorts of around 1,000 prisoners released from the prison. Support from the One Service was available to cohort members for a period of up to 12 months post-release, and engagement was on a voluntary basis. While the pilot operated on a PbR basis under the SIB model for the first two cohorts of released prisoners, a third cohort received One Service support under a 'fee-for-service' arrangement, rather than under the original SIB-funded PbR model. This change to the model was due to the roll-out of 'Transforming Rehabilitation' reforms to probation, which introduced mandatory statutory supervision for short-sentenced offenders – the target group for the Peterborough pilot – and also included a PbR funding mechanism to incentivise providers to reduce reoffending. This meant that while the pilot was concluded early in order to avoid any duplication in services to the same

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population, the alternative fee-for-service funding arrangement for the third cohort enabled the pilot to continue operating until the new Community Rehabilitation Company (CRC) providers implemented their approach to rehabilitation.

Under the terms of the SIB, the MoJ, supported by the Big Lottery Fund, agreed to repay investors their capital and a return on their investment according to how successful the One Service was in reducing reconvictions. Specifically, payment required a 7.5% reduction in the number of reconviction events in the 12 months following discharge across the whole pilot.¹ If reconviction events were reduced by 10% in either of the first two cohorts of prisoners, a payment would also be made.

The impact of the intervention was estimated using a propensity score matching (PSM) approach. Cave et al. (2012) describe the development of the PSM approach used for cohort $1.^2$ The impact for that cohort was estimated (by a previous team of independent assessors) to be a reduction in reoffending of 8.4% (Jolliffe and Hedderman, 2014).³

Following publication of the cohort 1 results, MoJ commissioned a review of the methodological approach. This was prompted in part by the desire to understand the reasons behind the differences in reconviction rates between prisoners discharged from HMP Peterborough and prisoners discharged from other prisons.⁴ That review did not propose any major changes to the cohort 1 methodology.

It did recommend a change to the sample definition. With cohort 1, prisoners leaving HMP Peterborough at any point during the cohort period were regarded as being in the treatment group. Those leaving a different prison during the cohort 1 period and not later leaving HMP Peterborough within the same cohort period made up the pool of potential comparators. That definition entails a systematic difference between the treament group and the (resulting) comparison group. Individuals who would have potentially been in the comparison group were instead included in the treatment group if they had a subsequent short sentence, this time at HMP Peterborough. Since the treatment group is much smaller than the comparison group, its mean number of reconvictions is more likely to be influenced by their inclusion. In view of this, a different sample definition was used for cohort 2. The cohort 2 treatment group includes all those whose first discharge in the cohort 2 period was from HMP Peterborough. The cohort 2 comparison group includes all those whose first discharge in the cohort

¹A reconviction is defined as an offence committed in the 12 months following release from prison, and resulting in conviction at court either in those 12 months or in a further 6 month period (allowing time for cases to progress through the courts). If an offender is reconvicted of multiple offences on one sentencing occasion, this counts as one reconviction event.

²https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/217392/ peterborough-social-impact-bond-assessment.pdf

³https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/341684/ peterborough-social-impact-bond-report.pdf

⁴The MoJ announced its intention to review the cohort 1 methodology in https://www.gov.uk/government/uploads/ system/uploads/attachment_data/file/341682/pbr-pilots-cohort-1-results.pdf (Annex B).

2 period was from a non-Peterborough prison.

In order to learn more from the evaluation, an additional analysis was carried out that assessed the extent to which the estimated impacts varied according to the definition of the sample. The results of this sensitivity analyses are presented in this report. It is important to note that, while the sample definition was changed for cohort 2, the sample definition for cohort 1 was not changed retrospectively. The published cohort 1 result (Jolliffe and Hedderman, 2014), the published cohort 2 result and the published final cohort result (Anders and Dorsett, 2017b) were used to determine the outcome payments. The estimates presented in this report are not used to determine the outcome payments.

In all, this report is one of three following the cohort 1 evaluation:

- **Methodology Review** assesses the cohort 1 approach and recommends an approach for cohort 2 and the final cohort (Anders and Dorsett, 2017a)
- Cohort 2 Report presents impact estimates for cohort 2 and the final cohort (Anders and Dorsett, 2017b)
- Learning Exercise (this report) explores the sensitivity of the results to the recommendation in the Methodology Review to alter the sample definition.

2 Learning from the evaluation

This chapter presents new estimated impacts for cohorts 1 and 2 under both the original sample definition and the revised definition. It is important to note that none of the estimates presented below are directly comparable with the main evaluation results. This is due to the fact that only those prisons common to both cohorts were included in the comparison group for the learning exercise. This involved omitting HMPs Pentonville, Blakenhurst, Brixton and Hewell. The 'Original' and 'Revised' sample definitions are as follows:

- Original prisoners released from HMP Peterborough at any point during the cohort period were regarded as being in the treatment group; those leaving a different prison during the cohort period and not later leaving HMP Peterborough within the same cohort period made up the pool of potential comparators.
- **Revised** prisoners whose first discharge in the cohort period was from HMP Peterborough were regarded as being in the treatment group; prisoners whose first discharge in the cohort period was from a different prison were regarded as being in the comparison group.

In line with this, using different sample selections for each cohort, four illustrative calculations are presented:

- 1. cohort 1, original sample definition
- 2. cohort 1, revised sample definition
- 3. cohort 2, original sample definition
- 4. cohort 2, revised sample definition.

3 Estimates

For both cohorts and both sample definitions, the matching methodology used by Jolliffe and Hedderman (2014) was applied. Appendix A shows the extent to which matching was successful in identifying a comparison group of prisoners with characteristics similar to those leaving HMP Peterborough. Across both cohorts and both sample definitions, the impression is one of close similarity in the average characteristics of prisoners leaving HMP Peterborough and prisoners in the matched comparison sample. This provides reassurance that the matching was successful in identifying comparison groups that looked like their associated treatment group in all cases.

Table 3.1 presents the corresponding estimated impacts on the number of reconviction events (see row labelled 'Peterborough Diff.') and Table 3.2 shows these as percentages. The results show that in both cohorts, the counterfactual number of reconvictions was smaller under the new definition than the old definition. In cohort 1, this did little to alter the estimated impact (7.0% compared to 7.4%). In cohort 2, however, the estimated impact increased from 6.7% to 12.7%. The result under the new sample definition was significantly different from zero, unlike the estimate under the old definition.

| | Cohort 1 | | Cohort2 | |
|--------------------|----------|----------|----------|----------|
| | Old def. | New def. | Old def. | New def. |
| Other Prisons | 1.563*** | 1.412*** | 1.626*** | 1.501*** |
| | (62.74) | (56.26) | (64.18) | (60.08) |
| Peterborough | 1.453*** | 1.308*** | 1.516*** | 1.309*** |
| | (19.26) | (17.95) | (19.42) | (17.62) |
| Peterborough Diff. | -0.110 | -0.104 | -0.109 | -0.191** |
| | (-1.39) | (-1.35) | (-1.33) | (-2.44) |
| Observations | 10035 | 9365 | 10283 | 9440 |

Table 3.1: Estimated impact by cohort and sample definition

Notes: Reporting coefficients from linear regression model of reconviction event rate. t-statistics in parentheses. Matched sample based on 10:1 nearest neighbour matching without replacement. Stars indicate statistical significance as follows: * p < 0.10, ** p < 0.05, *** p < 0.01

| | Cohort 1 | | Cohort2 | |
|-------------------|----------|----------|----------|----------|
| | Old def. | New def. | Old def. | New def. |
| Percentage impact | -7.043 | -7.371 | -6.735 | -12.74** |
| | (-1.39) | (-1.36) | (-1.34) | (-2.47) |
| Observations | 10035 | 9365 | 10283 | 9440 |

Table 3.2: Estimated percentage impact by cohort and sample definition

Notes: Reporting coefficients from linear regression model of reconviction event rate. t-statistics in parentheses. Matched sample based on 10:1 nearest neighbour matching without replacement. Stars indicate statistical significance as follows: * p < 0.10, ** p < 0.05, *** p < 0.01

4 Discussion

A propensity score matching (PSM) approach was used to evaluate the impact of the Social Impact Bond. The estimates presented in Chapter 3 point to the potential importance of sample definition. As noted above, standardising on a consistent set of prisons across cohorts means that direct comparison with the main evaluation results is not valid. Even if there were no such issue though, all impacts are estimated with a confidence interval and it will often be the case that two impacts look very different but, statistically, are not significantly so. As some illustration of this, while the cohort 1 impact estimates reported in Table 3.2 both suggest a reduction of about 7%, these estimates are imprecise with a confidence interval extending from a reduction of about 17% to an increase of 3%. The estimated cohort 1 reduction of 2.6% reported in the Methodology Review (Anders and Dorsett, 2017a) sits within this confidence interval and is therefore not statistically significantly different. It is worth noting that it was not possible to replicate the result of Jolliffe and Hedderman (2014). This should perhaps be no surprise given the difficulties often encountered with replication attempts.¹ However, the difference between the replication result and the Jolliffe and Hedderman (2014) result was not statistically significant.

This lack of precision cautions against reading too much into the fact that sample definition appears to influence the estimated impact with cohort 2 but not so much with cohort 1. Indeed, the difference between the two estimated impacts in cohort 2 is not itself statistically significant. While the lack of precision limits the ability to make more definite statements about how the definition of the sample affects impact estimates, with a fixed threshold for payment, such variation could nevertheless have important financial implications.

¹Duvendack et al. (2015) looked across 162 replication studies in economics journals and found that two out of three were unable to confirm the original findings. Chang and Li (2015) in a smaller study were able to themselves replicate the main result in one third of cases where they had access to the original data and code. Assistance from the authors of the studies increased this to about one half. Note that we did not we have access to the code used by Jolliffe and Hedderman (2014).

Bibliography

- Anders, J. and Dorsett, R. (2017a). A review of the matching process for the impact analysis of the HMP Peterborough Social Impact Bond. MoJ Research Report.
- Anders, J. and Dorsett, R. (2017b). HMP Peterborough Social Impact Bond cohort 2 and final cohort impact estimates. MoJ Research Report.
- Cave, S., Williams, T., Jolliffe, D., and Hedderman, C. (2012). Peterborough Social Impact Bond: an independent assessment. Development of the PSM methodology. Ministry of Justice Research Series 8/12, Ministry of Justice.
- Chang, A. C. and Li, P. (2015). Is economics research replicable? sixty published papers from thirteen journals say "usually not". Finance and Economics Discussion Series, Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board, Washington, D.C.
- Duvendack, M., Palmer-Jones, R. W., and Reed, W. R. (2015). Replications in economics: A progress report. *Scholarly Comments on Academic Economics*, 12(2):164–191.
- Jolliffe, D. and Hedderman, C. (2014). Peterborough Social Impact Bond: Final Report on Cohort 1 Analysis. Report prepared for the Ministry of Justice, University of Leicester.

A Appendix: match quality

Table A.1 presents descriptive statistics for cohort 1 under the original sample definition. Comparing HMP Peterborough prisoners with the matched comparison sample, there are two differences that register as significant at the 95% significance level. This is in line with how many would be expected to arise purely by chance and so indicates an acceptable balance on observed characteristics. Tables A.2 to A.4 present analogous results for the other samples. Again, the impression is one of close similarity, providing reassurance that matching has been successful in identifying comparison groups that look like their associated treatment group.

| Characteristic | Other Prisons | Peterborough | Std. Diff. | p |
|---|---------------|--------------|------------|---------|
| Age at Release | 33.5 | 33.5 | -0.01 | 0.80 |
| Age of First Offence | 20.5 | 20.4 | -0.01 | 0.68 |
| Previous Offences | 32.2 | 32.3 | 0.00 | 0.98 |
| Previous Conviction Occasions | 14.9 | 14.9 | -0.00 | 0.97 |
| Previous Custodial Sentences | 4.1 | 4.1 | -0.00 | 1.00 |
| Sentence Length | 122.5 | 125.9 | 0.05 | 0.19 |
| Time Served | 49.7 | 50.6 | 0.03 | 0.43 |
| Previous T1 T2 Convictions | 1.2 | 1.2 | -0.00 | 0.97 |
| White - British | 64.1 | 64.1 | 0.00 | 0.97 |
| White - Foreign | 21.3 | 21.3 | -0.00 | 0.99 |
| Black - British | 5.5 | 6.1 | 0.03 | 0.47 |
| Black - Foreign | 2.0 | 1.7 | -0.02 | 0.57 |
| Asian/Middle Eastern - British | 4.2 | 3.6 | -0.03 | 0.39 |
| Asian/Middle Eastern - Foreign | 1.8 | 1.7 | -0.01 | 0.77 |
| Copas Score | -64.9 | -66.5 | -0.02 | 0.54 |
| Severe Offence | 0.5 | 0.6 | 0.02 | 0.56 |
| Chronic Offender | 13.4 | 13.3 | -0.00 | 0.91 |
| Offence: Absconding | 1.7 | 2.0 | 0.02 | 0.53 |
| Offence: Breach CO | 6.1 | 6.3 | 0.01 | 0.82 |
| Offence: Breach SSO | 12.6 | 12.2 | -0.01 | 0.70 |
| Offence: Criminal/Malicious Damage | 1.7 | 2.1 | 0.03 | 0.39 |
| Offence: Domestic Burglary | 3.2 | 2.7 | -0.03 | 0.38 |
| Offence: Drink Driving | 3.7 | 4.1 | 0.02 | 0.56 |
| Offence: Drug Import/Export/Production | 0.3 | 0.3 | -0.00 | 0.99 |
| Offence: Drug Possession/Small-Scale Supply | 2.4 | 2.8 | 0.02 | 0.52 |
| Offence: Fraud/Forgery | 3.0 | 3.2 | 0.01 | 0.77 |
| Offence: Handling | 1.1 | 1.3 | 0.02 | 0.58 |
| Offence: Other | 3.3 | 2.9 | -0.02 | 0.48 |
| Offence: Other Burglary | 2.7 | 2.8 | 0.01 | 0.82 |
| Offence: Other Motoring Offences | 6.9 | 7.3 | 0.01 | 0.69 |
| Offence: Public Order | 2.9 | 2.8 | -0.01 | 0.88 |
| Offence: Robbery | 0.2 | 0.0 | -0.06 | 0.00*** |
| Offence: Serious Violence | 0.3 | 0.3 | -0.00 | 0.96 |
| Offence: Sexual | 0.4 | 0.5 | 0.02 | 0.63 |
| Offence: Child Sexual | 0.5 | 0.9 | 0.04 | 0.30 |
| Offence: Soliciting/Prostitution | 0.1 | 0.0 | -0.05 | 0.00*** |
| Offence: Taking and Driving Away | 1.7 | 2.0 | 0.03 | 0.47 |
| Offence: Theft | 20.1 | 18.5 | -0.04 | 0.23 |
| Offence: Theft from a Vehicle | 1.5 | 1.8 | 0.03 | 0.48 |
| Offence: Violence | 23.4 | 23.1 | -0.01 | 0.84 |
| Ν | 9,101 | 934 | 0.02 | |

| Table A.1: Cohort 1 (old definition): average characteristics post-matching |
|---|
|---|

| Characteristic | Other Prisons | Peterborough | Std. Diff. | p |
|---|---------------|--------------|------------|---------|
| Age at Release | 33.3 | 33.3 | -0.01 | 0.89 |
| Age of First Offence | 20.7 | 20.5 | -0.02 | 0.59 |
| Previous Offences | 29.6 | 29.8 | 0.00 | 0.93 |
| Previous Conviction Occasions | 13.6 | 13.6 | 0.00 | 0.90 |
| Previous Custodial Sentences | 3.6 | 3.6 | 0.01 | 0.77 |
| Sentence Length | 122.6 | 127.5 | 0.06 | 0.08 |
| Time Served | 49.4 | 50.6 | 0.04 | 0.30 |
| Previous T1 T2 Convictions | 1.1 | 1.2 | 0.01 | 0.71 |
| White - British | 65.3 | 65.3 | -0.00 | 1.00 |
| White - Foreign | 20.8 | 20.4 | -0.01 | 0.78 |
| Black - British | 5.1 | 5.7 | 0.02 | 0.49 |
| Black - Foreign | 1.9 | 1.9 | -0.00 | 0.90 |
| Asian/Middle Eastern - British | 4.1 | 3.9 | -0.01 | 0.83 |
| Asian/Middle Eastern - Foreign | 1.7 | 1.6 | -0.01 | 0.80 |
| Copas Score | -71.6 | -71.6 | -0.00 | 0.99 |
| Severe Offence | 0.6 | 0.7 | 0.01 | 0.84 |
| Chronic Offender | 11.0 | 11.1 | 0.00 | 0.93 |
| Offence: Absconding | 1.7 | 2.2 | 0.04 | 0.33 |
| Offence: Breach CO | 7.1 | 6.7 | -0.01 | 0.70 |
| Offence: Breach SSO | 12.8 | 12.7 | -0.00 | 0.95 |
| Offence: Criminal/Malicious Damage | 1.7 | 2.2 | 0.03 | 0.38 |
| Offence: Domestic Burglary | 2.5 | 2.5 | 0.00 | 0.91 |
| Offence: Drink Driving | 4.0 | 4.2 | 0.01 | 0.86 |
| Offence: Drug Import/Export/Production | 0.5 | 0.3 | -0.02 | 0.62 |
| Offence: Drug Possession/Small-Scale Supply | 2.9 | 2.9 | -0.00 | 0.94 |
| Offence: Fraud/Forgery | 3.1 | 3.2 | 0.01 | 0.88 |
| Offence: Handling | 1.3 | 1.3 | 0.00 | 0.98 |
| Offence: Other | 3.1 | 2.7 | -0.03 | 0.44 |
| Offence: Other Burglary | 2.5 | 2.8 | 0.02 | 0.68 |
| Offence: Other Motoring Offences | 8.0 | 7.8 | -0.01 | 0.81 |
| Offence: Public Order | 2.8 | 2.9 | 0.00 | 0.94 |
| Offence: Robbery | 0.2 | 0.0 | -0.05 | 0.00*** |
| Offence: Serious Violence | 0.4 | 0.3 | -0.01 | 0.78 |
| Offence: Sexual | 0.5 | 0.5 | -0.00 | 0.96 |
| Offence: Child Sexual | 0.6 | 0.9 | 0.03 | 0.38 |
| Offence: Soliciting/Prostitution | 0.1 | 0.0 | -0.04 | 0.01*** |
| Offence: Taking and Driving Away | 1.8 | 2.0 | 0.01 | 0.72 |
| Offence: Theft | 18.8 | 17.0 | -0.05 | 0.20 |
| Offence: Theft from a Vehicle | 1.1 | 1.9 | 0.06 | 0.11 |
| Offence: Violence | 22.5 | 23.0 | 0.01 | 0.73 |
| Ν | 8,501 | 864 | 0.02 | |

Table A.2: Cohort 1 (new definition): average characteristics post-matching

| Characteristic | Other Prisons | Peterborough | Std. Diff. | p |
|---|---------------|--------------|------------|------|
| Age at Release | 33.2 | 33.1 | -0.00 | 0.91 |
| Age of First Offence | 20.0 | 20.0 | -0.01 | 0.88 |
| Previous Offences | 37.0 | 37.1 | 0.00 | 0.96 |
| Previous Conviction Occasions | 17.1 | 17.4 | 0.02 | 0.65 |
| Previous Custodial Sentences | 5.4 | 5.3 | -0.00 | 0.99 |
| Sentence Length | 127.3 | 128.7 | 0.02 | 0.59 |
| Time Served | 51.9 | 54.2 | 0.06 | 0.14 |
| Previous T1 T2 Convictions | 1.4 | 1.4 | -0.00 | 1.00 |
| White - British | 64.8 | 64.5 | -0.01 | 0.88 |
| White - Foreign | 22.4 | 22.9 | 0.01 | 0.73 |
| Black - British | 5.4 | 4.3 | -0.05 | 0.13 |
| Black - Foreign | 1.6 | 1.5 | -0.01 | 0.68 |
| Asian/Middle Eastern - British | 3.7 | 4.9 | 0.06 | 0.12 |
| Asian/Middle Eastern - Foreign | 2.0 | 1.9 | -0.01 | 0.75 |
| Copas Score | -61.4 | -61.8 | -0.01 | 0.88 |
| Severe Offence | 1.3 | 1.2 | -0.01 | 0.76 |
| Chronic Offender | 16.0 | 15.9 | -0.00 | 0.94 |
| Offence: Absconding | 1.3 | 1.4 | 0.00 | 0.93 |
| Offence: Breach CO | 4.8 | 5.0 | 0.01 | 0.85 |
| Offence: Breach SSO | 12.0 | 12.2 | 0.01 | 0.81 |
| Offence: Criminal/Malicious Damage | 1.8 | 1.4 | -0.04 | 0.24 |
| Offence: Domestic Burglary | 2.7 | 2.5 | -0.01 | 0.78 |
| Offence: Drink Driving | 3.7 | 3.5 | -0.01 | 0.68 |
| Offence: Drug Import/Export/Production | 1.4 | 1.5 | 0.01 | 0.84 |
| Offence: Drug Possession/Small-Scale Supply | 2.8 | 2.4 | -0.02 | 0.52 |
| Offence: Fraud/Forgery | 3.0 | 3.6 | 0.03 | 0.35 |
| Offence: Handling | 1.2 | 1.1 | -0.01 | 0.73 |
| Offence: Other | 3.4 | 3.3 | -0.01 | 0.81 |
| Offence: Other Burglary | 2.3 | 2.6 | 0.02 | 0.48 |
| Offence: Other Motoring Offences | 6.6 | 6.2 | -0.02 | 0.66 |
| Offence: Public Order | 4.3 | 4.0 | -0.01 | 0.72 |
| Offence: Robbery | 0.1 | 0.1 | -0.01 | 0.85 |
| Offence: Serious Violence | 0.6 | 0.5 | -0.01 | 0.86 |
| Offence: Sexual | 1.1 | 1.1 | -0.00 | 0.98 |
| Offence: Child Sexual | 0.7 | 1.0 | 0.03 | 0.40 |
| Offence: Soliciting/Prostitution | 0.0 | 0.0 | | |
| Offence: Taking and Driving Away | 1.0 | 1.1 | 0.01 | 0.86 |
| Offence: Theft | 22.3 | 22.1 | -0.01 | 0.85 |
| Offence: Theft from a Vehicle | 1.1 | 1.3 | 0.01 | 0.76 |
| Offence: Violence | 21.8 | 22.3 | 0.01 | 0.73 |
| Ν | 9,336 | 947 | | |

Table A.3: Cohort 2 (old definition): average characteristics post-matching

| Characteristic | Other Prisons | Peterborough | Std. Diff. | p |
|---|---------------|--------------|------------|-------|
| Age at Release | 33.1 | 32.9 | -0.01 | 0.70 |
| Age of First Offence | 20.1 | 20.1 | -0.01 | 0.80 |
| Previous Offences | 33.0 | 33.4 | 0.01 | 0.79 |
| Previous Conviction Occasions | 15.4 | 15.6 | 0.01 | 0.74 |
| Previous Custodial Sentences | 4.3 | 4.3 | 0.01 | 0.77 |
| Sentence Length | 127.4 | 129.2 | 0.02 | 0.53 |
| Time Served | 51.9 | 54.1 | 0.05 | 0.17 |
| Previous T1 T2 Convictions | 1.3 | 1.3 | 0.00 | 0.91 |
| White - British | 65.2 | 64.7 | -0.01 | 0.76 |
| White - Foreign | 21.8 | 22.6 | 0.02 | 0.57 |
| Black - British | 5.0 | 3.9 | -0.05 | 0.12 |
| Black - Foreign | 1.8 | 1.6 | -0.01 | 0.68 |
| Asian/Middle Eastern - British | 4.0 | 5.1 | 0.05 | 0.15 |
| Asian/Middle Eastern - Foreign | 2.2 | 2.1 | -0.01 | 0.75 |
| Copas Score | -69.6 | -69.5 | 0.00 | 0.99 |
| Severe Offence | 1.1 | 1.3 | 0.01 | 0.69 |
| Chronic Offender | 13.1 | 13.5 | 0.01 | 0.75 |
| Offence: Absconding | 1.5 | 1.4 | -0.01 | 0.78 |
| Offence: Breach CO | 4.8 | 5.3 | 0.02 | 0.56 |
| Offence: Breach SSO | 13.7 | 13.2 | -0.02 | 0.65 |
| Offence: Criminal/Malicious Damage | 1.5 | 1.4 | -0.01 | 0.76 |
| Offence: Domestic Burglary | 2.7 | 2.8 | 0.00 | 0.92 |
| Offence: Drink Driving | 4.0 | 3.6 | -0.02 | 0.57 |
| Offence: Drug Import/Export/Production | 1.6 | 1.6 | 0.00 | 0.98 |
| Offence: Drug Possession/Small-Scale Supply | 2.8 | 2.5 | -0.02 | 0.65 |
| Offence: Fraud/Forgery | 3.1 | 3.9 | 0.04 | 0.25 |
| Offence: Handling | 1.2 | 1.0 | -0.02 | 0.66 |
| Offence: Other | 3.5 | 2.9 | -0.03 | 0.33 |
| Offence: Other Burglary | 2.3 | 2.5 | 0.01 | 0.68 |
| Offence: Other Motoring Offences | 7.1 | 6.6 | -0.02 | 0.59 |
| Offence: Public Order | 4.1 | 3.9 | -0.01 | 0.76 |
| Offence: Robbery | 0.2 | 0.1 | -0.01 | 0.71 |
| Offence: Serious Violence | 0.5 | 0.6 | 0.00 | 0.91 |
| Offence: Sexual | 0.6 | 0.8 | 0.02 | 0.58 |
| Offence: Child Sexual | 0.8 | 1.0 | 0.03 | 0.46 |
| Offence: Soliciting/Prostitution | 0.0 | 0.0 | -0.03 | 0.05* |
| Offence: Taking and Driving Away | 1.1 | 1.2 | 0.00 | 0.93 |
| Offence: Theft | 20.6 | 19.7 | -0.02 | 0.55 |
| Offence: Theft from a Vehicle | 1.2 | 1.2 | -0.00 | 0.95 |
| Offence: Violence | 21.0 | 22.7 | 0.04 | 0.23 |
| Ν | 8,574 | 866 | 0.02 | |

| Table A.4: Cohort 2 (new definition): a | average characteristics post-matching |
|---|---------------------------------------|
|---|---------------------------------------|