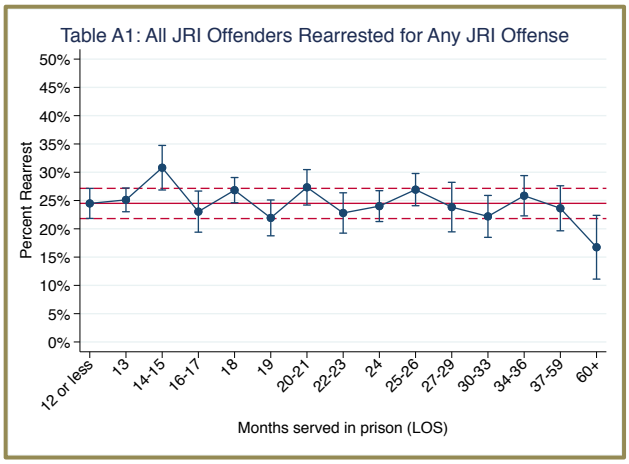
Appendix A: Rearrest by Crime type

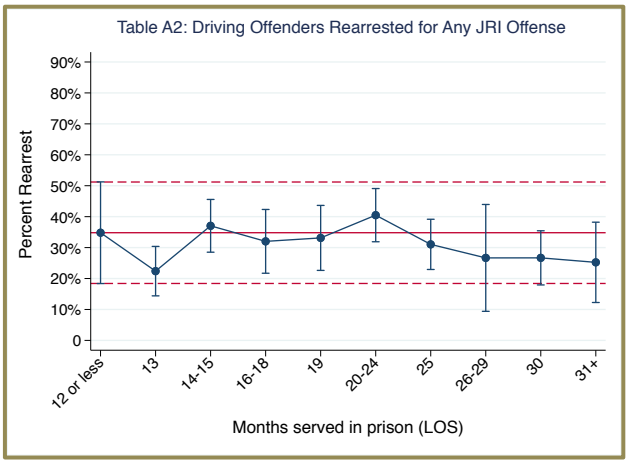
Effect of Prison Length of Stay on Recidivism in Oregon

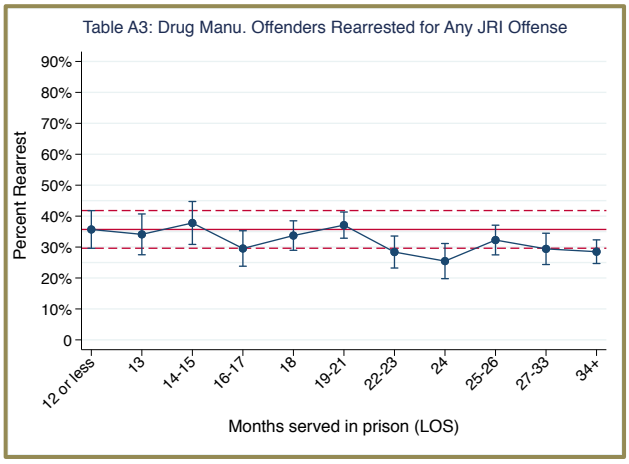
Portland State University

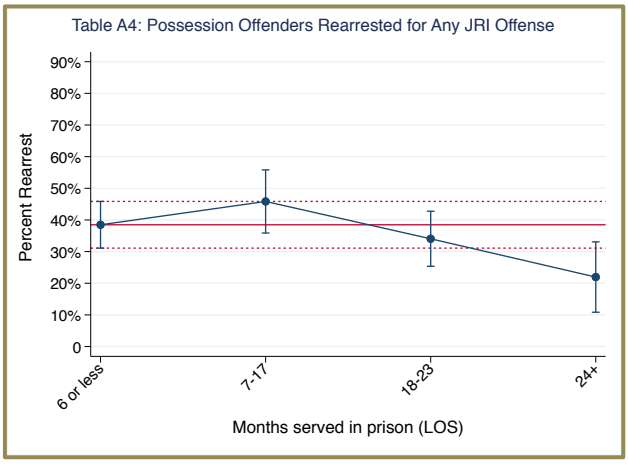
We examine nuanced information as to the reason for rearrest which included all JRI specific offense, drug possession, drug manufacturing and distribution, drug possession, driving offenses, general violent offenses, and general property offenses. Below are the figures depicting the results of each of the models. The models were conducted on the overall sample and on the 4 specific crime sub-types. The results in general follow similar patterns as rearrest for any offense. When statistically significant or important results are observed these patterns are also discussed in the main documents.

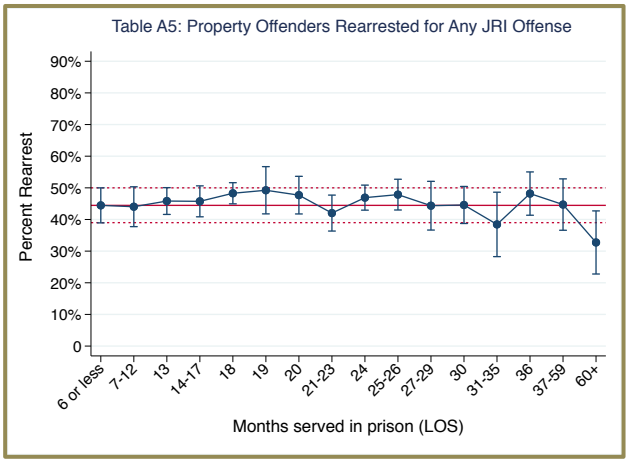
Rearrest for Any JRI Offense by Crime Types



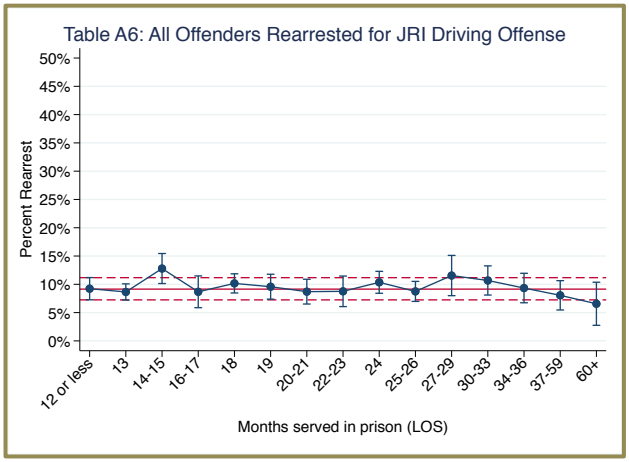


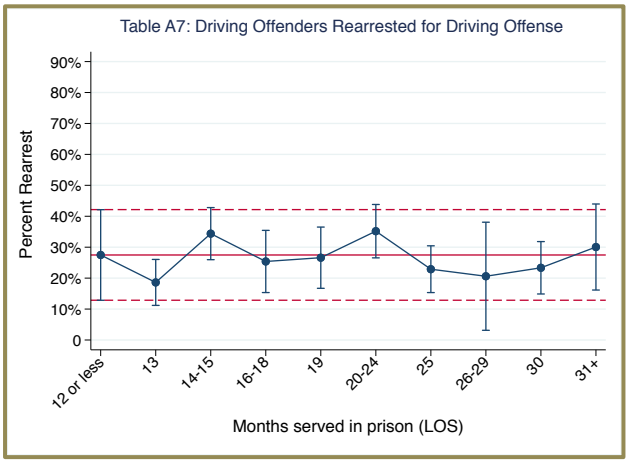


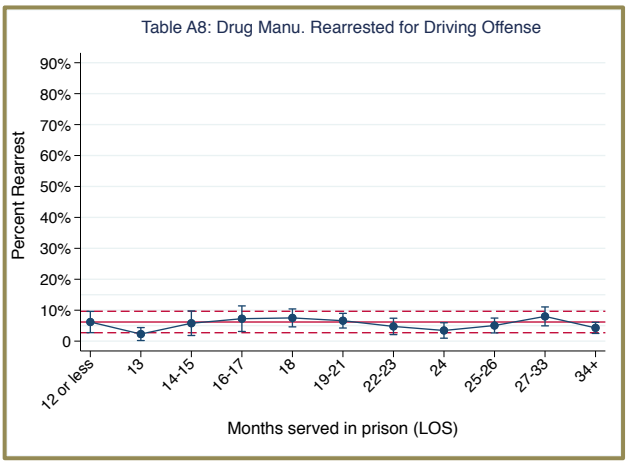


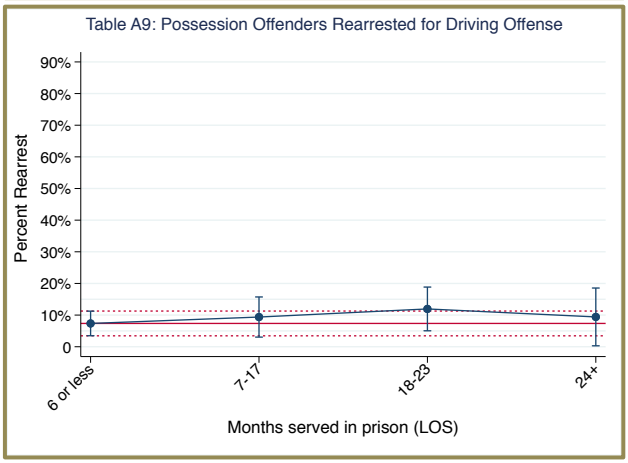


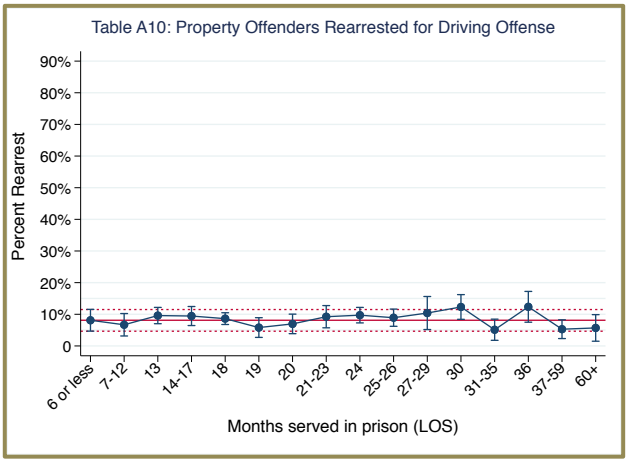
Rearrest for Driving Offense by Crime Types



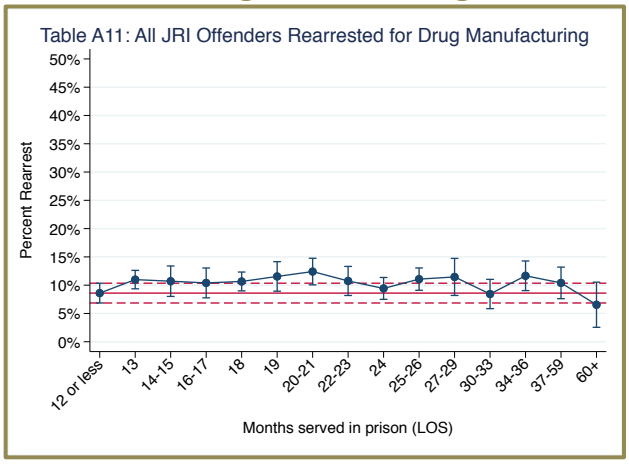


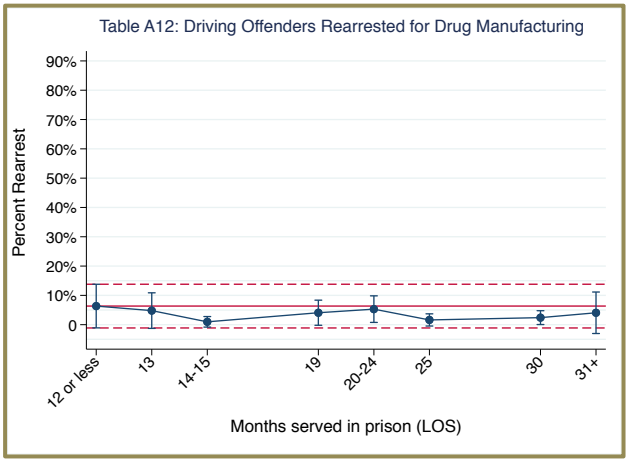


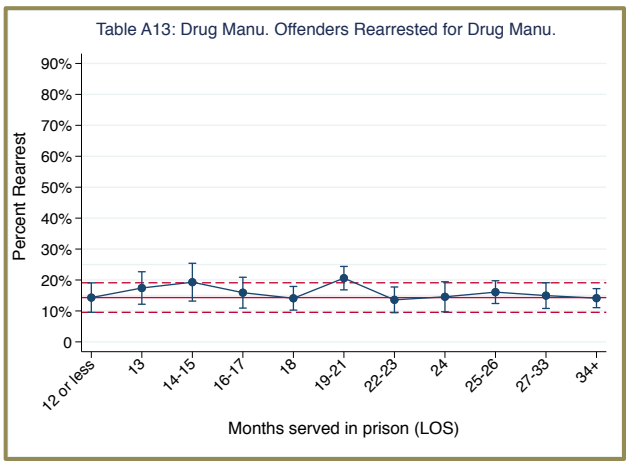


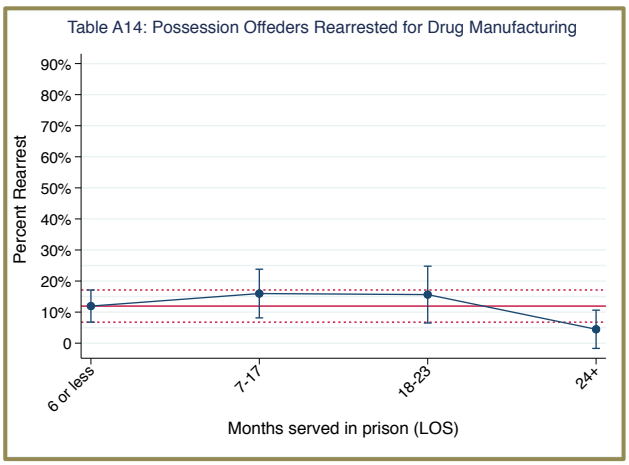


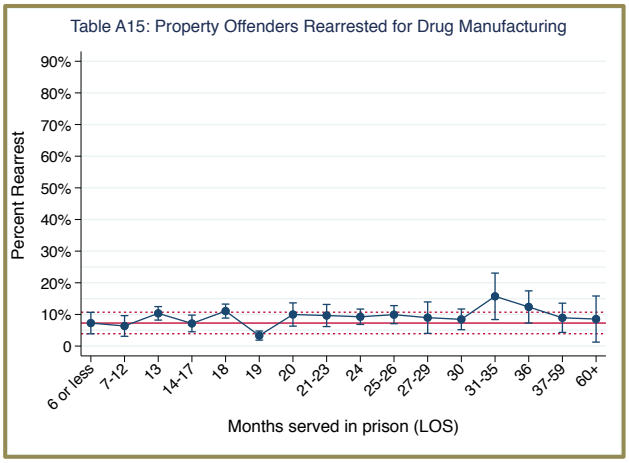
Rearrest for Drug Manufacturing and Distribution by Crime Types



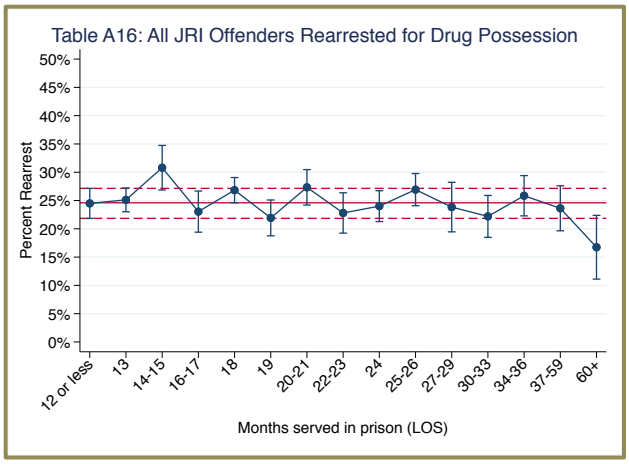


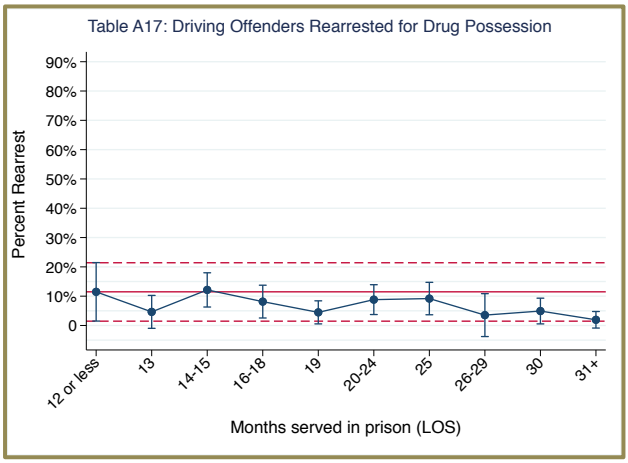


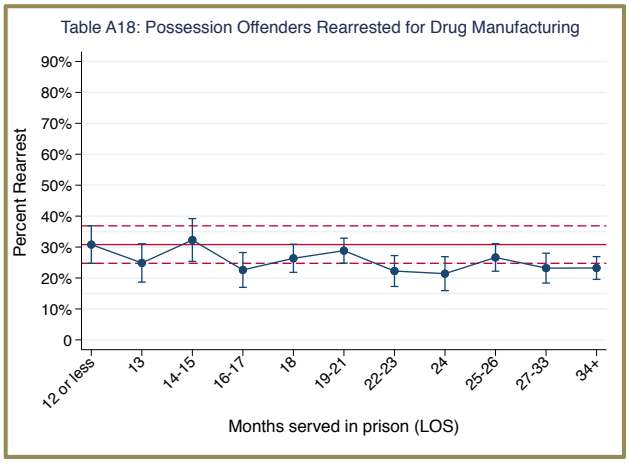


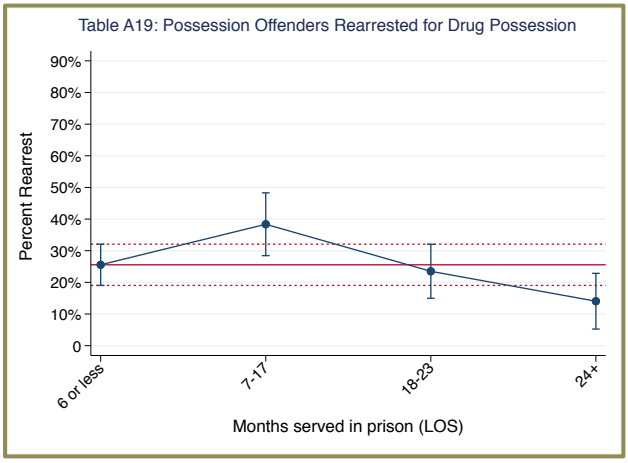


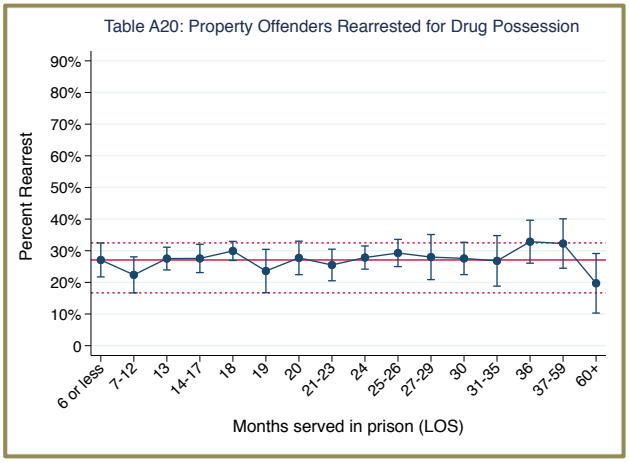
Rearrest for Drug Possession by Crime Types



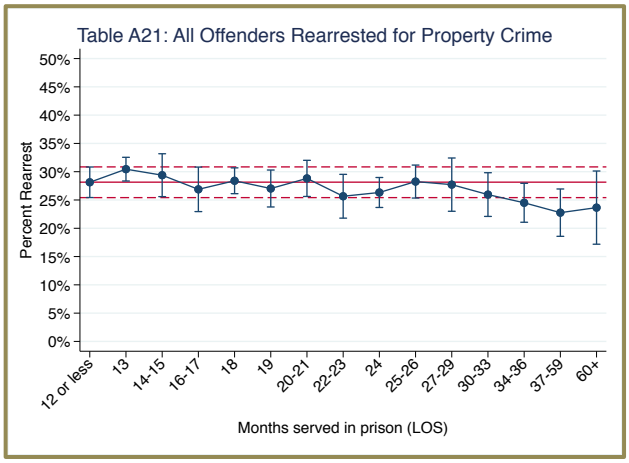


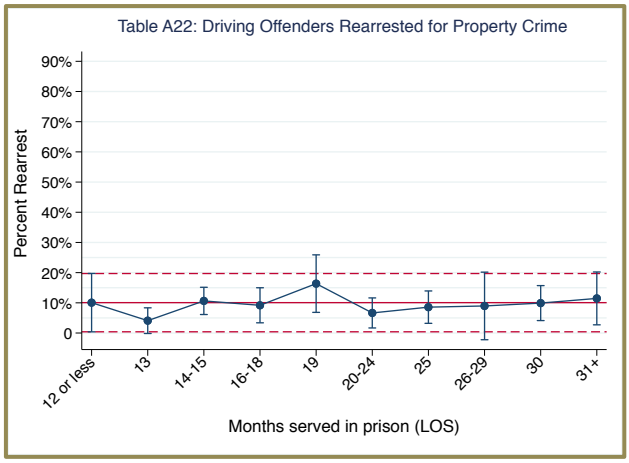


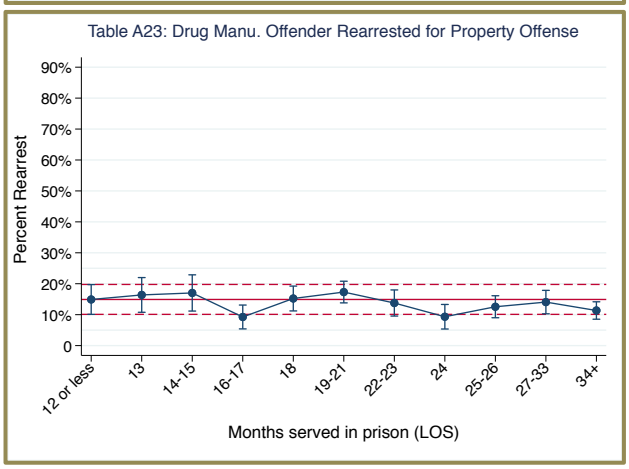


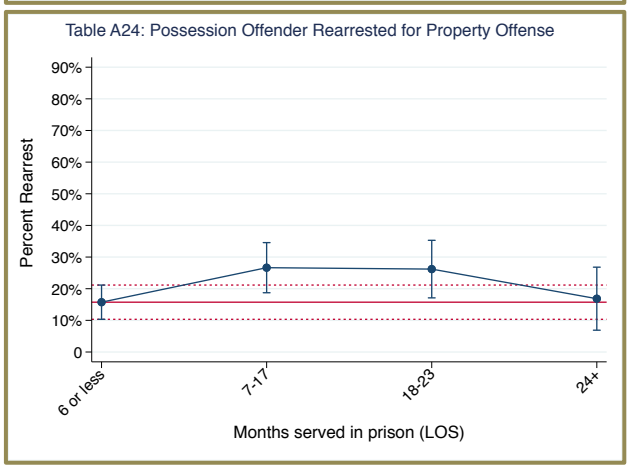


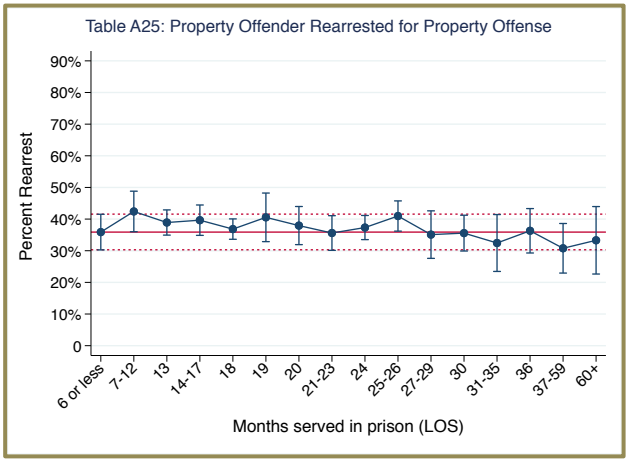
Rearrest for a Property Offense by Crime Types



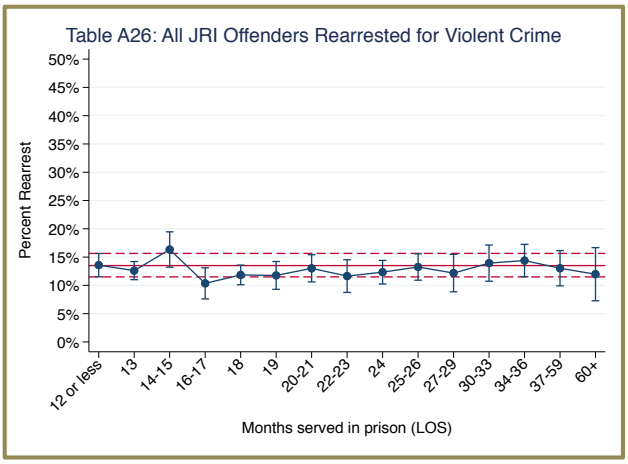


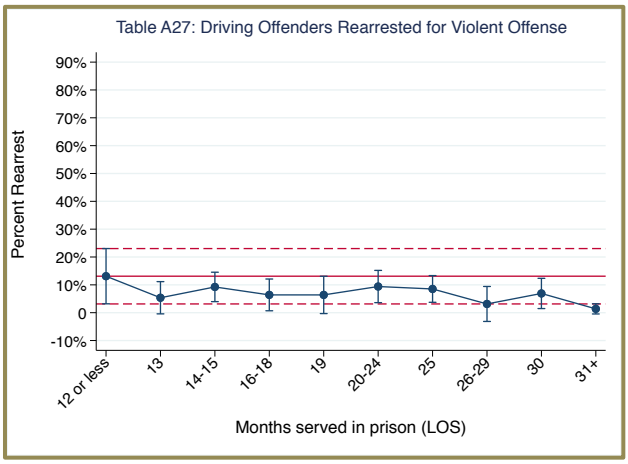


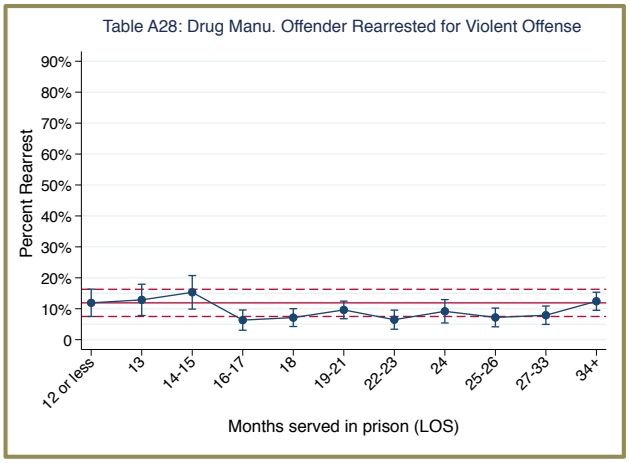


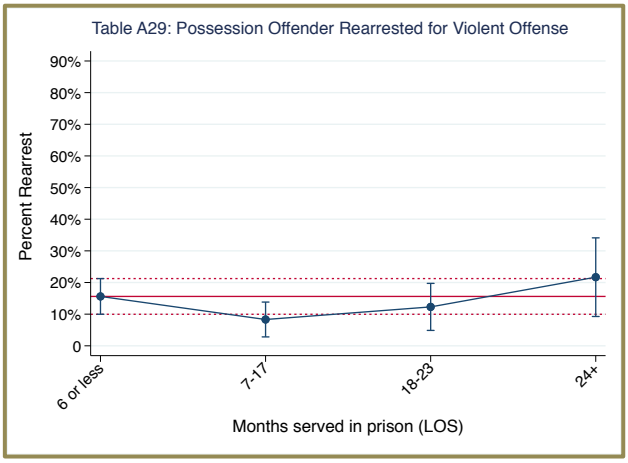


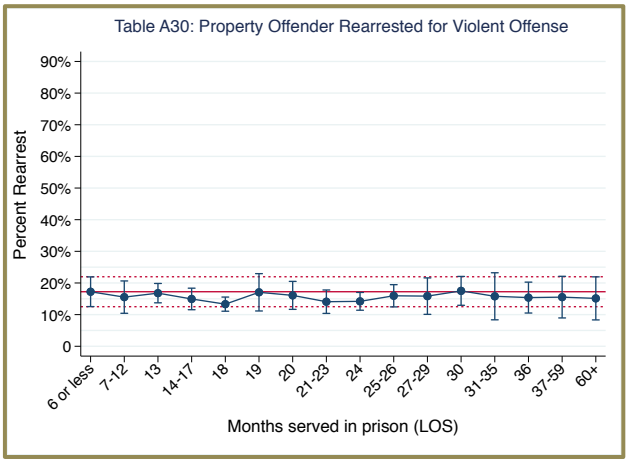
Rearrest for a Violent Crime Offense by Crime Types











Appendix C: Data and Methods

Effect of Prison Length of Stay on Recidivism in Oregon

Portland State University

The most powerful scientific procedure we could use for assessing the causal relationship between length of prison stay (LOS) and recidivism is a randomized controlled trial or RCT. This would involve randomly assigning offenders to a shorter or longer prison stay. Random assignment prior to sentencing would ensure that the groups are equivalent in all regards except for LOS. Each offender would then be followed as they leave prison to monitor whether they are rearrested, reconvicted, or reincarcerated for a new crime over a set period like three years. The recidivism rates for the groups of individuals with similar LOS could then be compared to see if longer prison stays are associated with higher or lower recidivism rates. If, for example, the recidivism rates were 50% for short-term incarceration group and 30% for the long-term group, we would have strong evidence that longer prison stays deter later criminal activity in the community.

While ideal from a scientific perspective, an RCT study like the one described above comes with obvious ethical and legal considerations that prevent its use in the present context. That means we needed an alternative approach to studying the impact of time served on recidivism. The main challenge in researching a topic like this is having non-equivalent comparison groups. Specifically, the people who stay in prison for a long time might be different in important ways from those who serve a shorter term. The former may have a more extensive criminal history, they might be serving time on multiple offenses, or there might be demographic differences between the groups. Without accounting for these differences, the research team could not be sure that any difference found in recidivism was solely attributable to length of stay in prison.

Propensity score modeling (PSM) is a relatively new approach to dealing with the issues that come with non-random assignment and can account for and removed the problems of non-equivalent comparison groups. PSM is a statistical matching technique that attempts to control for pre-existing differences between study participants. Prior research has shown this technique to be reliable and valid when assessing different "dosages" of a particular intervention or in our case differences in LOS (Hong, 2012). Moreover, criminological researchers working in other states have increasingly relied on PSM to isolate the effect of prison sentences on recidivism (Loughran et al., 2009; Meade, Steiner, Makarios, & Travis, 2013; Rydberg & Clark, 2016).

With the ethical and feasibility concerns of an RCT and the likelihood that a PSM model will produce valid and reliable results, our study utilizes a PSM technique known as marginal means weighting through stratification (MMW-S). The approach involves creating RCT-like comparable LOS groups created by (1) "matching" on offender characteristics that influence sentencing and (2) accounting for characteristics that influence recidivism. Thus, we create LOS groups that act as "statistical twins" who received different sentence lengths and makes them comparable. We are then able to accurately assess the impact of LOS of future recidivism. The analysis also controls for factors that are used in determining sentence length (e.g., offense type and criminal history).

Sample

Working with the Oregon Criminal Justice Commission, we identified all offenders released from prison in Oregon between 2011 and 2015 after serving time for one or more JRI offenses. This consisted of 12,824 individuals. This includes people released following the end of their sentence

(73.2%), those released on short-term transitional leave (26.3%), and people released for other, less common reasons (.4%). JRI offenses are grouped into four major categories: 1) Drug Possession, 2) Drug Manufacturing, Delivery, Sales, 3) Property Offenses, and 4) Driving Offenses. The specific offenses we targeted for this study are provided in Table 1a below.

After removing less than 2% of cases due to various issues with missing, incomplete, or inaccurate information, the final analyses consisted of 12,497 individuals. The reduction in the initial sample of 12,824 cases involved several steps. First, 104 people had two cases or distinct prison custodies during the study period. We deleted their second case to ensure that each person was represented by just one case in the final sample. Second, CJC had difficulty finding a full set of records for 201 people. The missing data resulted from convictions being overturned (n = 5), destruction of records (n = 48), incorrect name or ID that prevented data matching across record management systems (RMS; n = 36), sealed or lost records due to a long prison stay (n = 14), and for 98 people the cause of the missing data was unclear. Third, 22 of the offenders died either while serving time on their JRI offense(s) or before they completed a full three-year follow-up in the community. This left us with 12,497 people in our study sample, or 97.5% of the initial pool of cases.

Data Sources

The CJC provided us with data from several statewide criminal justice databases. The Law Enforcement Data System (LEDS) is managed by the Oregon State Police and documents criminal arrests throughout the state. We had access to each offender's arrest history dating from 1975 up through the end of 2018. Juvenile records in LEDS are often expunged, so these data largely capture the offenders' adult history.

The Oregon Judicial Department's Odyssey System captures information on criminal cases from the state's 27 Circuit Courts. It provided us with the charging and conviction history for each of the offenders in our sample. While some of the cases we found in Odyssey date back to the 1970s, it appears that the RMS consists mostly of cases from the late 1980s forward. In other words, the court history for some of the older offenders in our sample may be truncated. Likewise, the courts use Odyssey for tracking cases in the adult system. The juvenile court records for the people in our sample were not available to us. Finally, less serious charges that are resolved in county, municipal, and specialty courts are not documented in Odyssey.

Finally, the Oregon Department of Corrections (DOC) maintains a comprehensive database for the offenders under their supervision, including records on inmates and people on some form of community supervision. This includes admissions to the DOC dating back to the mid-1970s.

Characteristics of the Sample

With regard to the characteristics of the people in the final sample, there were 10,356 men (82.9%) and 2,141 women (17.1%). The majority were White (9,676; 77.4%) followed by Hispanic/Latino (1,346; 10.8%), Black/African-American (1,014; 8.1%), American Indian (283; 2.3%), Asian (172; 1.4%), Pacific Islander (4; less than .1%), and two cases were listed as "unknown" race. The average age of the offenders was 36.3 (SD = 10.5) and ranged from 16 to 79 years old. Seven of the offenders (.1%) were under the age of 18 at the time of their release to the community; 1,606 (12.9%) were age 18 to 24; 4,613 (36.9%) 25 to 34; 3,405 (27.2%) 35 to 44; 2,153 (17.2%) 45 to 54; 629 (5.0%) 55 to 64; and 84 (.7%) were age 65 or older.

Table C1. JRI Offenses (ORS code, sub-code, brief offense description)

Driving Offenses

811.182 (03) - DRIV S/R F
811.182 (NEW) - DRIV S/R N
811.182 (NEWX) - DRV SR NAT
813.010 (05) - DUII-FELON

Drug Manufacturing, Delivery, Sales

475.752 (01A) - DCS/MCS AF
475.752 (01B) - DCS/MCS BF
475.752 (01BX) - D/MCS 2 AT
475.752 (01C) - DCS/MCS CF
475.810 - DEL HYDROC
475.820 - DEL MTHDN
475.822 - DEL MTHD S
475.830 - DEL OXYCO
475.830 (X) - DEL OXYC X
475.832 - DEL OCYC S
475.840 (01A) - DELMANU AF
475.840 (01B) - DELMANU BF
475.840 (01BX) - DEL BF ATT
475.840 (01C) - DELMANU CF
475.846 - MAN HEROIN
475.848 - MAN HER SC
475.850 - DEL HEROIN
475.850 (X) - DEL HERO X
475.852 - DEL HER SC
475.856 - MANU MARIJ
475.856 (2) - MANU MJ BF
475.856 (3) - MAN MJ CF
475.856 (3B) - MAN EXTR
475.856 (3BX) - MAN EXTR X
475.856 (X) - MAN MARI X
475.858 - MAN MARJ S
475.858 (3B) - SCH EXTR
475.860 (02A) - DEL MJ FP
475.860 (02B) - DEL MJ NP
475.860 (04A) - DEL MJ MIN
475.860 (04AX) - MJ MIN ATT
475.860 (2) - DEL MJ AM
475.860 (2X) - DEL MJ AMX
475.860 (3A) - CF MJ MIN
475.860 (3B) - EXTR OLCC
475.860 (4) - MJ MIN AM
475.862 - DEL MARJ S
475.862 (2) - DEL MJ SC
475.862 (3AX) - MJ MIN SCX
475.870 - DEL MDMA
475.872 - DEL MDMA S
475.876 - MAN COCAIN
475.880 (02) - DEL COCAIN
475.880 (02X) - DEL COCA X
475.880 (03) - DEL COC MI
475.880 (03X) - DEL COC MX
475.882 - DEL COCA S
475.886 - MANU METH
475.886 (X) - MAN METH X
475.888 - MAN METH S
475.890 (02) - DELIV METH
475.890 (02X) - DEL METH X
475.890 (03) - DELMETH MI
475.890 (03X) - DELMETH MX
475.892 - DEL METH S
475.892 (X) - DELMETH SX
475.904 - DEL SUB SC
475.906 (01) - SUB/MIN AF
475.906 (01X) - SUB/MIN AT
475.906 (02) - SUB/MIN BF
475.908 (01) - INGEST BF
475.910 (01A) - APLBODY AF
475.967 - PPRE W/INT
475.986 (1A) - APPLBODYAF
475.992 (01A) - DEL/MAN AF
475.992 (01B) - DEL/MAN BF
475.992 (01C) - DEL/MAN CF
475.992 (02A) - SELL MARIJ
475.992 (02AX) - SELL MJ AT
475.992 (04A) - POS SUB BF
475.995 (01) - SUB MIN AF
475.995 (X) - SUB MIN AT
475.999 - SUB SCHOOL

Drug Possession

475.752 (3A) - PCS I AM
475.752 (3AX) - POS I AM X
475.752 (3B) - PCS II AM
475.752 (7) - PCS I BF
475.752 (8) - PCS II CF
475.824 - POS MTHDN
475.834 - POS OXYCO
475.834 (2B) - PCS OXYCO
475.840 (03A) - POS/SUB BF
475.840 (03B) - POS/SUB CF
475.854 - POS HEROIN
475.854 (2B) - POSS HERO
475.854 (X) - POS HERO X
475.864 (02) - POSS MARIJ
475.864 (02X) - POS MARJ X
475.864 (3A) - POS MJ>4OZ
475.874 - POSS MDMA
475.874 (2B) - PCS MDMA
475.874 (X) - POS MDMA X
475.884 - POS COCAIN
475.884 (2B) - PCS COCA
475.894 - POSS METH
475.894 (2B) - PCS METH
475.992 (04AX) - SUB BF AT
475.992 (04B) - POS SUB CF

Property Offenses

164.055 - THEFT I
164.057 - THEFT AGGR
164.057 (X) - THEF AG AT
164.135 - UN USE VEH
164.162 - MAIL TH CF
164.215 - BURG II
164.225 - BURG I
164.225 (X) - BURG I AT
164.365 - MISCH I
164.377 (02) - COMP FRAUD
164.377 (03) - COMP DESTR
164.377 (05B) - COMP LOTT
164.395 - ROBB III
165.013 - FORG I
165.022 - FORG IN I
165.055 (03B) - FRD CRD CF
165.055 (04B) - FRD CRD CF
165.800 - ID THEFT
165.803 - AG ID THFT
819.300 - STOLEN VEH
819.310 - TRAF ST VH

Measures

While a detailed description of each of the measures in this dataset is outlined below, we provide a brief breakdown for the reader to follow the terms used in describing the analysis and findings.

Recidivism Outcomes. The recidivism outcomes examined for this report included the three primary types: if they occurred:

- Rearrest within the first three years of release.
- Reincarceration within the first three years of release.
- Reconviction within the first three years of release.

Additionally, we examined nuanced information as to the reason for rearrest which can be found in Appendix A:

- General violent offenses
- General property offenses
- Drug possession
- Drug manufacturing and distribution
- Driving offenses

Lastly, we examined the time-to-recidivism information. Prior research has shown that the longer we are able to keep offenders in the community, post-release, the higher their likelihood of staying successful. This examination focused on time-to-recidivism for the first three years. The results of this analysis are not full presented in the report as the findings produced no significant results. Graphical representation of three of the models were presented in Appendix B. For details of additional time-to-recidivate results or more information on interpretation of results in Appendix B, please contact the authors at Portland State University.

Prison Length of Stay. Length of prison stay (LOS) is measured in months served. Our measures account for the actual time served by the offender, which includes time-served credited from any pretrial detention, as well as any transitional leave time. If an offender is released to the public, including those on supervision, on transitional leave, or in a transitional facility (*e.g.* halfway house) they are assumed to be able to recidivate. The analysis examines the LOS for the overall sample, and then individually for each of the four major JRI offense categories of property, driving, drug possession, and drug manufacturing and distribution.

Controlled Measures. In order to adequately isolate the effects of LOS, we control for other important factors that influence (1) the length of sentence given at the disposition and (2) any other factors that might influence the likelihood of recidivism once released. These controls included:

- Individual's recent criminal history (within the past five years),
- Past revocations of supervision
- The number of convictions on which the LOS is based
- Severity of the offense according to the state sentencing grid (a DOC measure)
- The most serious JRI offense committed.
- Age at first arrest
- Age at release
- Sex

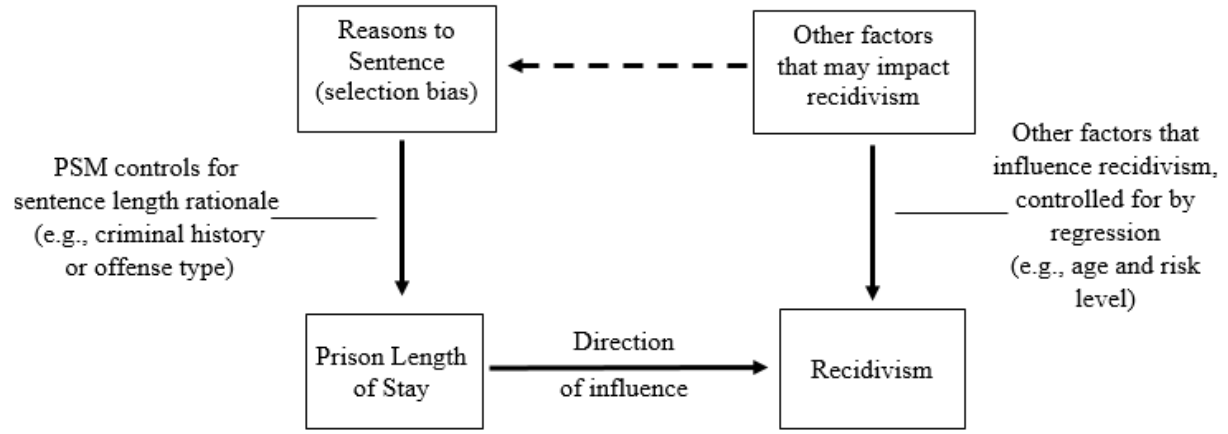
- Race
- Risk to reoffend[1]
- Infractions (major and minor) committed while in prison
- Areas of criminogenic need (e.g., antisocial attitudes) when available.

Analyses

As noted, in order to answer the research questions, we aimed to model the reasons for a certain sentence length, as well as any other factors that might influence the recidivism. Figure B1 provides a diagram of how our analytical approach achieves this strategy. The approach to modeling the decision to detain employs a PSM technique[2] known as marginal means weighting through stratification (MMW-S). After applying the technique, we compare the recidivism outcomes of those who receive different sentence lengths to isolate the effects of LOS while accounting for any remaining imbalanced covariates. This process involves an ordinal logistic regression to employ the PSM technique, and binary logistic regression analysis to account for the additional controls.

Lastly, prior research has shown the longer released people can remain in the community without recidivating, the greater the likelihood that they will be successful for the long term. Studies generally show that most recidivate within the first three years, and particularly in the first year after release from prison. Subsequently, we examine the rate at which offenders recidivate upon being released through analyzing survival trends, or time-to-recidivism models.

Figure C1. Diagram of analytical plan and use of PSM



Marginal Means Weighting Through Stratification (MMW-S). The type of PSM we rely on for this analysis is MMW-S. Essentially, *this form of weighting allows analysts to estimate the impact of dosage (or intensity) of an ordinal variable, such as LOS, on a particular outcome of interest* (see Hong, 2012). The MMW-S approach has been used in assessing the impact of prison length on post-release recidivism (see e.g., Loughran, Wilson, Nagin, & Piquero, 2015). MMW-S has also been shown to be an effective approach for simulating the effects of RCT experiments (see

[1] Risk level was determined by the Public Safety Checklist (PSC) and by the Level of Service Case Management Inventory (LS/CMI) when available.

[2] We refer the interested reader to Hong (2012) for more detailed information about PSM.

Campbell & Labrecque, 2018). In this sense, the propensity score is used to weight people who spent different durations in prison so that the characteristics examined (e.g., age, sex, race, criminal history) are similar within each grouping of offenders. We specifically matched on the following variables:

- Age at First Arrest
- Race
- JRI Crime Severity
- Number of Driving Offenses
- Number of Possession Offenses
- Number of Drug Manufacturing and Distribution Offenses
- Number of Property Offenses
- Prior Violations of Community Supervision
- Pre-Sentencing LS/MCI Crime History Score
- Pre-Sentencing LS/MCI Association History Score
- Pre-Sentencing LS/MCI Drug History Score
- Pre-Sentencing LS/MCI Recreational History Score
- Pre-Sentencing LS/MCI Attitude Score
- Pre-Sentencing LS/MCI Antisocial Score

In the current study, the propensity score summarizes a convicted individual's likelihood of receiving a specific prison sentence duration. Because the number of months spent in prison had a heavy skew (i.e., 54.2% of cases had a prison stay of 19 months or less, with large clusters at 13, 18, and 24-26 months), we categorized the "dosage" of time spent in prison (LOS) into 15 ordered groups. The cut-points for the categories were constructed to maintain similar counts of defendants within each grouping (at least 359 cases per dosage category). Table C2 describes the category duration ranges, the number of defendants falling into each group, and their respective propensity score distributions.

Table C2. Pre- and post-weight sample size and propensity score distribution

Length of stay in prison (months)	Pre-Weight			Post-Weight		
	N (12,340)	Mean propensity score	Standard deviation	N (11,980)	Mean propensity score	Standard deviation
12 months or less	1,142	.027	.035	1,032	.028	.017
13	2,420	.020	.010	2,363	.027	.015
14-15	530	.028	.015	519	.027	.014
16-17	555	.030	.024	541	.028	.016
18	1,370	.025	.019	1,344	.028	.015
19	740	.032	.016	732	.028	.015
20-21	697	.032	.030	678	.028	.015
22-23	483	.033	.048	468	.028	.015
24	898	.033	.040	882	.027	.014
25-26	832	.031	.038	813	.027	.014
27-29	395	.034	.031	389	.028	.015
30-33	467	.030	.017	458	.028	.015
34-36	704	.039	.045	688	.028	.016
37-59	748	.044	.030	725	.029	.017
60 months or more	359	.046	.027	348	.030	.017
F-statistic		54.24			1.07	
p-value for *F*		<.001			.378	
% of covariates significant		47.4%			34.2%	
AUC		.753			.517	

Post-Match Comparisons. Table C3 also demonstrates how applying the weight is able to make it so there are few statistically significant differences across the different length of stay (e.g. dosage) categories, and the ability of the propensity score to identify the different LOS groups. In other words, *the weight controls for certain factors (e.g., instant offense and criminal history) that are used in determining sentence length*. *Our estimation process allowed us to predict someone's sentence length with 75.3% accuracy*. Following the PSM technique application, we conducted a series of basic tests to ensure that the weighting was successful in accounting for the sentencing length. The length of stay groupings are then analyzed via multivariate regressions, which allow us to control for other factors that might impact recidivism (see Figure C1). Below we describe the category duration ranges, the number of defendants falling into each group, and their respective propensity score distributions for the for the crime subtypes.

Table C3. Pre-/post-weight sample size and propensity score distribution for JRI property

Length of stay in prison (months)	Pre-Weight			Post-Weight		
	N (7,956)	Mean propensity score	Standard deviation	N (7,710)	Mean propensity score	Standard deviation
6 or less	444	.046	.009	430	.266	.121
7-12	255	.046	.008	246	.263	.123
13	2,073	.049	.006	2,033	.266	.121
14-17	464	.042	.009	452	.263	.121
18	978	.047	.008	967	.264	.122
19	468	.039	.009	456	.260	.124
20	248	.045	.009	243	.261	.122
21-23	339	.040	.010	332	.258	.124
24	600	.042	.010	588	.260	.122
25-26	402	.044	.009	393	.261	.123
27-29	175	.040	.010	169	.257	.122
30	273	.043	.010	268	.260	.123
31-35	228	.035	.009	214	.260	.125
36	301	.038	.010	293	.259	.125
37-59	430	.033	.009	404	.257	.124
60 or more	278	.033	.010	222	.247	.128
F-statistic		196.94			.58	
p-value for *F*		<.001			.895	
% of covariates significant		40.5%			8.1%	
AUC		.746			.502	

Table C4. Pre-/post-weight sample size and propensity score distribution for JRI driving

Length of stay in prison (months)	Pre-Weight			Post-Weight		
	N (937)	Mean propensity score	Standard deviation	N (867)	Mean propensity score	Standard deviation
12 or less	41	.145	.052	38	.133	.039
13	132	.158	.043	117	.133	.037
14-15	129	.149	.056	113	.132	.039
16-18	74	.140	.048	69	.131	.040
19	94	.149	.042	87	.132	.037
20-24	123	.141	.042	116	.132	.039
25	128	.131	.045	121	.130	.038
26-29	33	.123	.037	32	.134	.042
30	115	.127	.051	108	.131	.040
31+	68	.112	.036	66	.129	.036
F-statistic		8.09			.11	
p-value for *F*		<.001			.995	
% of covariates significant		16.2%			8.1%	
AUC		.643			.503	

Table C5. Pre-/post-weight sample size and propensity score distribution for JRI drug manufacturing and Distribution.

Length of stay in prison (months)	Pre-Weight			Post-Weight		
	N (3,185)	Mean propensity score	Standard deviation	N (3,036)	Mean propensity score	Standard deviation
12 or less	207	.187	.043	197	.186	.038
13	173	.184	.045	167	.186	.039
14-15	143	.176	.041	137	.186	.039
16-17	280	.176	.050	253	.185	.040
18	307	.174	.045	290	.184	.039
19-21	429	.177	.041	413	.186	.039
22-23	254	.182	.040	245	.186	.038
24	213	.186	.045	204	.186	.040
25-26	289	.189	.043	278	.187	.040
27-33	302	.194	.040	291	.188	.037
34+	588	.201	.040	561	.187	.038
F-statistic		15.8			.17	
p-value for *F*		<.001			.998	
% of covariates significant		21.6%			13.5%	
AUC		.629			.507	

Table C6. Pre-/post-weight sample size and propensity score distribution for JRI drug possession.

Length of stay in prison (months)	Pre-Weight			Post-Weight		
	N (403)	Mean propensity score	Standard deviation	N (377)	Mean propensity score	Standard deviation
6 or less	177	.502	.180	159	.425	.129
7-17	100	.408	.134	97	.419	.123
18-23	79	.392	.122	78	.420	.128
24+	47	.361	.135	43	.419	.125
F-statistic		17.7			.17	
p-value for *F*		<.001			.976	
% of covariates significant		16.2%			2.7%	
AUC		.685			.510	

Detailed Information on Measures/Variables

The three data sources (LEDS, Odyssey, DOC) described above were used in coding all of the variables for this study. The table below provides a brief description of the major variables, and where needed, we detail the step taken in coding the variable.

Variable	Source	Description
INDEX INCARCERATION *All of the offenders in this study were incarcerated in an Oregon facility for at least one JRI crime. We refer to this as their "index offense" and "index incarceration".*		
Custody Number	DOC	Indicates the number of distinct custody cycles an offender has had in the DOC. A new custody cycle begins when the offender completes his/her sentence and applicable community supervision.
Admission Date	DOC	Date the offender was admitted to prison for their index JRI offense. All of the offenders in our sample had at least one JRI offense between 2011 and 2015.
Previous Status	DOC	The offender's status with the DOC prior to entering prison for their index JRI offense. Some of the offenders were already under DOC supervision for a prior custody. Others were first time offenders or had successfully completed a prior custody cycle.
Release Date	DOC	Date the given offender was released from prison for their index JRI offense. To be included in the sample they had to have a prison release date between Jan 1st, 2011 and Dec 31st 2015.
Release Reason	DOC	Documents the reason for releasing the given offender to the community following their incarceration. Most of the offenders were released after they completed their sentence. Others were released on short-term transitional leave (STTL) or through the Alternatives to Incarceration Program (AIP). While STTL and AIP offenders are technically considered prisoners, they nevertheless had the opportunity to reoffend in the community during their leave. As such, we started their individualized 3-year recidivism follow-up on the day they started their leave.
Length of Stay (LOS)	DOC	Indicates the number of months the offender was incarcerated for their index JRI offense and other convictions. The DOC calculates the LOS of length of stay using the following formula: ([Release Date] - [Admission Date]) / 30.5
Age at Release	DOC	Age of the offender at their release from prison for their index JRI offense.
Prior Revocations	DOC	Count of the offender's probation/parole revocations in Oregon prior to their index release. Includes of any type of violation listed in DOC records (e.g., CRTR, CUST, REVO, RTNS, VIOL).
DRs Major	DOC	Count of the offender's major disciplinary reports during their index incarceration.

DRs Minor	DOC	Count of the offender's minor or less serious disciplinary reports during their index incarceration.
DRs Assault Rules	DOC	Number of times the offender had a disciplinary report involving an assault during their index incarceration.
DRs Sex Assault Rules	DOC	Number of times the offender had a disciplinary report involving a sexual assault during their index incarceration.
Trans Leave Start Date	DOC	Some of the offenders in the sample were released to the community early though one of the DOC's transitional leave policies. This includes Short-Term Trans Leave (STTL) and the Alternatives to Incarceration Program (AIP). This field provides the starting date for their transitional leave.
Trans Leave End Date	DOC	This date documents the end of their transitional leave. Offenders then complete their post-prison supervision (if applicable).
Trans Leave Days	DOC	Number of days spent on transitional leave.
Trans Leave Type	DOC	Type of transitional leave (STTL or AIP).
INDEX OFFENSE *These variables document the JRI and non-JRI crimes the offender was serving time on during their index incarceration.*		
Total Index Offenses	DOC	Number of JRI and Non-JRI offenses the person was serving time on during their index incarceration.
Non-JRI Index Offenses	DOC	Number of Non-JRI offenses the person was serving time on during their index incarceration.
JRI Index Offenses	DOC	Number of JRI offenses the person was serving time on during their index incarceration. All cases in the sample had to have at least one JRI offense. Calculated by summing the four items below.
JRI Driving Offenses	DOC	Count of the person's index offenses that are classified as a JRI driving crime (see JRI offense table for full list of applicable ORSs).
JRI Drug Offenses	DOC	Count of the person's index offenses that are classified as a JRI drug manufacturing, sales, distribution crime (see JRI offense table).
JRI Possession Offenses	DOC	Count of the person's index offenses that are classified as a JRI drug possession crime (see JRI offense table).
JRI Property Offenses	DOC	Count of the person's index offenses that are classified as a JRI property crime (see JRI offense table).

Most Serious JRI Offense	DOC	Gives the ORS and subcode for the person's most serious JRI offense. If the person was incarcerated for more than one JRI offense, the DOC looks for the crime with the longest sentence. If the sentence lengths are the same, they use a severity score assigned to each ORS and select the most serious charge.
Most Serious JRI Offense Sentence Length	DOC	Sentence length for the most serious JRI index offense. Actual time served during the index incarceration is also influenced by concurrent offenses, earned time, and other factors.
Most Serious JRI Offense Crime Date	DOC	The offense date for the most serious JRI index crime.
Most Serious JRI Offense Conviction Date	DOC	Date the offender was convicted for their most serious JRI index crime.
Most Serious JRI Offense Crime Seriousness	DOC	Crime seriousness score (0 to 11) for the most serious JRI index offense. Scores are from the Oregon Sentencing Grid, with higher scores indicating a more serious offense.
Most Serious JRI Offense Criminal History	DOC	Gives the offender's criminal history code at the time of their sentencing for the JRI index offense. Ranked from I (no prior convictions) to A (3+ prior person felonies). Based on the Oregon Sentencing Grid.
Most Serious JRI Offense County	DOC	Originating county for the offender's most serious JRI index offense.
Most Serious JRI Offense Region	DOC	Originating region for the offender's most serious JRI index offense. Counties are grouped into one of four regions in the state (e.g., Central Eastern, Metro, NW Coastal, South-West).
Most Serious JRI Offense Type	DOC	Indicates whether the offender's most serious JRI index offense was for a driving, drug possession, drug manufacturing/sales/dist., or a property crime.
LS-CMI RISK & NEEDS ASSESSMENT		
The Level of Service/Case Management Inventory (LS/CMI) is a clinician rated risk and needs case management tool used with adult offenders in Oregon. It generates a total risk score, risk classification, and eight sub-scores. DOC staff complete the assessment at varying intervals during an offender's incarceration rather than rating the offender on the day of their release to the community. As such, we selected the most recent LS/CMI in the 30 days preceding an offender's release. If the measure was not available from this timeframe, we substituted it with the first assessment completed in the 30 days after they were released. Lacking this, the LS/CMI variables were left missing.		

LSCMI Assessment Date	DOC	Date the LS/CMI was administered.
LSCMI Days from Release	DOC	Number of days between the offender's most recent LS/CMI and their index release to the community. Negative numbers indicate an assessment date before the release. Positive numbers indicate an assessment date after index release.
LSCMI Total Score	DOC	Total score on the LS/CMI scale ranging from 1 to 42, with higher number indicative of higher risk for recidivism.
LSCMI Total Score Risk Classification	DOC	Risk classification for the LS/CMI total score ranging from "Very Low" (0 to 4), "Low" (5 to 10), "Medium" (11 to 19), "High" (20 to 29), and "Very High" (30 to 42).
LSCMI Criminal History Score	DOC	Score on Criminal History subscale of the LS/CMI. Ranges from 0 to 8 with higher numbers indicating greater risk.
LSCMI Criminal History Classification	DOC	Risk classification for LS/CMI Criminal History subscale (ranges from "Very Low" to "Very High").
LSCMI Family Score	DOC	Score on Family/Marital subscale of the LS/CMI. Ranges from 0 to 4 with higher numbers indicating greater risk.
LSCMI Family Classification	DOC	Risk classification for LS/CMI Family/Marital subscale (ranges from "Very Low" to "Very High").
LSCMI Education Score	DOC	Score on Education/Employment subscale of the LS/CMI. Ranges from 0 to 9 with higher numbers indicating greater risk.
LSCMI Education Classification	DOC	Risk classification for LS/CMI Education/Employment subscale (ranges from "Very Low" to "Very High").
LSCMI Recreation Score	DOC	Score on Leisure/Recreation subscale of the LS/CMI. Ranges from 0 to 2 with higher numbers indicating greater risk.
LSCMI Recreation Classification	DOC	Risk classification for LS/CMI Leisure/Recreation subscale (ranges from "Very Low" to "High").
LSCMI Associates Score	DOC	Score on Companions/Associates subscale of the LS/CMI. Ranges from 0 to 4 with higher numbers indicating greater risk.
LSCMI Associates Classification	DOC	Risk classification for LS/CMI Companions/Associates subscale (ranges from "Very Low" to "Very High").

LSCMI Drug Score	DOC	Score on Alcohol/Drug subscale of the LS/CMI. Ranges from 0 to 8 with higher numbers indicating greater risk.
LSCMI Drug Classification	DOC	Risk classification for LS/CMI Alcohol/Drug subscale (ranges from "Very Low" to "Very High").
LSCMI Attitude Score	DOC	Score on Procriminal Attitude subscale of the LS/CMI. Ranges from 0 to 4 with higher numbers indicating greater risk.
LSCMI Attitude Classification	DOC	Risk classification for LS/CMI Procriminal Attitude subscale (ranges from "Very Low" to "Very High").
LSCMI Antisocial Score	DOC	Score on Antisocial Pattern subscale of the LS/CMI. Ranges from 0 to 4 with higher numbers indicating greater risk.
LSCMI Antisocial Classification	DOC	Risk classification for LS/CMI Antisocial Pattern subscale (ranges from "Very Low" to "Very High").
PSC RISK ASSESSMENT *The Public Safety Checklist (PSC) is a fully automated actuarial risk assessment tool that was developed collaboratively by the DOC and CJC to predict three forms of recidivism: new felony conviction, new arrest for a person crime, and new arrest for a property crime. The scores for this measure were calculated at the time of the offender's index release to the community.*		
PSC Felony Conviction	DOC	Estimated probability of recidivating with a new felony conviction within 3 years of release to the community. Ranges from 0 to 1. Score is derived from derived from a combination of the demographic and criminal history factors detailed below.
PSC Property Arrest	DOC	Estimated probability of recidivating with a new arrest for a property crime within 5 years of release to the community (e.g., burglary, MV theft). Ranges from 0 to 1. Score is derived from derived from a combination of the demographic and criminal history factors detailed below.
PSC Person Arrest	DOC	Estimated probability of recidivating with a new arrest for a person crime within 5 years of release to the community (e.g., assault, robbery). Ranges from 0 to 1. Score is derived from derived from a combination of the demographic and criminal history factors detailed below.
PSC PriorVlntY	DOC	Factor used in calculating PSC scores. Count of the person's arrests in LEDS (prior to index release date) for crimes classified as "Person" offenses. Count truncated at 15.
PSC VlntLst5Y	DOC	Factor used in calculating PSC scores. Same as item above but only includes arrests in 5 years preceding the person's index release. Count truncated at 15.

PSC PriorPropY	DOC	Factor used in calculating PSC scores. Count of the person's arrests in LEDS (prior to index release date) for crimes classified as "Property" offenses. Count truncated at 15.
PSC PropLst5Y	DOC	Factor used in calculating PSC scores. Same as item above but only includes arrests in 5 years preceding the person's index release. Count truncated at 15.
PSC PriorOthY	DOC	Factor used in calculating PSC scores. Count of the person's arrests in LEDS (prior to index release date) for crimes classified as "Statutory" offenses. Count truncated at 15.
PSC OthLst5Y	DOC	Factor used in calculating PSC scores. Same as item above but only includes arrests in 5 years preceding the person's index release. Count truncated at 15.
PSC Arrst1stage	DOC	Factor used in calculating PSC scores. Offender's age at their first arrest in LEDS. Note that most juvenile records are expunged so this is not a very accurate measure of juvenile offending.
PSC Stat	DOC	Factor used in calculating PSC scores. Coded "1" if the offender's most serious index conviction was a Statutory crime. Otherwise coded "0".
PSC Pers	DOC	Factor used in calculating PSC scores. Coded "1" if the offender's most serious index conviction was a Person crime. Otherwise coded "0".
PSC Prpt	DOC	Factor used in calculating PSC scores. Coded "1" if the offender's most serious index conviction was a Property crime. Otherwise coded "0".
PSC Custdynox	DOC	Factor used in calculating PSC scores. Coded "1" if the offender had two or more custody cycles in the DOC. Otherwise coded "0".
PSC Pop	DOC	Factor used in calculating PSC scores. Coded "1" for Prison cases, "0" for Probation cases. For the current study was always "1".
PSC Agenow	DOC	Factor used in calculating PSC scores. Offender's age at time of their index release.
PSC Severity	DOC	Factor used in calculating PSC scores. Numeric score indicating the severity of the most serious index offense. Ranges from 100 to 635 in the current sample, with lower numbers indicating a more serious crime. CJC assigns the severity scores to each criminal ORS.
PSC Priorsx	DOC	Factor used in calculating PSC scores. Coded "1" if the offender had ever been incarcerated in an Oregon prison. Otherwise coded "0". Is "1" for all cases in the current sample.

PSC Theft	DOC	Factor used in calculating PSC scores. Coded “1” if the offender had a prior felony conviction for a theft offense. Otherwise coded “0”.
PSC Revocation	DOC	Factor used in calculating PSC scores. Coded “1” if the offender had a prior violation of community supervision. Only includes revocations listed as "VIOL" in DOC records. Otherwise coded “0”.
PSC Male	DOC	Factor used in calculating PSC scores. Coded “1” if the offender was male. Otherwise coded “0”.
COURT CHARGING AND CONVICTION HISTORY *The Odyssey data system was used to document the offender’s charging and conviction history in Oregon’s Circuit Courts prior to their index release. Counts provided are based on court disposition date rather than offense date. Count should also include all JRI and non-JRI index offenses.*		
Courts Misd Charges	Odyssey	Count of the Misdemeanor charges disposed prior to offender’s index release date.
Courts Misd Convictions	Odyssey	Count of the Misdemeanor convictions disposed prior to offender’s index release date.
Courts Felony Charges	Odyssey	Count of the Felony charges disposed prior to offender’s index release date.
Courts Felony Convictions	Odyssey	Count of the Felony convictions disposed prior to offender’s index release date.
Convictions Felony Person	Odyssey	Number of prior Felony convictions for person crime.
Convictions Felony Non-Person	Odyssey	Number of prior Felony convictions for non-person crime.
Convictions Felony Total	Odyssey	Number of prior Felony convictions total (person & non-person).
Convictions AMisd Person	Odyssey	Number of prior A Misdemeanor convictions for person crime.
Convictions AMisd Non-Person	Odyssey	Number of prior A Misdemeanor convictions for non-person crime.
Convictions AMisd Total	Odyssey	Number of prior A Misdemeanor convictions total (person or non-person).
Convictions Amisd and Felony Total	Odyssey	Number of prior Felony and A Misdemeanor convictions total.

Sentencing Grid Criminal Hx	Odyssey	Estimated sentencing criminal history score for Oregon Sentencing Grid. Ranges from "A" to "I" with earlier letters indicting a larger criminal history. This rating is based solely on adult convictions found in Odyssey. The actual score used at sentencing includes applicable juvenile offenses.
CRIMINAL ARREST HISTORY *The LEDS data system was used to characterize the offenders' arrest history in Oregon prior to their index release date. The counts provided below represent the number of "arrest dates" with a given type of charge rather than a count of the actual charges listed per arrest. For example, an arrest on January 21st, 2011 with three charges for Burglary I would only count as one burglary offense date.*		
Prior Arrest Dates for Criminal Offense	LEDS	Number of unique arrest dates in LEDS involving a criminal charge. A unique arrest date is defined using a combination of the offender's ID, a date, and the name of the county. Excludes probation/parole violations and other police contacts that do not constitute a physical custody for a crime.
Prior Arrest Dates for Assaultive Disorderly Conduct	LEDS	Number of prior arrest dates involving assault offenses or disorderly conduct (e.g., assault I to IV; intimidation; murder; stalking; harassment; disorderly conduct I or II).
Prior Arrest Dates for Attempted Crime Criminal Conspiracy	LEDS	Number of prior arrest dates involving attempted crimes or criminal conspiracy.
Prior Arrest Dates for Criminal Trespass	LEDS	Number of prior arrest dates involving criminal trespassing offenses.
Prior Arrest Dates for Driving Offenses Reckless Behavior	LEDS	Number of prior arrest dates involving driving offenses or reckless behavior (DUI; driving reckless; DWS, hit & run; failure to perform duties of driver).
Prior Arrest Dates for Drugs-Mnf Del Sale	LEDS	Number of prior arrest dates involving manufacturing, distribution, or sale of drugs (e.g., delivery of heroin; manufacturing meth).
Prior Arrest Dates for Drugs-Possession	LEDS	Number of prior arrest dates involving drug possession (e.g., possession of cocaine; possession of marijuana).
Prior Arrest Dates for Escape Resist Arrest Police Interference	LEDS	Number of prior arrest dates involving escape or resist arrest (e.g., escape I to III; false information to police officer; interfering with a police officer; eluding a police officer).

Prior Arrest Dates for Failure to Appear	LEDS	Number of prior arrest dates involving failure to appear.
Prior Arrest Dates for Fraud Forgery	LEDS	Number of prior arrest dates involving fraud or forgery (e.g., computer fraud; criminal simulation; false claim to health care; forged instrument; fraudulent use of a credit card).
Prior Arrest Dates for Obstruction of Justice Government Admin	LEDS	Number of prior arrest dates involving obstruction of justice or government administration (e.g., bribe giving, false swearing; interference with public transportation; official misconduct).
Prior Arrest Dates for Robbery	LEDS	Number of prior arrest dates involving robbery.
Prior Arrest Dates for Sexual Offenses Noncompliance	LEDS	Number of prior arrest dates involving sexual offenses or noncompliance with sexual offender registry (e.g., rape I to III; sodomy I to III; encouraging child sex abuse; obscene material; possession child pornography; public indecency; failure to report as sex offender).
Prior Arrest Dates for Theft Property Crime	LEDS	Number of prior arrest dates involving theft or property crime (e.g., burglary I or II; criminal mischief I to III; theft I to III; unauthorized use of a motor vehicle).
Prior Arrest Dates for Weapon Offenses	LEDS	Number of prior arrest dates involving weapon offenses (e.g., felon in possession of a firearm; carrying a concealed weapon; possession of a destructive device).
Prior Arrest Dates for Other	LEDS	Number of prior arrest dates involving other offenses not classified above (e.g., abandoning a child; animal abuse; criminal mistreatment; custodial interference; fishing violation; promotion of gambling; offensive littering).
RECIDIVISM *The state of Oregon defines recidivism for ex-prisoners in three ways: 1) a new arrest for any crime within three years of release to the community, 2) a new misdemeanor or felony conviction for a new crime within three years, and 3) re-incarceration for a felony offense within three years. New arrests, convictions, re-incarcerations that happen more than three years (1,096+ days) from an offender's release date and incidents that happen out-of-state are not counted in these official metrics. These three measures of recidivism are detailed below along with other metrics we calculated specifically for the current study.*		
Recidivism Time to Arrest	LEDS	Number of days to first new arrest in Oregon following offender's index release from prison. Calculated by CJC using LEDS data with date of arrest greater than the index release date. Can exceed 1,095 days. Missing values indicate the offender did not recidivate in this way.

Recidivism Arrest3year	LEDS	Coded "1" if the number above is between 1 and 1,095. Otherwise coded "0".
Recidivism Time to Felony	Odyssey	Number of days to first new felony conviction in Oregon following offender's index release from prison. Calculated by CJC using court disposition dates greater than the index release date. Can exceed 1,095 days. Missing values indicate the offender did not recidivate in this way.
Recidivism Time to Mis	Odyssey	Number of days to first new misdemeanor conviction in Oregon following offender's index release from prison. Calculated by CJC using court disposition dates greater than the index release date. Can exceed 1,095 days. Missing values indicate the offender did not recidivate in this way.
Recidivism Time to Conviction	Odyssey	Minimum score from two items above.
Recidivism Conviction3year	Odyssey	Coded "1" if the number above is between 1 and 1,095. Otherwise coded "0".
Recidivism Time to Incar	DOC	Number of days to first new incarceration for a felony conviction in Oregon following offender's index release from prison. Calculated by CJC using DOC sentencing data. Can exceed 1,095 days. Missing values indicate the offender did not recidivate in this way.
Recidivism Incar3year	DOC	Coded "1" if the number above is between 1 and 1,095. Otherwise coded "0".
Recidivism Time to Violent Arrest	LEDS	Number of days to new violent arrest following release from prison (e.g., murder; manslaughter; assault; rape; sodomy; sex abuse; robbery; intimidation; harassment). Calculated by PSU using LEDS data with an arrest date greater than the index release date. Missing values indicate the offender did not recidivate in this way.
Recidivism Violent Arrest 3yr	LEDS	Coded "1" if the number above is between 1 and 1,096. Otherwise coded "0".
Recidivism Time to Property Arrest	LEDS	Number of days to new property arrest following release from prison (e.g., theft; theft of services; identity theft; burglary; arson; criminal mischief; unlawful use of a motor vehicle). Calculated by PSU using LEDS data with an arrest date greater than the index release date. Missing values indicate the offender did not recidivate in this way.
Recidivism Property Arrest 3yr	LEDS	Coded "1" if the number above is between 1 and 1,096. Otherwise coded "0".

Recidivism Time to JRI Driving Arrest	LEDS	Number of days to a new arrest for a JRI driving offense. Calculated by PSU using LEDS data with an arrest date greater than the index release date. Missing values indicate the offender did not recidivate in this way.
Recidivism JRI Driving Arrest 3yr	LEDS	Coded "1" if the number above is between 1 and 1,096. Otherwise coded "0".
Recidivism Time to JRI Drug Arrest	LEDS	Number of days to a new arrest for a JRI drug manufacturing, distribution, sales offense. Calculated by PSU using LEDS data with an arrest date greater than the index release date. Missing values indicate the offender did not recidivate in this way.
Recidivism JRI Drug Arrest 3yr	LEDS	Coded "1" if the number above is between 1 and 1,096. Otherwise coded "0".
Recidivism Time to JRI Poss Arrest	LEDS	Number of days to a new arrest for a JRI drug possession offense. Calculated by PSU using LEDS data with an arrest date greater than the index release date. Missing values indicate the offender did not recidivate in this way.
Recidivism JRI Poss Arrest 3yr	LEDS	Coded "1" if the number above is between 1 and 1,096. Otherwise coded "0".
Recidivism Time to JRI Property Arrest	LEDS	Number of days to a new arrest for a JRI property offense. Calculated by PSU using LEDS data with an arrest date greater than the index release date. Missing values indicate the offender did not recidivate in this way.
Recidivism JRI Property Arrest 3yr	LEDS	Coded "1" if the number above is between 1 and 1,096. Otherwise coded "0".
Recidivism Time to Any JRI Arrest	LEDS	Number of days to a new arrest for any JRI offense. Calculated by PSU using LEDS data with an arrest date greater than the index release date. Missing values indicate the offender did not recidivate in this way.
Recidivism JRI Any Arrest 3yr	LEDS	Coded "1" if the number above is between 1 and 1,096. Otherwise coded "0".

Appendix B: Survival Analysis

Effect of Prison Length of Stay on Recidivism in Oregon

Portland State University

To assess the average time to recidivate once an individual is released from prison, the research team conducted a series of survival analyses. These results predict, regardless of the time served, how long an individual remains in the community before they have contact with the justice system. This analysis can be illustrative of relative differences between crime types. We caution in interpreting these results relative to the research question as the results presented do not account for LOS. As presented below the graphs indicate of there are differences in the likelihood to recidivate for any LOS. These selected results are presented to give an example of what the results can look like. Because the results require the generation of graph for each LOS groups for each of the 45 analyses a total of over 600 graphs would need to be created to demonstrate all results. Given this, we have not included all results from the survival analysis. For more detailed discussion of the results presented here or information on survival results not presented on this appendix please contact the researchers at Portland State University.

In the selected graphs below, property offenders are the most likely to recidivate the soonest, while driving offender are the slowest (best) to recidivate.