



PPIC

PUBLIC POLICY
INSTITUTE OF CALIFORNIA

Employment Before, During, and After Prison in California

Technical Appendix

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with research support from Luciana Susanto and Brandon Martin

Appendix A. Background and Introduction

This section includes background information and supplementary materials related to the introduction.

Figure A1 illustrates how we measure pre- and post- prison periods when aggregating public data, such as the ACS. Since the 2015-19 period includes both pre- and post-prison periods for some released prisoners, we aggregate over 2011-14 to create pre-prison measures and over 2020-2023 to create post-prison measures.

FIGURE A1

Measurement of pre- and post-prison information for public data

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Pre-Prison Only				Includes Pre and Post					Post-Prison Only			

SOURCE: Author calculation.

NOTE: Public data are aggregated over eight pre-prison (2011-19) and post-prison (2015-23) years OR four exclusively pre (2011-14), four exclusively post (2020-23), and five overlap (2015-19) years.

FIGURE A2

Number of years pre-prison employment that can be observed for first-in-year CDCR releases, 2015-19

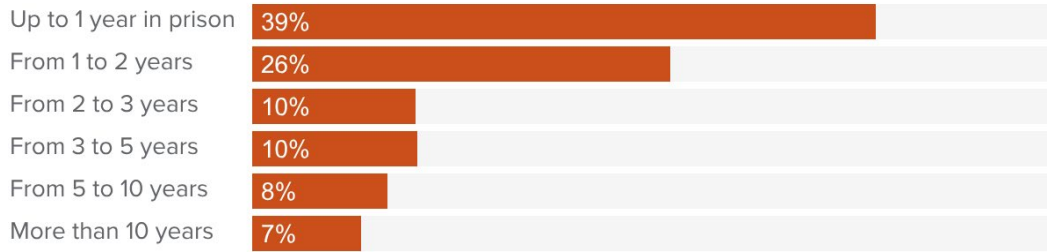
Entry Year	<=18	19	20	21	22	23 to 27	>=28	Year N
2000	413	438	406	425	399	1,428	2,426	5,935
2001	52	42	40	35	31	107	281	588
2002	50	31	43	64	47	132	369	736
2003	60	51	53	46	50	180	450	890
2004	61	44	52	73	54	213	507	1,004
2005	66	72	84	51	55	258	665	1,251
2006	83	75	68	67	73	317	806	1,489
2007	81	75	102	93	80	361	904	1,696
2008	98	112	138	110	110	430	1,265	2,263
2009	134	148	134	164	133	552	1,671	2,936
2010	2,310	3,902	5,353	5,859	6,193	33,253	109,349	166,219
Age N	8,930	5,046	6,639	7,143	47,900		109,349	185,007
Pop %	4.8	2.7	3.6	3.9	25.9		59.1	100.0
Pre Years	0	1	2	3	4		4+	

SOURCE: Author calculation from CDCR and DOJ data.

NOTE: DOJ data used to resolve age inconsistencies. In most industries, people can begin work under special conditions at age 16; in agriculture the lower limit is age 14.

FIGURE A3

More than 9 in 10 people were released within 10 years

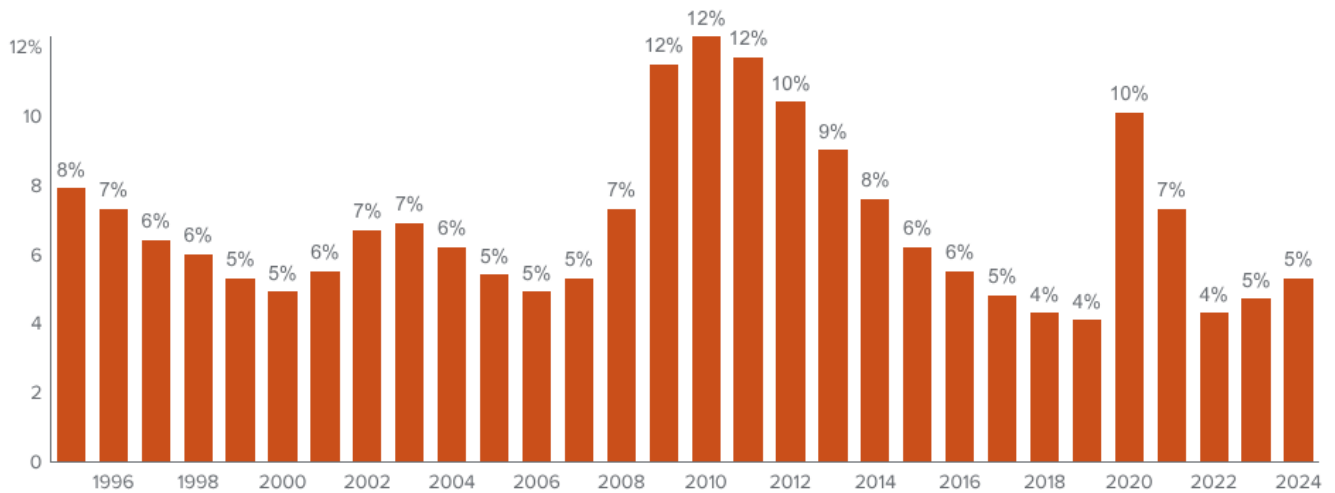


SOURCE: Author calculation based on CDCR data.

NOTES: People released for the first time in each year, 2015-19 (N=185,007).

FIGURE A4

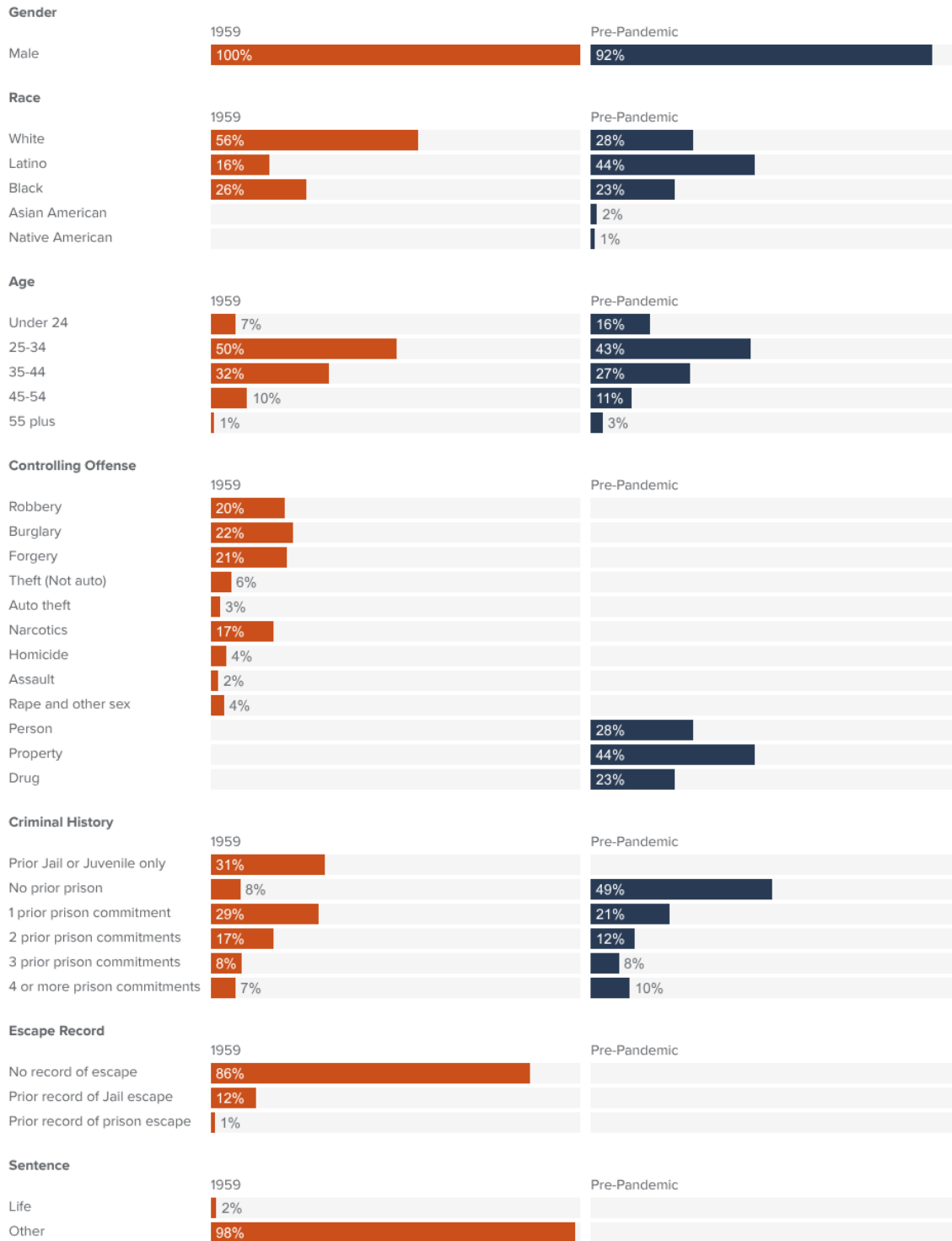
Annual statewide unemployment rate



SOURCE: Author depiction of Employment Development Department data.

FIGURE A5

Camp firefighters in 1959 versus just before the pandemic



SOURCE: Author calculation from CDCR data.

NOTES: 1959 data reflect the characteristics of the camp population on 12/31/1959 (N=1723). claude.ai was used to extract historical data in tabular form from PDF files created by the UC Berkeley IGS library. Pre-pandemic data reflect the characteristics of people released between 2016 and 2019. Differences in variables reflect different measures available to us in the different periods and/or different population characteristics. Age is release age for the pre-pandemic cohort

TABLE A1

2023 poverty thresholds by PUMA for single people aged 18 -65

PUMA	Counties Included	Threshold
8	Del Norte, Lassen, Modoc, Plumas, and Siskiyou	\$15,000
6	Colusa, Glenn, Tehama, and Trinity	\$15,200
13	Imperial	\$15,300
54	Tulare	\$15,500
15	Kern	\$15,900
16	Kings	\$15,900
20	Madera	\$15,900
24	Merced	\$16,100
51	Sutter and Yuba	\$16,400
10	Fresno	\$16,500
45	Shasta	\$16,500
17	Lake and Mendocino	\$16,800
4	Butte	\$17,100
12	Humboldt	\$17,100
2	Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, and Tuolumne	\$17,200
50	Stanislaus	\$17,300
39	San Joaquin	\$17,700
36	San Bernardino	\$17,800
9	El Dorado	\$18,200
29	Nevada and Sierra	\$18,200
33	Riverside	\$18,300
34	Sacramento	\$18,400
57	Yolo	\$19,100
27	Monterey and San Benito	\$19,200
31	Placer	\$19,500
40	San Luis Obispo	\$19,700
48	Solano	\$20,000
19	Los Angeles	\$20,100
42	Santa Barbara	\$20,100
56	Ventura	\$20,300
28	Napa	\$20,500
49	Sonoma	\$20,500
37	San Diego	\$20,600
7	Contra Costa	\$20,900
44	Santa Cruz	\$21,000
30	Orange	\$21,100
1	Alameda	\$22,200
21	Marin	\$23,100
43	Santa Clara	\$24,400
38	San Francisco	\$25,000
41	San Mateo	\$25,000

SOURCES: California Poverty Measure

NOTES: Special thanks to Patty Malagon.

TABLE A2

Unemployment rates vary widely across the state

County	Unemployment Rate	County	Unemployment Rate
Alameda	3.8	Orange	3.5
Alpine	8.4	Placer	3.6
Amador	5.1	Plumas	7.2
Butte	5.2	Riverside	4.8
Calaveras	5.2	Sacramento	4.3
Colusa	12.0	San Benito	5.7
Contra Costa	3.9	San Bernardino	4.6
Del Norte	6.0	San Diego	3.7
El Dorado	4.1	San Francisco	3.4
Fresno	7.5	San Joaquin	6.0
Glenn	6.7	San Luis Obispo	3.6
Humboldt	4.6	San Mateo	3.1
Imperial	18.0	Santa Barbara	4.0
Inyo	4.0	Santa Clara	3.6
Kern	8.2	Santa Cruz	5.5
Kings	8.5	Shasta	4.8
Lake	6.7	Sierra	5.1
Lassen	5.6	Siskiyou	6.6
Los Angeles	5.1	Solano	4.4
Madera	7.1	Sonoma	3.6
Marin	3.5	Stanislaus	6.3
Mariposa	5.5	Sutter	8.1
Mendocino	4.9	Tehama	5.6
Merced	9.0	Trinity	5.5
Modoc	6.7	Tulare	9.8
Mono	3.9	Tuolumne	4.9
Monterey	7.1	Ventura	4.2
Napa	3.4	Yolo	4.8
Nevada	4.1	Yuba	6.2

SOURCE: Bureau of Labor Statistics, 2023.

NOTE: The state average in 2023 was 4.7 percent.

TABLE A3

Industry groupings and person-quarters of employment, 2000-23

Combined Code	Label	Person quarters	Included NAICS codes
0	Temporary *	253,020	561320
11	Agriculture	71,322	11
21	Extraction and Utilities	8,409	21; 22
23	Construction	271,371	23
33	Manufacturing	154,550	31-33
42	Wholesale	73,576	42
44	Retail	176,685	44; 45
48	Transportation and Storage	80,899	48; 49
53	Real Estate, Finance, and Information	53,231	51-53
54	Professional, Managerial, and Public Admin	65,599	54; 55; 92
56	Admin and Business Support *	95,808	5611-6; 8; 9 (Not 561320)
57	Facilities and Waste Management	60,153	5617; 562
61	Social Care, Education, and NGOs	92,231	61; 624; 813
62	Health Care	38,820	621-623
71	Entertainment and Accommodation	37,137	71; 721
72	Restaurants, Bars, Food Services	155,607	722
81	Auto and Other Repair	36,297	811
82	Household and Personal Care	32,871	812; 814
99	Uncategorized and Missing	26,431	99

SOURCE: Author calculation from CDCR and EDD data.

NOTE: All person-quarters employed for first-in-year releases 2015-19 by industry group and included NAICS codes. These combinations pertain to EDD, ACS, and BLS industry codes with one important exception (*). The ACS does not allow industry identification at the six-digit level, so Temporary Help (0) is included in the Admin and Business Support (56) category in ACS categorizations.

Appendix B. Employment Rates

This section includes supplementary information about employment rates among released prisoners and the factors that determine them.

Incarceration and Employment before and after Prison

Table B1 provides additional information about incarceration in prison or jail before and after prison. Before prison, the average time between arrest and conviction *for a single case* was more than five months (154 days) and the median was about 2.5 months (73 days). After prison, pretrial periods grew to 210 days on average and 105 days at the median.

Table B1 shows the share of people who were released between 2015 and 2019 who were arrested, convicted, and sentenced to jail or prison in each year relative to entry (negative years) or release (positive years), along with average sentence lengths, expected sentence served (defined as half the sentence length), and the average number of days between arrest and conviction—the pretrial period. These figures include all arrests, not just the one that led to imprisonment.

TABLE B1

Pretrial and post-sentencing incarceration before and after prison

Year before entry or after release	Arrested in Year	Convicted in Year	Jail or Prison Sentence	Days Sentenced	Expected Days to Serve	Pretrial Days among Convicted
-4	49.3	29.2	25.0	578	289	262
-3	53.8	33.2	29.3	651	326	293
-2	63.3	42.3	38.9	963	482	333
-1	88.3	69.1	67.2	1352	676	202
1	52.5	31.2	29.1	835	418	275
2	43.0	25.4	23.5	758	379	322
3	38.2	21.1	16.5	709	354	348
4	34.0	18.1	16.5	674	337	365

SOURCE: Author calculation from CDCR and DOJ data

NOTE: Days sentenced enumerates all days sentenced to either jail or prison inclusive of multiple sentences. Expected days to serve equals half of the days sentenced, which is the norm under California sentencing law. To estimate pretrial detention, people who are arrested but not convicted are assumed to have been released, while people who were convicted are assumed to have been detained. Potential days of pretrial detention are the number of days between the arrest dates and the conviction dates for all arrests that led to convictions, as shown in the last column.

To produce Table B2, I constructed quarterly data that includes arrest, conviction, and incarceration sentences. I then created binary variables that equal one if a person is assumed to have been in pretrial detention in the quarter and if a person is expected to have been serving a jail or prison sentence in the quarter. These measures are based on the sentence and pretrial period lengths described in Table B1.

As shown in Table B1, pretrial incarceration subsumes post-sentence incarceration in every period, and their sum would exceed 100 percent in most years. This makes sense. People held in pretrial detention will usually see their sentences reduced by the number of days held before sentencing. As shown in Table B1, most people who are

convicted are sentenced to some incarceration, though it may be suspended. I do not account for suspensions because without jail data I cannot know whether the sentence was served or not and when.¹

TABLE B2

Pretrial and post-sentencing incarceration and employment after prison by year

Year Before or After	Only Incarcerated	Only Employed	Employed and Incarcerated	Employed	Pretrial Incarceration	Post-Sentence Incarceration
-4	35.9	13.4	9.1	22.5	36.6	35.9
-3	39.8	12.7	10.4	23.0	41.7	38.8
-2	46.5	10.6	12.6	23.2	51.1	40.9
-1	68.1	3.4	16.5	19.9	81.8	49.4
1	38.2	16.3	17.1	33.4	34.5	49.5
2	33.4	18.4	9.4	27.8	33.9	34.2
3	32.2	17.3	8.2	25.5	30.7	32.0
4	30.2	16.9	7.1	24.0	27.4	29.0

SOURCE: Author calculation from CDCR, DOJ, and EDD data

NOTE: The unshaded side of the table supports Figure 5 in the main text. Incarceration includes both pretrial and post-sentence.

Finally, PPIC also has two sources of reimprisonment data from CDCR, which are incomplete in different ways. One source includes people *returned to and released from* prison before 2023 in each post-prison year. The other includes data on people returned to (but not necessarily released from) prison in the first post-prison year.

As shown in Table B3, the former underestimates total reimprisonment (and the DOJ data presented in Tables B1 and B2 likely do, too) because some people return to prison without new convictions. We anticipate receiving comprehensive data on three-year reimprisonment rates soon. For now, we use the DOJ incarceration measures depicted and described above to characterize post-prison incarceration rates.

TABLE B3

Reimprisonment information from CDCR data

Year after release	Reimprisoned and Re-released	Quarters in Prison	Reimprisoned
1	4.8	2	6.6
2	11.8	3	---
3	14.0	3	---
4	12.4	3	---

SOURCE: Author calculation from CDCR data.

NOTE: All people released for the first time between 2015 and 2019.

¹ The DOJ data do include prison and jail admissions but not exits. Moreover, definitively aligning custodial records with arrests and dispositions has proved challenging and remains an aim of ongoing work.

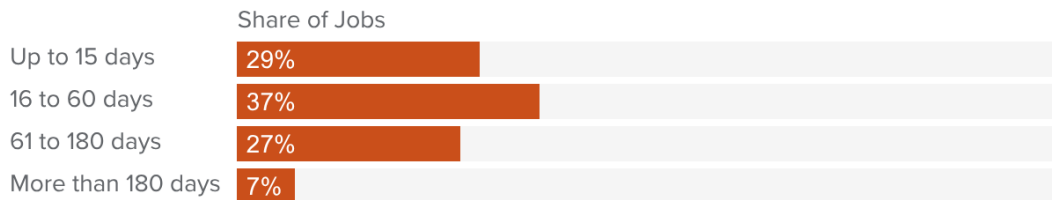
Appendix C. Work Types

This section includes supplementary information about the kinds of work that released people did before, during and after prison

FIGURE C1

Prison job schedules

Job Tenure



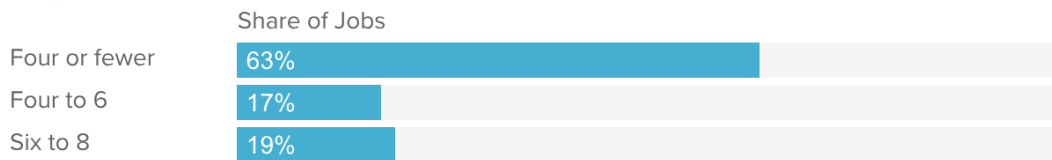
Schedules Per Job



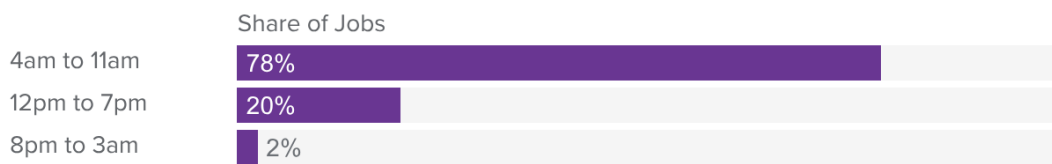
Days Scheduled



Daily Hours Scheduled



Shift Scheduled

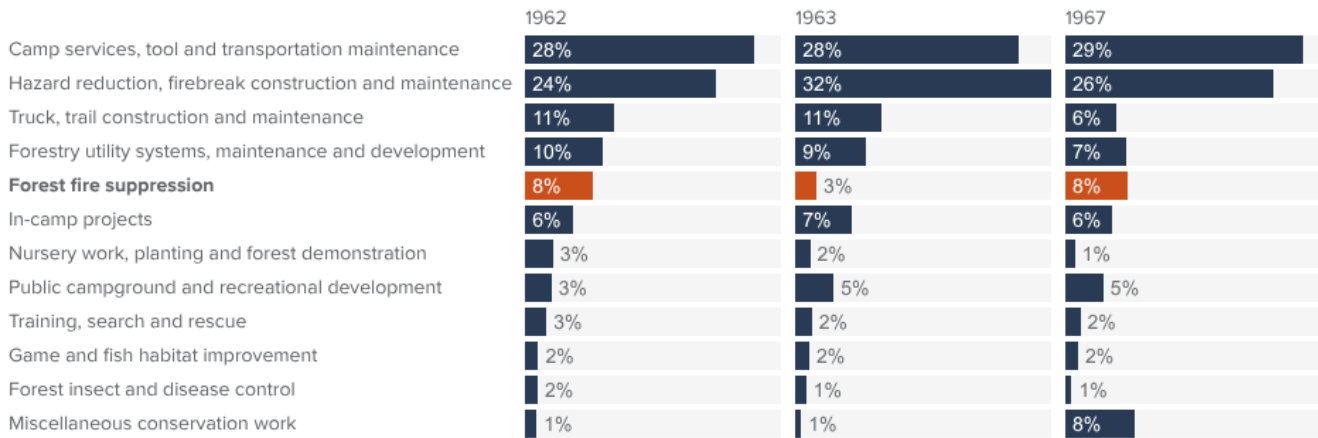


SOURCE: Author calculation from CDCR data.

NOTES: All work assignments held by people within one year of their first-in-year release, 2016-19 (N=166,433). Less than one percent of people are scheduled to work 8 or more hours per day or five or more days per week; about five percent are scheduled for less than five days per week.

FIGURE C2

What camp firefighters did in the 1960s may or may not be what they do today

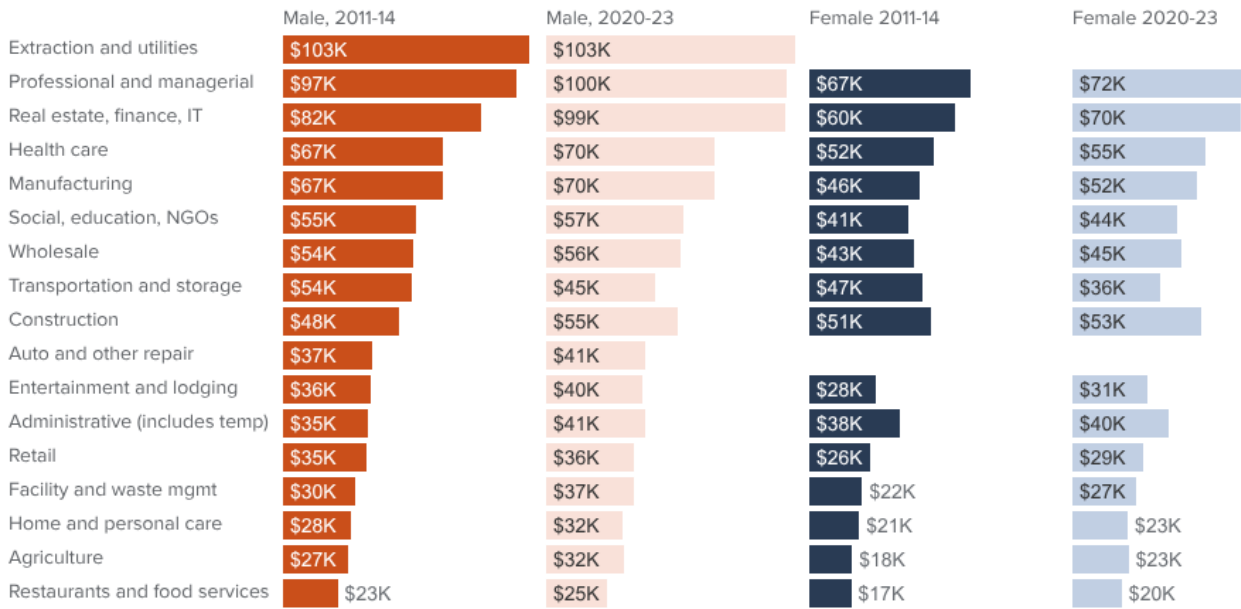


SOURCE: Author depiction of Department of Forestry data.

NOTES: claude.ai was used to extract data in tabular form from PDF files created by the UC Berkeley IGS library.

FIGURE C3

Average annual earnings in the state workforce by industry, gender, and period

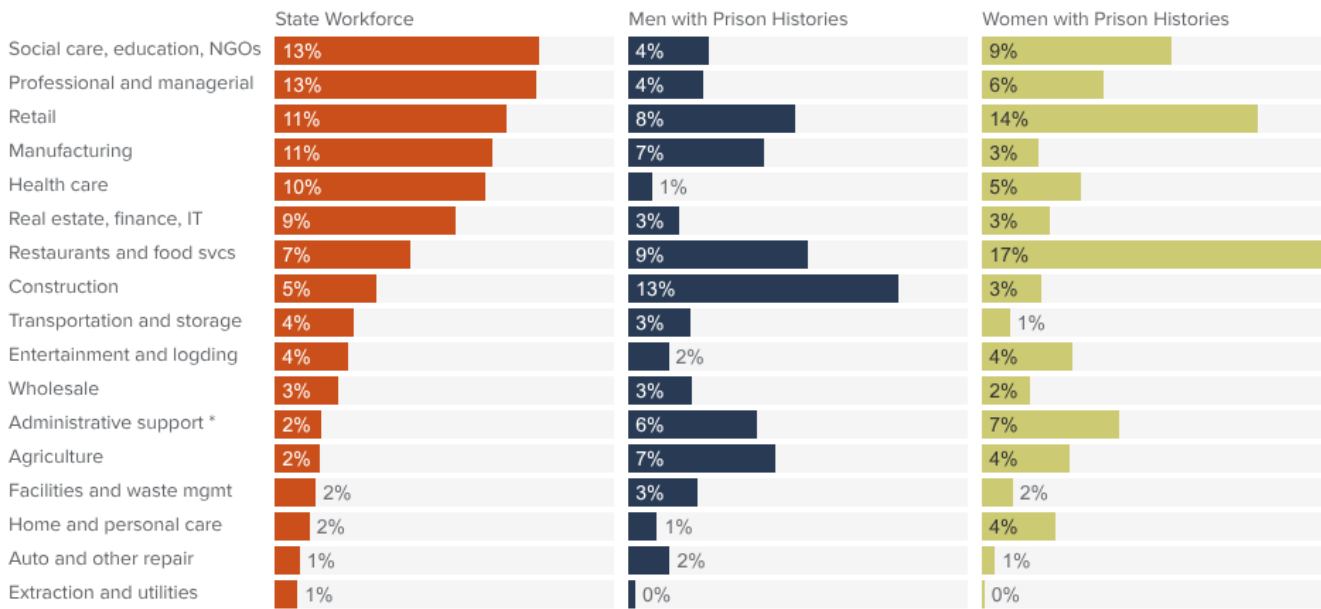


SOURCE: Author calculation from ACS data.

NOTES: State workforce information from aggregated ACS sample data 2011-2014 (n1=565,384) and ACS sample data 2020-2023 (n2=602,661). Extraction/Utilities and Auto/Other Repair suppressed for females due to low sample size.

FIGURE C5

People in the state workforce are concentrated in different industries than people with prison histories



SOURCE: Author calculation from CDCR, EDD, and ACS data.

NOTES: Industries for people with prison histories reflect the last jobs they held before prison. State workforce information from aggregated ACS sample data 2011-2014 (n=565,384) aligns with pre-prison periods. Temporary Help Services are included in Administrative Support for the ACS sample and separated for the prison sample.

FIGURE C6

Industries in which people commonly worked varied

Industries in which people commonly worked before prison varied

Administrative and Business Support

Los Angeles	19%
San Bernardino	19%

Agriculture

Kings	52%
Imperial	49%
Merced	47%
Madera	46%
Tulare	43%
Kern	40%
Nevada/Sierra	33%
Sacramento Valley	31%
Santa Barbara	30%
Humboldt	28%
Fresno	27%
San Joaquin	22%
Sutter/Yuba	21%
Stanislaus	20%

Construction

Placer	31%
San Luis Obispo	29%
El Dorado	29%
Napa	28%
Eastern Sierra	28%
Monterey/San Benito	26%
Sonoma	26%
Riverside	24%
San Diego	24%
Sacramento	23%
Solano	22%
Orange	22%

Restaurants and Food Service

San Mateo	28%
Shasta Cascade	25%
Shasta	24%
Yolo	22%
Santa Cruz	21%
Lake/Mendocino	20%
Butte	19%

Retail

Marin	40%
Santa Clara	25%
Contra Costa	25%
Ventura	22%

Social Care, Education, NGO

San Francisco	21%
Alameda	18%

Industries in which people commonly worked after prison varied

Administrative and Business Support

San Bernardino	24%
Los Angeles	21%

Agriculture

Kings	51%
Kern	42%
Imperial	41%
Madera	37%
Tulare	36%
Merced	35%
Sacramento Valley	27%
Nevada/Sierra	24%

Construction

Placer	41%
Sonoma	40%
Napa	36%
San Luis Obispo	35%
El Dorado	32%
Eastern Sierra	32%
San Diego	31%
Santa Clara	31%
Sacramento	30%
Monterey/San Benito	29%
Santa Barbara	28%
Riverside	28%
San Mateo	28%
Contra Costa	28%
Orange	27%
Shasta	27%
Sutter/Yuba	26%
Ventura	26%
Solano	26%
Butte	24%
San Joaquin	23%

Manufacturing

Yolo	32%
Humboldt	28%
Fresno	27%
Stanislaus	22%

Restaurants and Food Service

Shasta Cascade	24%
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Retail

Marin	39%
Santa Cruz	26%
Lake/Mendocino	22%

Social Care, Education, NGO

San Francisco	46%
Alameda	41%

SOURCE: Author calculation from CDCR and EDD data

NOTE: The geographic units are counties or groups of counties. Multi-county groupings include: Eastern Sierra, Sacramento Valley, and Shasta Cascade. Eastern Sierra counties are: Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, and Tuolumne. Sacramento Valley counties are: Colusa, Glenn, Tehama, and Trinity. Shasta Cascade counties are: Del Norte, Lassen, Modoc, Plumas, and Siskiyou.

TABLE C1

CDCR job titles categorized into SIPA job categories

Job Title	Janitorial	Grounds	Kitchen	Laundry	Health	Forestry	Industry	Services	Maintenance
Car Washer	X								
Distribution Center	X								
Janitorial Services	X								
Porter	X								
R.A.S.P.	X								
Trash Operations	X								
Vector Control	X								
Community Service Crew		X							
Landscape Gardening		X							
Out Grounds Crew		X							
Outside Work Crew		X							
Yard Worker		X							
Bakery (Job)			X						
Culinary Arts			X						
Dining Room Cook			X						
Dining Room Line Server			X						
Dining Room Scullery			X						
Dining Room Worker			X						
Main Kitchen Baker			X						
Main Kitchen Cook			X						
Main Kitchen Maintenance			X						
Main Kitchen Pot Crew			X						
Main Kitchen Sandwich Room			X						
Main Kitchen Veg Room			X						
Main Kitchen Worker			X						
Meat Processing			X						
Satellite Kitchen Cook			X						
Satellite Kitchen Worker			X						
Clothing Distribution				X					
Dry Cleaning				X					
Laundry (Job)				X					
ADA Worker - Semi-Skilled					X				
Adult Care Giver					X				
Dental Lab					X				
Medical / Dental Assistance					X				
Optical					X				
Psych Aide					X				
Radiological Tech					X				
Visually Impaired Program					X				

Job Title	Janitorial	Grounds	Kitchen	Laundry	Health	Forestry	Industry	Services	Maintenance
Camp Firefighter						X			
Camp Firefighter- Special Skills						X			
Camp Inmates						X			
Farm						X			
Fire Fighter Training						X			
Garment Factory							X		
JV Computers							X		
JV Electronics							X		
JV Refrigeration							X		
Shoe Factory							X		
Animal Grooming								X	
Barber								X	
Clerk								X	
Companion Dog Training								X	
Fire House Training								X	
Firehouse								X	
Graphic Arts								X	
Inmate Advisory Committee								X	
Inmate Canteen Worker								X	
Institution Firefighter								X	
Library Assistant								X	
Literacy Tutor								X	
Mechanical Drawing								X	
Micrographics								X	
New Life K-9 Program								X	
Office Services								X	
Peacemakers Alliance								X	
Peer Educator-PREA								X	
Peer Mentor								X	
Photographer								X	
Physical Fitness Training								X	
Recreational Aid								X	
Shoe Shine								X	
Support Warehouse Worker								X	
Taxi Driver								X	
Teacher's Aide								X	
Tech Illustration								X	
Therapeutic Program								X	
Tool Room Attendant								X	
Truck Driver								X	
Warehouse Worker								X	

Job Title	Janitorial	Grounds	Kitchen	Laundry	Health	Forestry	Industry	Services	Maintenance
Word Processing								X	
Auto Mechanics									X
Boiler Room Worker									X
Building Maintenance									X
Carpenter									X
Construction Worker									X
Electronics & PC Repair									X
Electrician									X
Maintenance & Repair									X
Maintenance Mechanic									X
Metal Signs									X
Painter									X
Plumber									X
Precast									X
Refrigerator & Air Condition									X
Sewer Plant Worker									X
Sheet Metal									X
Small Engine Repair									X
Steam Plant Worker									X
Upholstery									X
Water Plant Worker									X
Welding									X

SOURCE: Author categorization of CDCR job titles into SIPA job categories.

NOTE: Other positions are also available to prisoners. Only positions held by cohort members are shown.

Appendix D. Earnings

This section includes supplementary information about compensation for work before, during, and after prison.

Sentence credits as compensation

In California, imprisoned people can reduce the portion of their sentences that they serve by earning sentence credits. Sentence credits can be earned through good conduct, work assignments, and participation in prison programs. Legislation and regulations specify the rules that govern credits (CCR tit 15, 3043-3044). For prisoners serving determinate sentences (i.e., a sentence with a set length), CDCR considers sentence credits when calculating their earliest possible release date. If a person is serving an indeterminate sentence (e.g., life with a possibility of parole), CDCR considers good conduct credits and program credits earned, and the likelihood of earning good conduct credits, when calculating their minimum eligible parole date. Good conduct credit rates can be understood as shown in Table D1.

TABLE D1

How good conduct credit earning rates work

Actual Days Served	Good Conduct Day	Credit Rate	Calculated Days Served
4	1	20%	5
2	1	33.3%	3
1	1	50%	2
1	2	66.6%	3

SOURCE: Prison Law Office, 2024.

In the past decade, CDCR has revised good conduct credit earning rates multiple times in response to legislation, most notably in 2017 following approval of Proposition 57. Below is an overview of how credit rates changed since January 2010, depending on the sentence served and relevant work group, as shown in Table D2.

TABLE D2

Good conduct credit earning rates by sentence type and work group

Sentence Type	Work Group (if applicable)	Period			
		01/25/2010 - 05/01/2017	05/01/2017 - 04/30/2021	05/01/2021 - 12/27/2021	As of 12/28/2021
Life without parole, condemned		0%	0%	0%	0%
Murder, one strike sex offense, other terms that do not allow credits		0%	20%	33.3%	33.3%
Violent offense, three strikes		0-15%	20%	33.3%	33.3%
Non-violent offense, three strikes		0%	33.3%	50%	50%
Non-violent offense, two strikes		20-33.3%	33.3%	50%	50%
Non-violent offense, any other types		50%	50%	50%	50%
Violent offense	Firefighter or in fire camp	15%	50%	33.3% + MSC	50%

Sentence Type	Work Group (if applicable)		Period		
Non-violent offense	Firefighter or in fire camp	20-66.6%	66.6%	33.3% + MSC	66.6%
Violent offense	Minimum A or Minimum B	15%	20%	33.3% + MSC	33.3%
Non-violent offense, two strikes	Minimum A or Minimum B	20-33.3%	33.3%	33.3% + MSC	66.6%
Non-violent offense, any other types	Minimum A or Minimum B	66.6%	66.6%	50% + MSC	66.6%
Refusal to accept housing assignments or failing to program		0%	0%	Dependent on sentence type	0%
SHU term for rule violation, any sentence type		0%	0%	Dependent on sentence type	0%

SOURCE: Prison Law Office, 2024.

NOTE: MSC=Minimum Security Credits were awarded from May 2021 through December 2021 for every 30 days served by people who were firefighters, in fire camps, or in Minimum A or Minimum B custody.

FIGURE D1

More than half of working prisoners earned less than \$20 in the year before they were released

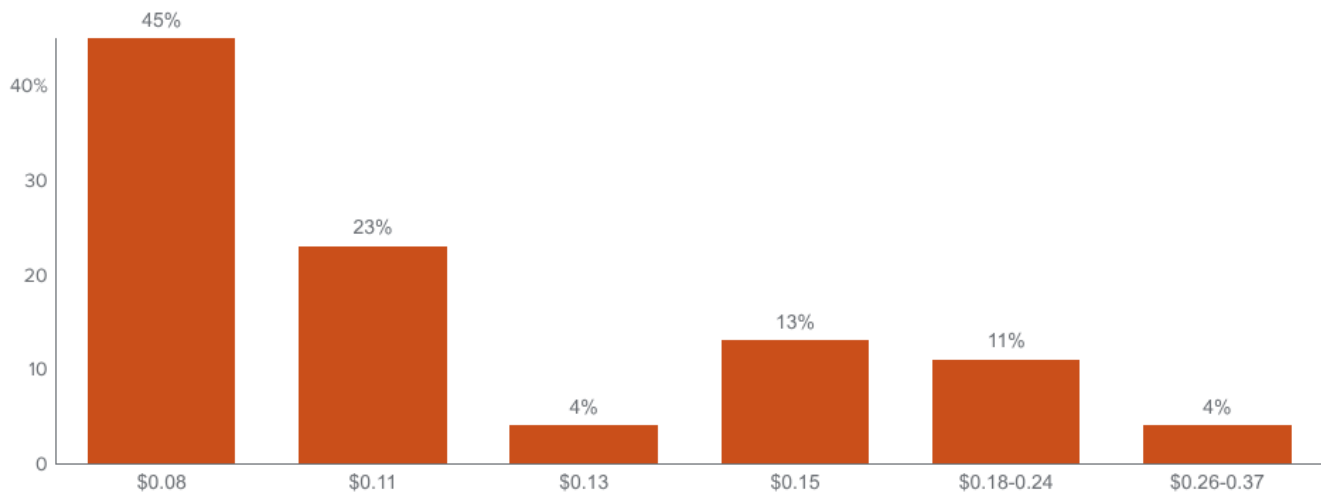


SOURCE: Author calculation from CDCR data.

NOTES: Total earnings from all non-firefighting, non-volunteer jobs worked by people in the last year they were in prison (N=66,301). Excludes the following jobs: camp firefighters, firefighter trainees, physical fitness training, and peacemakers.

FIGURE D2

Most positions held fell into the lower end of the CDCR pay scale

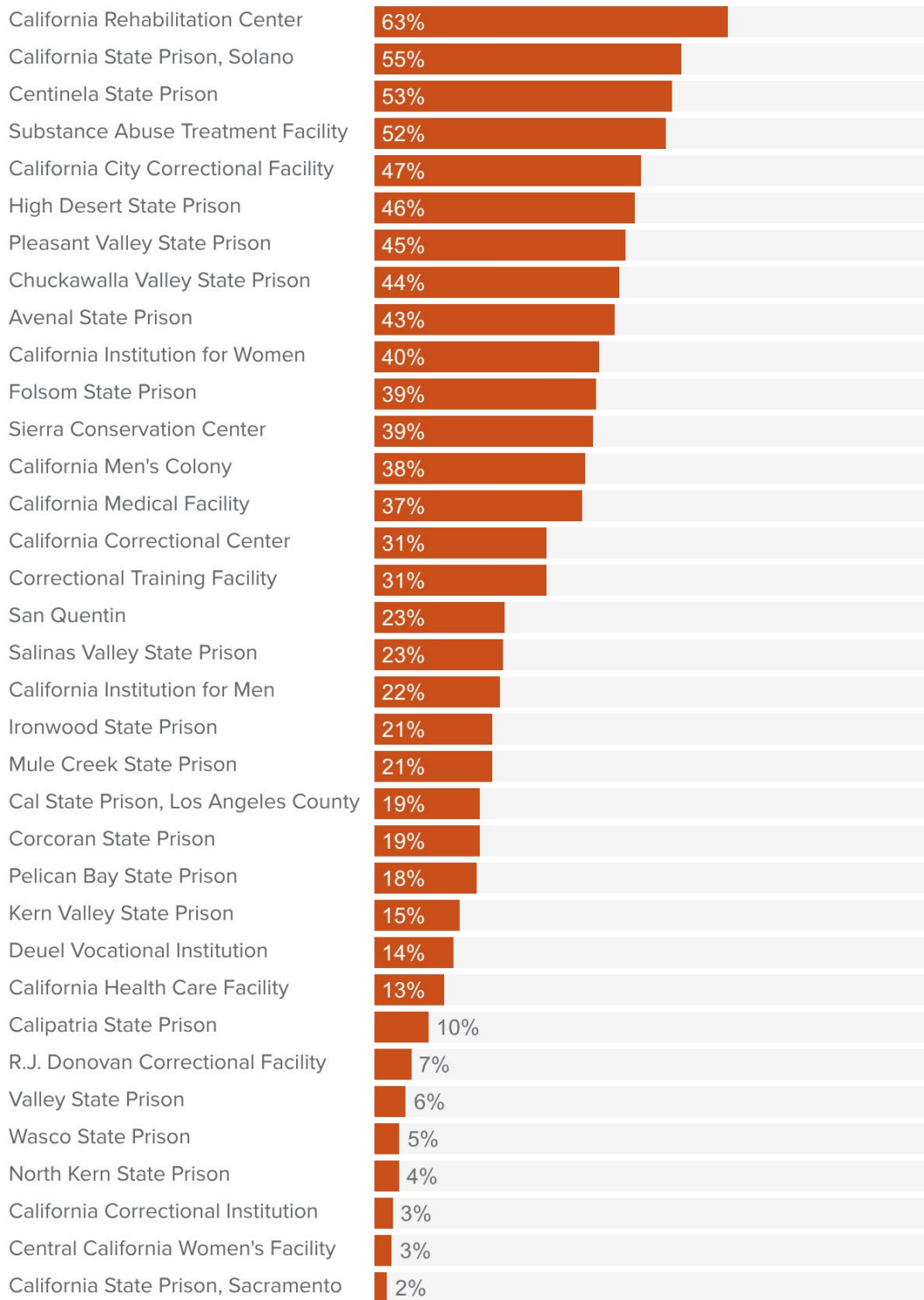


SOURCE: Author calculation from CDCR data.

NOTES: All pay-eligible, non-firefighting jobs held by first-in-year releases within one year of release (N=85,073). Not shown are positions for which pay ranged between 70 cents and \$1 per hour.

FIGURE D3

The likelihood of holding a pay ineligible job varied across prisons

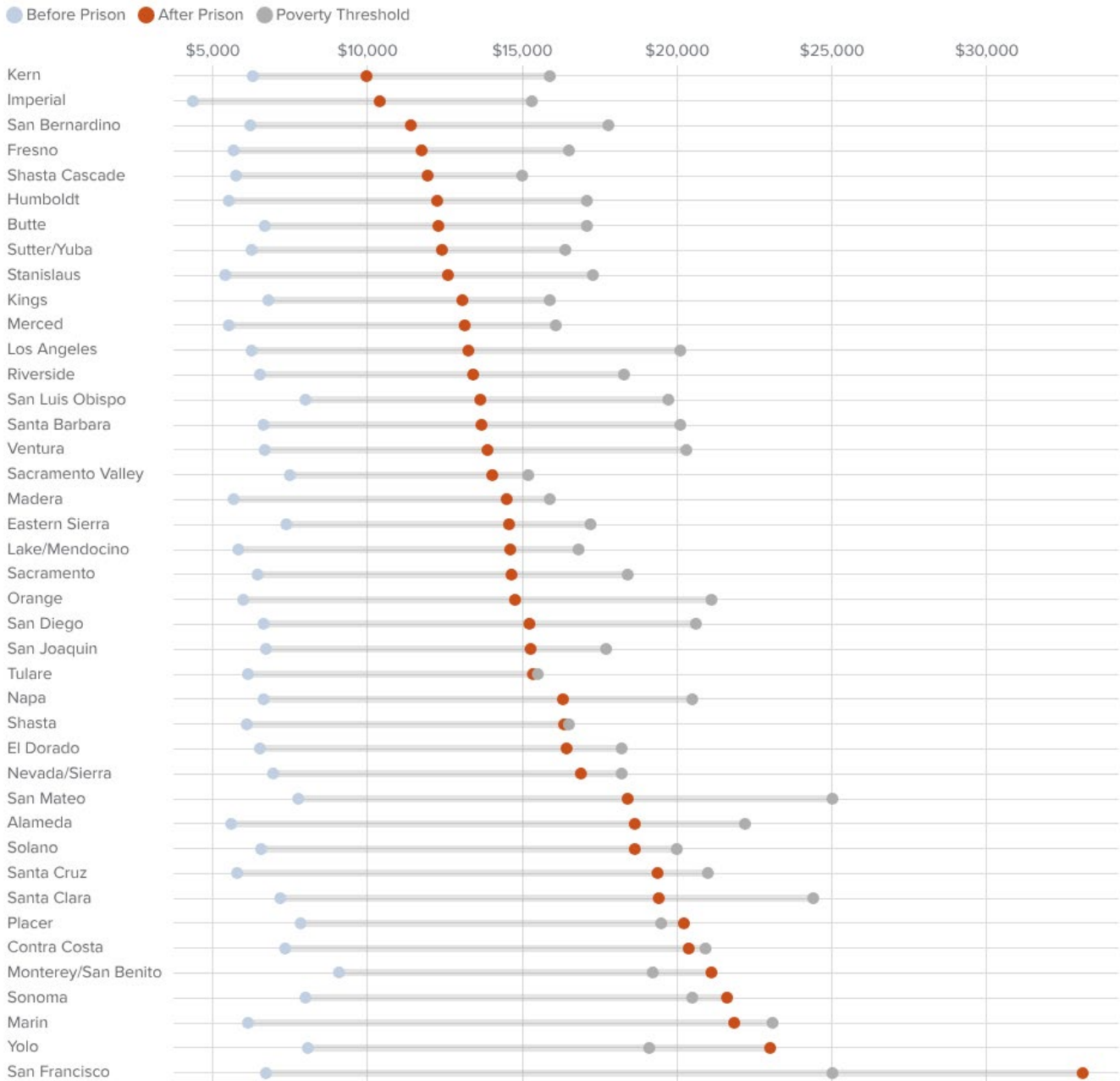


SOURCE: Author calculation from CDCR data.

NOTES: All jobs people released between 2016 and 2019 held in the year before they were released (N=166,517)

FIGURE D4

Median annual earnings varied across the state and rarely exceeded poverty thresholds

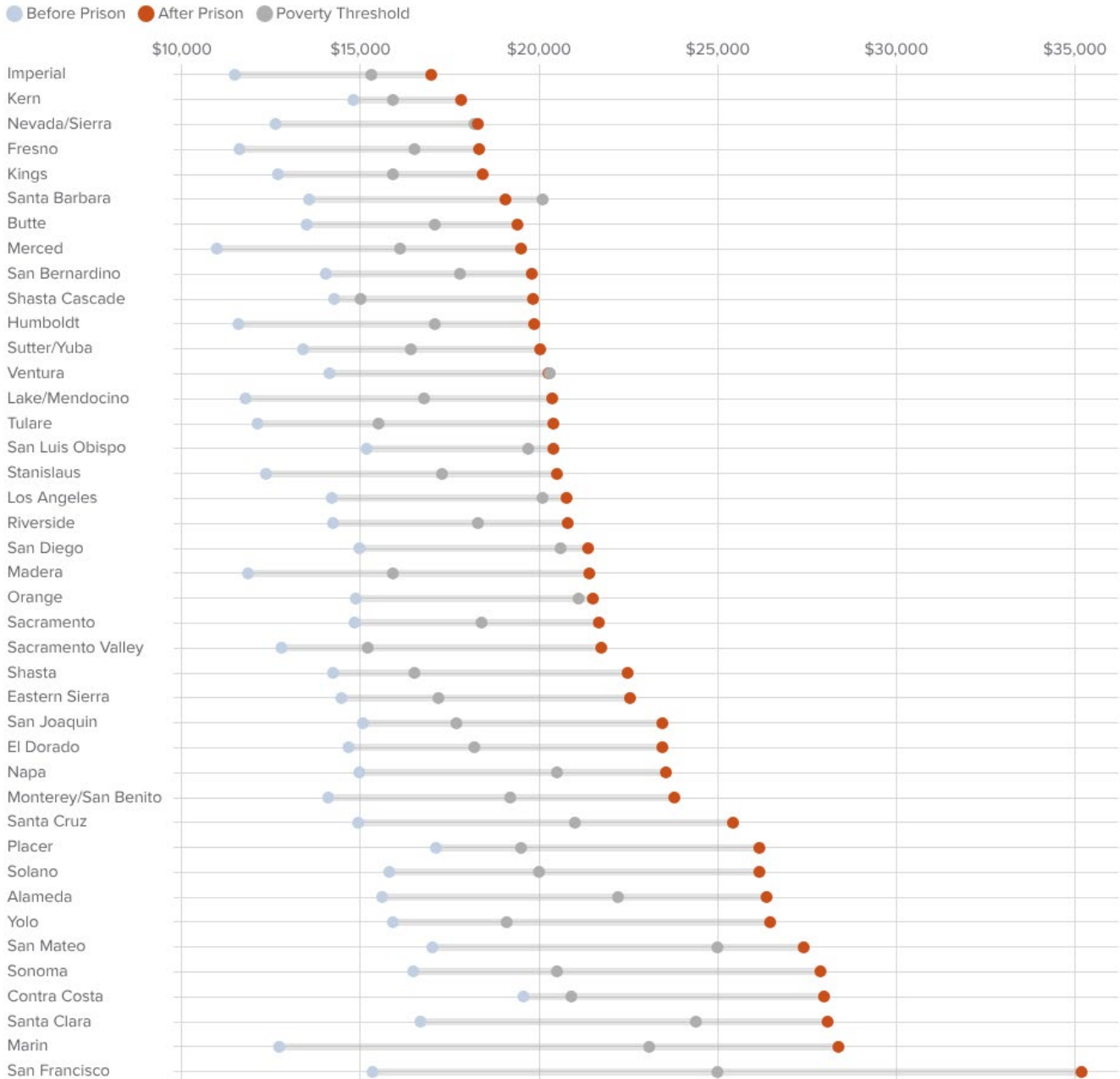


SOURCE: Author calculation from CDCR, EDD, and CPM data

NOTES: Single-person head of household California Poverty Measure (CPM) thresholds by PUMA. Median annual earnings over the four years before and after prison. Multi-county PUMAs include: Shasta Cascade, Sacramento Valley, and Eastern Sierra.

FIGURE D5

Average earnings among the working were higher than their median earnings



SOURCE: Author calculation from CDCR, EDD, and CPM data

NOTES: Single-person head of household California Poverty Measure (CPM) thresholds by PUMA. Median annual earnings over the four years before and after prison. Multi-county PUMAs include: Shasta Cascade, Sacramento Valley, and Eastern Sierra.

Appendix E. Who Succeeds and Who Struggles After Prison?

This section includes supplementary information about who succeeds and who struggles after prison.

TABLE E1

Select summary statistics

Variable	N	Percent	Mean	Min	Max
Race					
White	37,743	26.11	---	---	---
Latino	65,148	45.07	---	---	---
Black	35,101	24.28	---	---	---
Asian Am	3,388	2.34	---	---	---
Native Am	1,714	1.19	---	---	---
Other/Unknown	1,459	1.01	---	---	---
Gender					
Male	134,006	92.70	---	---	---
Female	10,547	7.30	---	---	---
Release Age Category					
18-24	19,036	13.17	---	---	---
25-34	53,830	37.24	---	---	---
35-44	37,721	26.09	---	---	---
45-54	21,667	14.99	---	---	---
55+	12,299	8.51	---	---	---
Citizen	129,870	89.84	---	---	---
Has Cognitive Disability	3,803	2.63	---	---	---
Has Physical Disability	7,926	5.48	---	---	---
Had Job before Prison	57,570	39.83	---	---	---
Had Job during Prison	75,122	51.97	---	---	---
Number of Arrests before Prison	144,553		17.66	0	255
Has PC290 Conviction	14,424	9.98	---	---	---
Has Serious or Violent Conviction	100,552	69.56	---	---	---
Controlling Offense					
Person	72,487	50.15	---	---	---
Property	28,446	19.68	---	---	---
Drug	12,845	8.89	---	---	---
Other	30,775	21.29	---	---	---
Admission Type					
New Conviction	124,434	86.08	---	---	---
Parole Violator	19,548	13.52	---	---	---
Other	571	0.40	---	---	---
Custody Level					

Variable	N	Percent	Mean	Min	Max
Unknown	11,857	8.20	---	---	---
Minimum	54,806	37.91	---	---	---
Medium	70,801	48.98	---	---	---
Maximum/Close	7,089	4.90	---	---	---
Recidivism Risk Score					
Low	42,775	29.59	---	---	---
Moderate	41,115	28.44	---	---	---
High Drug	7,216	4.99	---	---	---
High Property	15,348	10.62	---	---	---
High Violent	37,269	25.78	---	---	---
Unknown	830	0.57	---	---	---
Reading Level					
Grade 10 or Above	56,265	38.92	---	---	---
Grades 7-9	17,526	12.12	---	---	---
Grades 4-6	31,299	21.65	---	---	---
Grade 3 or Below	14,919	10.32	---	---	---
Unknown	24,544	16.98	---	---	---
Program Participation					
Adult Basic Education (I-III)	47,725	33.02	---	---	---
GED	9,126	6.31	---	---	---
College	13,034	9.02	---	---	---
Computer Technology (CTE)	3,973	2.75	---	---	---
Any Trade (CTE)	11,126	7.70	---	---	---
Transitions (OCE only)	25,914	17.93	---	---	---
Substance Use Disorder Treatment	22,904	15.84	---	---	---
Anger Management	16,350	11.31	---	---	---
Criminal Thinking	16,857	11.66	---	---	---
Family Relationships	9,652	6.68	---	---	---
Months Served	144,553		37.67	0	743
Parole Status					
State Parole	73,075	50.55	---	---	---
PRCS	70,451	48.74	---	---	---
Discharged	1,027	0.71	---	---	---
Unemployment Rate in PUMA	144,553	---	5.15	1.90	28.20
Number of Arrests after Prison	144,553	---	4.18	0	136

SOURCE: Author calculation from CDCR, DOJ, and EDD data

NOTE: Includes all people released for the first time in each year, 2016-19 (N=144,553). Unemployment rate in PUMA is the unemployment rate in the PUMA to which a person was released in the month they were released.

TABLE E2

Logistic regression results (DV= Employed after prison; IV: Employed before prison and employed during prison)

Employed after Prison	Odds ratio	SE	Z	p-value	Lower bound	Upper bound
Race (Base = White)						
Latino	0.967	0.016	-2.030	0.043	0.937	0.999
Black	1.179	0.021	9.020	0.000	1.137	1.222
Asian American	1.097	0.047	2.150	0.032	1.008	1.193
Native American	0.996	0.058	-0.080	0.939	0.888	1.116
Other/Unknown	0.881	0.057	-1.970	0.049	0.777	0.999
Gender (Base = Male)						
Female	0.996	0.025	-0.150	0.880	0.949	1.046
Release Age (Base = 18 to 24)						
25-34	1.228	0.025	9.970	0.000	1.179	1.279
35-44	1.138	0.027	5.410	0.000	1.086	1.193
45-54	0.883	0.026	-4.300	0.000	0.834	0.935
55+	0.566	0.021	-15.550	0.000	0.527	0.608
Citizen	2.204	0.052	33.480	0.000	2.105	2.309
Has Cognitive Disability	0.527	0.025	-13.710	0.000	0.481	0.577
Has Physical Disability	0.587	0.019	-16.690	0.000	0.551	0.625
Had Job before Prison	8.566	0.112	164.470	0.000	8.350	8.789
Had Job during Prison	1.086	0.015	5.940	0.000	1.057	1.116
Number of Arrests before Prison	0.994	0.001	-9.990	0.000	0.993	0.995
Has PC290 Conviction	0.930	0.023	-2.960	0.003	0.886	0.976
Has Serious or Violent Conviction	0.939	0.017	-3.450	0.001	0.905	0.973
Controlling Offense (Base = Person)						
Property	0.975	0.018	-1.410	0.158	0.941	1.010
Drug	1.094	0.027	3.650	0.000	1.042	1.147
Other	1.038	0.018	2.160	0.031	1.004	1.074
Admission Type (Base = New Conviction)						
Parole Violation	1.158	0.025	6.860	0.000	1.111	1.208
Other	1.331	0.122	3.130	0.002	1.113	1.593
Custody Level (Base = Unknown)						
Minimum	1.128	0.031	4.350	0.000	1.068	1.191
Medium	0.980	0.027	-0.730	0.466	0.929	1.034
Maximum/Close	0.901	0.036	-2.640	0.008	0.834	0.974
Security Level III or IV	0.963	0.020	-1.830	0.067	0.925	1.003
Had RVR or Credit Loss	0.937	0.014	-4.220	0.000	0.910	0.966
Recidivism Risk Score (Base = Low)						

Employed after Prison	Odds ratio	SE	Z	p-value	Lower bound	Upper bound
Moderate	1.092	0.021	4.610	0.000	1.052	1.134
High Drug	1.121	0.037	3.430	0.001	1.050	1.196
High Property	1.091	0.029	3.320	0.001	1.036	1.149
High Violent	1.153	0.025	6.520	0.000	1.105	1.203
Unknown	1.128	0.096	1.410	0.158	0.954	1.334
Reading Level (Base = Grade 10 or Above)						
Grades 7-9	0.916	0.019	-4.270	0.000	0.879	0.953
Grades 4-6	0.805	0.014	-12.100	0.000	0.777	0.834
Grade 3 or Below	0.570	0.014	-22.740	0.000	0.543	0.598
Unknown	0.703	0.015	-16.710	0.000	0.674	0.732
Program Participation						
Adult Basic Education (I-III)	0.975	0.014	-1.700	0.088	0.948	1.004
GED	1.049	0.027	1.840	0.065	0.997	1.103
College	1.331	0.031	12.450	0.000	1.272	1.392
Computer Technology (CTE)	0.983	0.038	-0.440	0.659	0.912	1.060
Any Trade (CTE)	1.116	0.027	4.600	0.000	1.065	1.170
Transitions (OCE only)	0.999	0.017	-0.060	0.954	0.966	1.033
Substance Use Disorder Treatment	1.098	0.021	4.800	0.000	1.057	1.140
Anger Management	1.074	0.034	2.260	0.024	1.009	1.143
Criminal Thinking	1.027	0.032	0.850	0.396	0.966	1.091
Family Relationships	0.991	0.030	-0.280	0.777	0.934	1.052
Months Served	1.004	0.000	27.400	0.000	1.003	1.004
Release Type (Base = State Parole)						
PRCS	0.908	0.016	-5.400	0.000	0.876	0.940
Discharge	0.663	0.053	-5.180	0.000	0.567	0.775
Unemployment Rate in Release Month in PUMA	0.996	0.003	-1.300	0.192	0.990	1.002
Constant	0.162	0.008	-38.010	0.000	0.148	0.178

SOURCE: Author calculation from CDCR, DOJ, and EDD data

NOTE: Includes all people released for the first time in each year, 2016-19 (N=144,553).

TABLE E3

Ordinary least squares regression results (Outcome = Post-prison median annual earnings among the employed)

Median Annual Wages after Prison	Coefficient	SE	t	p-value	Lower bound	Upper bound
Race (Base = White)						
Latino	609.65	252.11	2.42	0.02	115.51	1103.80
Black	-2958.02	285.65	-10.36	0.00	-3517.91	-2398.14
Asian American	1334.32	665.80	2.00	0.05	29.35	2639.29
Native American	-2194.66	941.88	-2.33	0.02	-4040.75	-348.58
Other/Unknown	904.68	1040.58	0.87	0.39	-1134.85	2944.22
Gender (Base = Male)						
Female	-3435.12	400.47	-8.58	0.00	-4220.05	-2650.20
Release Age (Base = 18 to 24)						
25-34	2344.00	322.52	7.27	0.00	1711.86	2976.14
35-44	3982.95	377.32	10.56	0.00	3243.42	4722.49
45-54	4159.13	468.81	8.87	0.00	3240.27	5078.00
55+	1278.64	628.04	2.04	0.04	47.67	2509.60
Citizen (versus Non-Citizen)	1187.94	424.30	2.80	0.01	356.32	2019.56
Has Cognitive Disability	-1577.12	909.69	-1.73	0.08	-3360.11	205.88
Has Physical Disability	-4112.95	586.14	-7.02	0.00	-5261.78	-2964.11
Had Job before Prison						
Had Job before Prison	4129.60	218.52	18.90	0.00	3701.30	4557.90
Had Job during Prison						
Had Job during Prison	-609.78	219.67	-2.78	0.01	-1040.33	-179.24
Number of Arrests before Prison						
Number of Arrests before Prison	-192.03	10.63	-18.07	0.00	-212.86	-171.20
Has PC290 Conviction						
Has PC290 Conviction	1079.70	397.53	2.72	0.01	300.55	1858.85
Has Serious or Violent Conviction						
Has Serious or Violent Conviction	354.33	294.54	1.20	0.23	-222.97	931.63
Controlling Offense (Base = Person)						
Property	-1583.18	283.93	-5.58	0.00	-2139.70	-1026.67
Drug	280.95	383.74	0.73	0.46	-471.18	1033.07
Other	610.20	268.19	2.28	0.02	84.54	1135.85
Admission Type (Base = New Conviction)						
Parole Violation	-1936.81	347.22	-5.58	0.00	-2617.36	-1256.27
Other	2991.18	1591.07	1.88	0.06	-127.31	6109.67
Custody Level (Base = Unknown)						
Minimum	3197.51	441.92	7.24	0.00	2331.35	4063.67
Medium	1983.87	444.74	4.46	0.00	1112.18	2855.57
Maximum/Close	733.75	644.03	1.14	0.26	-528.56	1996.05
Security Level III or IV	-2635.94	329.22	-8.01	0.00	-3281.20	-1990.67
Had RVR or Credit Loss	-1529.44	238.45	-6.41	0.00	-1996.79	-1062.08
Recidivism Risk Score (Base = Low)						
Moderate	-2262.05	295.15	-7.66	0.00	-2840.54	-1683.55
High Drug	-3317.95	527.06	-6.30	0.00	-4350.98	-2284.92
High Property	-3679.66	412.45	-8.92	0.00	-4488.06	-2871.26

Median Annual Wages after Prison	Coefficient	SE	t	p-value	Lower bound	Upper bound
High Violent	-3335.47	332.20	-10.04	0.00	-3986.57	-2684.36
Unknown	-1499.36	1372.54	-1.09	0.28	-4189.53	1190.81
Reading Level (Base = Grade 10 or Above)						
Grades 7-9	-1076.90	314.99	-3.42	0.00	-1694.28	-459.53
Grades 4-6	-1644.82	281.26	-5.85	0.00	-2196.09	-1093.54
Grade 3 or Below	-2708.32	428.20	-6.32	0.00	-3547.58	-1869.05
Unknown	-1933.47	344.54	-5.61	0.00	-2608.77	-1258.17
Program Participation						
Adult Basic Education (I-III)	-916.74	233.20	-3.93	0.00	-1373.81	-459.68
GED	-980.83	391.63	-2.50	0.01	-1748.43	-213.24
College	3840.78	331.85	11.57	0.00	3190.34	4491.21
Computer Technology (CTE)	-447.08	579.63	-0.77	0.44	-1583.15	688.99
Any Trade (CTE)	998.30	352.14	2.83	0.01	308.11	1688.50
Transitions (OCE only)	-1144.82	264.74	-4.32	0.00	-1663.72	-625.93
Substance Use Disorder Treatment	-201.26	304.23	-0.66	0.51	-797.55	395.03
Anger Management	-108.88	485.02	-0.22	0.82	-1059.53	841.77
Criminal Thinking	23.78	472.96	0.05	0.96	-903.22	950.78
Family Relationships	397.39	474.47	0.84	0.40	-532.58	1327.36
Months Served	45.97	2.27	20.26	0.00	41.52	50.42
Release Type (Base = State Parole)						
PRCS	-1756.55	285.45	-6.15	0.00	-2316.02	-1197.08
Discharge	-392.54	1363.52	-0.29	0.77	-3065.03	2279.95
Unemployment Rate in Release Month in PUMA	-432.23	47.04	-9.19	0.00	-524.43	-340.02
Constant	13316.33	802.02	16.60	0.00	11744.37	14888.30

SOURCE: Author calculation from CDCR, DOJ, and EDD data

NOTE: Includes all people released for the first time in each year, 2016-19 who had jobs after prison (N=63,940).

TABLE E4

Logistic regression results (DV= Employed after prison; IV: Longest pre-prison work spell quarters, prison job tenure)

Employed After Prison	Odds ratio	SE	Z	P-value	Lower bound	Upper bound
Race (Base = White)						
Latino	0.951	0.015	-3.200	0.001	0.923	0.981
Black	1.154	0.020	8.290	0.000	1.115	1.193
Asian American	1.044	0.044	1.040	0.300	0.962	1.133
Native American	0.979	0.054	-0.390	0.700	0.878	1.091
Other/Unknown	0.827	0.053	-2.980	0.003	0.729	0.937
Gender (Base = Male)						
Female	0.973	0.023	-1.130	0.257	0.929	1.020
Release Age (Base = 18 to 24)						
25-34	1.226	0.024	10.520	0.000	1.181	1.274
35-44	1.070	0.024	3.000	0.003	1.024	1.119
45-54	0.780	0.022	-8.990	0.000	0.739	0.823
55+	0.464	0.017	-21.320	0.000	0.432	0.498
Citizen (versus Non-Citizen)	2.368	0.056	36.290	0.000	2.260	2.481
Has Cognitive Disability	0.519	0.024	-14.450	0.000	0.474	0.567
Has Physical Disability	0.584	0.018	-17.200	0.000	0.550	0.621
Length of Longest Pre-Prison Spell	1.420	0.004	115.430	0.000	1.412	1.429
Job Tenure (Base = Zero/No Job)						
Up to 15 days	1.046	0.032	1.480	0.139	0.985	1.110
16 to 60 days	1.030	0.019	1.640	0.101	0.994	1.068
61 to 180 days	1.115	0.018	6.740	0.000	1.080	1.151
More than 180 days	1.266	0.030	10.050	0.000	1.209	1.326
Number of Arrests before Prison	0.997	0.001	-4.710	0.000	0.996	0.998
Has PC290 Conviction	0.839	0.020	-7.220	0.000	0.800	0.880
Has Serious or Violent Conviction	0.946	0.017	-3.130	0.002	0.914	0.980
Controlling Offense (Base = Person)						
Property	0.999	0.017	-0.070	0.943	0.966	1.033
Drug	1.091	0.025	3.740	0.000	1.042	1.141
Other	1.015	0.017	0.890	0.371	0.982	1.049
Admission Type (Base = New Conviction)						
Parole Violation	1.209	0.024	9.450	0.000	1.162	1.257
Other	1.113	0.100	1.190	0.234	0.933	1.326
Custody Level (Base = Unknown)						
Minimum	1.070	0.028	2.560	0.011	1.016	1.127

Employed After Prison	Odds ratio	SE	Z	p-value	Lower bound	Upper bound
Medium	0.945	0.025	-2.150	0.032	0.897	0.995
Maximum/Close	0.874	0.033	-3.600	0.000	0.812	0.940
Security Level III or IV	0.948	0.018	-2.790	0.005	0.912	0.984
Had RVR or Credit Loss	0.969	0.014	-2.140	0.033	0.942	0.997
Recidivism Risk Score (Base = Low)						
Moderate	1.153	0.021	7.710	0.000	1.112	1.196
High Drug	1.185	0.037	5.390	0.000	1.114	1.260
High Property	1.173	0.029	6.380	0.000	1.117	1.232
High Violent	1.247	0.026	10.550	0.000	1.197	1.299
Unknown	1.129	0.095	1.440	0.149	0.957	1.332
Reading Level (Base = Grade 10 or Above)						
Grades 7-9	0.919	0.018	-4.290	0.000	0.884	0.955
Grades 4-6	0.798	0.014	-13.140	0.000	0.772	0.826
Grade 3 or Below	0.546	0.013	-25.350	0.000	0.521	0.572
Unknown	0.697	0.014	-17.920	0.000	0.670	0.725
Program Participation						
Adult Basic Education (I-III)	0.960	0.013	-2.930	0.003	0.934	0.987
GED	1.044	0.025	1.750	0.079	0.995	1.095
College	1.304	0.029	12.050	0.000	1.249	1.361
Computer Technology (CTE)	0.993	0.036	-0.180	0.858	0.925	1.068
Any Trade (CTE)	1.120	0.026	4.980	0.000	1.071	1.172
Transitions (OCE only)	1.022	0.017	1.330	0.185	0.990	1.055
Substance Use Disorder Treatment	1.102	0.020	5.250	0.000	1.063	1.142
Anger Management	1.099	0.033	3.140	0.002	1.036	1.166
Criminal Thinking	1.017	0.030	0.560	0.573	0.960	1.077
Family Relationships	0.971	0.028	-1.010	0.311	0.918	1.028
Months Served	1.003	0.000	24.270	0.000	1.003	1.003
Release Type (Base = State Parole)						
PRCS	0.949	0.016	-3.060	0.002	0.918	0.981
Discharge	0.690	0.053	-4.840	0.000	0.593	0.802
Unemployment Rate in Release Month in PUMA	1.001	0.003	0.210	0.831	0.995	1.006
Constant	0.209	0.010	-33.940	0.000	0.191	0.229

SOURCE: Author calculation from CDCR, DOJ, and EDD data

NOTE: Includes all people released for the first time in each year, 2016-19 (N=144,553).

TABLE E5

Logistic regression results (DV= Employed in Years 2-4; IV: Felony arrest in Year 1)

Employed in Years 2-4	Odds ratio	SE	Z	p-value	Lower bound	Upper bound
Felony Arrest in Year 1	0.628	0.009	-32.430	0.000	0.611	0.646
Race (Base = White)						
Latino	1.043	0.017	2.600	0.009	1.011	1.077
Black	1.197	0.022	9.800	0.000	1.154	1.240
Asian American	1.153	0.049	3.310	0.001	1.060	1.254
Native American	0.993	0.059	-0.130	0.900	0.884	1.115
Other/Unknown	0.939	0.060	-0.980	0.326	0.827	1.065
Gender (Base = Male)						
Female	1.044	0.026	1.730	0.083	0.994	1.097
Release Age (Base = 18 to 24)						
25-34	1.108	0.023	4.960	0.000	1.064	1.153
35-44	0.997	0.024	-0.100	0.917	0.951	1.046
45-54	0.787	0.023	-8.150	0.000	0.743	0.834
55+	0.500	0.019	-18.490	0.000	0.464	0.538
Citizen (versus Non-Citizen)	2.149	0.052	31.670	0.000	2.049	2.253
Has Cognitive Disability	0.553	0.027	-12.170	0.000	0.503	0.608
Has Physical Disability	0.588	0.020	-15.900	0.000	0.551	0.628
Had Job before Prison	6.623	0.085	146.690	0.000	6.458	6.793
Had Job during Prison	1.087	0.015	5.960	0.000	1.058	1.117
Number of Arrests before Prison	0.995	0.001	-7.960	0.000	0.994	0.996
Has PC290 Conviction	1.056	0.026	2.230	0.026	1.007	1.108
Has Serious or Violent Conviction	0.887	0.016	-6.470	0.000	0.855	0.920
Controlling Offense (Base = Person)						
Property	0.963	0.018	-2.060	0.039	0.929	0.998
Drug	1.076	0.026	2.990	0.003	1.026	1.130
Other	1.056	0.018	3.170	0.002	1.021	1.093
Admission Type (Base = New Conviction)						
Parole Violation	1.108	0.024	4.730	0.000	1.062	1.157
Other	1.371	0.127	3.400	0.001	1.143	1.645
Custody Level (Base = Unknown)						
Minimum	1.078	0.030	2.720	0.007	1.021	1.138
Medium	0.956	0.026	-1.620	0.105	0.906	1.009

Employed in Years 2-4	Odds ratio	SE	Z	p-value	Lower bound	Upper bound
Maximum/Close	0.855	0.034	-3.900	0.000	0.791	0.925
Security Level III or IV	0.941	0.020	-2.940	0.003	0.903	0.980
Had RVR or Credit Loss	0.919	0.014	-5.530	0.000	0.892	0.947
Recidivism Risk Score (Base = Low)						
Moderate	1.057	0.020	2.930	0.003	1.019	1.097
High Drug	1.060	0.036	1.740	0.081	0.993	1.133
High Property	1.050	0.028	1.850	0.065	0.997	1.106
High Violent	1.106	0.024	4.620	0.000	1.059	1.154
Unknown	1.171	0.099	1.870	0.062	0.992	1.382
Reading Level (Base = Grade 10 or Above)						
Grades 7-9	0.932	0.019	-3.440	0.001	0.895	0.970
Grades 4-6	0.831	0.015	-10.350	0.000	0.802	0.861
Grade 3 or Below	0.606	0.015	-19.830	0.000	0.577	0.637
Unknown	0.729	0.016	-14.790	0.000	0.700	0.761
Program Participation						
Adult Basic Education (I-III)	0.961	0.014	-2.710	0.007	0.933	0.989
GED	1.014	0.026	0.540	0.587	0.964	1.066
College	1.274	0.029	10.730	0.000	1.219	1.331
Computer Technology (CTE)	0.986	0.038	-0.360	0.719	0.915	1.063
Any Trade (CTE)	1.075	0.025	3.060	0.002	1.026	1.126
Transitions (OCE only)	0.987	0.017	-0.800	0.424	0.954	1.020
Substance Use Disorder Treatment	1.039	0.020	1.930	0.053	1.000	1.079
Anger Management	1.059	0.034	1.810	0.070	0.995	1.127
Criminal Thinking	1.017	0.031	0.550	0.580	0.958	1.081
Family Relationships	0.985	0.030	-0.510	0.613	0.928	1.045
Months Served	1.004	0.000	27.590	0.000	1.003	1.004
Release Type (Base = State Parole)						
PRCS	0.822	0.015	-10.840	0.000	0.793	0.851
Discharge	0.656	0.052	-5.270	0.000	0.561	0.767
Unemployment Rate in Release Month in PUMA						
Constant	0.173	0.008	-36.360	0.000	0.158	0.190

SOURCE: Author calculation from CDCR, DOJ, and EDD data

NOTE: Includes all people released for the first time in each year, 2016-19 (N=144,553). Whether a person was arrested was a better predictor (and led to better model fit) than estimated incarceration time.



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