

PUNISHING FINANCIAL CRIMES: THE IMPACT OF PRISON
SENTENCES ON DEFENDANTS AND THEIR COLLEAGUES
SUPPLEMENTARY APPENDIX *

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Abstract

Financial crimes are costly to society but less severely punished than other nonviolent crimes. We investigate whether prison sentences reduce financial crimes. Using random assignment of judges in Finland to identify causal impacts, we find a prison sentence reduces defendant reoffending by 42.9 percentage points three years post-sentencing. Given prior evidence of financial misconduct "contagion," we also explore spillovers on colleagues. A prison sentence reduces the likelihood that a financial crime defendant's colleagues commit crimes by 27 percentage points, suggesting broader deterrent effects of harsher punishments, but only for fraud cases. Last, we show financial crimes are not victimless crimes.

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A Types of Financial Crimes

Below is a list of every financial crime category in the Finnish judicial system included in our analysis.

Category 1: Fraud (60%)

16 - Offence against public authorities

28 - Embezzlement

29 - Offences against public finances (tax fraud)

36 - Fraud

37 - Counterfeiting/means of payment fraud

39 - Offences by a debtor

44 - Unlicensed medical practice

61 - Unlicensed traffic offences (bus/tax)

Category 2: Business Offences (15%)

30 - Accounting offences

46 - Smuggling/import offences

47, 73, 78 - Workplace/employment offences

69 - Business infractions

49, 65 - Copyright issues

51 - Securities offences

Category 3: Forgery (9%)

33 - Forgery offences

Category 4: Laundering (7%)

32 - Receiving and money laundering offences

Category 5: Political Corruption (<1%)

40 - Offences in office

Category 6: Other (<9%)

15 - False Statement

17 - Lottery offences

24 - Defamation

31 - Extortion

38 - Data and communications offences

48 - Environmental offences

67,70,82 - Mixed bag (.3%)

B Institutional Context

This section provides details on the institutional context, including information on the different punishments and how they are administered.

B.1 Judge Panels

Composition of Judge Panels In a typical criminal case either a single judge or a panel consisting of a professional judge and 2-4 lay judges handles the proceeding. In very rare cases for very serious crimes, a panel of three professional judges is appointed. Table B1 shows that the overwhelming majority of financial crime cases (66.72%) are decided by a panel consisting of a professional judge and lay judges, with almost all of the remainder of cases (32.75%) decided by a single judge.

Formation of Judge Panels When a new case arrives in a court, the professional judge and lay judges are randomly assigned to a case, such that the panels' composition changes between cases. Given that there are a large number of lay judges, there is a great deal of variation in the panel's composition. For example, in 2006, there were 3700 lay judges and around 500 professional judges in Finland.

Decision-Making in the Court After the court hearing, the panel of judges decides on the verdict and punishment in the so-called "Deliberation in Camera". This meeting occurs directly after the hearing and is only attended by the judges. When lay judges are part of the judge panel, the professional judge acts as the chair of the panel and first explains to the lay judges the essential questions in the case and what are the relevant points of law to be considered. After this, if the panel cannot reach a unanimous verdict, they will vote. We do not observe in our data whether the verdict was unanimous or reached by vote. However, according to other sources, voting on verdicts is rare. For example, in 1997 only 0.5% of the verdicts in criminal cases were decided by vote (of Finland, 2007; de Godzinsky and Ervasti, 1999).

When the panel contains lay judges, the professional judge votes first. The panel votes on a set of questions in a particular order. The questions and their order are the following:

1. Is the defendant found guilty?

2. If found guilty, should the person be sentenced or left unpunished?
3. Does the previous punishment (for example, the previous probation sentence) also apply to the crime currently under consideration?
4. What type and magnitude of sanction should be imposed?
5. Other questions related to the penalty.

The side with the majority of votes wins. If the result is a tie, the least severe option is chosen regardless of which side the professional judge is on.

Table B1: Compositions of Judge Panels

	Frequency	Percent
Single Professional Judge	18532	32.75
Lay Judge Panel	37754	66.72
Military Panel	24	0.04
Panel of Three Professional Judges	270	0.48
Missing	3	0.01
Total	56583	100.00

Notes: These shares are calculated for the estimation sample. The sample construction is defined in Sections 2 and 4.

B.2 Detailed Description of Punishments

Fines These are the most lenient and common form of punishment that the district courts in Finland impose. Finland uses a day fine system¹ in which the monetary value of the fine is a product of the severity of an offense and the offender's income. More severe crimes generally receive a higher number of day fines from a judge. For example, the average number of day fine units for petty theft has historically been around 17, while the average number for aggravated theft has historically been around 47. The Finnish crime code defines the minimum and maximum number of day fines that can be assigned for each offense. Usually, the maximum per offense is 120, but if the same case involves multiple crimes, the number may increase to 240. The value of a single-

¹The name originates from the idea that the size of a single fine should be equal to the income loss a criminal would suffer if he were to instead spend a day in prison.

day fine unit is approximately half of the offender's daily net income.² The minimum monetary value of a single day fine is 6 euros, but there is no maximum. If a convicted defendant defaults on payment, the punishment may be converted into imprisonment.

Probation In Finland, probation is a conditional prison sentence, which means that while a specific prison sentence is imposed, it is suspended for a probationary period, which can last from 1 to 3 years. Probation is the second most common form of punishment in Finland. A judge may impose a probation sentence if the unconditional prison sentence is at most two years, the offense is not too severe, and the offender does not have an extensive criminal history. If the sentenced person commits another offense punishable by unconditional imprisonment during the probationary period, the original sentence of conditional imprisonment can be enforced by imposing a joint sentence of unconditional imprisonment to cover both the previous sentence that was given as probation and the sentence for the new offense. It is important to emphasize that the suspended sentence is enforced only when the severity of the new offense leads to imprisonment. Therefore, not just any subsequent crime is enough to automatically convert probation into prison time. A joint sentence may be more lenient than the simple addition of new and old sentences. Furthermore, if a judge considers that probation alone is not a sufficient punishment for a crime, the judge may bundle probation with unconditional fines.

Prison An unconditional prison sentence is the most severe punishment in the Finnish criminal justice system. For each offense, the Finnish criminal code specifies when a prison sentence is allowed and the minimum and maximum terms. Except in exceptional circumstances, offenders below the age of 18 years are not sentenced to prison. Convicted defendants serve their sentences in publicly-funded open or closed prisons, which arrange rehabilitative activities for them, along with educational or work opportunities. For prisoners, it is mandatory to participate in educational or work opportunities unless they are exempted for health reasons. Prisoners have the right to be in touch with the outside world through phone calls, visits, and approved leaves.

In Finland, almost all prisoners are released on parole. According to the guidelines, first-time prisoners are eligible for parole after serving half of their sentence, while those convicted of a

²The exact formula is $\frac{\text{Monthly net income} - 255 \text{ euros}}{60}$

crime within the prior three years are eligible for parole after two-thirds of their sentence. Time on parole lasts for the remainder of an offender's sentence after release. The majority of those on parole are not supervised after release, with only a quarter of those released in 2007 placed under supervision. This proportion is also likely much lower in our sample as supervision is mandatory for those under 21, and our sample consists only of offenders older than that. While parole supervision has been shown to be consequential for recidivism in other contexts (Banan and Macdonald, 2025), these rules make time spent on parole and the amount of supervision very uniform across defendants, which means it is unlikely that our IV results will be affected by differences in parole experiences for those on the margin of prison.

C Raw Mean Outcomes Around Prison Sentences

This section provides descriptive figures showing the evolution of criminal activity, employment, and income around sentencing. Figure C1 shows the probability of committing a crime in Panel (a), employment in Panel (b), and income in Panel (c) in the years before and after sentencing for financial crime defendants who are sent to prison versus those who are not. All panels indicate the year of sentencing with a dashed vertical line.

Across all panels, a decline in the outcome of interest begins in the 1-3 years before sentencing. In Panel (a), the reduction in the proportion of offenders charged with an offense continues to fall after sentencing, with a much larger reduction for those who are sentenced to prison.³ For employment, Panel (b) shows that the bulk of the reduction occurs before sentencing, with employment dropping more for those sent to prison. Panel (c) shows a steep decline in total income (including both earnings and transfers) occurring 2 years before sentencing for defendants sentenced to prison, with more muted declines for those not sentenced to prison. Income continues to fall 1 year after sentencing for those sent to prison, but by a smaller amount than in the years preceding sentencing. Income begins to trend upward for non-prison defendants directly after sentencing.⁴

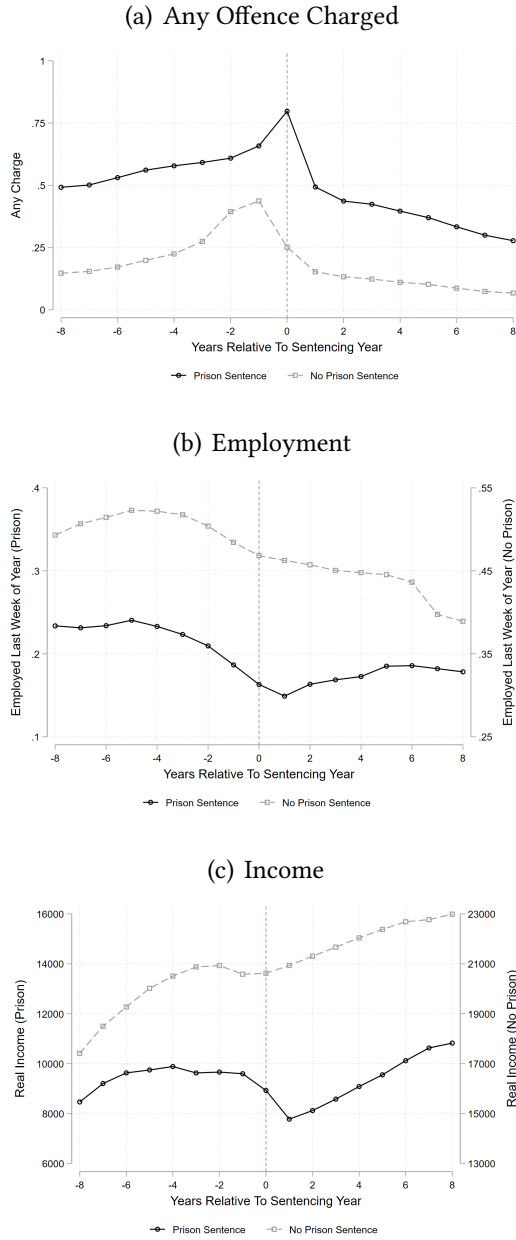
To further examine the dynamics of labor market outcomes around prison sentencing, we split the sample by the defendant's pre-sentence income. Appendix Figure F10 shows that the downward trend in employment and income preceding sentencing is driven by those with above-median income 5-10 years before the court decision.

The results in Figures C1 and F10 suggest a few things. First, there are interesting dynamics in the labor market outcomes of financial crime defendants both before and after the sentence. We document large declines in reoffending, employment, and income both preceding and accompanying the sentence. These declines are especially large for those more attached and earning higher incomes in the labor market before sentencing. The decline in income and employment

³Appendix Figure F11 presents an event study version of the Figure C1. As expected, there are pervasive pre-trends, demonstrating again that a traditional difference-in-differences design does not work in this setting.

⁴We replicate Figure C1 in Appendix Figure F12 using log income, and the results are qualitatively similar, suggesting that outliers are not driving these results.

Figure C1: Raw Patterns of Criminality, Employment, and Income Around the Time of Sentencing



Note: Panel A shows raw dynamics for whether an offence is charged 8 years before and 8 years after sentencing separately for those who are sent to prison (black line) versus those who are not sent to prison (grey line). Panel B (C) shows employment (income) of defendants 8 years before and 8 years after sentencing separately for those sent to prison as well as those who commit a financial but are not sent to prison (grey line). Employment and income are measured at the end of the year. These figures are for the estimation sample. Sample construction as defined in Sections 2 and 4.

before sentencing could be due to a job loss that makes financial crime more attractive. Alternatively, the decline in income and employment before sentencing could be due to individuals losing their jobs after arrest (Egan *et al.*, 2019).

Appendix Figure F13 depicts the dynamics of recidivism, earnings, and employment around the time the crime was committed and highlights that the latter interpretation of the decline in labor market outcomes is likely correct. Panel (b) shows the bulk of the observed drop in earnings occurs in the year after the offense. There is some decline in employment that precedes the offense year, but this is likely due to the data measuring employment at the end of a given year, so the impact of losing a job due to being charged is reflected between the year before the offense and the offense year. Therefore, most of the observed decline in labor market outcomes before sentencing is likely attributable to detection and arrest, rather than offending being influenced by a decline in labor market outcomes beforehand.

D Cost-Benefit Analysis

Formally, using a method similar to Bhuller *et al.* (2018) we calculate a cost-benefit analysis for the marginal financial crime defendant using the following equation:

$$\begin{aligned} \text{IncarcerationCost}^{LATE} = & \text{DirectCost}^{LATE} + (\text{Policing} + \text{CourtSavings})^{LATE} \\ & + \text{VictimSavings}^{LATE} \end{aligned}$$

DirectCost^{LATE} is the direct cost of sending the marginal defendant to prison. Prison in Finland costs 225 euros per day, and the cost of probation is €63 per day. Assuming the relevant decision margin for judges is prison vs. probation, the added cost of sending a financial crime defendant to prison is 162 euros per day. We multiply this value by the prison sentence length for each defendant in our sample and use this as the outcome of our main IV specification to estimate the incarceration cost for the marginal defendant. Using this approach, we estimate a direct cost of €46,918 in Column 1 of Table 8.

The benefits of a prison sentence consist of two components, both due to the reduction in future crime.⁵ First, if future crime is reduced, this leads to a decrease in policing and court costs. $(\text{PolicingSavings} + \text{CourtSavings})^{LATE}$ captures the reduction in these costs due to reduced reoffending. We calculate enforcement costs per incident in Finland as the total Finnish Police budget divided by the total number of recorded police incidents, and likewise, we calculate per-case court costs as the total Finnish criminal court budget divided by the total number of criminal cases. Following Bhuller *et al.* (2018), we then multiply these costs by the number of charges (as opposed to cases) and use this outcome in our IV model. We estimate a savings of €46,416 in Column 2 of Table 8.

Second, $\text{VictimSavings}^{LATE}$ captures the reduction in victimization costs resulting from the prevention of future crimes. We quantify the victimization cost in the following way. First,

⁵Note that Bhuller *et al.* (2018) include a third class of benefits, reductions in transfers and higher taxes due to increased employment effects. We omit this category since we do not observe significant labor market impacts.

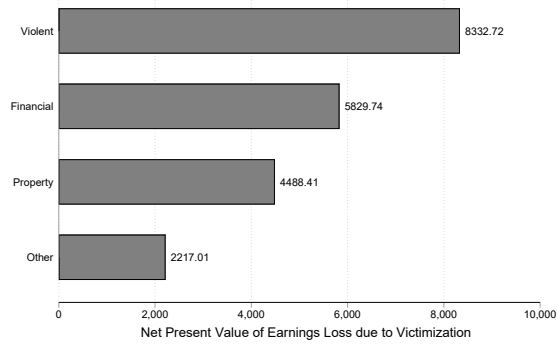
we use the matched event study approach described in Section 7 to calculate the reduction in earnings due to victimization over five years for different crime types (financial, property, violent, and other). Second, to calculate the net present value (NPV) of a given crime type victimization shock, we add up the discounted earnings losses captured by event study estimates, applying a 5% discount factor. Figure D1 shows how these NPVs vary between crime types. Third, we create an outcome variable for each future case using our estimated victim cost for the associated crime committed. Finally, using this victim cost as an outcome in our IV model, we estimate a €5287 reduction in victimization cost for the marginal defendant in Column 3 of Table 8.

This approach to calculating the per-charge policing and per-charge court costs is similar to Bhuller *et al.* (2018). In calculating these costs, we were constrained by the information available from the relevant agencies. Specifically, we divide total budgets by the number of charges, given that we do not have information on the per-charge-specific agency costs. However, this approach does raise some concerns.⁶ Police agencies perform many functions other than enforcement. Moreover, in some contexts, like the United States, there is substantial variability in the cost of adjudicating cases in courts, with cases for more severe crimes costing more. Both of these concerns may cause our per-charge costs to be inflated. That said, we believe our approach provides reasonable cost estimates, particularly in the Finnish context. For enforcement costs, if we assume the main function of police agencies is enforcement and their other activities are in service of this function, dividing the police budget by total charges is appropriate. Additionally, court costs in Finland likely result in more uniform costs across offense types, particularly compared with the United States, for two reasons. First, much of the variability in court costs in the United States likely occurs due to the wide use of plea bargaining. Less severe crimes are far more likely to be adjudicated this way, whereas more severe crimes are more likely to go to trial, which costs more. In Finland, plea bargaining is used very rarely. This means that most cases in our data are tried similarly, making costs across cases more uniform. Second, while it is still reasonable to assume that very severe crimes, such as murder, cost more to adjudicate, these crimes are rare in Finland, and so are unlikely to cause meaningful inflation of our calculated

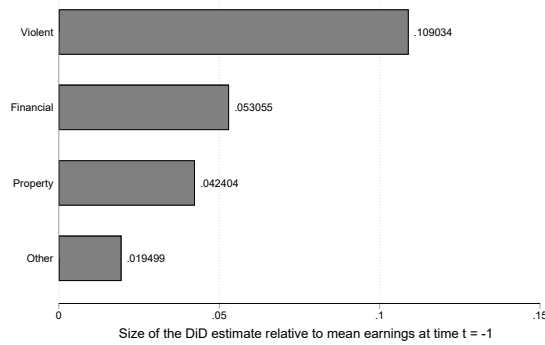
⁶For an alternative approach, see Deshpande and Mueller-Smith (2022).

per-charge court cost.

Figure D1: Net Present Value Earnings Impacts of Victimization for Cost-Benefit Analysis
(a) Net Present Value of Earnings Losses



(b) Net Present Value of Earnings Losses Relative to Earnings Before Victimization



Notes: Panel (a) reports the estimated average earning loss to victims of financial crimes, property crimes, violent crimes, and all other crimes. Panel (b) reports these losses as their percent of pre-victimization average earnings of the victims in the estimation sample. Estimates are obtained using the matched control difference-in-difference strategy described in Section 7. Earnings include total taxable labor market income, which is the sum of wages and self-employment income. Earnings impacts are reported in their net present value relative to victimization, which is calculated by discounting the estimated earning loss in each post-victimization period (0 to 5) at a 5% discount rate.

E External Validity

In this section, we discuss similarities and differences between the criminal justice system for financial crime defendants in Finland relative to the United States. While the United States is not the only country of interest when it comes to external validity, judicial systems across Europe are much more similar to each other, making external validity more likely.

To better understand the external validity of our estimates to the United States we use data from North Carolina from 2000-2015. This allows us to at least compare descriptive statistics. The results suggest more similarity than one might expect, particularly given the large and well-known differences for other crime types.

In Table E1, we show that 9% of all court cases in North Carolina involve financial crimes. Much like Finland, financial crime cases in North Carolina have the lowest incarceration rate (15%) and result in the shortest prison sentences (43 days) when compared to other crime types.⁷ When it comes to recidivism we find that 65% of financial crime defendants in North Carolina reoffend within the first five years.⁸ This rate of reoffending is nearly identical to that of property offenders and over 10 percentage points larger than that for drug offenders. Therefore, much like in Finland, financial crime defendants are sentenced more leniently, despite having comparable reoffending rates to other nonviolent crime defendants. The descriptive statistics on sentencing in North Carolina are also of largely similar magnitudes to those in Finland, indicating that financial crime defendants are treated similarly in both countries.

Differences in prison conditions while incarcerated might also affect the external validity of our results.⁹ Finland spends between €150-€214 per day per inmate, depending on the type of

⁷These calculations of sentence length exclude lifetime sentences. Lifetime sentences almost never occur for financial crimes, but they make up 1% of sentences for violent crimes.

⁸The data used in this section is limited to cases in North Carolina so recidivism is limited to reoffending within the state.

⁹Katz *et al.* (2003) find that there is a robust negative correlation between prison conditions—proxied for by the death rate in prison—and crime. On the other hand, several other studies show that higher security level housing units, which generally have worse conditions, are associated with increases in recidivism (Shapiro and Chen, 2007; Drago *et al.*, 2011; Mastrobuoni and Terlizzese, 2014). Di Tella and Schargrotsky (2013) finds that offenders in Argentina—where prison conditions are generally poor—assigned to home arrest with electronic monitoring had lower recidivism rates.

prison in which the defendant is housed.¹⁰ There is large variability in prison spending within the United States. For example, North Carolina spends \$103 per day to house an inmate and California spends \$291 per day, and Finland's per inmate spending is between these two.

Of course, it matters how this money is spent, and more spending does not necessarily indicate better prison conditions. Prisons in the Nordic countries, Finland included, are often held up as exceptional for placing a great deal of emphasis on rehabilitation and treating inmates humanely. In contrast, prison conditions are notoriously bad for general inmates in the United States. However, financial crime defendants in the United States are often sent to minimum-security prisons, which are more similar to Finnish prisons than those where other defendants are housed. The United States Bureau of Prisons states that "minimum security institutions, also known as Federal Prison Camps (FPCs), have dormitory housing, a relatively low staff-to-inmate ratio, and limited or no perimeter fencing. These institutions are work- and program-oriented." However, in the United States a sizable share of shorter sentences are prosecuted as misdemeanors, and any sentences that result are generally served in jails rather than prisons. Such facilities differ in structure and programming.

¹⁰See the government report found at the following link: <https://www.rikosseuraamus.fi/fi/index/ajankohtaista/\julkaisut/monisteetjaraportit/rikosseuraamuslaitoksentilinpaatosjatoimintakertomus2018.html>.

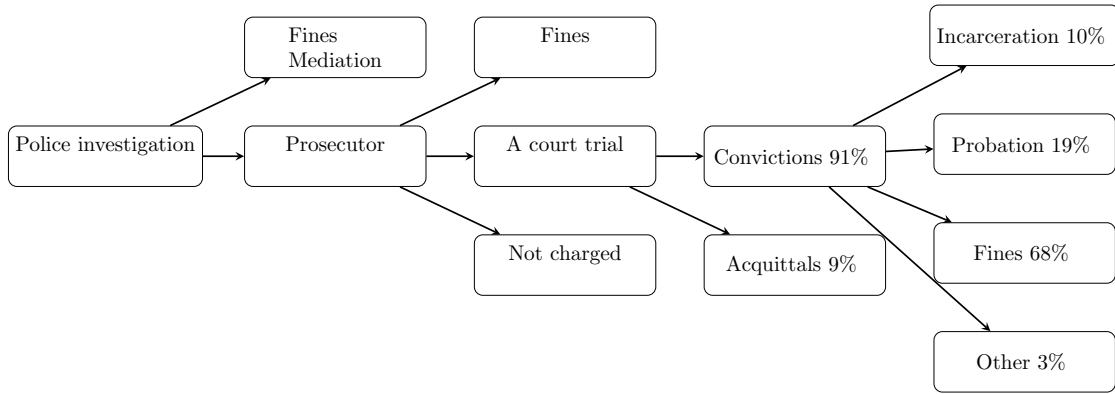
Table E1: Summary Statistics for Crimes in North Carolina

	Financial	Property	Drug	Violent	Other
Prison	0.151 (0.358)	0.226 (0.418)	0.192 (0.394)	0.308 (0.462)	0.189 (0.392)
Probation	0.849 (0.358)	0.774 (0.418)	0.808 (0.394)	0.692 (0.462)	0.811 (0.392)
Sentence in Days Excluding Life	76.430 (158.165)	89.944 (214.257)	131.790 (380.651)	335.603 (932.607)	159.195 (693.599)
Life Sentences	0.000 (0.011)	0.000 (0.019)	0.000 (0.010)	0.008 (0.091)	0.000 (0.016)
Re-offend within 5 Years	0.645 (0.478)	0.632 (0.482)	0.521 (0.500)	0.501 (0.500)	0.507 (0.500)
Observations	145,145	343,252	322,361	244,111	643,478

Notes: The table shows summary statistics that replicate Table 3 to get a better understanding how conditions in Finland differ from those in the United States. Results are for 2000-2015 in North Carolina, where we obtained data sufficient for summary statistics. We exclude all life sentences when computing the average sentence length (this makes little difference for financial crimes but does increase sentence length for other crime types). Recidivism only includes reoffending that occurred within North Carolina, as charges outside of North Carolina are not available.

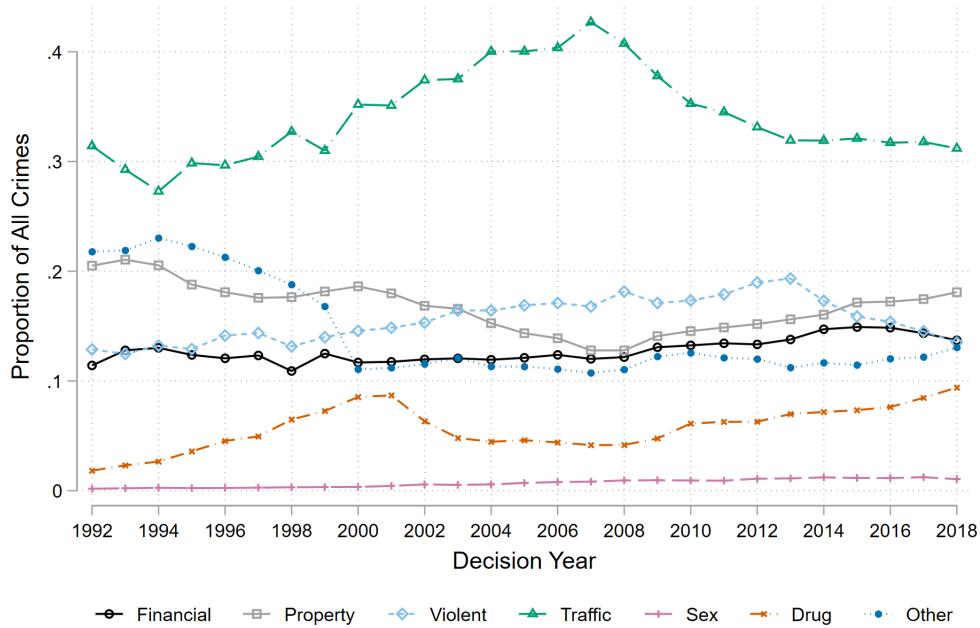
F Additional Figures

Figure F1: Sentencing Process and Court Outcomes in Finland



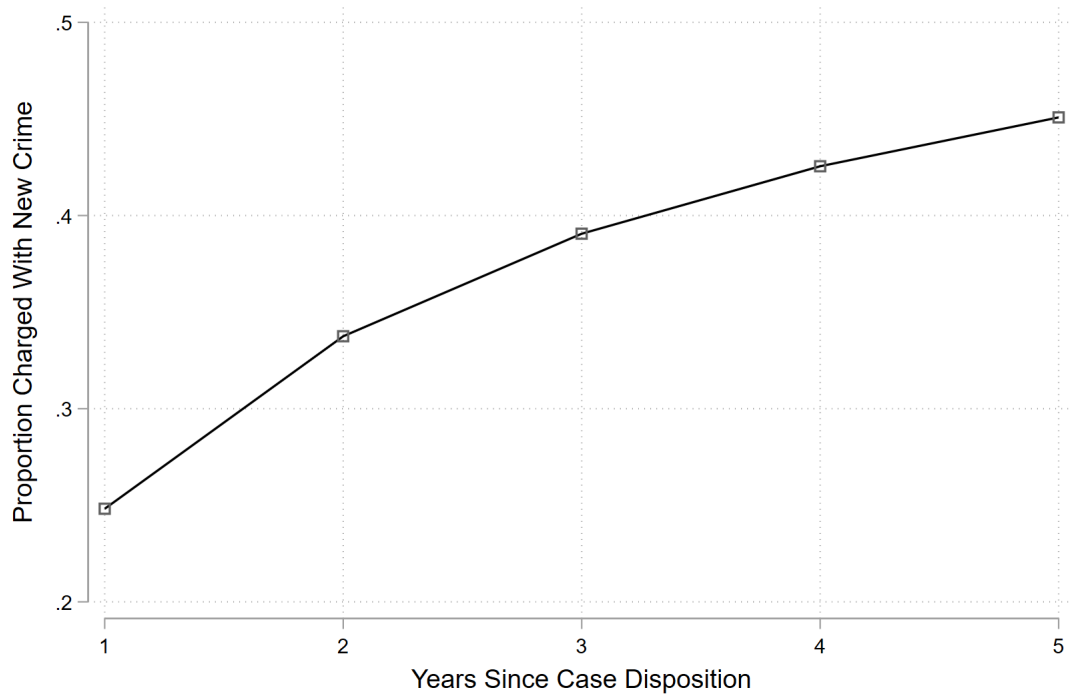
Notes: The figure provides a visual representation of the sentencing process in Finland and provides information for final sentences for financial crimes. Note that this figure reports statistics for all cases in Finland and does not impose the restrictions required for the estimation sample. For example, when imposing the estimation sample restrictions, we find that 11% of defendants are sent to prison, and 12.1% are acquitted. The boxes on the far right report the punishment probabilities conditional on conviction.

Figure F2: Proportion of Financial and All Other Crime Types, 1992-2018



Note: Figure shows the share of different crime types district court cases in Finland in 1992-2018, without applying sample restrictions described in Section 2 and 4.

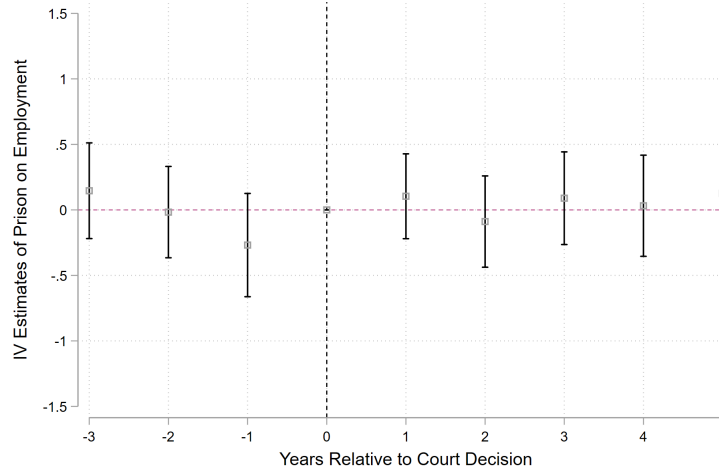
Figure F3: Recidivism for Financial Crime Defendants



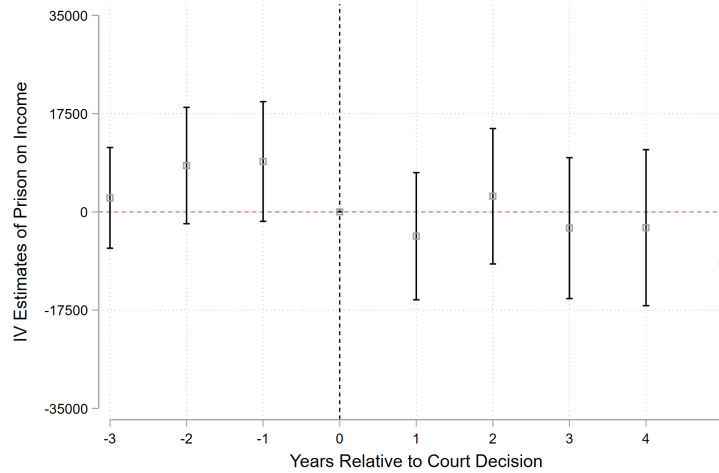
Note: Figure shows the proportion of financial crime defendants who reoffend (reappear in the court with a new crime) by the year since the initial sentence in our analysis sample. The sample construction is defined in Sections 2 and 4.

Figure F4: Impact of Prison on Defendant Labor Market Outcomes

(a) Employment



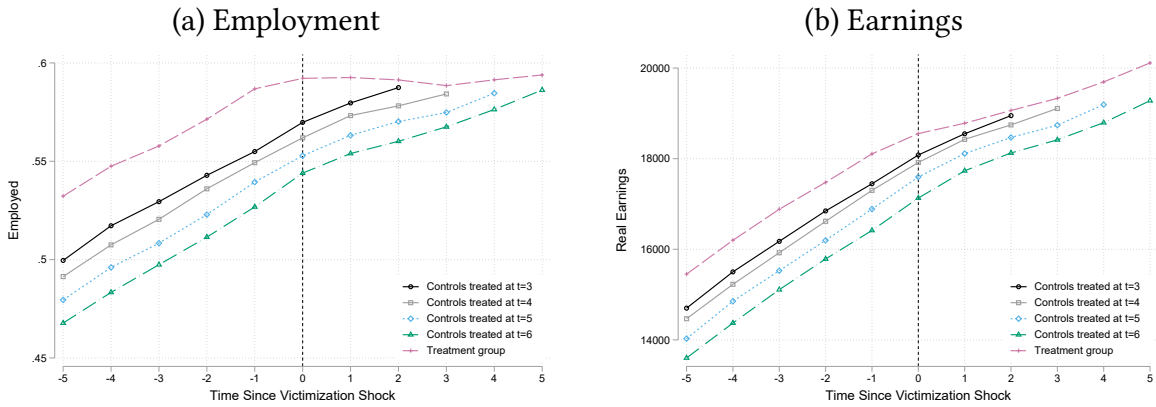
(b) Income



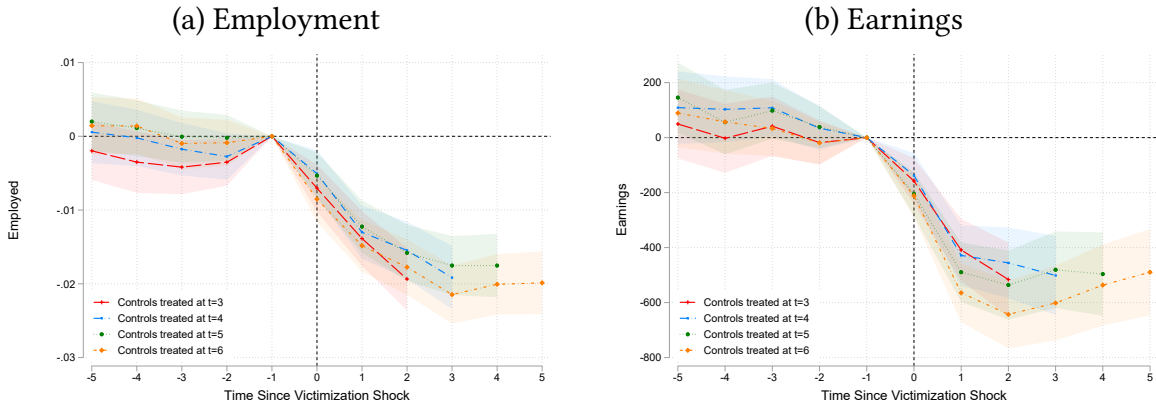
Note: Panel A (B) shows the IV estimates of the impact of incarceration on employment (income) of defendants 3 years before and 5 years after the sentencing using the identification approach of random assignment to judges as described in Section 4. Employment and income are measured at the end of the year, and the figures show the annual effects. 95% confidence intervals depicted. Sample construction and data as defined in Sections 2 and 4.

Figure F5: Impact of Financial Crimes on Victim's Employment and Income, Using Future Victims as the Counterfactual

Panel I: Raw Means

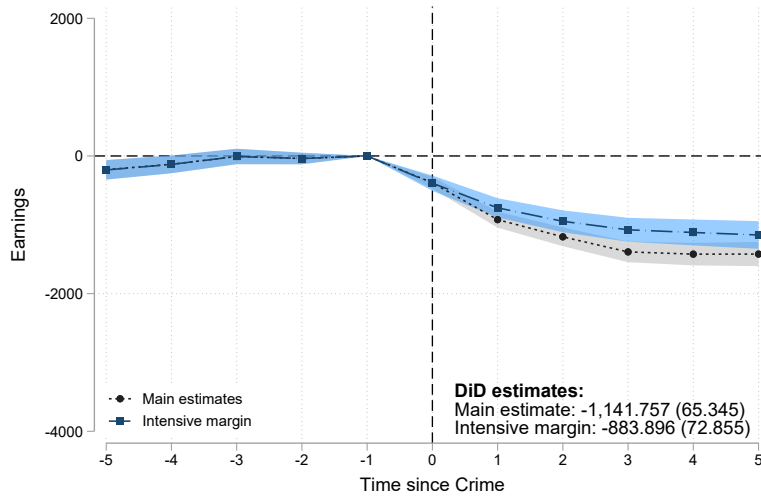


Panel II: Estimated Impacts



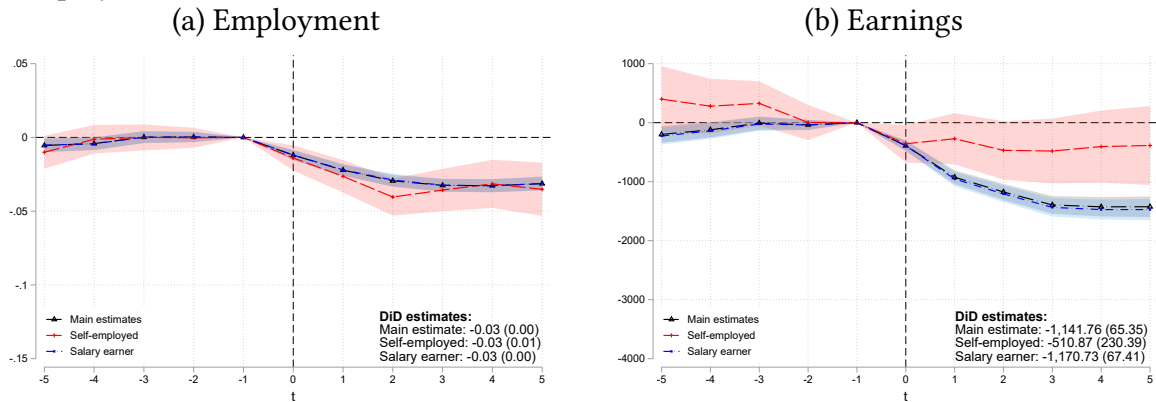
Notes Panels (a) and (b) report raw mean earnings and employment for victims and future victims. Panels (c) and (d) report the estimated impacts of being a victim of a financial crime using future victims as controls to identify effects. The different colors represent different time periods for the future victims used as a comparison. For example, "controls treated at t=3" compares victims to future victims who also experience financial crimes but three years later. The post-period varies accordingly. We impose no age restrictions on current or future victims, but results are similar if we restrict to victims below age 20 or above 65. We do not control for other observables before the event. Employment indicates whether the individual was employed in the last week of the year. Earnings consist of total taxable labor market income (the sum of salary, self-employment earnings, and taxable benefits). Standard errors are clustered at the individual level.

Figure F6: Impact of Financial Crimes on Victim's Income, Intensive Versus Extensive Margin



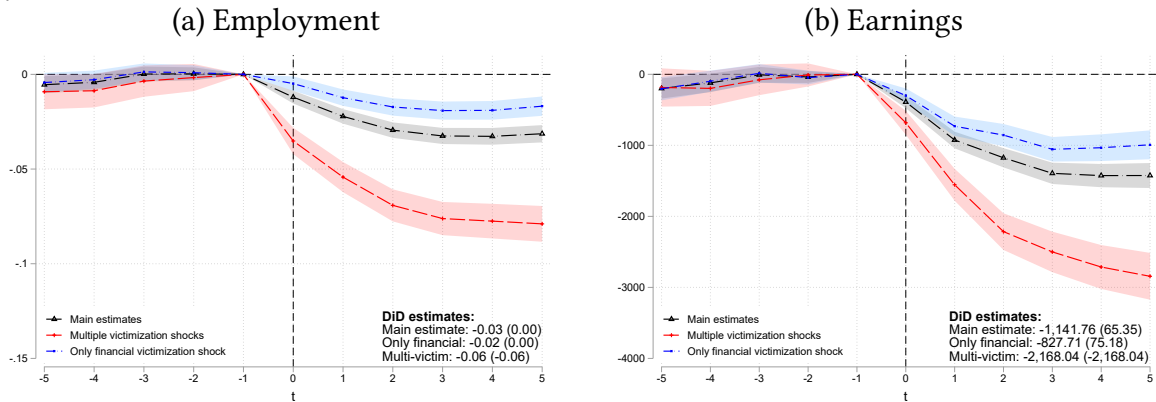
Notes This figure reports estimated impacts using the matched control to identify effects 5 years before and 5 years after the crime. The main effects are depicted in the black dotted line. The blue dashed line depicts estimates for victims who are employed in the post-period. Earnings consist of total taxable labor market income (the sum of salary, self-employment earnings, and taxable benefits). Standard errors are clustered at the individual level.

Figure F7: Impact of Financial Crimes on Victim's Employment and Income, Wage Earners Versus Self-Employed



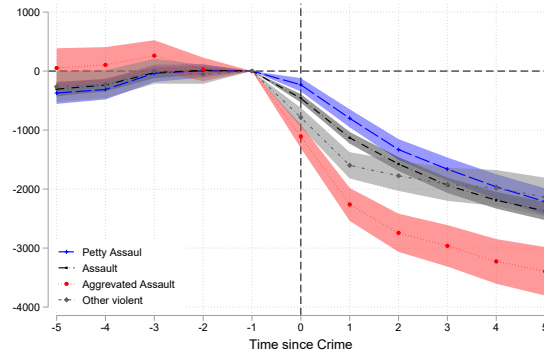
Notes This figure reports estimated impacts using the matched control to identify effects 5 years before and 5 years after the crime. The main effects are depicted in the black dotted line. Estimates are restricted to those who are ever self-employed in the pre-period in the red dashed line and wage earners in the blue dashed line. Earnings consist of total taxable labor market income (the sum of salary, self-employment earnings, and taxable benefits). Standard errors are clustered at the individual level.

Figure F8: Impact of Financial Crimes on Victims, Multiple Different Victimization Events Versus Only Financial Crime Victimization

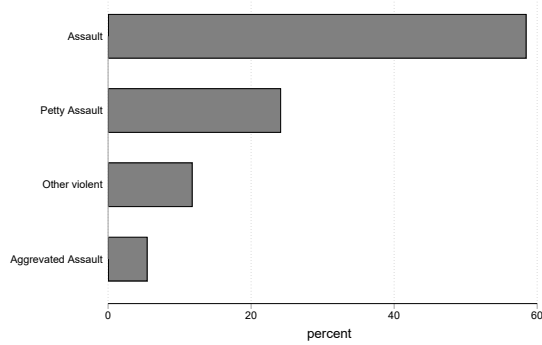


Notes This figure reports estimated impacts using the matched control to identify effects 5 years before and 5 years after the crime. The main effects are depicted in the black dotted line. The blue dashed line depicts estimates from a specification restricting to victims who only experienced financial crime victimization in the victimization year. Estimates for victims who experienced both financial crime victimization and some other crime victimization are depicted in the long-dashed red line. Employment indicates whether the individual was employed in the last week of the year. Earnings consist of total taxable labor market income (the sum of salary, self-employment earnings, and taxable benefits). Standard errors are clustered at the individual level.

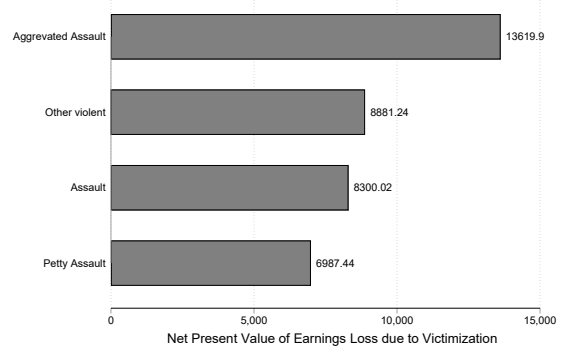
Figure F9: Breakdown of Violent Crimes and Their Costs
 (a) Victimization Earnings Cost by Sub-Category of Violent Crime



(b) Share of Violent Crime Sub-Categories



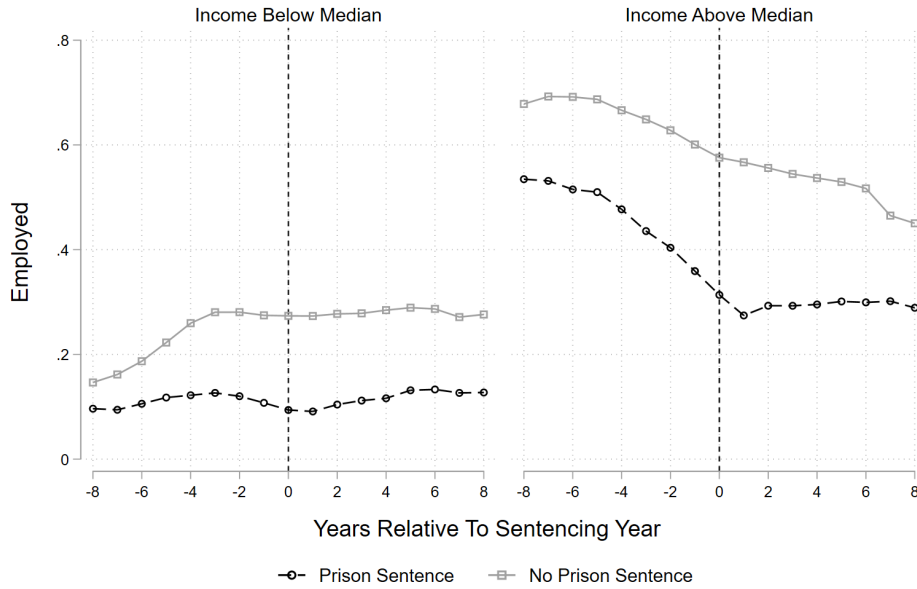
(c) Net Present Value Earnings Cost



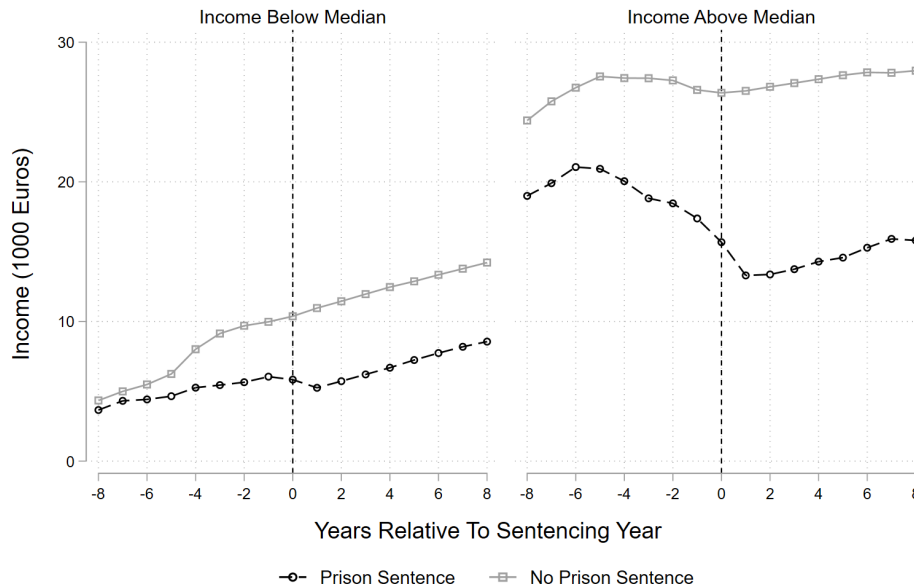
Notes Panel (a) reports the victimization cost event studies separately for each sub-category of violent crime, estimated using the same matched DiD design as our main analysis. Panel (b) reports the share of each violent crime sub-category as a share of the total violent crimes reported to the police during our sample. To calculate the net present value of earnings losses reported in Panel (c), we use the estimates of earning loss in each post-victimization period (0 to 5) and 5% discount rate.

Figure F10: Raw Patterns of Employment and Income Around the Time of Sentencing, Above Versus Below Median Income

(a) Employment

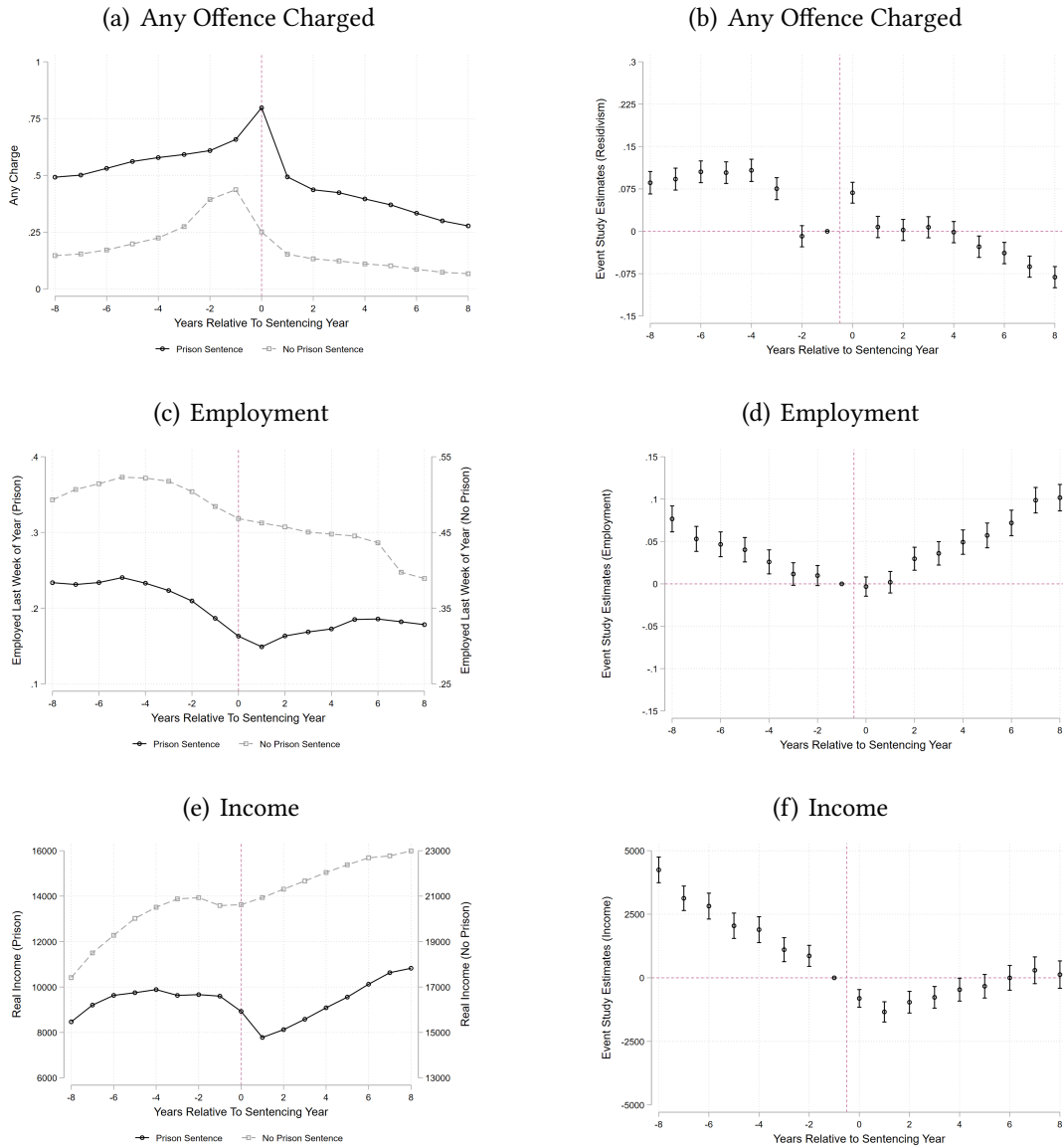


(b) Income



Note: Panel A (B) shows employment (income) of defendants 8 years before and 8 years after sentencing separately for those sent to prison as well as those who commit a financial but are not sent to prison (grey line). On the left-hand side, results are shown for those with below-median income before sentencing and on the right-hand side, results are shown for those with above-median income. Employment and income are measured at the end of the year.

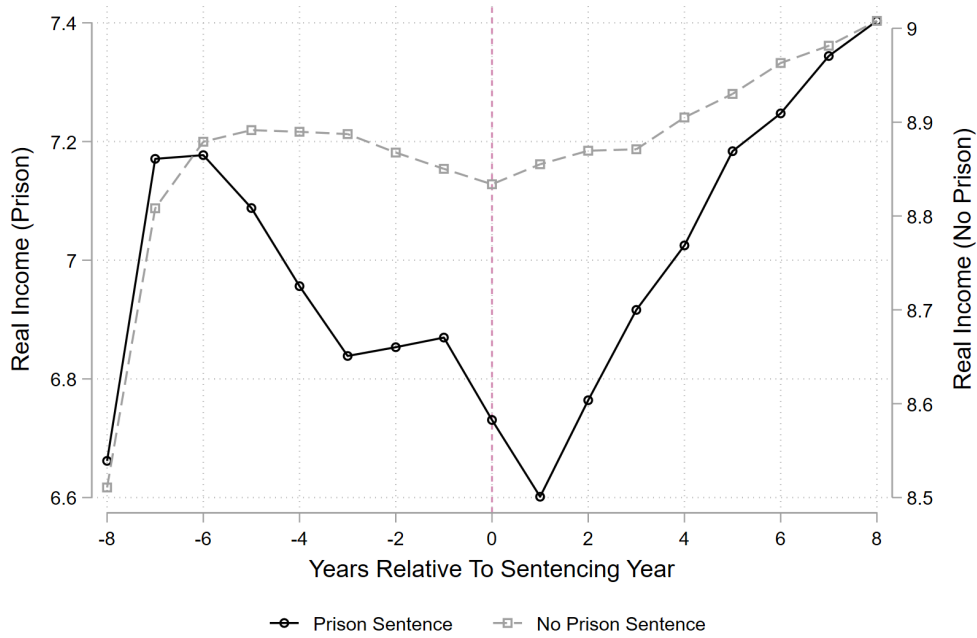
Figure F11: Raw and Event Study Patterns of Criminality, Employment, and Income Around the Time of Sentencing



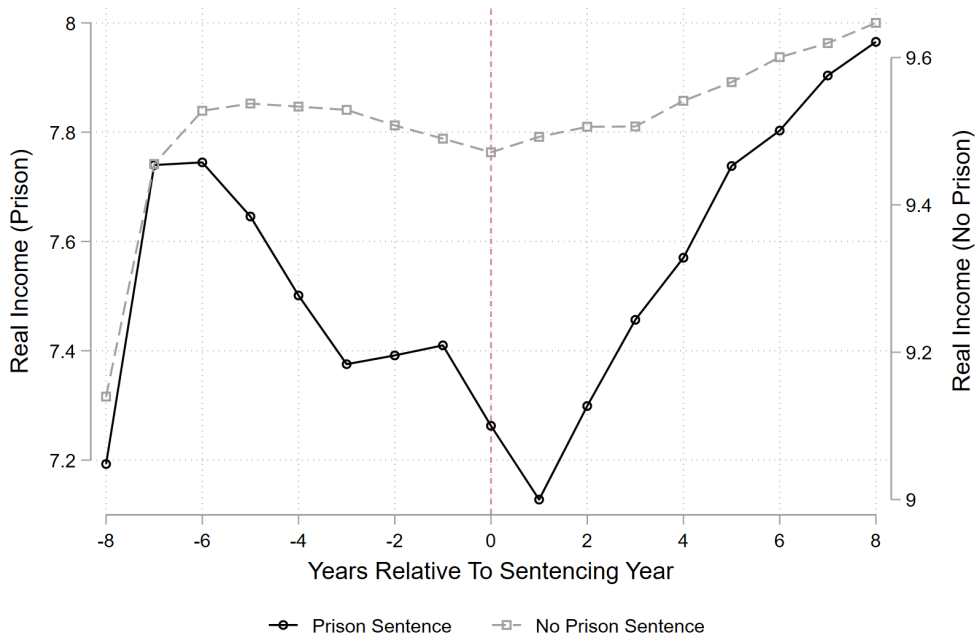
Note: Panel A shows raw dynamics for whether an offense is charged 8 years before and 8 years after sentencing separately for those who are sent to prison (black line) versus those who are not sent to prison (grey line). Panel C (E) shows the employment (income) of defendants 8 years before and 8 years after sentencing separately for those sent to prison as well as those who commit a financial but are not sent to prison (grey line). Employment and income are measured at the end of the year. On the right-hand panels, event study estimates are shown for criminal offenses (Panel B), employment (Panel D), and income (Panel F). Sample construction as defined in Sections 2 and 4.

Figure F12: Log Income with Inverse Hyperbolic Sine Transformation

(a) Log Income

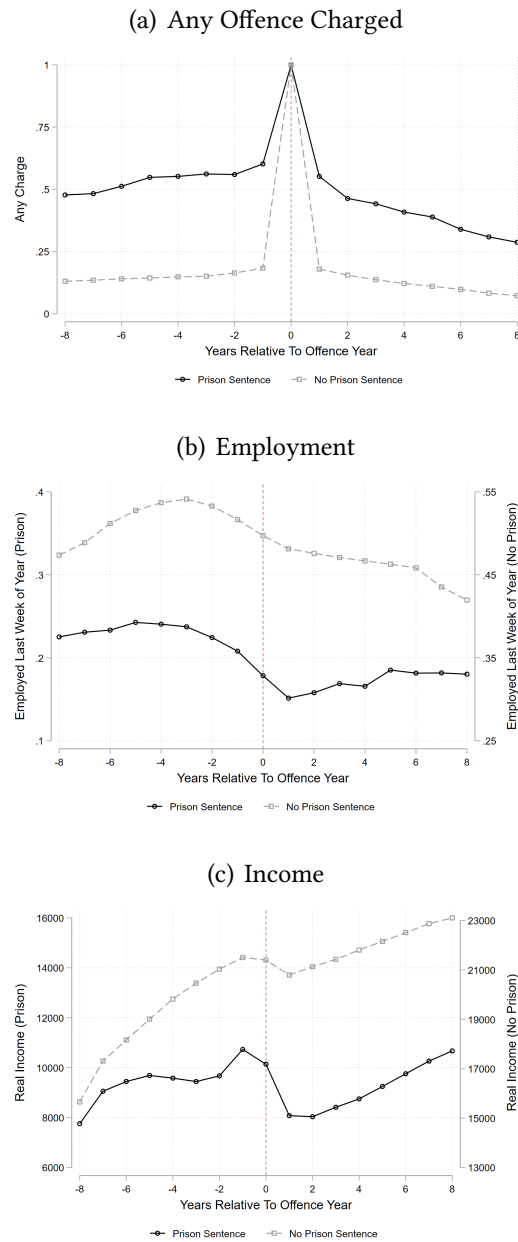


(b) Log Income with Hyperbolic Sine Transformation



Notes: Panel A shows log income dynamics of defendants 8 years before and 8 years after sentencing separately for those who are sent to prison (black line) versus those who are not sent to prison (grey line). Panel B shows the same, but imposes the inverse hyperbolic sine to address the issue of cases of zero income being dropped in Panel A. Income is measured at the end of the year. Sample construction as defined in Sections 2 and 4.

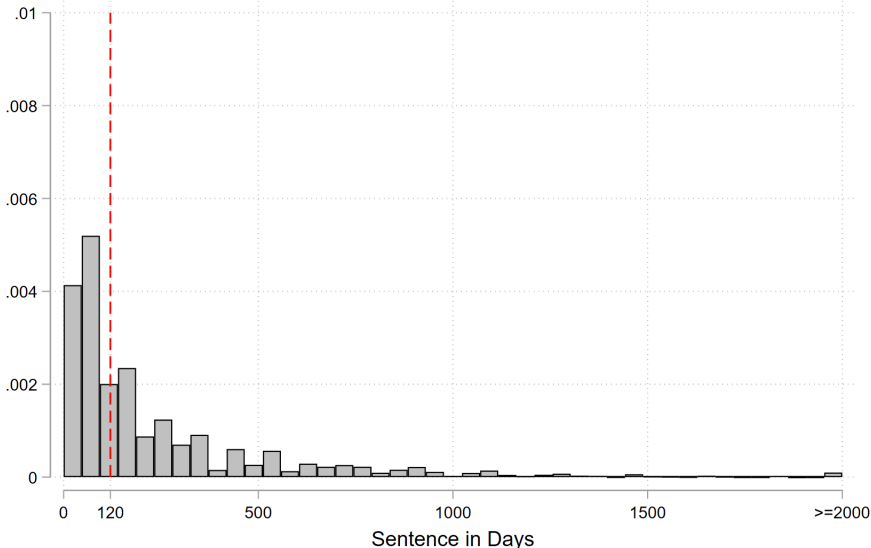
Figure F13: Raw Patterns of Criminality, Employment, and Income Around the Time of Offence



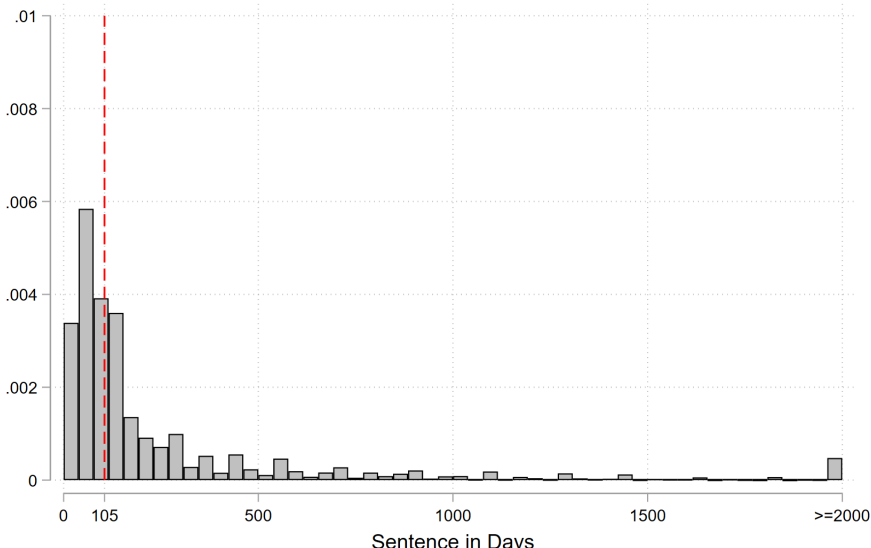
Note: Panel A shows whether defendants are charged with an offence years before and 8 years after the crime was committed (which can be different than the sentencing year as shown in Figure C1) separately for those who are sent to prison versus those who are not sent to prison. Panel B (C) shows employment (income) of defendants 8 years before and 8 years after the crime was committed. Employment and income are measured at the end of the year. Income include zeros for those who are not employed. Sample construction and data as defined in Sections 2.

Figure F14: Distribution of Sentence Length for Financial Crimes versus Other Crimes

(a) Financial Crimes



(b) Other Crimes



Note: Panel A (B) shows histogram of sentence length conditional on being sent to prison for financial crimes (all other crimes). For these histograms we use all court data without imposing the restrictions from our main analysis. Median sentence length shown via the red dotted line.

G Additional Tables

Table G1: Determinants of Prison Sentence Length

	(1)	(2)	(3)
Panel A: No prior prison sentences in the 3 years before sentence			
Offender age	Prison sentence length	Expected time spent in prison	
age < 21	S_i	$S_i \cdot \frac{1}{3}$	
age \geq 21	S_i	$S_i \cdot \frac{1}{2}$	
Panel B: Prior prison sentences in the past 3 before sentence			
Offender age	Prison sentence length	Expected time spent in prison	
age < 21	S_i	$S_i \cdot \frac{1}{2}$	
age \geq 21	S_i	$S_i \cdot \frac{2}{3}$	

Notes: Table illustrates how the expected time spent in prison evolves as a function of age and previous criminal history based on legal standards in Finland.

Table G2: Sample Size After Restrictions

	Cases (1)	Defendants (2)	Judges (3)	Courts (4)
All Cases (age \geq 23)	95314	67797	2862	75
Assigned a Judge	80347	59556	2862	65
Drop training Judges	68376	52458	915	65
Drop Swedish Speaking	66389	50874	911	65
Drop Judges with < 100 Cases	65288	50159	752	65
Drop Courts with < 2 Judges	65285	50158	752	65
Drop if Singleton in Cell	59179	45677	752	64
Drop if Missing Covariate Values	57632	44611	752	64

Notes: The table reports the sample size of cases, defendants, judges, and courts after imposing each restriction specified in each row. In all rows we have already removed traffic cases and juveniles as described in the main text.

Table G3: IV Estimates of Prison on Reoffending (Judges with ≥ 50 Cases)

	1 year after	1-2 years after	1-3 Years after
OLS: No Controls	0.384*** (0.008)	0.437*** (0.007)	0.445*** (0.007)
OLS: Conrols	0.090*** (0.008)	0.095*** (0.007)	0.091*** (0.007)
OLS: Reweighted	0.083*** (0.010)	0.084*** (0.008)	0.076*** (0.007)
IV	-0.129 (0.171)	-0.396** (0.193)	-0.276 (0.193)
Outcome Mean	.248	.337	.39
Outcome Mean if Prison	.591	.728	.789
Complier Mean	.573	.907	.884
CourtXYear FE	Y	Y	Y
N	57930	57930	57930

Notes: This table reports OLS and IV estimates of the impact of prison on the probability of appearing in court for a new crime within the specified time after sentencing, with the estimation sample expanded to include defendants whose judge saw more than 50 case in the sample period. Estimates are obtained by estimating equation (1). In IV estimates the prison indicator is instrumented by the judge stringency IV. All estimates include controls for court-by-year fixed effects. IV estimates include the additional controls included in the OLS: Controls and OLS: Reweighted results. Standard errors clustered two-way at the judge and defendant level appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G4: Age Robustness

	1 year after (1)	1-2 years after (2)	1-3 Years after (3)
OLS: No Controls	0.384*** (0.008)	0.432*** (0.007)	0.438*** (0.006)
OLS: Controls	0.092*** (0.008)	0.093*** (0.007)	0.089*** (0.006)
OLS: Reweighted	0.085*** (0.009)	0.084*** (0.008)	0.075*** (0.007)
IV	-0.004 (0.162)	-0.409** (0.197)	-0.290 (0.196)
Outcome Mean	.261	.353	.407
CourtXYear FE	Y	Y	Y
Observations	61451	61451	61451

Notes: The table reports OLS and IV estimates of the impact of prison on the probability of being charged with a crime within the specified time periods after sentencing, equivalent to Table 5, except here we include defendants 21 and above as opposed to defendants 23 and above. All estimates include controls for court-by-year fixed effects. IV estimates include controls. Standard errors clustered two-way at judge and defendant level appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G5: Sample Means for Defendants With Versus Without Prison Sentences

	(1)	(2)	(3)
Age at Conviction	38 (10)	35 (9)	39 (10)
Share Female	0.249 (0.433)	0.116 (0.321)	0.267 (0.442)
Earned Income	14175 (16373)	5771 (9790)	15257 (16732)
Share Employed	0.424 (0.494)	0.135 (0.341)	0.461 (0.498)
Share Student	0.032 (0.176)	0.036 (0.188)	0.031 (0.174)
Share White Collar Worker	0.090 (0.286)	0.032 (0.178)	0.097 (0.297)
Upper Management	0.052 (0.223)	0.012 (0.110)	0.057 (0.233)
Share Tertiary Degree	0.158 (0.364)	0.051 (0.221)	0.171 (0.377)
Num. of Children	0.544 (1.044)	0.228 (0.696)	0.584 (1.074)
Share with Criminal Charge 2 to 3 Years Prior	0.357 (0.479)	0.830 (0.375)	0.296 (0.456)
Observations	56583	6452	50131

Notes: Table shows descriptive statistics for the full sample of individuals who commit financial crimes (column 1) and those sent to prison (column 2) versus those who commit financial crimes but who are not sent to prison (column 3). All statistics are for the year before sentencing, and those who are not employed are included as zeros in the earnings and wage means. Summary statistics reported for the estimation sample. The sample construction is defined in Sections 2 and 4.

Table G6: Defendant Sample Means By Type of Financial Crime

	Financial Crime Categories			Other Crimes (4)
	Fraud (1)	Business (2)	Other Financial (3)	
Panel A: Labour Market and Demographic Variables				
Age at Conviction	38 (10)	42 (10)	37 (11)	36 (10)
Female	0.274 (0.446)	0.132 (0.339)	0.258 (0.438)	0.130 (0.336)
Earned Income	12160 (13187)	24582 (22696)	12836 (16534)	11346 (12719)
Employed	0.389 (0.488)	0.693 (0.461)	0.345 (0.475)	0.326 (0.469)
Share of Upper Management	0.030 (0.173)	0.140 (0.347)	0.053 (0.224)	0.021 (0.146)
Share Tertiary Degree	0.121 (0.326)	0.332 (0.471)	0.142 (0.349)	0.075 (0.265)
Num. of Children	0.551 (1.059)	0.729 (1.167)	0.412 (0.898)	0.330 (0.829)
Panel B: Court Outcomes				
Prison	0.119 (0.324)	0.064 (0.246)	0.131 (0.337)	0.185 (0.388)
Probation	0.287 (0.453)	0.328 (0.470)	0.129 (0.335)	0.172 (0.377)
Fine	0.461 (0.499)	0.463 (0.499)	0.549 (0.498)	0.535 (0.499)
Sentence in Days	84 (453)	106 (210)	43 (356)	125 (1043)
Not Guilty	0.107 (0.309)	0.132 (0.338)	0.150 (0.357)	0.0687 (0.253)
Charged 2 or 3 Years Ago	0.365 (0.481)	0.168 (0.373)	0.451 (0.498)	0.477 (0.499)
Observations	34308	8394	13881	174528

Notes: The unit of observation is individual-case level. These summary statistics are for the estimation sample. The sample construction is defined in Sections 2 and 4. Income and employment are measured at the end of the year. All variables measured the year before the crime. Column (4) all other reports descriptive statistics for all other non-financial crimes.

Table G7: Firm and Colleague Descriptive Statistics

Panel A: Firm Descriptive Statistics	Defendant Firms		Other Firms
	(1)	(2)	(2)
Average Number of Employees	14		8
Average Income	23,208		27,087
Share Financial	0.01		0.01
Share Manufacturing	0.10		0.09
Share Hospitality	0.08		0.05
Share Retail	0.17		0.18
Share Real Estate	0.15		0.12
Share Construction	0.15		0.09

Panel B: Employee Characteristics	Financial Crime Firms		Other Firms
	Defendants	Colleagues	All Employees
	(1)	(2)	(3)
Average Age	38	39	41
Average Income	24,582	24,566	28,978
Share High School	0.44	0.50	0.47
Share University	0.21	0.25	0.36
Share Dropout	0.36	0.25	0.18

Notes: Summary statistics are for the estimation sample. The sample construction is defined in Sections 2 and 4. Income and employment are measured at the end of the year. All variables measured the year before the crime.

Table G8: Robustness to Only Including Guilty Defendants

	1 year after	1-2 years after	1-3 Years after
OLS: No Controls	0.376*** (0.008)	0.425*** (0.007)	0.432*** (0.007)
OLS: Conrols	0.089*** (0.008)	0.093*** (0.008)	0.092*** (0.007)
OLS: Reweighted	0.085*** (0.010)	0.087*** (0.009)	0.080*** (0.008)
IV	-0.140 (0.180)	-0.439** (0.210)	-0.329 (0.214)
Outcome Mean	.263	.355	.409
Outcome Mean if Prison	.592	.728	.788
Court \times Year FE	Y	Y	Y
Obsevation	49729	49729	49729

Notes: Table reports similar OLS and IV estimates as in Table 5, but the specification includes only those who are found guilty. All estimates include controls for court-by-year fixed effects. IV estimates include additional controls, as with the OLS: Controls and OLS: Reweighted results. Standard errors clustered two-way at the judge and defendant level appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G9: Monotonicity of the Instrument

sub-sample:	Baseline instrument	Reverse-sample instrument
	P(Incarcerated) (1)	P(Incarcerated) (2)
Main Estimation Sample		
Estimate	0.457*** (0.062)	0.366*** (0.055)
Observations	56582	56582
Over 30 years old		
Estimate	0.479*** (0.066)	0.127*** (0.038)
Observations	44688	44688
Under 30 years old		
Estimate	0.394*** (0.134)	0.418*** (0.123)
Observations	11855	11855
Any post-compulsory education		
Estimate	0.337*** (0.067)	0.180*** (0.047)
Observations	29738	29738
No post-compulsory education		
Estimate	0.594*** (0.106)	0.431*** (0.105)
Observations	26816	26816
Married		
Estimate	0.373*** (0.096)	0.307*** (0.084)
Observations	18488	18488
Not married		
Estimate	0.484*** (0.073)	0.180*** (0.063)
Observations	38068	38068
Previously employed		
Estimate	0.174*** (0.058)	0.114*** (0.041)
Observations	23852	23852
Previously not employed		
Estimate	0.668*** (0.093)	0.338** (0.150)
Observations	32701	32701

Notes: Column 1 estimates the first-stage equation 2 separately for different subgroups. Dependent variable is an indicator of prison. The independent variable is the prison stringency measure from the main analysis. Column 2 estimates the first-stage equation 2 in different subsamples, but constructs the stringency measure using cases that do not belong in that specific subgroup. Standard errors are two-way clustered at the judge and defendant level and appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G10: Strict Monotonicity Test Results

	5 knots	10 knots	15 knots	20 knots
Test statistic	1,026	866	743	633
P-value	(0.000)	(0.000)	(0.008)	(0.641)

Notes: Table reports results from the Frandsen *et al.* (2023) test for strict monotonicity.

Table G11: Disaggregate Impact of Prison on Future Charges Post Sentencing

	1 year after (1)	1-2 years after (2)	1-3 Years after (3)
OLS: No Controls	4.769*** (0.203)	8.812*** (0.375)	12.802*** (0.553)
OLS: Controls	1.473*** (0.289)	2.704*** (0.341)	4.009*** (0.441)
OLS: Reweighted	1.626*** (0.361)	3.085*** (0.416)	4.525*** (0.542)
IV	-2.350 (2.711)	-7.869 (5.077)	-13.753** (6.647)
Outcome Mean	1.732	3.153	4.443
Outcome Mean if Prison	5.96	10.957	15.774
Complier Mean	6.3	15.141	23.187
CourtXYear FE	Y	Y	Y
Observations	56582	56582	56582

Notes: Table reports OLS and IV estimates of the impact of prison on the number of criminal charges within the specified time after sentencing. All estimates include controls for court-by-year fixed effects. IV estimates include additional controls, as with the OLS: Controls and OLS: Reweighted results. Standard errors clustered two-way at the judge and defendant level appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G12: Single Judge Panels Vs. Multiple Judge Panels

	1 year after	1-2 years after	1-3 Years after
Panel A: Baseline Specification (All Judge Panels)			
OLS: No Controls	0.385*** (0.008)	0.436*** (0.007)	0.444*** (0.007)
OLS: Conrols	0.091*** (0.008)	0.095*** (0.007)	0.091*** (0.007)
OLS: Reweighted	0.087*** (0.010)	0.087*** (0.008)	0.079*** (0.008)
IV	-0.168 (0.180)	-0.522** (0.216)	-0.429** (0.217)
Observations	56582	56582	56582
Panel B: Single Professional Judge Panels			
OLS: No Controls	0.437*** (0.014)	0.484*** (0.012)	0.503*** (0.011)
OLS: Conrols	0.123*** (0.016)	0.102*** (0.014)	0.106*** (0.013)
OLS: Reweighted	0.105*** (0.016)	0.085*** (0.014)	0.088*** (0.013)
IV	-0.324 (0.376)	-0.480 (0.421)	-0.349 (0.416)
Observations	18479	18479	18479
Panel C: Professional and Lay Judge Panels			
OLS: No Controls	0.369*** (0.010)	0.424*** (0.009)	0.428*** (0.008)
OLS: Conrols	0.084*** (0.009)	0.099*** (0.008)	0.093*** (0.008)
OLS: Reweighted	0.081*** (0.011)	0.093*** (0.010)	0.080*** (0.009)
IV	-0.053 (0.215)	-0.507** (0.235)	-0.389* (0.235)
Controls	Y	Y	Y
Court × Year FE	Y	Y	Y
Observations	38046	38046	38046

Notes: Table reports OLS and IV estimates of the impact of prison on the probability of appearing in court for a new crime within the specified time after sentencing. All estimates include controls for court-by-year fixed effects. IV estimates include additional controls, as with the OLS: Controls and OLS: Reweighted results. Panel A reports impacts using all cases, while Panel B restricts to cases that are decided by a single professional judge and Panel C restricts to cases decided by a professional judge and lay judges (see Appendix B for more details). Standard errors clustered two-way at the judge and defendant level appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G13: First Stage Complier Analysis: Defendant Characteristics

	All (1)	Charge (n-1) (2)	No Degree (3)	Married (4)
Judge IV	0.565*** (0.084)	1.095*** (0.200)	0.694*** (0.140)	0.416*** (0.122)
Relative complier		1.938	1.229	0.736
F-Statistic	44.982	30.023	24.407	11.675
Observations	56582	15760	26816	18488

Notes: Table shows first stage estimates for the full sample (column 1) and then explores the first stage for subsamples for types of crimes, including estimates of the relative complier share to better understand who is among the compliers. *p<0.1, **p<0.05, ***p<0.01

Table G14: First Stage for Subgroups: Types of Crimes

	All (1)	Fraud (2)	Business (3)	Forgery (4)	Laundering (5)
Judge IV	0.565*** (0.084)	0.457*** (0.101)	0.296 (0.186)	1.016*** (0.310)	1.005*** (0.293)
Relative complier share		0.808	0.523	1.798	1.780
F-Statistic	44.982	20.258	2.518	10.726	11.756
Observations	56582	34307	8392	5190	3946

Notes: Table shows first stage estimates for the full sample (column 1) and then explores the first stage for subsamples for types of crimes, including estimates of the relative complier share to better understand who is among the compliers. *p<0.1, **p<0.05, ***p<0.01

Table G15: Disaggregate Impact of Prison on Labor Market Outcomes Post Sentencing

	1st year after (1)	2nd year after (2)	3rd Year after (3)	4th year after (4)	5th year after (5)
Panel A: Employment					
OLS: No Controls	-0.302*** (0.006)	-0.281*** (0.007)	-0.274*** (0.007)	-0.262*** (0.007)	-0.252*** (0.007)
OLS: Controls	-0.052*** (0.006)	-0.036*** (0.006)	-0.040*** (0.006)	-0.029*** (0.006)	-0.028*** (0.007)
OLS: Reweighted	-0.029*** (0.006)	-0.019*** (0.006)	-0.029*** (0.006)	-0.018*** (0.007)	-0.016** (0.007)
IV	0.104 (0.165)	-0.089 (0.178)	0.089 (0.180)	0.032 (0.197)	0.126 (0.204)
Panel B: Income					
OLS: No Controls	-10616.918*** (214.508)	-10640.523*** (235.805)	-10676.364*** (247.572)	-10862.515*** (246.602)	-10855.065*** (259.737)
OLS: Controls	-2328.787*** (206.994)	-2192.730*** (220.930)	-2030.636*** (231.600)	-1992.761*** (231.590)	-1871.059*** (230.710)
OLS: Reweighted	-1275.481*** (148.597)	-1090.005*** (171.137)	-1051.809*** (195.553)	-1021.059*** (176.928)	-797.659*** (185.251)
IV	-4325.748 (5777.284)	2786.095 (6152.252)	-2890.329 (6401.521)	-2811.982 (7085.444)	-8981.969 (7389.590)
Earnings Mean	15177.642	15877.711	16581.585	17234.358	17889.358
Employment Mean	.397	.392	.384	.379	.374
CourtXYear FE	Y	Y	Y	Y	Y
Observations	56582	56582	56582	56582	56582

Notes: The table reports OLS and IV estimates of the impact of prison on on the probability of employment (Panel A) and the impact on income (Panel B) within specified time periods after sentencing. All estimates include controls for court-by-year fixed effects. IV estimates include controls. Standard errors clustered two-way at judge and defendant level appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G16: Cumulative 3-Year Impact of Prison on Reoffending, Employment and Income Post Sentencing

	Charged (1)	Employed (2)	Income (3)
OLS	0.444*** (0.007)	-0.305*** (0.009)	-31933.805*** (661.557)
OLS: Controls	0.091*** (0.007)	-0.038*** (0.007)	-6552.153*** (598.480)
OLS: Reweighted/Controls	0.079*** (0.008)	-0.025*** (0.008)	-3417.294*** (422.755)
IV	-0.429** (0.217)	0.122 (0.176)	-4429.982 (16802.779)
Outcome Mean	.391	.509	47636
Court × Year FE	Y	Y	Y
Observations	56582	56582	56582

Notes: The table reports OLS and IV estimates of the impact of prison on the probability of being charged with a crime, employment, and income in the three years after sentencing. IV estimates include controls. Standard errors clustered two-way at judge and defendant level appear in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table G17: Disaggregate Impact of Prison on Reoffending Post Sentencing by Income

	1 year after (1)	1-2 years after (2)	1-3 Years after (3)
Below-Median Income			
OLS: No Controls	0.329*** (0.010)	0.366*** (0.009)	0.363*** (0.008)
OLS: Conrols	0.081*** (0.010)	0.087*** (0.009)	0.080*** (0.009)
OLS: Reweighted	0.077*** (0.011)	0.081*** (0.010)	0.068*** (0.009)
IV	-0.206 (0.182)	-0.516** (0.218)	-0.482** (0.218)
Outcome Mean	.353	.464	.523
Outcome Mean if Prison	.626	.766	.824
CourtXYear FE	Y	Y	Y
N	24914	24914	24914
Above-Median Income			
OLS: No Controls	0.371*** (0.015)	0.424*** (0.015)	0.442*** (0.014)
OLS: Conrols	0.100*** (0.014)	0.100*** (0.013)	0.102*** (0.013)
OLS: Reweighted	0.104*** (0.018)	0.096*** (0.016)	0.092*** (0.014)
IV	-0.180 (0.378)	-0.638 (0.481)	-0.442 (0.478)
Outcome Mean	0.166	0.238	0.286
Outcome Mean if Prison	0.519	0.643	0.710
CourtXYear FE	Y	Y	Y
Observations	31643	31643	31643

Notes: Table reports OLS and IV estimates of the impact of prison on the probability of appearing in court for a new crime within the specified time after sentencing. All estimates include controls for court-by-year fixed effects. IV estimates include additional controls, as with the OLS: Controls and OLS: Reweighted results. Standard errors clustered two-way at the judge and defendant level appear in parentheses. Panel A reports results for those with below-median income while Panel B reports results for those with above-median income. *p<0.1, **p<0.05, ***p<0.01

Table G18: First Stage, Subsamples by Income

Dependent Variable: P(Prison sentence)			
	All (1)	Below-Median (2)	Above-Median (3)
Judge Stringency	0.565*** (0.084)	0.762*** (0.128)	0.324*** (0.076)
Court \times Year FEs	Y	Y	Y
F-Statistic	44.982	35.471	18.383
Controls	Y	Y	Y
Observations	56582	28063	28490

Notes: Table shows first stage estimates for the full sample (column 1) those with below-median income (column 2) and those with above-median income (column 3). All columns include court-by-year fixed effects. Standard errors appear in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table G19: Balance Check for Fraud Only

	Prison (1)	Judge Strictness (2)
Age	0.0000170 (0.000169)	-0.0000159 (0.0000122)
Female	-0.0181*** (0.00344)	0.000303 (0.000246)
Children	-0.00491*** (0.00129)	-0.0000272 (0.0000980)
Married	0.00618* (0.00341)	-0.000145 (0.000265)
Secondary Degree	-0.0126*** (0.00355)	-0.000199 (0.000244)
Post Secondary Degree	-0.00239 (0.00516)	-0.000424 (0.000350)
Employed	-0.0212*** (0.00334)	-0.000773*** (0.000265)
Income	-0.000000328*** (9.23e-08)	8.17e-09 (7.56e-09)
Native Born	0.0276*** (0.00428)	-0.000296 (0.000477)
Prison at time t-1	0.323*** (0.0119)	-0.000264 (0.000476)
Prison at time t-2,t-3	0.309*** (0.0115)	0.000221 (0.000464)
Charge at time t-2,t-3	0.0593*** (0.00412)	0.000477 (0.000323)
P-Value	0.000	0.066
F-Statistic	387.942	1.686
Observations	34307	34307

Notes: This table reports estimates from regressing a prison sentence indicator (column 1) and the judge stringency instrument (column 2) on the defendants' characteristics for defendants who commit fraud. These characteristics are highly predictive of a prison sentence, but not of judge stringency. All estimates include controls for court-by-year fixed effects. Standard errors clustered two-way at judge and defendant level are in parentheses. The reported F-statistic tests the joint hypothesis that the coefficients on all included variables are zero. *p<0.1, **p<0.05, ***p<0.01

Table G20: Balance Check for Business Offenses Only

	Prison (1)	Judge Strictness (2)
Age	0.000279 (0.000293)	-0.00000986 (0.0000273)
Female	-0.0215*** (0.00547)	0.000347 (0.000643)
Children	-0.000980 (0.00205)	0.0000173 (0.000196)
Married	-0.00402 (0.00592)	-0.000113 (0.000506)
Secondary Degree	-0.00795 (0.00785)	-0.000255 (0.000535)
Post Secondary Degree	-0.0211*** (0.00803)	-0.000516 (0.000626)
Employed	-0.0335*** (0.00900)	0.000119 (0.000538)
Income	-5.42e-08 (0.000000147)	1.48e-08 (9.65e-09)
Native Born	0.0273* (0.0165)	0.000529 (0.00127)
Prison at time t-1	0.351*** (0.0486)	-0.000465 (0.00200)
Prison at time t-2,t-3	0.353*** (0.0369)	0.000674 (0.00156)
Charge at time t-2,t-3	0.0504*** (0.00923)	-0.000831 (0.000685)
P-Value	0.000	0.924
F-Statistic	36.971	0.485
Observations	8392	8392

Notes: This table reports estimates from regressing a prison sentence indicator (column 1) and the judge stringency instrument (column 2) on the defendants' characteristics for defendants who commit business offenses. These characteristics are highly predictive of a prison sentence, but not of judge stringency. All estimates include controls for court-by-year fixed effects. Standard errors clustered two-way at judge and defendant level are in parentheses. The reported F-statistic tests the joint hypothesis that the coefficients on all included variables are zero. *p<0.1, **p<0.05, ***p<0.01

Table G21: Balance Check for All Cases Excluding Fraud and Business Offenses

	Prison (1)	Judge Strictness (2)
Age	-0.000491** (0.000201)	-0.00000393 (0.0000189)
Female	-0.0256*** (0.00453)	0.000206 (0.000453)
Children	-0.00893*** (0.00203)	0.0000116 (0.000200)
Married	0.00428 (0.00577)	-0.000785* (0.000423)
Secondary Degree	0.000346 (0.00573)	0.000297 (0.000396)
Post Secondary Degree	-0.00630 (0.00560)	-0.00141** (0.000656)
Employed	-0.0133** (0.00583)	0.000639 (0.000395)
Income	-0.000000334*** (0.000000123)	5.99e-09 (1.30e-08)
Native Born	0.0116 (0.00911)	0.000982 (0.000855)
Prison at time t-1	0.308*** (0.0160)	-0.0000790 (0.000644)
Prison at time t-2,t-3	0.259*** (0.0146)	0.000252 (0.000658)
Charge at time t-2,t-3	0.0495*** (0.00556)	0.000661 (0.000421)
P-Value	0.000	0.099
F-Statistic	225.117	1.560
Observations	13878	13878

Notes: This table reports estimates from regressing a prison sentence indicator (column 1) and the judge stringency instrument (column 2) on the defendants' characteristics for defendants who commit financial crimes that are not fraud or business offenses. These characteristics are highly predictive of a prison sentence, but not of judge stringency. All estimates include controls for court-by-year fixed effects. Standard errors clustered two-way at judge and defendant level are in parentheses. The reported F-statistic tests the joint hypothesis that the coefficients on all included variables are zero. *p<0.1, **p<0.05, ***p<0.01

Table G22: Impact of Prison on Reoffending Post Sentencing

	1 year after (1)	1-2 years after (2)	1-3 Years after (3)
Panel A: Fraud			
OLS: No Controls	0.398*** (0.010)	0.446*** (0.009)	0.449*** (0.008)
OLS: Controls	0.113*** (0.011)	0.114*** (0.010)	0.107*** (0.009)
OLS: Reweighted	0.106*** (0.013)	0.102*** (0.011)	0.091*** (0.010)
IV	-0.129 (0.321)	-0.666* (0.395)	-0.558 (0.382)
Outcome Mean	0.252	0.343	0.399
Outcome Mean If Prison	0.606	0.741	0.800
Observations	34307	34307	34307
Panel B: Business Offense			
OLS: No Controls	0.193*** (0.022)	0.258*** (0.023)	0.291*** (0.024)
OLS: Controls	0.048** (0.020)	0.069*** (0.022)	0.082*** (0.023)
OLS: Reweighted	0.003 (0.031)	0.023 (0.032)	0.018 (0.032)
IV	-0.884 (0.698)	-1.288 (0.868)	-0.923 (0.756)
Outcome Mean	0.094	0.152	0.191
Outcome Mean if Prison	0.282	0.410	0.480
Observations	8,392	8,392	8,392
Panel C: Other Financial			
OLS: No Controls	0.359*** (0.013)	0.400*** (0.011)	0.409*** (0.011)
OLS: Controls	0.067*** (0.015)	0.071*** (0.013)	0.069*** (0.012)
OLS: Reweighted	0.055*** (0.016)	0.058*** (0.013)	0.055*** (0.012)
IV	-0.032 (0.219)	-0.132 (0.238)	-0.079 (0.228)
Outcome Mean	0.332	0.435	0.490
Outcome Mean If Prison	0.654	0.792	0.854
Observations	13878	13878	13878

Notes: Table reports OLS and IV estimates of the impact of prison on the probability of appearing in court for a new crime within the specified time after sentencing, for the financial crime sub-categories as indicated by panel labels. All estimates include court-by-year fixed effects. IV estimates include the same additional controls as OLS: Controls and OLS: Reweighted. Standard errors clustered two-way at the judge and defendant level appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G23: First Stage By Type of Financial Crime

	Fraud (1)	Business (2)	Other (3)
Judge IV	0.457*** (0.101)	0.296 (0.186)	0.952*** (0.169)
F-Statistic	20.258	2.518	31.595
Observations	34307	8392	13878

Notes: Table shows first stage estimates separately for each financial crime sub-category. All specifications include court-by-year fixed effects. Standard errors appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G24: Impact of Prison on Recidivism Controlling for Multidimensional Sentencing

	Baseline		Guilty Stringency		Probation/Fine Stringency	
	First Stage (1)	IV (2)	First Stage (3)	IV (4)	First Stage (5)	IV (6)
IV: Incarcerated	0.565*** (0.084)	-0.429** (0.217)	0.557*** (0.087)	-0.474** (0.231)	0.512*** (0.093)	-0.423* (0.229)
<i>F-stat.</i>	44.982		273.59		30.456	
Observations	56582	56582	56582	56582	56582	56582

Notes: Table shows robustness to adding a control for the judge's guilty stringency measures (Panel A) as well as instrumenting guilty and prison separately in the same specification (Panel B). First stage estimates are shown in the left hand side while the impacts on recidivism of defendants is shown on the right hand side. *p<0.1, **p<0.05, ***p<0.01

Table G25: IV Model with Multiple Punishment Margins

Panel A: First Stage					
	Baseline	Guilty		Fine/Probation	
<i>Outcome:</i>	<i>P(Prison)</i> (1)	<i>P(Prison)</i> (2)	<i>P(Guilty)</i> (3)	<i>P(Prison)</i> (4)	<i>P(Fine/probation)</i> (5)
Incarceration Stringency	0.565 (0.084)	0.557 (0.087)	-0.032 (0.090)	0.554 (0.096)	0.584 (0.125)
Guilty Stringency		0.035 (0.075)	1.470 (0.091)		
Fine or Probation Stringency				-0.014 (0.060)	1.154 (0.082)
Observations	56582	56582	56582	56582	56582
Panel B: IV Estimates					
	Baseline	Guilty	Probation/Fine		
<i>Outcome:</i>	<i>Any charge 3 years after</i> (1)	<i>Any charge 3 years after</i> (2)	<i>Any charge 3 years after</i> (3)		
IV: Incarceration	-0.429 (0.217)	-0.466 (0.231)	-0.407 (0.214)		
IV: Guilty		0.062 (0.074)			
IV: Fine/Probation			0.058 (0.068)		
	56582	56582	56582		

Notes: Table reports first stage and IV estimates. All the specifications control for court-by-year fixed effects. Column 1 shows the baseline first stage and IV estimates reported in the main body of the paper. Columns 3 and 4 show the results from an analysis with multiple treatments and instruments. Standard errors clustered two-way at the judge and defendant level appear in parentheses.

Table G26: Balance Check for Colleagues

	Prison (1)	Judge Strictness (2)
Age	0.0000655 (0.000132)	-0.00000581 (0.0000127)
Post Secondary Degree	0.000649 (0.00266)	0.0000809 (0.000314)
Married	-0.000702 (0.00169)	-0.0000627 (0.000152)
Female	-0.0102*** (0.00296)	-0.0000219 (0.000378)
Native Born	0.00614 (0.00479)	0.0000492 (0.000643)
Income	-7.92e-08 (0.000000189)	2.29e-08* (1.34e-08)
Children	0.000361 (0.000797)	0.0000473 (0.0000719)
Charge at time t-1	0.00942 (0.00620)	-0.00147*** (0.000531)
Charge at time t-2,t-3	0.0165*** (0.00462)	0.000139 (0.000415)
Prison at time t-1	0.0391 (0.0403)	-0.00103 (0.00237)
Prison at time t-2,t-3	0.0538* (0.0300)	-0.00213 (0.00165)
P-Value	0.000	0.203
F-Statistic	3.511	1.331
Observations	112871	100253

Notes: This table reports estimates from regressing a prison sentence indicator (column 1) and the judge stringency instrument (column 2) on the colleagues' characteristics. These characteristics are highly predictive of a prison sentence, but not of judge stringency. All estimates include controls for court-by-year fixed effects. Standard errors clustered two-way at judge and defendant level are in parentheses. The reported F-statistic tests the joint hypothesis that the coefficients on all included variables are zero. *p<0.1, **p<0.05, ***p<0.01

Table G27: Balance Check for Colleagues for Fraud Only

	Prison (1)	Judge Strictness (2)
Age	-0.000119 (0.000184)	-0.0000136 (0.0000169)
Post Secondary Degree	0.00207 (0.00373)	0.000842** (0.000392)
Married	0.00134 (0.00243)	-0.0000636 (0.000192)
Female	-0.0121*** (0.00424)	-0.000678 (0.000504)
Native Born	0.00598 (0.00617)	0.000665 (0.000689)
Income	0.000000335 (0.000000316)	3.59e-08** (1.79e-08)
Children	-0.00125 (0.00114)	0.000175* (0.0000928)
Charge at time t-1	0.0140* (0.00795)	-0.00188*** (0.000621)
Charge at time t-2,t-3	0.0129** (0.00580)	-0.000281 (0.000452)
Prison at time t-1	0.0228 (0.0523)	-0.00401 (0.00271)
Prison at time t-2,t-3	0.0616 (0.0398)	-0.000811 (0.00228)
P-Value	0.008	0.000
F-Statistic	2.331	3.116
Observations	59313	55359

Notes: This table reports estimates from regressing a prison sentence indicator (column 1) and the judge stringency instrument (column 2) on the colleagues' characteristics for colleagues of defendants who commit fraud only. These characteristics are highly predictive of a prison sentence, but not of judge stringency. All estimates include controls for court-by-year fixed effects. Standard errors clustered two-way at judge and defendant level are in parentheses. The reported F-statistic tests the joint hypothesis that the coefficients on all included variables are zero. *p<0.1, **p<0.05, ***p<0.01

Table G28: Balance Check for Colleagues for Business Offenses Only

	Prison (1)	Judge Strictness (2)
Age	0.000231 (0.000185)	-0.00000107 (0.0000232)
Post Secondary Degree	0.00924* (0.00503)	-0.000432 (0.000718)
Married	0.00144 (0.00295)	0.000525 (0.000329)
Female	0.000970 (0.00606)	0.00149** (0.000713)
Native Born	0.00608 (0.0121)	-0.00177 (0.00191)
Income	-0.000000383 (0.000000293)	-9.38e-09 (2.65e-08)
Children	0.00160 (0.00135)	-0.000147 (0.000163)
Charge at time t-1	-0.00245 (0.0132)	-0.00106 (0.000807)
Charge at time t-2,t-3	0.0147* (0.00882)	0.00125* (0.000679)
Prison at time t-1	-0.0577 (0.0427)	0.00258 (0.00433)
Prison at time t-2, t-3	0.0169 (0.0479)	0.000317 (0.00285)
P-Value	0.572	0.123
F-Statistic	0.868	1.514
Observations	23497	21238

Notes: This table reports estimates from regressing a prison sentence indicator (column 1) and the judge stringency instrument (column 2) on the colleagues' characteristics for colleagues of defendants who commit business offenses only. These characteristics are highly predictive of a prison sentence, but not of judge stringency. All estimates include controls for court-by-year fixed effects. Standard errors clustered two-way at judge and defendant level are in parentheses. The reported F-statistic tests the joint hypothesis that the coefficients on all included variables are zero. *p<0.1, **p<0.05, ***p<0.01

Table G29: Balance Check for Colleagues for All Cases Excluding Fraud and Business Offenses

	Prison (1)	Judge Strictness (2)
Age	0.000382* (0.000205)	-0.0000188 (0.0000229)
Post Secondary Degree	-0.00502 (0.00359)	-0.000559 (0.000509)
Married	-0.00589*** (0.00223)	-0.000482* (0.000268)
Female	-0.0120*** (0.00437)	-0.0000139 (0.000596)
Native Born	0.00323 (0.00746)	-0.000832 (0.00164)
Income	-0.000000359* (0.000000200)	1.77e-08 (2.11e-08)
Children	0.00167* (0.000913)	-0.000146 (0.000148)
Charge at time t-1	0.000805 (0.00953)	-0.000273 (0.000928)
Charge at time t-2, t-3	0.0123* (0.00746)	-0.000201 (0.000696)
Prison at time t-1	0.0614 (0.0619)	-0.00315 (0.00414)
Prison at time t-2, t-3	0.111* (0.0577)	-0.00377 (0.00293)
P-Value	0.006	0.435
F-Statistic	2.417	1.011
Observations	30026	23619

Notes: This table reports estimates from regressing a prison sentence indicator (column 1) and the judge stringency instrument (column 2) on the colleagues' characteristics for colleagues of defendants who commit other financial crimes only. These characteristics are highly predictive of a prison sentence, but not of judge stringency. All estimates include controls for court-by-year fixed effects. Standard errors clustered two-way at judge and defendant level are in parentheses. The reported F-statistic tests the joint hypothesis that the coefficients on all included variables are zero. *p<0.1, **p<0.05, ***p<0.01

Table G30: Spillover Impact of Prison on Coworkers of Financial Criminals, Main and Collapsed Estimates

	Colleague Financial Crime Within:		
	1 Year (1)	1-2 Years (2)	1-3 Years (3)
Panel A: Main Fraud Spillovers			
OLS with Controls	0.006 (0.006)	0.006 (0.007)	0.005 (0.007)
IV Estimate	-0.190** (0.085)	-0.228** (0.106)	-0.272** (0.120)
Observations	55,359	55,359	55,359
Panel B: Collapsed Fraud Spillovers			
OLS with Controls	0.031** (0.013)	0.035** (0.014)	0.035** (0.014)
IV Estimate	-0.148 (0.201)	-0.237 (0.251)	-0.275 (0.261)
Observations	5648	5648	5648
Panel C: Collapsed Fraud Spillovers Reweighted			
OLS with Controls	0.031** (0.013)	0.035** (0.014)	0.035** (0.014)
IV Estimate	-0.164** (0.082)	-0.219** (0.102)	-0.301** (0.128)
Observations	5648	5648	5648

Notes: Data restricted to defendants who are employed in plants with 50 or fewer employees. Standard errors in parentheses clustered at the defendant-judge level to account for the level of treatment. Panel A reports our main estimates, while Panels B and C collapse to mean colleague recidivism for each defendant, meaning each defendant enters the estimation only once. Panel B weights each defendant equally. Panel C weights each defendant according to the number of exposed colleagues. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table G31: Impact of Financial Crime on Victims

Time (1)	Earnings (2)	Employed (3)
-5	-198.772 (72.298)	-0.005 (0.002)
-4	-120.950 (65.852)	-0.004 (0.002)
-3	-7.254 (57.363)	0.000 (0.002)
-2	-36.842 (43.016)	0.000 (0.002)
-1	0.000 (0.000)	0.000 (0.000)
0	-389.643 (44.140)	-0.012 (0.002)
1	-924.551 (59.727)	-0.022 (0.002)
2	-1,174.885 (69.179)	-0.029 (0.002)
3	-1,394.030 (76.461)	-0.033 (0.002)
4	-1,426.004 (83.378)	-0.033 (0.002)
5	-1,425.000 (89.678)	-0.031 (0.002)
Observations	2,036,844	2,036,844
Pre-Mean	21,520	0.693

Notes: Table reports the event study estimates from Figure 5, showing the impact of victimization on employment and earnings. Employment indicates whether the individual was employed in the last week of the year. Earnings consist of total taxable labor market income (the sum of salary, wages, and self-employment earnings). Standard errors are clustered at the individual level. Estimates are obtained using equation 8. Sample constructed as explained in the Section 7. *p<0.1, **p<0.05, ***p<0.01

Table G32: First Stage for Other Crime Types

Dependent Variable: P(Prison sentence)		
	Property (1)	Drug (2)
Judge Stringency	0.943*** (0.122)	0.922*** (0.185)
Outcome Mean	0.356	0.216
Court \times Year FEs	Y	Y
F-Statistic	835	169
Controls	Y	Y
Observations	37,199	22,443

Notes: Table shows first-stage estimates for property and drug crime defendants. All estimates include court-by-year fixed effects. Standard errors appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G33: Monotonicity of the Instrument: Children

sub-sample:	Baseline instrument	Reverse-sample instrument
	P(Incarcerated) (1)	P(Incarcerated) (2)
Main Estimation Sample		
Estimate	0.457*** (0.062)	0.366*** (0.055)
Observations	56582	56582
Household with Children		
Estimate	0.380*** (0.075)	0.303*** (0.063)
Observations	21009	21009
Household without Children		
Estimate	0.510*** (0.081)	0.251*** (0.073)
Observations	35543	35543

Notes: Column 1 estimates first-stage equation 2 separately for different subgroups. Dependent variable is an indicator of prison. The independent variable is the prison stringency measure used in the main analysis. Column 2 estimates first-stage equation 2 in different subsamples, but constructs the stringency measure using cases that do not belong in that specific subgroup. Standard errors are two-way clustered at the judge and defendant level and appear in parentheses. *p<0.1, **p<0.05, ***p<0.01

Table G34: Judge Stringency, Prison Sentence, and Length of Prison Sentence

	(1)	(2)
Reduced Form:	139.980 (30.613)	78.481 (30.613)
IV	253.725 (43.118)	142.253 (23.706)
Mean of Dep.	227.644	132.073
Observations	56499	56499

Notes: Table reports reduced form and IV estimates of the impact on the prison sentence length and expected time spent in prison. In column (1), the outcome is the prison sentence length that a judge assigns. In column (2), the outcome is the length of the expected prison sentence assuming that the inmate behaves well. Table G1 illustrates how the expected time spent in prison variable is calculated based on legal standards in Finland. Standard errors clustered two-way at the judge and defendant level appear in parentheses.

Table G35: Summary Statistics Colleagues of Financial Offenders

	<= 50 Employees (1)	> 50 Employees (2)
Age	39 (12.03)	39 (12.10)
Female	0.427 (0.495)	0.454 (0.498)
Swedish Speaking	0.025 (0.157)	0.028 (0.165)
Earned Income	25350 (14896.5)	26831 (15199.1)
Wages	23709 (15178.4)	25423 (15665.7)
Upper Management	0.096 (0.295)	0.101 (0.301)
College Degree	0.279 (0.448)	0.312 (0.463)
Num. of Children	0.902 (1.100)	0.873 (1.083)
Previous Charge t-3	0.0464 (0.210)	0.0311 (0.173)
Number of Establishments	9555	1280
Number of Workers	132643	105549

Notes: This table presents sample means for those who worked at the same plant as an employed defendants at the time of their crime (sample construction is defined in Section 2). Column 1 restricts to plants with 50 employees or fewer and column 2 restricts to firms with more than 50 employees. All statistics are for the year the defendant's crime was committed.

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