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The Benefits of Rehabilitative Incarceration

Gordon B. Dahl and Magne Mogstad

Since the 1980s, incarceration rates have risen substantially in most countries, tripling in the United States and nearly doubling in many European countries. These trends raise important questions about the effectiveness of prisons and how well ex-convicts reintegrate into society.

Time spent in prison can deter offenders from future crime or rehabilitate offenders by providing vocational training or wellness programs. However, incarceration can also lead to recidivism and unemployment due to human capital depreciation, exposure to hardened criminals, or societal and workplace stigma. Incarceration can also have effects beyond those on the offenders themselves, with spillovers to other family members or the offenders' criminal networks. Importantly, the effects of incarceration may well depend on both prisoner characteristics and prison conditions.

The sharp rise in incarceration, particularly in the United States, occurred shortly after the release of an influential report by the sociologist Robert Martinson.[1] The report examined the existing evidence on prisoner rehabilitation programs and came to the conclusion that "nothing works." Ensuing policy discussions gradually led to rehabilitation programs playing a subordinate role to policies emphasizing punishment and incapacitation. While some scholars and policymakers have questioned the "nothing works" doctrine, convincing empirical work on the question remained scarce until recently. As summarized roughly a decade ago, "Remarkably little is known about the effects of imprisonment on reoffending. The existing research is limited in size, in quality, [and] in its insights into why a prison term might be criminogenic or preventative."[2] We also know little about spillovers to other family

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Dahl's research interests are in labor economics and applied microeconomics, including a wide set of issues that range from how income affects child achievement, to peer effects among coworkers and family members, to the impact of incarceration on recidivism and employment, to intergenerational links in welfare use. He received a bachelor's degree from Brigham Young University in 1993 and a PhD from Princeton University in 1998.

Gordon and his wife, Katherine, have four daughters, all of whom enjoy the sunshine of San Diego and traveling abroad.

Magne Mogstad is the Gary S. Becker Professor in Economics and the College in the Kenneth C. Griffin Department of Economics at the University of Chicago. He also is the director of the Ronzetti Initiative for the Study of Labor Markets at the university's Becker Friedman Institute. His work is motivated by the broad question of how to address market failures and equalize opportunities. Countless policies — taxation, subsidized education, social insurance — have been implemented in an effort to achieve those objectives. A key challenge is to distill each policy's unique impact so that it can be understood which ones actually work and which do not. This challenge motivates Mogstad's work, which aims at providing credible empirical evidence that informs policymakers. This is made possible by combining theory and econometric methods with large administrative datasets that can be linked to supplementary data sources.

Mogstad has published extensively in leading scholarly journals. He is a current coeditor of the *Journal of Political Economy*, and he previously served as a coeditor of the *Journal of Public Economics* and a foreign editor of *The Review of Economic Studies*. He is a recipient of the Alfred P. Sloan Foundation Fellowship and the 2017 IZA Young Labor Economist Award.

members or criminal networks.

The lack of convincing evidence is primarily due to two factors. First, there are few panel datasets that can track offenders both before and after their time in prison. There are even fewer panel datasets that can link the required labor market, crime, family, and criminal network outcomes. Second, there is selection bias in who is sent to prison. The average convict already has a criminal record and a weak attachment to the labor market, and negative shocks such as job loss often precede imprisonment. The fact that incarceration is not random suggests that analyses based on observational data are unlikely to capture causal effects.

In a series of papers with Manudeep Bhuller and Katrine V. Løken, we overcome these data challenges and the nonrandomness of imprisonment, offering new insights into how incarceration affects recidivism, employment, children, and criminal networks.

The Norwegian Setting

Our work studies the effects of incarceration in Norway, a setting with two key advantages. First, we are able to link several administrative data sources to construct a panel dataset containing complete records of the criminal behavior and labor market outcomes of every Norwegian who has been incarcerated. We can further link this information to other family members, including children and siblings. Moreover, we have information on co-offending that allows us to map out criminal networks for observed crimes.

Second, we can leverage the random assignment of criminal cases to judges who differ in their propensities to send defendants to prison. Roughly half of all randomly assigned cases result in imprisonment. But some judges send defendants to prison at a high rate, while others are more lenient. We measure a judge's stringency as the average incarceration rate for all other cases a judge handles, after controlling for court and year fixed effects, which is the level of random assignment. This quasi-random assignment of judge stringency can be used as an instrument for incarceration, as it strongly predicts the judge's decision in the current case, but is uncorrelated with other case characteristics both by design and empirically.

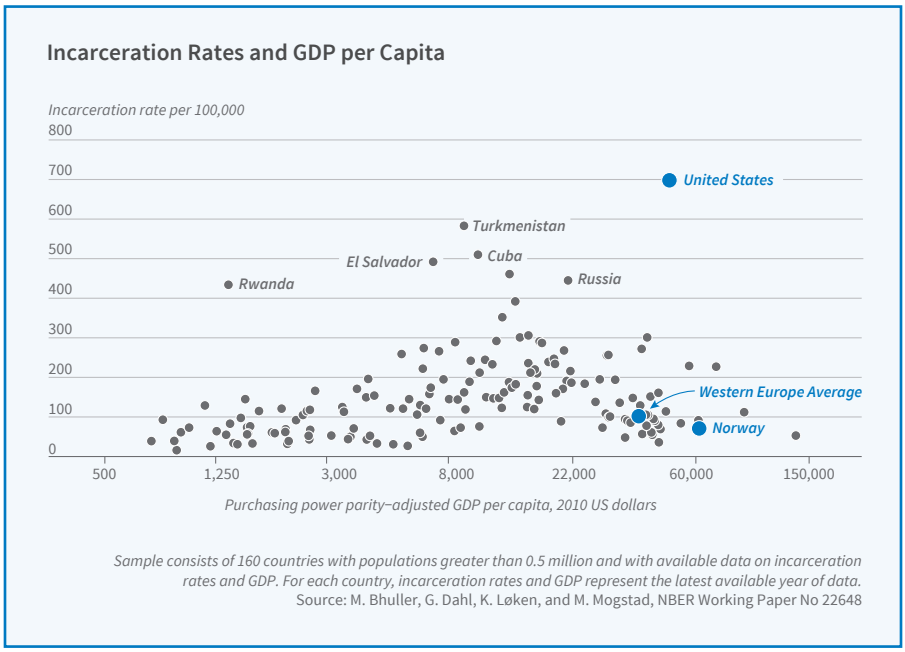

Figure 1

In interpreting the findings from our work, it is useful to know how Norway compares with other countries. Characteristics of prisoners, including demographics and crime categories, are broadly similar in Norway and other countries, including the United States, with the exceptions that the US homicide rate is much higher, and race plays a larger role there as well. What stands out as different, especially compared with the United States, is the prison system. Norway, like many other European countries, has short spells rather than lengthy sentences, and emphasizes rehabilitation rather than punishment.

In Norway, the average time spent in prison is a little over six months, which is similar to most other Western European countries. This contrasts with average US prison time of almost three years, which is in large part the reason the United States is an outlier in its incarceration rate compared with the rest of the world [Figure 1]. Norway places low-level offenders in open prisons with more freedoms and responsibilities than in US prisons, and high-level offenders in closed prisons with more security. This provides much more separation between minor and hardened criminals than exists in the United States.

There is no overcrowding in Norwegian prisons and better personal safety, with each prisoner being assigned to their own cell and a higher inmate-to-staff ratio than in the United States. Prisons in Norway also offer well-funded education, drug treatment, mental health, and job training programs. Finally, Norway places an emphasis on helping ex-convicts integrate back into society, with access to social-support services and active labor market programs.

Recidivism, Employment, and Job Training

Our research on the effects of incarceration on the offender, using the random assignment of judges as an instrument, yields three key findings.[3] First, imprisonment discourages fur-

ther criminal behavior. We find that incarceration lowers the probability that an individual will reoffend within five years by 27 percentage points and reduces the corresponding number of criminal charges per individual by 10 charges. These reductions are not simply due to an incapacitation effect. We find sizable decreases in reoffending probabilities and cumulative charged crimes even after defendants are released from prison.

Our second result is that bias due to selection on unobservable individual attributes, if ignored, leads to the erroneous conclusion that time spent in prison is criminogenic. If we simply compare criminal defendants sent to prison versus those not sent to prison, we find positive associations between incarceration and subsequent crime. This is true even when we control for a rich set of demographics, the type of crime committed, previous criminal history, and past employment. This stands in contrast to our analysis based on the random assignment of judges, which finds an opposite-signed result.

Third, the reduction in crime is driven by individuals who were not working prior to incarceration. Among these individuals, imprisonment increases participation in programs directed at improving employability and reducing recidivism, and this ultimately raises employment and earnings while discouraging criminal behavior.

The effects of incarceration for this group are large and economically important. Imprisonment causes a 34 percentage point increase in participation in job training programs for the previously nonemployed, and within five years their employment rate increases by 40 percentage points. At the same time, the likelihood of reoffending within five years is cut by 46 percentage points, and there is a decline of 22 in the average number of criminal charges.

A very different pattern emerges for individuals who were previously attached to the labor market. Among this group, there is no significant effect of incarceration on either the probability of reoffending or the number of charged crimes. Moreover, they experience an immediate 25 percentage point drop in employment due to incarceration, and this effect continues out to year five. This drop is almost entirely explained by defendants losing their jobs with their previous employers while they are in prison.

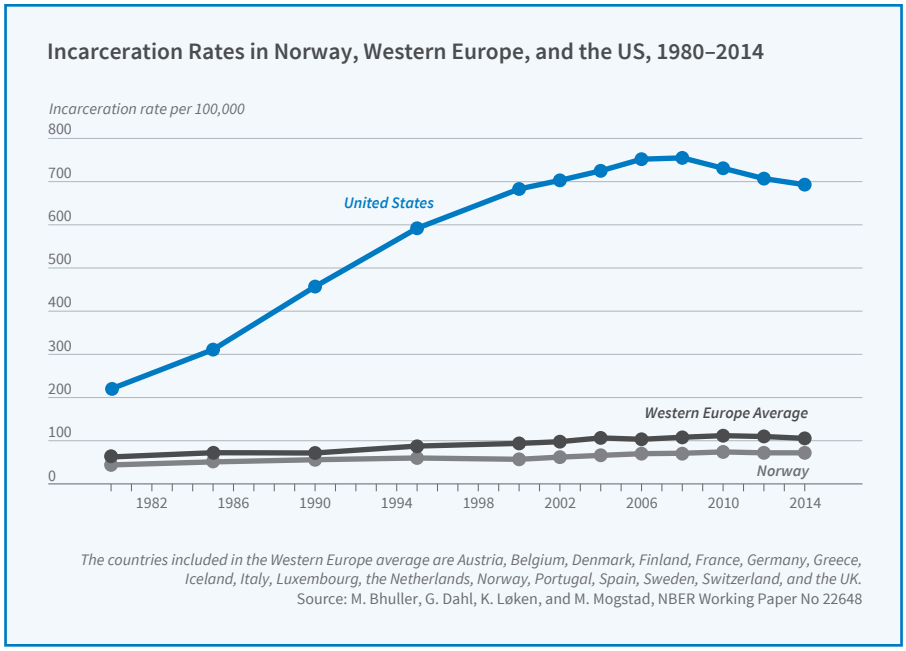

Figure 2

How do the findings for Norway compare to findings of recent research on the United States? A handful of papers in the US use similar random judge assignment designs; these studies find either no effect or the opposite result, namely that incarceration results in higher recidivism and worse labor market outcomes. A plausible explanation for the difference is that Norway's prison system differs markedly, both in terms of prison-term length and prison conditions, from the US prison system.

Family and Criminal Network Spillovers

While understanding the effects of incarceration on the offender is an important first step, capturing spillover effects is also important for evaluating criminal justice policy and designing effective prison systems. Children in particular could be affected either positively or negatively by having a parent incarcerated, a matter we explore.[4]

How children are affected will likely depend on whether imprisonment was rehabilitative for their parent. Using our judge stringency instrument, we find that incarceration has no effect on a father's probability of committing future crime. But it does reduce their employment by 20 percentage points. Fathers are eight years older on average and significantly more likely to be employed prior to incarceration than defendants in general, which helps explain the heterogeneous effects for fathers versus other defendants.

We look at two child outcomes: The probability the child commits a crime up to 10 years later and school grades. Ordinary least squares estimates reveal that children of incarcerated fathers are 1 percentage point more likely to be charged with a crime, relative to a mean of 13 percent, and show no effect on school grades. Using our judge stringency instrument, we find no statistical evidence that a father's incarceration affects a child's own crime or school grades, but we are not able to rule out modest-sized effects.

We also use our judge stringency instrument to explore the effect of incarceration on both preexisting criminal networks and brothers.[5] We define criminal groups based on network links to prior

criminal cases. Our analysis yields three main findings. First, when a criminal network member is incarcerated, their peers' probability of being charged with a future crime decreases by 51 percentage points over the next four years. Likewise, having an older brother incarcerated reduces the probability his younger brother will be charged with a crime by 32 percentage points over the next four years.

Second, these peer effects are concentrated in networks where the links between individuals are likely to be active and salient, defined as living close by geographically and having network ties for recently committed crime. For the brother network, the spillover passes only from older to younger brothers, and not the other way around. More generally, we find no spillover effects for other family members such as sisters and spouses.

Third, bias due to selection on unobservables matters. While ordinary least squares estimates show positively signed spillover effects for both networks, the instrumental variables estimates find that incarceration of a defendant has a strong preventative effect on network peers. A policy simulation that increases average judge stringency by 1 standard deviation illustrates the relevance of these spillover effects. Failing to account for incarceration spillover effects provides misleading projections of total policy impact and post-reform recidivism rates, as the network reductions in future crimes committed are larger than the direct effect on the incarcerated defendant.

Feasibility of Reform

Our research on Norway's criminal justice system serves as a proof of concept that time spent in prison with a focus on rehabilitation can result in positive outcomes. The Norwegian prison system increases job training, raises employment, and reduces crime, mostly due to changes for individuals who were not employed prior to imprisonment. While there are no discernible spillovers to children, there are large spillovers for both criminal networks and brothers that provide additional benefits in terms of crime reduction.

It should be noted that Norway's prison system is expensive. However, prison reform is more affordable than it may initially appear in the United States, and could even save money if prison sentences were shortened. The United States is an outlier in incarceration rates, with sentence lengths that are roughly five times longer than the international average. Our calculations suggest that a European-style prison system, with its higher costs but shorter sentences, would result in significant US cost savings. Moreover, to the extent that prison increases post-release employment, this would indirectly reduce expenditures on safety net programs and possibly increase tax revenue. And while it is difficult to monetize the benefits from fewer crimes being committed, the gains from reduced victimization are likely to be large.

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[1] "What Works? Questions and Answers about Prison Reform," Martinson R. *The Public Interest* 35, Spring 1974, pp. 22–54.
Return to Text

[2] "Imprisonment and Reoffending," Nagin DS, Cullen FT, Jonson CL. *Crime and Justice* 38(1), 2009, pp. 115–200.
Return to Text

[3] "Incarceration, Recidivism and Employment," Bhuller M, Dahl GB, Løken KV, Mogstad M. NBER Working Paper 22648, September 2016, revised February 2019, and *Journal of Political Economy*, forthcoming.
Return to Text

[4] "Intergenerational Effects of Incarceration," Bhuller M, Dahl GB, Løken KV, Mogstad M. NBER Working Paper 24227, January 2018, and *AEA Papers and Proceedings* 108, May 2018, pp. 234–240.
Return to Text

[5] "Incarceration Spillovers in Criminal and Family Networks," Bhuller M, Dahl GB, Løken KV, Mogstad M. NBER Working Paper 24878, August 2018.
Return to Text