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Essays in the Economics of Crime and Discrimination

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The United States and other Western countries stand out as global leaders in development and human rights (United Nations Development Programme 2014), yet some groups continue to be marginalized with limited access to the opportunities and institutions that make these countries exceptional. This dissertation focuses on two such populations, criminal defendants and sexual minorities, with the goal of documenting how legal and social systems shape individuals' economic behavior and well-being. Chapter 1 examines the impact of incarceration on criminal and labor market outcomes in Harris County, Texas. Chapter 2 documents patterns of concealment among men experiencing same-sex attraction in the United States and studies the costs and implications. Chapter 3 analyzes how legal recognition of same-sex unions impacts the labor market and fertility outcomes for gay and lesbian couples in Sweden.

Chapter 1

The Criminal and Labor Market Impacts of Incarceration

The United States currently has the highest incarceration rate in the world (Walmsley 2009), a consequence of three decades of dramatic growth in the prison population since the late 1970s (Carson 2013). Over this same time period governmental expenditures on police protection, judicial and legal systems, and corrections also surged (Bureau of Justice Statistics 1980; Kyckelhahn 2013). Recent estimates indicate that the annual U.S. correctional population included over 7 million adults (Glaze and Herberman [2013]), and combined federal, state, and local expenditures on justice-related programs topped $260 billion per year. Despite the reach and cost associated with these changes to criminal justice policy, causal evidence on how this use of incarceration has impacted the population remains scarce (see Donohue [2009]).

This chapter investigates the impacts of incarceration using original data from Harris County, Texas. The new data are composed of over 2.6 million criminal court records accounting for 1.1 million unique defendants, capturing the universe of misdemeanor and felony criminal charges between 1980 and 2009 regardless of final conviction status. It is also linked to state prison and county jail administrative data, unemployment insurance wage records, public assistance benefits, marriage and divorce records, and future criminal behavior.

The research design leverages the random assignment of criminal defendants to courtrooms as a source of exogenous variation in both the extensive and intensive margins of incarceration. The courts are staffed by judges and prosecutors who differ in their propensity to incarcerate. As a result, which courtroom a defendant is randomly assigned to strongly predicts whether he will be incarcerated and for how long. This increasingly popular identification strategy has been used in a number of applications where judges, case workers, or other types of program administrators are given discretion on how to respond to a randomly assigned caseload.

The application considered in this chapter is moderately more complex than other potential uses of this research design. Sentencing takes on multiple dimensions (e.g., incarceration, fines, and drug treatment), and judges display nonmonotonic tendencies (e.g., a judge may incarcerate drug offenders at a relatively higher rate but property offenders at a relatively lower rate). Since failure to account for these features of the data can lead to violations of the exclusion restriction and monotonicity assumption, a new estimation procedure is developed. In this new approach, I relax the first-stage equation to allow the impact of court assignment on sentencing outcomes to flexibly respond to observed defendant characteristics. Because this can generate many instruments due to the curse of dimensionality, the least absolute selection and shrinkage operator (LASSO) is used in conjunction with cross validation as a data-driven tool to achieve disciplined dimension reduction without skewing statistical testing. I then use this approach to construct instruments for each observed aspect of sentencing, not just incarceration, to control for court tendencies on nonfocal sentencing dimensions.

The empirical findings in this chapter indicate that incarceration for marginal defendants is less attractive from a policy perspective than has been shown in prior work. I measure modest incapacitation effects while defendants are in jail or prison: felony defendants are 6 percentage points less likely to be charged with a new criminal offense while incarcerated. This benefit, however, is offset by increases in postrelease criminal behavior: each additional year that a felony defendant was incarcerated increases the probability of facing new charges postrelease by 5.6 percentage points per quarter. These results are particularly concerning because the incapacitation effect is disproportionately driven by misdemeanor charges, while the postrelease criminal behavior shows mainly increases in felony offenses. Partially driving this result is a pattern of former inmates being charged with new crime types. In particular, I find that former inmates are especially likely to commit more property (e.g., theft or burglary) and drug-related crimes after being released, even if these crimes were not their original offenses.

In contrast with prior work, I find strong evidence that incarceration has lasting negative effects on labor market outcomes after defendants have been released. I find that each additional year of incarceration reduces postrelease

employment by 3.6 percent points. Among felony defendants with stable precharge earnings incarcerated for one or more years, reemployment drops by at least 24 percent in the five years after being released. Misdemeanor defendants show a small increase in take-up of cash welfare payments, and felony defendants show increases in Food Stamps benefits, which provide further evidence of lasting economic hardship postrelease.

The impacts of incarceration extend beyond recidivism and labor market outcomes. Incarceration appears to negatively impact family formation and stability as measured through marriage and divorce activity. While incarcerated, young felony defendants exhibit significantly lower rates of marriage that are not compensated postrelease, indicating a net decline in marriage rather than a temporal shift. Further supporting this conclusion, I find that divorce rates among older felons increase while in prison and postrelease.

Using these new estimates, I reevaluate the welfare impacts of incarceration. Because I cannot measure general deterrence effects in my research design, the cost-benefit exercise is partial in nature and only accounts for the administrative expenses, criminal behavior effects, and economic impacts associated with the defendant's own outcomes. Using the most conservative estimates, I find that a one-year prison term for marginal defendants decreases social welfare by $56,200 to $66,800, of which negative impacts to economic activity account for 41–48 percent of overall costs. In order for this sentence to be neutral in social welfare terms, a one-year prison term for a marginal (low-risk) offender would need to deter at least 0.4 rapes, 2.2 assaults, 2.5 robberies, 62 larcenies, or 4.8 habitual drug users in the general population.

Chapter 2

Discrimination with Concealable Characteristics: Evidence and Application to Sexual Orientation in the United States

Economic research on discrimination, both theoretical (Becker 1957) and empirical (e.g., Bertrand and Mullainathan [2004]; Charles and Guryan [2008]; Goldin and Rouse [2000]) has classically assumed that minority traits are perfectly observable. In the context of race and sex, which form the general foundation of existing research, such an assumption is innocuous. In the second chapter, however, I propose a departure from this body of work through the consideration of an alternative class of traits: concealable characteristics. These traits are precisely defined by the fact that they are not publicly observable. Instead, agents make an active decision whether to disclose or conceal their minority status.

The proposed departure has important implications from both a theoretical and empirical perspective. Given the option to conceal, individuals who self-identify their minority status represent the subset of the population for whom the benefits of disclosure outweigh the costs, which is a classic case of selection bias. A potential consequence of this bias, for example, could be that those likely to face the worst discrimination conceal their type and generate censoring in the distribution of realized discrimination (i.e., what is actually measurable ex post in equilibrium). As a result, estimates based on self-reported status would underestimate the true magnitude of discrimination faced in the population.

If we suppose that the researcher could measure innate preferences, selection bias could be avoided, but standard models that focus on wage penalties may fail to capture the nuanced implications of discrimination. The costs of discrimination may be dispersed across multiple outlets (e.g., labor market penalties and mental health costs), and the relevant channel will uniquely depend on the individual's concealment status. This stands in contrast to Becker [1957], who concludes that zero or minimal measured wage penalties is an indication that all or most minorities have found nondiscriminating firms and avoided punishment.

The specific application being considered in this chapter is innate sexual orientation, a concept that is theoretically distinct from self-identified sexual orientation. The former category measures an individual's private sexual attraction, while the latter is the public presentation of one's sexual orientation.

Original empirical analysis illustrates how concealment potential shapes life-cycle outcomes using data from the National Longitudinal Survey of Youth 1979. The chapter leverages the fraternal birth order (FBO) hypothesis from developmental psychology as a proxy measure for innate sexual orientation in lieu of self-identified sexual orientation. The FBO hypothesis is the culmination of numerous studies that have consistently found that men with more older brothers are more likely to identify as homosexual or report same-sex attraction (see Blanchard [1997]). This proxy for innate sexual orientation is used in conjunction with varying degrees of juvenile exposure to local discrimination against the lesbian, gay, and bisexual community based on the respondent's county of birth in the United States. Studying how these two sources of variation interact will allow the chapter to consider how life-cycle trajectories change in response to increasing motives to conceal, and whether early life exposure to antigay policies and attitudes has long-term implications past adolescence.

My evidence documents patterns of concealment and its corresponding impact on individual outcomes. I find that men who were more likely to develop same-sex attraction yet born in more homophobic counties were significantly less likely to engage in same-sex cohabitation through age 45 compared to similar men from less homophobic counties. Changes in identity investments (conservative gender ideology and religious adherence) conform with this pattern, and sizable penalties to mental health and educational attain-

ment accrue to men from more homophobic backgrounds. Labor market outcomes, however, appear to generally be unaffected. I hypothesize that men who experience same-sex attraction yet conceal it are compensated for this choice despite their diminished human capital.

Chapter 3

Same-Sex Partnership for What? Evidence from Swedish Registers

(coauthored with Lina Aldén, Lena Edlund, and Mats Hammerstedt)

The last chapter studies how individual and joint outcomes evolve for same-sex couples after entering into a legalized recognized union in Sweden. In 1989, Denmark became the first country to legally recognize same-sex unions. Since then, some 31 countries have followed suit, the United States being the latest to legalize same-sex marriage nationwide.

Despite growing demand, relatively little is known about the function of legal same-sex unions. What is it that legal status confers that cannot be achieved through private contracts or actions such as cohabitation? Arguably, the same might be asked of the long-lived institution of opposite-sex marriage.

But what holds for opposite-sex unions need not carry over to same-sex ones. For instance, the returns to marriage in the Beckerian framework rests on returns to specialization, and same-sex couples appear to specialize less (Jepsen and Jepsen 2002). Long-term commitment is another celebrated function of marriage that may or may not translate to same-sex couples (Andersson et al. 2006). A potentially more thorny issue, however, is the so-called paternity presumption: the husband is the presumed father of children borne by the wife (Appleton 2006). Paternity presumption has until now been a universal feature of marriage and one that may even constitute its very core (Posner 1992). In fact, most same-sex unions carve out paternity presumption, but even when included, its application is far from straightforward. This is so because of the strong rights accorded birth mothers. By default, the mother is the woman who gives birth. If a man in a same-sex partnership acknowledges paternity of a child born to an unmarried woman, will the child have three parents? And if parental rights are at the heart of legal unions, then what is its relevance to all-male, and thus sterile, couples?

This chapter highlights the practical implications for same-sex couples of greater access to legal rights formerly reserved for opposite-sex couples by studying an expansion of rights in Sweden. Starting in January 1995, same-sex couples could enter registered partnership, a contract that conferred almost the same rights and obligations as opposite-sex

marriage. However, paternity presumption was carved out in an innocuous-sounding exemption of rights extended to one sex only. It would be another eight years until same-sex partners gained the right to adopt jointly or as stepparents. The new adoption law was enacted in 2002 and took effect January 1, 2003. In this chapter, we analyze Swedish administrative data covering the period 1994–2007.

Derived from Swedish registers, these data are high quality, have universal coverage, and allow us to follow individuals. Using these administrative data, we identify and follow all individuals who entered into registered partnerships in 1995–2006 (to allow for a post- and preunion year). For comparison, we include all who entered opposite-sex marriage in the given period. The data contain detailed information on earnings and children living in the household, which enables us to shed new light on how entry into partnership/marriage affects labor market and parental outcomes. Our empirical strategy is to compare outcomes of earnings and presence of children before and after union entry, controlling for individual fixed effects so that the person serves as his or her own control group.

By exploiting longitudinal data, we can avoid the problem of selection into partnership (or marriage) that arises in cross-sectional comparisons. However, the possibility that partnership/marriage entry is timed to coincide with other life changes remains. Milestones such as graduation or steady employment may both trigger marriage and presage earnings growth, resulting in an upward bias. On the other hand, a downward bias would result if partnership/marriage were timed to coincide with a downshift in labor market attachment (e.g., due to parenthood or retirement). Therefore, our estimates provide a description of labor market and parenting responses to partnership/marriage entry but cannot isolate the causal effect of entry into partnership/marriage.

Our most noteworthy finding pertains to parenthood. Following the 2002 adoption law giving those in a registered partnership the right to joint or step-parent adoption, we see both a noticeable increase in lesbian partnership and children living with lesbians in partnership. The net effect of union entry on presence of children, especially after the 2002 reform, reveals similar effects of entry into legal union status for lesbian and opposite sex couples—couples with at least one woman. These findings highlight the importance of a legal framework for parental rights; indeed, it underscores the role of joint legal parenting for fertility decisions.

Turning to earnings, we find a substantial decline in individual earnings for gay men (−12 percent), whereas for lesbian women the effect is small (−2 percent) and highly insignificant. As for couples' earnings, the pronounced decline seen for gays is absent, suggesting a high degree of income buffering (or negative sorting). By contrast, among lesbians, the income reduction seen at the individual level is amplified once viewed at the couple level, suggestive of within-couple positively correlated labor market responses to

partnership entry. Within-couple earnings gaps change in a direction consistent with this interpretation. Among lesbians, there is a sizable (but statistically insignificant) reduction in the within-couple earnings gap, whereas among gays there is only a small and highly insignificant effect on the gap.

As a point of reference, we also look at heterosexual couples and find effects of marriage largely in line with what has been documented in the literature: an increase in fertility, a decrease in women's earnings, and an increase in the within-couple earnings gap. Men earn substantially more after marriage than before, but we find no evidence of a marriage premium employing our within-individual comparison. Instead, we find a strong ramp up of earnings in the years leading up to marriage. Given the negative marriage premium for women and the absence of a positive premium for men, our finding that the combined earnings for the couple decline after marriage is perhaps unsurprising.

Taken together, these findings paint a picture of same-sex registered partnership filling a different role for same-sex couples than marriage does for opposite sex couples, and the roles are different for gays and lesbians. Generally speaking, as evidenced by the earnings gap, specialization on union entry is much more pronounced among heterosexual couples and, if anything, higher among gays than lesbians. This is particularly noteworthy given the close to zero fertility effect among gays and similar fertility effects for women, whether in a same- or opposite-sex union.

References

Andersson, Gunnar, Turid Noack, Ane Seierstad, and Harold Weedon-Fekjær. 2006. "The Demographics of Same-Sex Marriages in Norway and Sweden." *Demography* 43(1): 79–98.

Appleton, Susan Frelich. 2006. "Presuming Women: Revisiting the Presumption of Legitimacy in the Same-Sex Couples Era." *Boston University Law Review* 86: 227–294.

Becker, Gary. 1957. *The Economics of Discrimination*. Chicago: University of Chicago Press.

Bertrand, Marianne, and Sendhil Mullainathan. 2004. "Are Emily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discriminations." *American Economic Review* 94(4): 991–1013.

Blanchard, Ray. 1997. "Birth Order and Sibling Sex Ratio in Homosexual Versus Heterosexual Males and Females." *Annual Review of Sex Research* 8: 27–67.

Bureau of Justice Statistics. 1980. *Justice Expenditure and Employment in the U.S., 1979*. Technical report. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics.

Carson, E. Anne. 2013. "Prisoners in 2013." Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics. http://www.bjs.gov/content/pub/pdf/p13.pdf (accessed October 20, 2015).

Charles, Kerwin Kofi, and Jonathan Guryan. 2008. "Prejudice and Wages: An Empirical Assessment of Becker's The Economics of Discrimination." *Journal of Political Economy* 116(5): 773–809.

Donohue, John J., III. 2009. "Assessing the Relative Benefits of Incarceration: Overall Changes and the Benefits on the Margin." In *Do Prisons Make Us Safer*? Steven Raphael and Michael A. Stoll, eds. New York: Russell Sage Foundation, pp. 269–342.

Glaze, Lauren E., and Erinn J. Herberman. 2013. *Correctional Population in the United States, 2012*. Technical report. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics.

Goldin, Claudia, and Cecelia Rouse. 2000. "Orchestrating Impartiality: The Impact of 'Blind' Auditions on Female Musicians." *American Economic Review* 90(4): 715–741.

Jepsen, Lisa K., and Christopher A. Jepsen. 2002. "An Empirical Analysis of the Matching Patterns of Same-Sex and Opposite-Sex Couples." *Demography* 39(3): 435–453.

Kyckelhahn, Tracey. 2013. *Justice Expenditure and Employment Extracts, 2010—Preliminary*. Technical report. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics.

Posner, Richard. 1992. *Sex and Reason*. Cambridge, MA: Harvard University Press.

United Nations Development Programme. 2014. *Human Development Report*. Technical report. New York: United Nations Development Programme.

Walmsley, Roy. 2009. *World Prison Population List*, 8th ed. International Centre for Prison Studies.