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"The Unintended Impacts of Sentencing Guidelines on Family Structure"

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Executive Summary

This project was motivated by theoretical and empirical findings that suggest sentencing reforms and punitive prison sanctions may have adverse impacts on families. The hypothesis that we test using different data sets, different time periods and different measures of family structure is: imprisonment has had the unintended consequence of destabilizing families, particularly black families.

The underlying theoretical premise is that strong, stable two-parent families are related to the state of the marriage market. When there are large numbers of marriageable men relative to unmarried women, fewer female-headed families will form. But imprisonment reduces the supply of marriageable men, according to this theory. Thus, the central hypothesis is that when there is a change in sentencing policies that increases imprisonment there will be a corresponding reduction in the supply of marriageable men and an increase in the incidence of female-headed families.

To test our hypothesis we designed three research models to examine the relationship between family structure and incarceration, but using different measures and datasets. The goals was to see if testing for the same impacts using different data would confirm our theory that changing sentencing policies has adversely affected families. The first model (Module A) merged the National Longitudinal Survey on Youth (NLSY) for 1985 and 1994 with the Urban Institute's 1980 and 1990 Underclass Database (UDB) and the 1984 and 1993 National Correctional Report Program (NCRP) data set for counties. It measured the impact of inmate admissions and releases on female-headed families, female family headship, and out of wedlock births. Module B merged data from the Current Population Survey for 1985 and 1995 with state level data to measure the Darity-Myers sex ratio and expected welfare income and to measure their relationship to family structure, sentencing guidelines, and minimum sentences for drug related crimes. Finally, Module C used data collected from inmates entering the Minnesota prison system in 1997 and 1998, information from the Minnesota Crime Survey, and the 1990 Census to assess any connections between incarceration and family structure.

While the results of the project support parts of the underlying theory, the conclusion that imprisonment increases female-headed families is not strongly supported. Using the NLSY data set, we find few statistically significant impacts of prison admissions on different measures of family structure. And in the model specifications where we do find statistically significant impacts of admissions on family structure, e.g., in fixed effects models for 1994, the results emerge for states without sentencing guidelines but not for states with guidelines. The lack of strong and robust support for unintended impacts of sentencing guidelines on family structure may be a result of how we have measured the intervening influences of imprisonment. We looked at admissions rates and release rates and the ratio of admissions rates to release rates. It is possible that an examination of the number of admissions or releases will change these conclusions. But the main finding using the NLSY data set is that there are no strong or robust indicators of the adverse impacts of sentencing reforms on family structures.

When we looked at the replication of the Darity-Myers model of sex-ratios and family structures we again find little support for the adverse impacts of sentencing reforms on family structures. We find unequivocal support for the underlying model that links sex-ratios to family structure. But we find ironically that sex-ratios in recent years are slightly higher for blacks in sentencing guidelines states than there are in non-sentencing guidelines states. In states with mandatory minimum sentences for drug-related crimes the sex-ratios are not much different from those of states without mandatory minimums. As a result, we do not find consistent evidence that sentencing guidelines or mandatory minimum sentences adversely affect family

structure, despite very strong and consistent evidence that lower supplies of marriageable men are associated with higher incidences of female-headed families. There are some minor differences in the responsiveness of family structures to sex-ratios in states with different sentencing policies and there is a small impact of drug enforcement policies on black (but not white) family structures. These impacts should be explored further in future research.

We hoped to examine in greater detail one state with a long history of sentencing reforms and the impacts of local community factors on inmate family structure. We wanted to know whether the aspects of locations that lose marriageable males due to incarceration were more important in explaining the family structures left behind by prisoners than the characteristics of the prisoners themselves. If sentencing reforms adversely affect local neighborhoods then one would expect these effects to translate into differences in family structures faced by inmates who come from these communities. We find, however, that the local impacts are small. Far more of the variance in inmate family structures is explained by individual inmate demographics than location characteristics.

In summary, then, we have looked at three different data sets at different points in time and using different notions of family structure and we find little consistent support for the theoretically plausible hypothesis that there are strong unintended impacts of imprisonment policies on family structures.

Statement of the Problem

In 1991, nearly four out of ten state prison inmates reported growing up in female-headed families (Snell, 1993:30). This is in sharp contrast to the general population where more than eight out of ten families were two-parent families (U.S. Bureau of the Census, 1992).

Such deviation from the norm is also apparent when examining sibling incarceration. In 1991, nearly one-third of all inmates in state prisons reported having a brother who had also been incarcerated, far in excess of the general risk of incarceration (Snell, 1993: 30). This statistic implies that family background influences criminality. This supports other work that suggests that dysfunctional families and/or environments contribute to, or are correlated with factors that lead to, crime and incarceration (Wilkinson, 1980). Less understood is emergent evidence that a reverse process may also be at work: that incarceration may destabilize families or neighborhoods. If true, such a trend could affect the design of sound public policies that deal with punishment and imprisonment.

What is the social impact if public policies, such as sentencing reform, designed to reduce sentencing disparities, have unintentionally contributed to family or neighborhood destabilization? Is it possible that longer prison sentences and higher incarceration rates that leads to greater flows of inmates into prisons have inadvertently induced dislocations in local marriage markets that, in turn, contribute to the decline of two-parent families?

Early evidence of this last process is found in a model of black family structure where the proximate cause of extremely high rates of female-headship among African Americans was the low availability of marriageable males (Darity and Myers, 1996). The low availability of males was seen to be a consequence of such factors as homicide and incarceration. Researchers found statistically significant and nontrivial impacts of male incarceration on the incidence of black female-headed families.

The disturbing implication of this finding is that the unintended impacts of incarceration on family structure that may exist increase crime and violence. The intended goal of incarceration itself may unleash a chain of events that may contribute to further crime, violence and, thus, further crime control and corrections.

Goals and Objectives of the Project

This project was designed to study the possible impacts of sentencing reforms and incarceration on family structure. The approach was to examine the same problem from multiple angles to understand the causal relationships between male withdrawal from productive spheres of the economy and changes that result in the community and families. Different data sets and a variety of statistical methods were used to assess the impacts of incarceration and/or reforms on family structure and stability.

In addition, since the process of family destabilization or community distress is never observed directly and because there may be substantial differences in how that process works across different racial and ethnic groups, the study also examined multiple data sets and different groups for comparative purposes. One data set was constructed from questionnaires administered to inmates in a single state. By studying a single state that had undergone a major sentencing reform, researchers hoped to glean possible generalizations or patterns that might inform policy makers in other states.

Research Questions Explored

Three sets of overlapping and complementary questions were formulated for this project and were the basis of three research modules. They were:

Module A: The Flow of Inmates

This module examined whether inmate flows within a specific geographic area (county) contribute to individual probabilities of family disruption.

1. Does the flow of inmates in the county of residence (i.e., the admission and/or release from prison) contribute to the probability that a female is unmarried or living in a family with no adult male present?
2. Does this flow contribute to the probability that a family head is female?
3. Does the effect depend on whether there is control for other location-specific factors – such as underclass characteristics?
4. Does the effect differ between different racial and ethnic groups?

Module B: Sentencing Reforms

Module B concerned whether sentencing reforms affect mate availability and/or female family headship.

1. Is female-family headship more pronounced in states that have undergone sentencing reforms?
2. Does the effect of sentencing reforms on female family headship differ between races?
3. Is there a more pronounced marriageable male shortage in states with sentencing reforms?
4. Does the shortage, if any, differ between races?

Module C: Family Status and Incarceration in a Single State

The third module focused on a single state that has undergone major and putatively successful sentencing reform. The questions asked were:

1. Do zip-code level characteristics of locations from which inmates come influence the probability that one will be incarcerated?
2. Does the effect of individual and zip code level characteristics vary if calculated by aggregate or individual measures?

Together these three sets of questions provided a comprehensive and broad-based context to address the key concern: does incarceration and/or sentencing reforms have the unintended impact of destabilizing families or causing neighborhood disruption? The policy significance is direct: if, across each data set and empirical test, consistent support is found for the hypothesis that imprisonment causes family disruption, then the current focus on sentencing reforms that result in longer sentences or increased prison populations should be reassessed. Also, the current debate about how to deal with nonviolent offenders caught in the web of the sentencing reform takes on a new meaning.

It was anticipated that the results would be mixed or show ambiguity concerning the direction of causation. The obvious impact of family disruption on criminal participation could be the most direct and relevant impact. The appearance that incarceration causes family instability may simply be a strong correlation going in the wrong direction. If that was the case, the policy implication would be to focus on strengthening families, improving neighborhoods, and providing support to those facing social dislocations – including ex-offenders. But those policies can be pursued independent of any conclusion that prison causes family disruption.

Relationship to the Existing Literature

Two threads of research emerged in the literature: a) the phenomenon of incarceration breeding crime and b) the unintended consequences of imprisonment.

In 1980, Myers examined the phenomenon of incarceration breeding crime in a model of the impacts of time served on recidivism. The negative externality effect - or unintended impact - of punishment was distinguished theoretically from the rehabilitative - or intended effect - of punishment. The unintended, indirect effect could be termed "accumulation of criminal human capital," where the increased association with criminals in the close prison social system substitutes for the social capital that scholars assert is accumulated in positive environments - such as schools or neighborhoods.

Clear (1996) has conceptualized the implicit - and unintended - consequence of prison as:

a. Send[ing] messages, to offenders or the public, that are garbled as to right and wrong

b. Tend[ing] to increase the potential for criminality (Clear 1996:2)

It is useful to view these two impacts as well as the one identified by Myers as implicit because conventional empirical methods typically cannot disentangle messages, signals, and beliefs. Actions and consequences can be observed, but the underlying moral factors cannot. One might observe declining employment, neighborhood change and increased crime, or the destabilization of families amid a reduction in the supply of marriageable men, but perhaps not the implicit factors the drive the changes.

The second thread of literature identified three explicit, unintended consequences of imprisonment. The first was the negative impact of imprisonment on the employment of released offenders. Some find that wages are lower and unemployment rates higher for former inmates (Myers, 1983; Freeman, 1994), while others challenge this finding (Grogger, 1995). The second impact is the effect of imprisonment on the destabilization of local communities. This impact originates either through the operation of the labor market and the local economy (Nightingale and Watts, 1996; Sullivan, 1989; McGahey, 1986) or through the feedback effects that destabilization and family disruption have on juvenile crime (Sampson, 1987; 1995). A third, and less well-understood, impact is the effect of incarceration on family structure and stability

(Darity and Myers, 1990). Some of this literature demonstrates the negative impacts of mothers' imprisonment on family stability (Albor, 1995; Baunach, 1985; Hale, 1987). Other studies examine the impacts of male incarceration on children and wives or mates (Carlson and Cervera, 1991; Gabel, 1992; Hairston and Lockett, 1987; King, 1993).

Logically, this project focused on the third consequence given that all other impacts - explicit and implicit – seem to revert to this problem. Clear (1996) suggests that the destabilizing impact of incarceration on family structure acts as a conduit through which prison might affect moral and social cohesion. It is not clear how this comes about - through absent role models or damage to local marriages markets, for example, but the mediating influence appears to the be family.

Robert Sampson (1995) suggests that the central linkage between violence and social destabilization is the observed structure of families. After controlling for a variety of social factors, the presence of married couple families reduces juvenile murder and robbery rates. Meanwhile, the presence of unmarried females, aged 15 - 19, positively relates to adult murder and robberies. Therefore, unfavorable marriage markets and family instability appear to contribute to higher rates of violence in communities and thus, indicators of family structure and marriage appear to operationalize the notion of social destabilization.

Based on studies that demonstrated disparate impacts on changing marriage markets in black vs. white family structures, this project examined the effect incarceration separately for blacks, whites, and where possible for Latinos and other ethnic groups.

Darity and Myers (1983; 1984) argued that the withdrawal of black males from the marriage pool has a larger negative impact on black families than does a parallel withdrawal among whites because blacks begin with a larger male deficit. If a market faces a shortage of males - as early as age 15 - the withdrawal of one more black male has a devastating multiple impact on the formation of two parent black families. Among whites, the deficit occurs at a later age and affects family formation differently. Sampson (1995) confirmed this when he found that an increase in the availability of mates improves the prospects of black family stability by larger measurable amounts than among whites.

Variables for Modules A, B, and C and Analysis Plan

Table 1 outlines the dependent and independent variables used in each module. The variables demonstrate how this project used different data sets to understand and assess relationships between sentencing guidelines or minimum sentences for drug related offenses and family structure.

Table 1 Dependent and Independent Variables

	Module A	Module B	Module C
Dependent Variables	1. Families headed by females 2. Females who are heads of family 3. Women who have never married and have had a child	1. Darity-Myers Sex Ratio 2. Probability of female headed family	*Individual Level* 1. Dependent children *Zip Code Level* 1.Inmates dependent children
Independent Variables	*Individual Level* Age, education, income, race *County/Census Tract Level* Prison admission and release, unemployment, poverty, welfare, education, central city location, sentencing guidelines	*Individual Level* Age, education, experience, region, children in household, central city location, home ownership, race *State Level* State unemployment rate, male institutionalization rate, mortality rate, population density, welfare rate, abortion rate,	*Individual Level* Age, education, veteran status, employment, new admission status, *Zip Code Level* Victimization rates, poverty, housing tenure, age distribution

Analysis Plan for Modules A, B, and C

Modules A, B and C shared a common initial frame of reference. Data from individual-level observations were merged with data from location-specific observations. T-tests for differences between races and for differences between time periods were performed. Then regression estimates of coefficients in the models described above were obtained.

A policy test from Module B is given to illustrate how to determine the impacts of sentencing reforms. The problem is determining if female headship is higher in aggressive sentencing-reform states than in other states. Superscript *R* denotes reform states and *N* non-reform states in a given year *t*. The probabilities of female-headed families can be given for blacks, *B,* in reform and non-reform states by:

$$Prob_t^B(Fhh = 1 \mid ReformState) = Prob_t^{BR}$$
$$Prob_t^B(Fhh = 1 \mid NonreformState) = Prob_t^{BN}$$

where these probabilities are estimated from logistic functions. The effect of sentencing reforms *R* on the probability of female-headship among blacks at time *t* is determined by computing:

$$Prob_t^{BR} \mid Prob_t^{BN}$$

where the numerator is computed using the estimated coefficients obtained from the reform states but using the independent variables for the non reform states. If this ratio is equal to one, there is no effect of sentencing reforms on female-headship; if greater than one, sentencing reforms increase female-headship; and if less than one, sentencing reduces female-headship.

Project Implementation

Each module used different data and different levels of aggregation in order to see if similar results on the relationship between incarceration and family structure emerged from each measure and approach.

Module A: Inmate Flows

Methods and Procedures

The analysis for Module A merged the Urban Institute's Underclass Database (UDB), the National Longitudinal Survey of Youth (NLSY) data set, and the National Correctional Reporting Program (NCRP)

data set for counties. The result was an NLSY data set, with census tract information and county information added, measuring neighborhood stability and inmate flows. The dependent variables are female-headed families, female family headship, and women with out of wedlock births. The focus was on the reduced form impacts of inmate flows on marital, family, and childbearing variables.

Data Collection

The combination of the NLSY data, which includes respondents' county-of-residence information, with macro-level data on underclass determinants and on county-level incarceration was conducted by staff at the Urban Institute, directed by Dr. William Sabol, Director of the Federal Crime Statistics Programs. The merger entailed the selection of NLSY responses for 1985 and 1994 to permit a close match with the 1980 and 1990 Urban Institute's Underclass Database (UDB) data and the 1984 and 1993 National Correctional Reporting Program (NCRP) data on inmate flows by county. By using two different years in the UDB and the NLSY data sets, the researchers could estimate changes in child-bearing, marital dissolution, and female-headship that can be attributed to inmate flows within the general area where respondents live. This data synthesis asked the question: How does the flow of inmates in or out of prisons translate into individual family outcomes?

The Model and Specification of Variables

The main focus was on estimating the relationship between family instability – measured by female headed families – and three sets of independent variables: underclass measures of the county of residence, individual characteristics, and flows of inmates.

The underlying model estimated in Module A is given by Equation 1. The x's denote the individual-level independent variables, the y's census-level variables – aggregated at the county level and, w's the flow of inmates at the county level. One dependent variable is the unconditional probability of living in a female-headed family. The other dependent variables are the conditional probability of being a single head of household given that one is female and the conditional probability that a female who has never married has had a child. Controlling for location-specific factors and individual-level determinants, one can estimate the effect of inmate flows on these three dependent variables.

$$Prob\,(Fhh_i = 1) = f(x_i y_i^k, w_i^K)$$
$$Prob\,(Fhh_i \mid Female) = f(x_i y_i^k, w_i^k) \qquad \text{Eq. 1}$$
$$Prob\,(ChildBirth \mid NeverMarriedFemale) = f(x_i y_i^k, w_i^k)$$

The subscript *i* denotes the *i*th individual in the sample. The superscript *k* denotes the *k*th county in which the individual resides.

Data Analysis

To examine family structure, the percentage of female-headed families, females who are heads of family, and women who have never married but had a child were extracted from the NLSY. This data was separated into states with and without sentencing guidelines and states with and without mandatory minimum sentences for drug related offenses (see Appendix 1 for definition and outline of state categories). Two limited dependent model specifications were estimated. The first, a simple logistic function, used conventional maximum likelihood techniques. This specification assumes no unique effects are associated with particular locations in the sample. A second specification, a fixed effect logit model, relaxes this assumption and permits the possibility of location specific effects.

Table A.1 Measures of Family Structure
(Sample Sizes in Parentheses)

Measures	1985		1994	
	Blacks	Whites	Blacks	Whites
All States				
Percentage of Families that Are Headed by Females[a]	18.346 (1221)	7.842 (2665)	29.084 (1365)	10.358 (2539)
Percentage of Females in Families Who Are Family Heads[b]	32.893 (681)	14.595 (1432)	50.509 (786)	18.799 (1399)
Percentage of Women Who Have Never Married Who Have Had a Baby[c]	50.385 (520)	14.450 (782)	47.619 (315)	16.402 (189)
States with Sentencing Guidelines				
Percentage of Families that Are Headed by Females[a]	17.895 (95)	6.803 (294)	23.113 (212)	8.492 (577)
Percentage of Women in Families Who Are Family Heads[b]	30.357 (56)	12.903 (155)	39.516 (124)	15.077 (325)
Percentage of Women who Have Never Married Who Have Had a Baby[c]	46.153 (39)	7.22 (97)	25.806 (31)	12.820 (39)
States without Sentencing Guidelines				
Percentage of Families that Are Headed by Females[a]	18.384 (1126)	7.971 (2371)	30.182 (1153)	10.907 (1962)
Percentage of Women in Families Who Are Family Heads[b]	33.120 (625)	14.800 (1277)	52.568 (662)	19.926 (1074)
Percentage of Women who Have Never Married Who Have Had a Baby[c]	50.73 (481)	15.47 (685)	50.000 (284)	17.333 (150)
States with Mandatory Minimum Sentences for Drug Related Offenses				
Percentage of Families that Are Headed by Females[a]		29.426 (836)	10.967 (1541)	
Percentage of Women in Families Who Are Family Heads[b]		51.037 (482)	19.836 (852)	
Percentage of Women who Have Never Married Who Have Had a Baby[c]		46.753 (231)	15.493 (142)	
States without Mandatory Minimum Sentences for Drug Related Offenses				
Percentage of Families that Are Headed by Females[a]			33.188 (229)	9.322 (472)
Percentage of Women in Families Who Are Family Heads[b]			58.461 (130)	17.742 (248)
Percentage of Women who Have Never Married Who Have Had a Baby[c]			50.000 (84)	19.149 (47)

Source: National Longitudinal Survey of Youth 1979-1996

1. The whole sample: Males and females living in their own housing unit as a member of non- single families.
2. The whole sample: Females living in their own housing unit as a member of non-single families.
3. The whole sample: Females who have never married.

Table A.1 shows that in all states, for both years studied, blacks were more likely than whites to live in a female headed family, be a female head of family, or have an out of wedlock birth. Between 1985 and 1994 while living in a female-headed family or being a female head of family increased for both blacks and whites, both groups saw the percent of never married women with a child remain steady.

When comparing states with and without sentencing reforms, the same differences emerge in both 1985 and 1994. Blacks in either category of state were more likely than whites to live in one of the three family structures. In states without guidelines, the percentage of never married women with a child remained steady, similar to the sample of all states. In states with guidelines, though, the black rate for never married women who had had a child declined almost 45 percent, while the rate increased among whites 44 percent.

Comparing the proportion of the community affected by these factors, one sees that each measure was higher for blacks and whites in states without sentencing guidelines than in states with sentencing guidelines. In examining states with and without mandatory minimum sentences for drug related offenses, the same patterns found for all states and states with and without sentencing guidelines hold true for 1994. Blacks were more likely than whites to be affected by living in a female headed family, being a female head of family, or being unmarried and having had an out of wedlock birth. Examination of states with and without mandatory minimum sentences was only possible for 1994.[1]

[1] It should be noted that the reliability of this analysis may be limited when compared to other population samples such as census tract or current population surveys since this analysis was based on the NLSY. The NLSY tracked a younger population (subjects as young as 14 years old in 1979) than other traditional samples, therefore issues affecting parenthood and family headship may have been delayed until later in the study.

Table A.2 The Marginal Effects of Imprisonment on Family Structure, Simple Logit Model, 1985

Dependent Variables:	Female-Headed Families		Females Who Are Family Heads		Never Married Women Who Have Given Birth	
Measures	Black	White	Black	White	Black	White
All States						
Admission Rate	-.004	-.002	-.018	-.003	-.002	.018
Release Rate	.004	-.004	.024	-.022	.006	-.026
Admission /Release	-.019	-.004	-.077	-.000	-.061	.006
States with Sentencing Guidelines						
Admission Rate	.056	.003	.030	-.020	.009	-.027
Release Rate	-.062	.113	-.041	.319	-.006	.246
Admission /Release	.156	.030	.148	.082	.107	-.038
States without Sentencing Guidelines						
Admission Rate	-.009	-.007	-.026	-.014	-.005	.017
Release Rate	.009	-.004	.059	-.048	.031	-.205
Admission /Release	-.025	-.007	-.084	-.008	-.066	.005

Source: National Longitudinal Survey of Youth 1979-1996, Urban Institute Underclass Data Base, National Corrections Program Data Base

* Asterisks indicate Wald test for significance of coefficients * $p<.10$ ** $p<.05$

Table A.2 illustrates the effects of prison admission, prison release, and a ratio of admissions to releases on family structure, in 1984, by using the simple logit model. A marginal increase of one percent produces the corresponding decrease or increase in family structure. Unfortunately, this model did not yield any statistically significant results to help determine the impact of inmate flows on the community or family structure.

Table A.3 The Marginal Effects of Imprisonment on Family Structure, Simple Logit Model, 1994

Dependent Variables:	Female Headed Families		Females Who Are Family Heads		Never Married Women Who Have Given Birth	
Measures	Black	White	Black	White	Black	White
All States						
Admission Rate	.001	-.044	-.006	-.087	-.002	-.016
Release Rate	.004	.051	.013	.100	.009	.014
Admission /Release	-.005	-.032	.046	-.066	-.083	-.176
States with Sentencing Guidelines						
Admission Rate	.003	-.032	-.003	-.042	-.009	-.054
Release Rate	-.015	.054	-.017	.097	-.0003	.056
Admission /Release	-.023	.003	-.157	-.012	-.199	-.057
States without Sentencing Guidelines						
Admission Rate	-.0004	-.043	-.010	-.086	.003	-.007
Release Rate	.004	.049	.014	.095	-.0003	.008
Admission /Release	-.006	-.067	.038	-.128	-.050	-.020
States with Mandatory Minimum Sentences for Drug Related Offenses						
Admission Rate	-.003	-.042	-.017	-.093	-.004	-.009
Release Rate	.009	.048	.027	.103	.010	.010
Admission /Release	.052	-.023	-.050	-.062	-.168	-.027
States without Mandatory Minimum Sentences for Drug Related Offenses						
Admission Rate	.031	-.049	.076**	-.050	.043*	-.019
Release Rate	-.032	.066	-.085**	.083	-.043*	.011
Admission /Release	-.033	-.089	.935**	-.112	.349	-.019

Source: National Longitudinal Survey of Youth 1979-1996, Urban Institute Underclass Data Base, National Corrections Program Data Base

* Asterisks indicate Wald test for significance of coefficients * p<.10 ** p<.05

Table A.3 illustrates the 1994 results for the same type of logit model used for 1985. In this case, the analysis did yield a few significant results for states without mandatory minimum drug-related sentences. In these states, prison admission increased the number of black females who are heads of family, while release reduced the number of affected women. The ratio of admissions to releases indicates that overall admissions have a greater impact on family structure than do releases. The same can be seen for the number of never married women who have given birth. The effect of admissions increasing births appears to be offset by releases decreasing births, but the admission/release ratio indicates that overall admissions have a greater impact which results in more births.

Table A.4 The Marginal Effects of Imprisonment on Family Structure, Fixed Effect Logit Model, 1985

Dependent Variables:	Female Headed Families		Females Who Are Family Heads		Never Married Women Who Have Given Birth	
Measures	Black	White	Black	White	Black	White
All States						
Admission Rate	-.005	-.003	-.029	.012	-.024	.007
Release Rate	.005	-.008	.033	-.041	.019	-.022*
Admit /Release	.010	-.009	-.105	-.009	-.103	.009
States with Sentencing Guidelines						
Admission Rate	-.326	.020	.481	.025	-1.430	.0000
Release Rate	.038	.026	-.884	.065	1.659	.0000
Admit /Release	.313	.017	5.151	.036	-8.819	.0000
States without Sentencing Guidelines						
Admission Rate	-.020	-.005	-.056	.005	-.051	.011
Release Rate	.019	-.008	.057	-.045	.044	-.028**
Admit /Release	-.025	-.014	-.170	-.021	-.156	.010

Source: National Longitudinal Survey of Youth 1979-1996, Urban Institute Underclass Data Base, National Corrections Program Data Base

* Asterisks indicate Wald test for significance of coefficients * $p<.10$ ** $p<.05$

For Table A.4, the researchers used a fixed effect logit model to study the relationship between prison admission/release and family structure in 1985. Few statistically significant results emerged. In all states and states without sentencing guidelines, prison release reduced the number of never married white women who had a child.

Table A.5 The Marginal Effects of Imprisonment on Family Structure, Fixed Effect Logit Model, 1994

Dependent Variables:	Female Headed Families		Females Who Are Family Heads		Never Married Women Who Have Given Birth	
Measures	Black	White	Black	White	Black	White
All States						
Admission Rate	.021*	-.031	.019	-.070	.061**	-.002
Release Rate	-.020*	.031	-.020	.073	-.076**	.002
Admit /Release	.004	-.026	.042	-.063	1.346***	-.029
States with Sentencing Guidelines						
Admission Rate	-.002	-.067	-.0000	-.169	-.359	.0000
Release Rate	.002	.131	.0000	.331	.408	-.0000
Admit /Release	-.0000	.002	-.0000	.010	-3.222	-.001
States without Sentencing Guidelines						
Admission Rate	.024**	-.012	.025	-.027	.068**	-.0001
Release Rate	-.024**	.011	-.028	.025	-.088**	.0000
Admit /Release	.005	-.009	.270	-.037	1.773***	-.002
States with Mandatory Minimum Sentences for Drug Related Offenses						
Admission Rate	.017	-.009	.013	-.027	.026	.002
Release Rate	-.016	.009	-.010	.025	-.015	-.004
Admit /Release	.203*	-.007	.043	-.012	.947*	-.004
States without Mandatory Minimum Sentences for Drug Related Offenses						
Admission Rate	.021	-.044	-.029	-.075	-.0000	.001
Release Rate	-.005	.095	.041	.202	.0000	-.0002
Admit /Release	-.203	-.079	-.001	-.084	3.151	.001

Source: National Longitudinal Survey of Youth 1979-1996, Urban Institute Underclass Data Base, National Corrections Program Data Base

* Asterisks indicate Wald test for significance of coefficients * p<.10 ** p<.05

Table A.5 presents the results for 1994 of the fixed effect logit model. Of the four logit models, this analysis yielded the most significant results. Among all states, prison admission increases and prison release decreases the number of black female-headed families and the number of black out of wedlock births. The admission/release ratio indicates, however, that admissions have a greater impact than releases on out of

wedlock births. The same pattern is found among blacks in states without sentencing guidelines. Finally, in states with mandatory minimum drug sentences the black admission/release ratio indicates that admissions increase out of wedlock births.

Due to the small number of statistically significant results yielded in Module A, the researchers were not able to confirm or not confirm that sentencing guidelines and minimum drug related sentences impact family structure. The results of all regressions for Module A can be found in Appendix 3.

Module B: Sentencing Reforms

Methods and Procedures

This module examined the effects of statewide incarceration and sentencing changes on marriage markets and family structure. It used Current Population Survey (CPS) data to re-estimate sex-ratio and family structure equations drawn from Darity and Myers (1984; 1995). Using CPS data, the earlier model was re-estimated separately for states with and without sentencing reforms, in 1985 and 1995, and for states with and without mandatory minimum sentences for drug related crimes, in 1995. The analysis permitted a test of the hypothesis: there are no differences in the impacts of incarceration on sex-ratios and/or family structures between states with sentencing reforms and those without and between states with and without minimum drug related sentences.

Data Collection

This analysis combined data on state incarceration and state sentencing reforms with Current Population Survey data on individuals (for the Darity-Myers Sex Ratio) and families (for the family structure equations). The data was constructed for 1985 and 1995, and by states with and without sentencing guidelines, and by states with and without mandatory minimum drug-related sentences. The research team also assembled state level data for use in the sex ratio and welfare recipiency equations. Data sources for included the U.S. Census, Statistical Abstracts, Bureau of Labor Statistics and the Centers for Disease Control.

The Model and Specification of Variables

The underlying model estimated in Module B consisted of two measures. One is the Darity-Myers Sex Ratio (Darity and Myers,1995) which is the ratio of unmarried males in the labor force or school to unmarried females. It is computed by estimating two separate possibilities – the probability of being unmarried, male, and in the labor force, and the probability of being an unmarried female. Equation 2 shows that these two probabilities are functions of state-level variables, e.g. homicide rate and incarceration rate (*S*), as well as individual-level variables, *x*. The model is estimated separately for two time periods *(t)* – 1985 and 1995 – to capture changes in sentencing reforms. The model is also estimated separately for two partitions of states *(S)* – states with and without sentencing guidelines.

$$Prob_t^r(umlf) = f^r(x_{it} S_t)$$
$$Prob_t^r(uf) = f^r(x_{it} S_t) \quad \text{Eq. 2}$$

The second measure is the amount of expected welfare, which is calculated by measuring the probability of receiving AFDC assistance given that one is a family head. Then, given one is a family head who receives AFDC, what are the determinants of the level and amount of AFDC received? Finally, the two previous equations are used to estimate the expected annual AFDC income for the entire sample of family heads. Expected welfare is estimated as the product of the probability of AFDC recipiency and the estimated annual AFDC income (Darity and Myers, 1990).

Data Analysis

The researchers calculated the Darity-Myers sex ratio for male family heads in the labor force to female family heads in all states and in states with and without sentencing guidelines for 1985 and 1995. For 1995, measures were also estimated for states with and without mandatory minimum drug-related sentences.

The team then computed the partial effect of sentencing guidelines on sex ratio and the partial effect of sex ratio on female-headed families. They also computed the partial and total effect of guidelines on female headed families. The equations for each effect are found in Table B.3.

Finally, the elasticities of sex ratio and welfare receipt were computed and calculated for their effect on female-headed families. Both a simple logit and fixed effect logit model were calculated.

Results

Table B.1 Means of Darity-Myers Sex Ratio and Welfare Estimates, 1985

	Darity-Myers Sex Ratio	Expected Welfare
All States		
Total (N=39803)	0.363	$ 16 .900
Blacks (N=4461)	0.255	$165.453
Whites(N=35342)	0.379	$ 6.805
States with Sentencing Guidelines		
Total (N=5275)	0.355	$ 20.523***
Blacks (N=601)	0.266	$152.723
Whites (N=4674)	0.360	$ 12.085***
States without Sentencing Guidelines		
Total (N=34529)	0.366***	$ 16.485
Blacks (N=3860)	0.255	$170.833***
Whites(N=30669)	0.383***	$ 6.077

Source: Current Population Survey

* Asterisks indicate t test for the difference between states with sentencing guideline states and those without sentencing guidelines * p<.10 ** p<.05 *** p<.01

To obtain the Table B.1 results, the researchers measured the mean sex ratio and expected amount of welfare received among family heads. After analyzing the overall population without regard to race and with regard to race, the researchers then controlled for those states with sentencing guidelines and those without.

The analysis did not yield many significant results. In states without sentencing guidelines, in 1985, whites have a higher sex ratio of .383, than the general population, .366. In states with sentencing guidelines, white family heads receive lower welfare payments than the general population, $12.085 to $20.523.

Table B.2 Means of Darity-Myers Sex Ratio and Welfare Estimates, 1995

	Darity-Myers Sex Ratio	Expected Welfare
All States		
Total (N=21312	0.433	$ 19.370
Blacks (N=2661)	0.277	$171.410
Whites(N=18651)	0.458	$ 7.420
States with Sentencing Guidelines		
Total(N=8052)	0.464***	$ 18.240
Blacks (N=1012)	0.285***	$155.548
Whites(N=7040)	0.491***	$ 6.543
States without Sentencing Guidelines		
Total(N=13260)	0.414	$ 20.435***
Blacks (N=1649)	0.269	$186.444***
Whites(N=11611)	0.439	$ 8.108***
States with Mandatory Minimum Drug-Related Sentences		
Total(N=13304)	0.431	$ 19.470
Blacks (N=1597)	0.284	$201.475***
Whites(N=11707)	0.452	$ 6.478
States without Mandatory Minimum Drug-Related Sentences		
Total(N=8008)	0.436***	$ 19.845***
Blacks (N=1064)	0.272	$129.592
Whites(N=6944)	0.466***	$ 9.897***

Source: Current Population Survey

* Asterisks indicate t test for the difference between sentencing guideline states and non- sentencing guideline states * p<.10 ** p<.05 *** p<.01

The analysis illustrated in Table B.2 is similar to that of B.1 except that for 1995 a control for states with mandatory minimum drug related sentences was included in addition to the control for sentencing guidelines. This analysis yielded a greater number of significant results.

In states with sentencing guidelines, the population in general and the white population have a much higher sex ratio than does the black population. In states without guidelines, the amount of welfare received among blacks is 9 and 23 times higher than among the general and white populations, respectively.

In states without mandatory minimum drug sentences, one can see that whites have a higher sex ratio than the general population, and whites receive less welfare than does the general population.

Table B.3 Effects of Sentencing Guidelines and Mandatory Minimum Drug Sentences on Sex Ratio and Female-headed Families, 1985 and 1995

	Total	Blacks	Whites
Effect of Sentencing Guidelines			
1985			
Partial Effect of Sentencing Guidelines on Sex Ratio [a]	0.001	-0.003	0.002
Partial Effect of Sex Ratio on Female-headed Families [b]	-.194***	-.399***	-.151***
Partial Effect of Sentencing Guidelines on Female-headed Families [c]	-0.012**	0.014	-0.007
Total Effect of Sentencing Guidelines on Female-headed Families [d]	-0.012*	0.015	-0.007
1995			
Partial Effect of Sentencing Guidelines on Sex Ratio [a]	0.001	-0.002	0.010
Partial Effect of Sex Ratio on Female-headed Families [b]	-.114***	-.342***	-.079***
Partial Effect of Sentencing Guidelines on Female-headed Families [c]	0.005	-0.038*	0.003
Total Effect of Sentencing Guidelines on Female-headed Families [d]	0.005	-0.037	0.003
Effect of Mandatory Minimum Drug Sentences: 1995			
Partial Effect of Minimum Sentences on Sex Ratio [a]	-.003*	-.009*	.008*
Partial Effect of Sex Ratio on Female-headed Family [b]	-.114***	-.349***	-.079***
Partial Effect of Drug enforcement on Female-headed Family [c]	.020***	.055*	.001
Total Effect of Drug enforcement on Female-headed Family [d]	.020***	.058*	.0002

Source: Current Population Survey

$$a.\ \frac{\partial sex-ratio}{\partial x} \quad b.\ \frac{\partial FHH}{\partial sexratio} \quad c.\ \frac{\partial FHH}{\partial x} \quad d.\ \frac{\partial FHH}{\partial sex-ratio} * \frac{\partial sex-ratio}{\partial x} + \frac{\partial FHH}{\partial x},$$

where x is for sentencing guidelines or minimum drug sentences. * p<.10 ** p<.05 *** p<.01

In Table B.3, the partial effect of sex ratio on female family headship is the most significant result of the analysis. In both 1985 and 1995, sex ratio helped reduce the number of female-headed families. In both years, the impact of reducing female-headed families was greater among blacks than whites.

In 1985, the partial and total effect of sentencing guidelines also helped reduce female family headship slightly among the general population. Reliable results about white and blacks separately were not obtainable. However, in 1995, there is a partial effect of sentencing guidelines on reducing black female family headship.

There are many interesting results on the impact of minimum drug sentences on sex ratio and female family headship. First, minimum sentences reduce the sex ratio among the general population and black population, but increase it among whites. However, among all communities the sex ratio reduces female family headship, but most significantly in the black community. The direct partial and total effect of minimum drug sentences on female-headed families, though, is an increase in such families in the general and black populations.

Table B.4 Elasticity of Sex Ratio and Welfare Recipiency on Female Headed Families, Simple Logit Model, 1985 and 1995

	Sex Ratio		Welfare	
	1985	1995	1985	1995
All States				
Total	-0.469***	-0.466***	0.074***	0.067***
Blacks	-0.203***	-0.233***	0.197***	0.193***
Whites	-0.501***	-0.486***	0.032***	0.038***
States with Sentencing Guidelines				
Total	-0.420***	-0.470***	0.060***	0.063***
Blacks	-0.156***	-0.238***	0.254***	0.155***
Whites	-0.387***	-0.470***	0.028***	0.037***
States without Sentencing Guidelines				
Total	-0.479***	-0.428***	0.076***	0.067***
Blacks	-0.209***	-0.214***	0.192***	0.194***
Whites	-0.519***	-0.438***	0.032***	0.038***
States with Mandatory Minimum Sentences for Drug-Related Offenses				
Total		-0.493***		0.098***
Blacks		-0.208***		0.284***
Whites		-0.479***		0.046***
States without Mandatory Minimum Sentences for Drug-Related Offenses				
Total		-0.409***		0.050***
Blacks		-0.215***		0.162***
Whites		-0.458***		0.032***

Source: Current Population Survey
* p<.10 ** p<.05 *** p<.01

Table B.4, which illustrates the results of a simple logit model in 1985 and 1995, shows that the sex ratio reduces female headed families while welfare receipt appears to increase the number of families. This is true in all states, states with and without guidelines, and states with and without minimum drug related mandatory sentences.

The amount of impact among communities and between 1985 and 1995 does vary, however. Among the general population, the sex ratio reduced female-headed families slightly between 1985 and

1995 in all states and in states without sentencing guidelines. The impact increased in states with sentencing guidelines.

Among blacks, the sex ratio's impact in reducing female-headed families increased in all three categories of states. Whites, however, followed the pattern of the general population; sex ratio's impact decreased in all states and states without guidelines, but increased significantly in states with guidelines. The increase was twice as great as among blacks.

The role of welfare in increasing female family headship varied across categories of states and years studied. Between 1985 and 1995 in all states, the impact of welfare decreased among the general population and blacks, but increased among whites. In states with sentencing guidelines, the impact of welfare increased among the total and white populations, but decreased among blacks. In states without sentencing guidelines, the impact of welfare declined among the general population, but increased among blacks and whites. In this case, however, the amount of the increase among blacks is about six times higher than among whites.

Data about states with minimum mandatory drug-related sentences was only available for 1995. The sex ratio was twice as large among whites than blacks in reducing female-headed families. Conversely, welfare had a much larger impact in increasing the number of black female-headed families than white female headed families. However, comparing the size of impact in states with and without minimum sentences, the actual impact is pretty comparable between the two categories.

Table B.5 Elasticity of Sex Ratio and Welfare on Female-headed Families, Fixed Effect Logit Model, 1985 and 1995

	Sex Ratio		Welfare	
	1985	1995	1985	1995
All States				
Total	-.471***	-.508***	.078***	.074***
Blacks	-.210***	-.217***	.202***	.181***
Whites	-.504***	-.481***	.032***	.038***
States with Sentencing Guidelines				
Total	-.472***	-.535***	.069***	.071***
Blacks	-.175***	-.209***	.262***	.147***
Whites	-.400***	-.476***	.029***	.038***
States without Sentencing Guidelines				
Total	-.480***	-.506***	.079***	.074***
Blacks	-.216***	-.224***	.197***	.203***
Whites	-.523***	-.450***	.032***	.038***
States with Mandatory Minimum Sentences for Drug Related Offenses				
Total		-.569***		.105***
Blacks		-.182***		.275***
Whites		-.493***		.046***
States without Mandatory Minimum Sentences for Drug Related Offenses				
Total		-.484***		.058***
Blacks		-.208***		.170***
Whites		-.462***		.033***

Source: Current Population Survey
* p<.10 ** p<.05 *** p<.01

The analysis displayed in Table B. 5 used a fixed effect versus a simple logit model . The general trends are similar to those above – sex ratio helps reduce the number of female-headed families, while welfare recipiency increases them.

Between 1985 and 1995, in all states and in states with and without sentencing guidelines, the impact of sex ratio on reducing female-headed families grew. This was also true among blacks. Among whites the impact lessened in all states and states without guidelines, but increased in states with guidelines. However,

as above, the overall impact of sex ratio is more than twice as great on whites than on blacks.

Examining the role of welfare receipt on female headed families, the greatest overall impact is on the black community; the effect is about six times higher among blacks that whites. However, between 1985 and 1995, the impact decreased among blacks in all states and states with sentencing guidelines and only increased in states without guidelines. Among the general population, however, the only increase between 1985 and 1995 was in states with guidelines. For whites, the role of welfare increased in all three categories of states.

In states with and without minimum drug-related sentences, the role of sex ratio in reducing female headed families was more than twice as great as among whites than blacks, but the greatest impact is among the entire population. In states with and without minimum sentences, the impact of welfare is greater in states with minimum sentences for all population groups. However, the differential between whites and blacks is less than in Table B.4.

Although the findings in Module B support a connection between sex ratio and family structure, there is no conclusive evidence that sentencing guidelines for minimum drug related sentences impact family structure. The regression results for Module B can be found in Appendix 4.

Module C: Family Status and Incarceration in Minnesota

Methods and Procedures

The third part of the analysis looked at Minnesota. Researchers, working with the Minnesota Department of Corrections, sought a random sample of 500 inmates and interview them about their family backgrounds, children, and marital relations. This data collection was changed once the project was underway. To better manage data collection, the Minnesota Department of Corrections interviewed all inmates entering Minnesota prisons between July 1, 1997 and April 27, 1998.

The Department of Corrections matched criminal records to interview data. Staff merged census data by the zip codes of where inmates lived when arrested for their current convictions. Staff also merged

victimization data from a state crime survey. These data are individual level data with zip codes. This permitted the study of: are the places inmates left are more predictive of their leaving children behind or are their own characteristics more predictive of this measure of distress.

The central hypothesis in this module is that neighborhoods that lose young men to imprisonment are different from other neighborhoods and as such contribute to the differences in outcomes that prisoners face. The major outcome studied is the likelihood that prisoners have left dependents behind. This measure was studied -- rather than marriage or family status -- because it was believed that it captured a broader array of the circumstances inmates face. This hypothesis, then, suggests that location-specific factors play an important role in influencing the dependency that results when inmates leave behind children. The task was to compare location effects and inmate effects.

Data Collection

Between July 1, 1997 and April 27, 1998, social workers interviewed all inmates entering the Minnesota prison system. Each inmate was asked about age, education, employment as well as number of dependent children, veteran status, and if this was their first incarceration, and if they came from a state other than Minnesota. This data was then merged with zip code level data to gain a better understanding of the strength of the home community to determine if community characteristics can affect the possibility of incarceration. Inmates were grouped by community and individual data was extracted based on the aggregate of each inmate group.

The Model and Specification of Variables

Two different levels of aggregation were explored. The first looked at the determinants of the likelihood individual inmates leave dependents behind. The mean of the overall sample was 62 percent. The mean for whites was 57percent and for blacks 71 percent. The mean for other races was 58 percent. There were two sets of possible determinants of the probability that an inmate had dependents. One set included individual inmate characteristics, such as age, race, gender, education, employment at time of arrest, new admission, and out-of-state residency. Another set of determinants included location characteristics of where the inmates last lived. These factors included victimization rates, poverty rates, home ownership rates, race and age distributions.

Equation 3 is a logistic equation for Z^k, the probability of the kth inmate having dependents. There

$$Z^k = \frac{1}{1+\exp-(\sum \beta_i x_i^k + \sum \gamma_i w_i^k)} \quad \text{Eq. 3}$$

are two sets of independent variables in the equation. The x's denote individual-level determinants. The w's represent location-level determinants.

A different aggregation focused on the values of the dependent and independent variables *at the zip-code level.* The specific grouping of zip codes referred to the locations from which the inmates came. Z indicates the percent of inmates from a particular zip code who have dependents. Another way of interpreting Z is as the incidence of dependents at the locations where inmates last lived. The value of Z is 60 percent for all inmates, 67 percent for blacks and 58 percent for white inmates. It is 59 percent for all other races. The superscript j indicates the jth zip code from which the inmates with the measured variable come. The variable, w_j, is location specific factors, and variable, x_i, is individual factors. Conventional ordinary least squares estimates can be used to obtain the coefficients, β_i and γin the equation.

$$\ln(\frac{Z^j}{1-Z^j}) = \sum \beta_i x_i^j + \sum \gamma^j w_i^j \quad \text{Eq. 4}$$

Data Analysis

To determine the relative effects of individual vs location-level variables in equation 4, we computed the changes in Z were computer for each independent variable. The discrete changes in the independent variables were evaluated at the difference between the highest and lowest values of the independent variables. This calculation provides two complementary ways of assessing the relative contributions of individual vs location-specific variables in order to explain changes in the probability that an inmate has left behind dependents.

To determine the relative contributions of inmate vs location-specific effects in the aggregate model, conventional analysis of variance methods was used. Here we obtained the percent of the variance in the linear regression that can be explained by the inmate variables as opposed to the location variables.

Results

Table C.1 Determinants of Incarceration on Inmate Family Structure, Individual Level **Analysis** (Wald statistics in Parentheses)

	Dependent Variables: Having Dependents (N=811)			
Independent Variables	Coef	(1) P $\|_{x=max}$	(2) P $\|_{x=min}$	$(P\|_{x=max} - P\|_{x=min})/(X_{max} - X_{max})$
Constant	-2.750 (6.266)			
Male (inmate)	-.700 (4.064)	.620	.750	-.131
Age (inmate)	.096 (64.911)	.970	.350	.014
Education (inmate)	-.106 (3.331)	.501	.827	-.019
Black (inmate)	.798 (15.142)	.726	.567	.158
Veteran (inmate)	-.231 (.464)	.585	.632	-.047
Being Employed at Arrest (inmate)	.494 (5.822)	.703	.607	.096
New Admission (inmate)	.130 (.259)	.632	.605	.026
Came from Other States (inmate)	.312 (2.867)	.646	.583	.063
Sub Total (1)				.162
Proportion of Victimized Experience (location)	-.001 (.036)	.604	.632	-.0002
Proportion of people at Poverty Level (location)	.042 (5.254)	.797	.509	.007
Proportion of Living in their Own House (location)	.019 (3.301)	.729	.391	.004
Proportion of People with Age under 18 (location)	-.010 (.249)	.596	.680	-.002
Proportion of Blacks (location)	.001 (.004)	.634	.628	.0001
Sub Total (2)				.009

Source: Department of Correction, Census 1990, and Minnesota Crime Survey

Table C.1 reports the results of estimating equation 3. The first set of columns is the computation of Z for the minimum and maximum values of each independent variable. The next column provides the discrete change in Z as a result of a change in x or w between the minimum and maximum

values of x or w. Summing up the values computed for the x's and w's provides a measure of the sum of the incremental effects on the probability of leaving dependents behind due to a) individual-level inmate factors, and b) location-level variables.

The results show that the contribution of inmate characteristics is 16 times larger than the contribution of location characteristics. The sum of the incremental impacts due to inmate factors is .1625 while the sum of the incremental impacts due to location factors is only .0104. The Wald statistics show that few of the location-specific factors are statistically significant. Among all the location-specific factors, only poverty rates emerge as significant at the 5 percent level. In contrast, gender, age, education, race, and employment at arrest are all statistically significant individual inmate factors that contribute to the differences in the probability that an inmate leaves behind dependents. Thus, inmate characteristics and not location factors are the dominant determinants of the probability that children are left behind.

Table C.2 Effects of Incarceration on Inmate Family Structure
(T statistics in Parentheses)

		Dependent Variables: Log-Odds of Inmates with Dependents (N=202 zip code level)		
	Independent Variables	Characteristics of Inmates	Characteristics of Locations	Characteristics of Inmates and Locations
Characteristics of Inmates	Constant	-11.378	-6.957	-26.411
		(-2.069)	(-1.657)	(-3.860)
	Males	-2.090		-2.171
		(-.730)		(-.777)
	Age	.476***		.475***
		(6.258)		(6.424)
	Education	-.412		-.182
		(-1.225)		(-.548)
	Blacks	.756		3.560**
		(.500)		(1.951)
	Veterans	-1.477		-1.901
		(-.679)		(-.885)
	Employed at least 6	2.532**		2.663
	Months when Arrested	(1.938)		(2.058) **
	First Time Admissions	3.808**		4.111***
		(2.076)		(2.280)
	Came from Other States	1.353		1.070
		(.948)		(.757)
Characteristics of Locations	Victimization Rate		.431	1.261
			(.123)	(.403)
	Poverty Rate		.219***	.294***
			(2.457)	(3.696)
	Home Ownership Rate		.070	.112**
			(1.137)	(2.080)
	Percent of Population		.027	.018
	Under 18		(.223)	(.171)
	Percent of Blacks		-.079	-.168
			(-.663)	(-1.453)
	F	8.399	1.499	6.807
	Percentage of Variance of the Dependent Variables explained by the Characteristics of Inmates		***28.32***	
	Percentage of Variance of the Dependent Variables explained by the Characteristics of Locations		***6.18***	

Source: Department of Correction, Census 1990, and Minnesota Crime Survey
* Asterisks indicate Wald test for significance of coefficients
* p<.10 ** p<.05 *** p<.01

Table C.2 reports a parallel exercise designed to assess the impacts of inmate characteristics vs location-specific factors on the likelihood that children are left behind. The data were aggregated in this exercise at the zip-code level. The inmate characteristics, therefore, relate to the characteristics of inmates who reported particular zip codes as their last address. Significant determinants of the log-odds that inmates left dependents behind include: age, employed at time of arrest, first-time admission, and poverty. Older inmates, those who were employed at the time of their arrest, first-time offenders and those coming from high poverty zip-codes are more likely to have left dependents behind.

After measuring separately the individual characteristics of inmates and the location variables, and then measuring individual and location together, one can compute the relative importance of each in explaining the variance in the dependent variables. Individual characteristics have a much larger impact on incarceration than do location characteristics. The variance of dependent variables measured by individual characteristics is 28 percent versus six percent for location variables.

Taken together, then, the two tables lend little support for the hypothesis that the locations from which inmates come have characteristics that explain much of the difference among inmates of whether they leave children behind or not. In fact, it appears that inmates who have worked in the past 6 months or who are first offenders are the ones most likely to leave behind children, regardless of the neighborhoods or the zip-codes from which they come. Although these tables lend little support for the location effects hypothesis, they still suggest that imprisonment hurts families most when the persons imprisoned are those who were recently employed or who are first offenders.

Appendix 1: Definition of States With and Without Sentencing Guidelines and States with and without Minimum Mandatory Sentences for Drug Related Offenses

States with Sentencing Guidelines

The Bureau of Justice Assistance (BJA) defines (Bureau of Justice, 1996) defines two types of sentencing guidelines, which are combined to form the list below. The BJA defines presumptive sentencing guidelines as:

> Sentencing that meets the following conditions: (1) the appropriate sentence for an offender in a specific case is presumed to fall within a range of sentences authorized by sentencing guidelines that are adopted by a legislatively created sentencing body, usually a sentencing commission; (2) sentencing judges are expects to sentence within the range or provide written justification for departure; (3) the guidelines provide for some review, usually appellate, of the departure. Presumptive guidelines may employ determinate or indeterminate sentencing structures.
>
> Voluntary/advisory sentencing guidelines are:
>
> Recommended sentencing policies that are not required by law. Usually based on past sentencing practices, they serve as a guide to judges. The legislature has not mandated their use. Voluntary/advisory guidelines may employ determinate or indeterminate sentencing structures.

In the table below, voluntary/advisory guidelines states are indicated by an asterisk. All others are presumptive states.

States with sentencing guidelines are those defined as using sentencing guidelines as their primary form of sentencing. If states, have more than one form of sentencing the more dominant form is how they were categorized by the Bureau of Justice. Sixteen states fulfilled this definition. States were categorized based on their sentencing structure as of February 1994, with the exception of North Carolina, where guidelines took effect in October 1994 (Bureau of Justice, 1996).

U.S. States and the District of Columbia which Do and Do not Employ Sentencing Guidelines, as of February 1994	
States with Sentencing Guidelines	States without Sentencing Guidelines
Arkansas* Delaware Florida Kansas Louisiana* Maryland* Michigan* Minnesota North Carolina Oregon Pennsylvania Tennessee Utah Virginia* Washington Wisconsin*	Alabama Alaska Arizona California Colorado Connecticut Dist. of Columbia Georgia Hawaii Idaho Illinois Indiana Iowa Kentucky Maine Massachusetts Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Dakota Ohio Oklahoma Rhode Island South Carolina South Dakota Texas Vermont West Virginia Wyoming
Source: Bureau of Justice Assistance, *National Assessment of Structured Sentencing*, Washington, DC: Bureau of Justice Assistance, 1996, p. 20 - 21.	

States with Mandatory Minimum Sentences for Drug Related Crimes

Over 30 states have mandatory minimum incarceration sentences for drug-related offenses. It is difficult, however, to ascertain the true range of offenses that are subject to the mandatory sentences. From state to state, the penalties that apply vary widely based on type of drug, amount of drug, or if the offender is "drug-dependent" not (Bureau of Justice, 1996).

U.S. States and the District of Columbia which Do Have and Do Not Have Mandatory Minimum Incarceration Sentences for Drug- Related Offenses, February 1994

States with Minimum Sentences		States without Minimum Sentences	
Alabama	Massachusetts	Hawaii	Virginia
Alaska	Michigan	Kansas	Washington
Arizona	Minnesota	Kentucky	Wyoming
Arkansas	Mississippi	Louisiana	
California	Missouri	Maine	
Colorado	Montana	Nebraska	
Connecticut	Nevada	New Hampshire	
Delaware	New Jersey	New Mexico	
Dist. of Columbia	North Carolina	New York	
Florida	North Dakota	Ohio	
Georgia	Pennsylvania	Oklahoma	
Idaho	Rhode Island	Oregon	
Illinois	South Carolina	Tennessee	
Indiana	South Dakota	Texas	
Iowa	West Virginia	Utah	
Maryland	Wisconsin	Vermont	

Source: Bureau of Justice Assistance, *National Assessment of Structured Sentencing*, Washington, DC: Bureau of Justice Assistance, 1996, p. 24 - 25

Appendix 2: Independent and Dependent Variables Used in Modules A, B, and C

Independent Variables Used in Module A		
Variable	Definition	Source
Age (age)	Age of respondent (personal variable)	National Longitudinal Survey of Youth
Level of Education Attained (educ)	Highest level of education attained (personal variable)	National Longitudinal Survey of Youth
Income (income)	Annual income of respondent	National Longitudinal Survey of Youth
Prison Admissions by County, 1984 (admit8_p)	The number of male admissions to prison per 1000 county male residents, by race, in 1984 (county variable)	National Correctional Reporting Program
Prison Releases by County, 1984 (rels8_p)	The number of male releases from prison per 1000 county male residents, by race, in 1984 (county variable)	National Correctional Reporting Program
Percent of Female Headed Families in County, 1984 (fhh8_p)	The percent of female headed households in county, by race, in 1984 (county variable)	Underclass Data Base
County Unemployment Rate, 1984 (unemp8_p)	The county's unemployment rate (percent), by race, in 1984 (county variable)	Underclass Data Base
County Poverty Rate, 1984 (povrat_8)	The county's poverty level (percent), by race, in 1984 (county variable)	Underclass Data Base
County Welfare Rate, 1984 (welf8_p)	The percent of county residents receiving welfare, in 1984 (county variable)	Underclass Data Base
County's Average Welfare Received, 1984 (avwelf_8)	The average amount of welfare county residents received, in 1984 (county variable)	Underclass Data Base
County's Black Population, 1984 (black8_p)	Size of county's black population (percent), in 1984 (county variable)	Underclass Data Base
County's College Educated Population, 1984 (col8_p)	Percent of county's population who have received at least a bachelor's degree, in 1984 (county variable)	Underclass Data Base
Central City Residency (cc_msa)	Indicator of residency in central city area (county variable)	National Longitudinal Survey of Youth
Prison Admissions by County, 1993 (admit9_p)	The number of male admissions to prison per 1000 county male residents, by race, in 1993 (county variable)	National Correctional Reporting Program
Prison Releases by County, 1993 (rels9_p)	The number of male releases from prison per 1000 county male residents, by race, in 1993 (county variable)	National Correctional Reporting Program

Percent of Female Headed Families in County, 1993 (fhh9_p)	The percent of female headed households in county, by race, in 1993 (county variable)	Underclass Data Base
County Unemployment Rate, 1993 (unemp9_p)	The county's unemployment rate (percent), by race, in 1993 (county variable)	Underclass Data Base
County Poverty Rate, 1993 (povrat_9)	The county's poverty level (percent), by race, in 1993 (county variable)	Underclass Data Base
County Welfare Rate, 1993 (welf9_p)	The percent of county residents receiving welfare, in 1993 (county variable)	Underclass Data Base
County's Average Welfare Received, 1993 (avwelf_9)	The average amount of welfare county residents received, in 1993 (county variable)	Underclass Data Base
County's Black Population, 1993 (black9_p)	Size of county's black population (percent), in 1993 (county variable)	Underclass Data Base
County's College Educated Population, 1993 (col9_p)	Percent of county's population who have received at least a bachelor's degree, in 1993 (county variable)	Underclass Data Base

Variables Used in Module B		
Variable	Definition	Source
Dependent Variables		
Unmarried Male (umlf_m)	An unmarried male in the labor force or in school. Used to construct probability of men in the labor force.	Current Population Survey
Unmarried Female (um_f)	An unmarried female, in or out of the labor force or school	Current Population Survey
Welfare Recipiency (dummy) (welf_d)	Dummy variable for welfare recipiency. Used to determine probability of AFDC recipiency.	SSA Annual Statistical Abstracts and state plans
Logarithm for Received Welfare (logwelf)	Log of annual AFDC income. Used to calculate expected welfare	SSA Annual Statistical Abstracts and state plans
Independent Variables		
Age (age)	Age	Current Population Survey
Age^2 (age2)	Square of the Age	Current Population Survey
Level of Education Attained (educ)	Highest level of education attained	Current Population Survey
Dependent Child Age 6 or Under (child6)	Number of children six years of age or younger.	Current Population Survey
Dependent Child Age 7 - 18 (child618)	Number of children between 7 and 18 years of age.	Current Population Survey
State Abortion Ratio (abort)	The ratio of abortion to births in state	Allan Guttmacher Institute and the Centers for Disease Control
State Institutionalization Rate, 1980 (inst80)	Percentage of men incarcerated by race.	Census Bureau and National Institute of Justice
State Mortality Rate, 1980 (mort80)	State mortality rate in 1980	U.S. Vital Statistics
State Population Density, 1980 (popden80)	State population density per square mile in 1980	U.S. Statistical Abstracts
State Black Population, 1980 (black80)	Size of state's black population (percent) in 1980	U.S. Statistical Abstracts
State Welfare Rate, 1980 (welfar80)	Percent of state residents receiving welfare in 1980	U.S. Statistical Abstracts
AFDC Income, 1980 (afdc80)	Amount of AFDC income received by respondent, in 1980	SSA Annual Statistical Abstracts and state plans
Home Ownership (dummy) (ownhous)	Dummy variable for home ownership	Current Population Survey
Residency in Northeastern U.S. (neast)	Indicator for residency in Northeastern United States	Current Population Survey

Residency in Midwestern U.S. (mwest)	Indicator for residency in Midwestern United States	Current Population Survey
Residency in Western U.S. (west)	Indicator for residency in Western United States	Current Population Survey
Central City Residency (dummy) (ccity)	Dummy variable for residency in central city area	Current Population Survey
Sentencing Guidelines State (dummy) (sguide)	Dummy variable for sentencing guidelines state (1 = has guidelines, 0= does not have guidelines)	Bureau of Justice Assistance
Expected Welfare Received (expwelf)	Amount of expected welfare received (instrument variable)	Constructed
Darity-Myers Sex Ratio (sexr_dm)	The Darity-Myers sex ratio of men in labor force to women in labor force	Constructed
Female-Headed Family (dummy) (f_head)	Dummy variable for female-headed family	Current Population Survey

Dependent Variables Employed in Module C		
Variable	Definition	Source
Marital Status (Marital)	Marital status of respondent. Single = 1, married or widowed or common law marriage = 2, separated or divorced = 3	Minnesota Department of Corrections
Single with Dependent Children (singlwdp)	Single with dependent children	Minnesota Department of Corrections
Single (single)	Inmate never Married (inmate variable)	Minnesota Department of Corrections
Marital Status, Not Single or Divorced (ma_wd_cl)	Inmate married or widowed or common law marriage (inmate variable)	Minnesota Department of Corrections
Marital Status, Not Single or Married (sep_divo)	Inmate separated or divorced (inmate variable)	Minnesota Department of Corrections
Male (male_in)	Male inmate (inmate variable)	Minnesota Department of Corrections
Age (age_in)	Age of inmate (inmate variable)	Minnesota Department of Corrections
Education Level Attained (educ_in)	Highest level of education attained by inmate (inmate variable)	Minnesota Department of Corrections
White (white_in)	White inmate (inmate variable)	Minnesota Department of Corrections
Black (black_in)	Black inmate (inmate variable)	Minnesota Department of Corrections
Veteran Status (veter_in)	Served in U.S. military (inmate variable)	Minnesota Department of Corrections
Employment Status when Arrested (emp_arr)	Inmate's employment status at time of arrest (inmate variable)	Minnesota Department of Corrections
Inmate's Number of Dependent Variables (dep_num)	Number of dependent variables applicable to inmate (inmate variable)	Minnesota Department of Corrections
New Inmate (newadm)	Newly admitted inmate (inmate variable)	Minnesota Department of Corrections
Victimization Experience (victim)	Had been victimized by crime at least once (location variable from MN crime survey)	Minnesota Crime Survey
Community 's Male Population (male_p)	Size of male population in community (percent) (location variable)	U.S. Census
Community's Female Headed Families (fhd_p)	Percent of female headed families in community (location variable)	U.S. Census

New Residents in Community (move_p)	Percent of residents newly moved into community (location variable)	U.S. Census
Community Poverty Level (poor_p)	Percent of community residents living at the poverty level (location variable)	U.S. Census
Home Ownership (ownhs_p)	Percent of home owners in community (location variable)	U.S. Census
Residents Under Age 18 (age17_p)	Percent of population under the age of 18 (location variable)	U.S. Census
Black Population (Black_p)	Size of black population (percent) (location variable)	U.S. Census

Appendix 3: Regression Results for Module A

Appendix Table A.1 Estimates of Female-Headed Families, Simple Logit Model
(Standard Errors in Parentheses)

	1985				1994			
Variables	Whites		Blacks		Whites		Blacks	
Constant	-2.807	-3.145	-7.132	-7.001	-2.191	-1.394	-2.434	-2.458
	(1.164)	(1.171)	(1.302)	(1.302)	(1.333)	(1.619)	(1.391)	(1.445)
Age	0.124	0.126	0.198	0.199	0.041	0.042	0.021	0.018
	(0.032)	(0.032)	(0.035)	(0.035)	(0.033)	(0.033)	(0.031)	(0.031)
Education	-0.097	-0.100	-0.042	-0.035	-0.102	-0.111	0.035	0.034
	(0.031)	(0.030)	(0.043)	(0.044)	(0.032)	(0.032)	(0.038)	(0.038)
Income	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Admission 93					-0.534		-0.002	
					(0.243)		(0.048)	
Release 93					0.062		0.018	
					(0.274)		(0.051)	
Admit93/						-0.845		-0.029
Release93						(0.704)		(0.292)
Admission 84	-0.131		-0.068		-0.349		0.010	
	(0.412)		(0.082)		(0.427)		(0.069)	
Release84	-0.072		0.067		0.162		-0.057	
	(0.450)		(0.084)		(0.451)		(0.070)	
Admit84/		-0.138		-0.190		-0.163		0.150
Release84		(0.272)		(0.265)		(0.278)		(0.207)
% of FHH	-0.030	-0.008	0.032	0.031	0.031	0.041	0.005	0.053
	(0.036)	(0.034)	(0.014)	(0.014)	(0.034)	(0.033)	(0.014)	(0.014)
Unemp Rate	-0.072	-0.054	0.047	0.047	0.034	0.046	0.013	0.050
	(0.051)	(0.048)	(0.024)	(0.024)	(0.107)	(0.104)	(0.031)	(0.027)
% of Poverty	-0.001	0.002	-0.007	-0.008	-0.005	-0.002	-0.011	-0.014
	(0.010)	(0.010)	(0.048)	(0.048)	(0.012)	(0.012)	(0.039)	(0.038)
% of welfare	-0.048	-0.068	0.000	-0.002	-0.011	-0.021	0.066	0.067
Recipiency	(0.078)	(0.077)	(0.070)	(0.068)	(0.064)	(0.059)	(0.063)	(0.064)
Average	0.003	0.003	-0.001	-0.001	0.000	0.000	-0.001	-0.000
Welfare Income	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
% of Blacks	-0.012	-0.008	-0.002	-0.001	-0.003	-0.000	-0.008	-0.009
	(0.010)	(0.010)	(0.011)	(0.010)	(0.012)	(0.012)	(0.010)	(0.010)
% of College	-0.007	-0.006	0.015	0.012	0.008	0.012	0.029	0.031
Graduate	(0.019)	(0.018)	(0.032)	(0.032)	(0.019)	(0.018)	(0.033)	(0.031)
Sentence	-1.928	-0.974	-0.299	-1.665	-0.436	-1.138	0.262	-0.248
guideline	(0.665)	(1.155)	(0.743)	(1.882)	(0.379)	(1.021)	(0.663)	(1.416)
guideline *	0.192		0.493		0.140		0.018	
admission	(1.660)		(0.323)		(1.106)		(0.152)	
guideline *	2.302		-0.536		0.066		-0.092	
release	(2.123)		(0.370)		(1.158)		(0.191)	
guideline *		0.719		1.371		0.878		-0.084
admit/release		(1.015)		(1.517)		(0.866)		(1.291)
Central city	0.612	0.562	0.214	0.229	-0.021	-0.106	0.092	0.100
	(0.187)	(0.181)	(0.231)	(0.228)	(0.199)	(0.197)	(0.181)	(0.177)
Chi-squared	152.60	142.86	92.491	93.927	79.005	73.935	55.155	52.999

Source: National Longitudinal Survey of Youth.

Appendix Table A.2 Estimates of the Probability of Being a Female Family Head , Simple Logit Model

(Standard Errors in Parentheses)

	1985				1994			
Variables	Whites		Blacks		Whites		Blacks	
Constant	-0.412	-1.015	-4.817	-4.438	-0.068	0.660	0.341	0.305
	(1.279)	(1.277)	(1.467)	(1.471)	(1.432)	(1.710)	(1.762)	(1.888)
Age	0.061	0.062	0.181	0.185	0.005	0.009	0.001	-0.001
	(0.034)	(0.034)	(0.040)	(0.040)	(0.035)	(0.035)	(0.039)	(0.038)
Education	-0.149	-0.147	-0.249	-0.234	-0.187	-0.198	-0.151	-0.149
	(0034)	(0.034)	(0.056)	(0.056)	(0.036)	(0.036)	(0.049)	(0.049)
Income	-0.000	-0.000	-0.000	-0.000	0.000	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Admission 93					-0.582		-0.041	
					(0.260)		(0.060)	
Release 93					0.646		0.057	
					(0.293)		(0.065)	
Admit93/						-0.879		0.152
Release93						(0.740)		(0.577)
Admission 84	-0.123		-0.120		-0.474		0.056	
	(0.445)		(0.090)		(0.440)		(0.083)	
Release84	-0.181		0.141		0.269		-0.069	
	(0.487)		(0.092)		(0.457)		(0.085)	
Admit84/		-0.073		-0.393		-0.214		0.101
Release84		(0.290)		(0.289)		(0.298)		(0.231)
% of FHH	-0.035	-0.005	0.039	0.039	0.032	0.048	0.014	0.021
	(0.037)	(0.035)	(0.016)	(0.015)	(0.037)	(0.035)	(0.017)	(0.017)
Unemp Rate	-0.063	-0.043	0.063	0.058	0.103	0.111	0.024	-0.007
	(0.052)	(0.049)	(0.027)	(0.027)	(0.116)	(0.113)	(0.037)	(0.034)
% of Poverty	-0.005	-0.000	0.002	-0.008	-0.004	0.000	-0.006	-0.007
	(0.010)	(0.010)	(0.053)	(0.052)	(0.013)	(0.013)	(0.049)	(0.048)
% of welfare	-0.057	-0.092	0.012	0.021	-0.033	-0.041	0.013	0.000
Recipiency	(0.081)	(0.081)	(0.075)	(0.074)	(0.068)	(0.063)	(0.080)	(0.084)
Average	0.004	0.004	-0.001	-0.001	0.001	0.000	0.001	0.001
Welfare Income	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
% of Blacks	-0.014	-0.008	-0.007	-0.010	-0.003	0.001	-0.004	-0.005
	(0.011)	(0.010)	(0.012)	(0.011)	(0.013)	(0.013)	(0.012)	(0.012)
% of College	-0.007	-0.005	0.046	0.043	0.009	0.014	0.048	0.043
Graduate	(0.021)	(0.020)	(0.037)	(0.038)	(0.020)	(0.019)	(0.039)	(0.037)
sentence	-2.057	-1.024	-8.262	-1.431	-0.532	-0.999	0.111	0.133
guideline	(0.679)	(1.150)	(0.835)	(1.954)	(0.398)	(1.089)	(0.744)	(1.686)
guideline *	-0.315		0.397		0.297		0.030	
admission	(1.745)		(0.345)		(1.164)		(0.172)	
guideline *	3.076		-0.336		0.012		-0.126	
release	(2.308)		(0.409)		(1.214)		(0.208)	
guideline *		0.807		1.086		0.797		-0.781
admit/release		(1.007)		(1.589)		(0.922)		(1.545)
Central city	0.767	0.699	0.272	0.337	0.037	-0.070	0.026	0.027
	(0.198)	(0.191)	(0.258)	(0.256)	(0.212)	(0.209)	(0.225)	(0.222)
Chi-squared	86.016	72.535	77.861	75.853	56.863	51.365	45.471	42.060

Source: National Longitudinal Survey of Youth.

Appendix Table A.3 Estimates of Never Married Women Who Have Had a Child, Simple Logit Model

(Standard Errors in Parentheses)

	1985				1994			
Variables	Whites		Blacks		Whites		Blacks	
Constant	2.298	1.315	-3.179	-3.330	-3.918	-0.906	-0.154	0.447
	(2.078)	(2.145)	(1.700)	(1.721)	(3.706)	(4.449)	(2.284)	(2.407)
Age	0.280	0.291	0.300	0.320	-0.028	-0.036	-0.087	-0.093
	(0.068)	(0.068)	(0.511)	(0.052)	(0.090)	(0.088)	(0.047)	(0.047)
Education	-0.632	-0.619	-0.435	-0.426	-0.278	-0.264	-0.172	-0.184
	(0.081)	(0.080)	(0.067)	(0.067)	(0.079)	(0.076)	(0.062)	(0.062)
Income	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Admission 93					-0.956		0.028	
					(0.632)		(0.075)	
Release 93					1.058		-0.003	
					(0.746)		(0.080)	
Admit93/						-2.403		-0.396
Release93						(2.081)		(0.752)
Admission 84	0.540		-0.020		0.743		0.054	
	(0.691)		(0.099)		(1.175)		(0.102)	
Release84	-0.881		0.035		-1.472		-0.167	
	(0.760)		(0.099)		(1.420)		(0.105)	
Admit84/		0.175		-0.266		-0.139		0.331
Release84		(0.511)		(0.300)		(0.885)		(0.331)
% of FHH	-0.046	-0.032	0.020	0.024	-0.049	-0.045	0.075	0.063
	(0.064)	(0.061)	(0.018)	(0.018)	(0.097)	(0.095)	(0.023)	(0.022)
Unemp Rate	-0.163	-0.158	0.040	0.032	0.648	0.551	0.057	0.069
	(0.090)	(0.086)	(0.031)	(0.030)	(0.317)	(0.293)	(0.045)	(0.040)
% of Poverty	-0.012	-0.014	-0.050	-0.058	0.069	0.080	0.060	0.050
	(0.019)	(0.019)	(0.061)	(0.061)	(0.038)	(0.037)	(0.062)	(0.060)
% of welfare	0.160	0.109	0.085	0.104	-0.391	-0.408	-0.212	-0.165
Recipiency	(0.127)	(0.125)	(0.085)	(0.084)	(0.182)	(0.170)	(0.101)	(0.104)
Average	-0.002	-0.000	-0.002	-0.002	0.006	0.006	0.003	0.002
Welfare Income	(0.004)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)
% of Blacks	-0.028	-0.025	0.006	0.002	0.068	0.067	0.024	0.016
	(0.018)	(0.017)	(0.014)	(0.013)	(0.031)	(0.028)	(0.017)	(0.016)
% of College	-0.023	-0.018	0.036	0.040	0.098	0.082	0.059	0.068
Graduate	(0.036)	(0.034)	(0.038)	(0.038)	(0.053)	(0.051)	(0.057)	(0.052)
sentence	-1.921	0.691	-0.639	-0.876	1.246	5.868	0.284	0.461
guideline	(1.420)	(2.167)	(1.094)	(2.033)	(0.960)	(3.893)	(1.380)	(2.387)
guideline *	-7.122		0.146		-6.118		-0.105	
admission	(5.594)		(0.360)		(3.489)		(0.303)	
guideline *	8.796		-0.057		6.182		-0.023	
release	(5.577)		(0.420)		(3.370)		(0.434)	
guideline *		-1.418		0.700		-4.422		-1.174
admit/release		(2.025)		(1.711)		(3.779)		(2.142)
Central city	0.565	0.567	0.278	0.321	-0.290	-0.443	0.011	0.018
	(0.344)	(0.340)	(0.295)	(0.293)	(0.556)	(0.543)	(0.275)	(0.268)
Chi-squared	287.69	282.76	130.55	134.51	62.756	60.157	120.94	117.28

Source: National Longitudinal Survey of Youth.

Appendix Table A.4 Estimates of Family Structures by States with and without Minimum Drug Enforcement Sentences, Simple Logit Model
(Standard Errors in Parentheses)

	FHH				Female being Head				Out-of-Wedlock Baby			
Variables	Whites		Blacks		Whites		Blacks		Whites		Blacks	
Constant	-2.683	-1.327	-2.408	-2.356	-0.809	.0337	1.597	-2.758	-1.892	0.266	0.855	-1.080
	(1.375)	(1.918)	(1.510)	(1.507)	(1.463)	(2.044)	(1.990)	(2.588)	(3.825)	(4.964)	(2.466)	(2.957)
Age	0.040	0.041	0.018	0.016	0.008	0.009	-0.015	-0.011	-0.026	-0.020	-0.096	-0.102
	(0.033)	(0.033)	(0.031)	(0.031)	(0.035)	(0.035)	(0.039)	(0.038)	(0.089)	(0.088)	(0.047)	(0.047)
Education	-0.103	-0.113	0.037	0.039	-0.189	-0.200	-0.144	-0.140	-0.258	-0.252	-0.170	-0.181
	(0.032)	(0.032)	(0.038)	(0.038)	(0.036)	(0.036)	(0.019)	(0.049)	(0.078)	(0.077)	(0.061)	(0.062)
Income	-0.000	-0.000	-0.000	-0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Admit 93	-0.614		0.153		-0.343		0.307		-2.536		0.310	
	(0.655)		(0.121)		(0.668)		(0.185)		(2.816)		(0.218)	
Release 93	0.830		-0.158		0.571		-0.341		1.520		-0.314	
	(0.779)		(0.124)		(0.795)		(0.194)		(2.701)		(0.228)	
Admit93/		-1.112		-0.164		-0.767		3.767		-2.393		2.455
Release93		(1.153)		(0.389)		(1.216)		(1.813)		(3.180)		(1.977)
Admit 84	-0.408		-0.007		-0.472		0.065		1.285		0.085	
	(0.434)		(0.069)		(0.449)		(0.084)		(1.195)		(0.103)	
Release84	0.204		-0.059		0.252		-0.079		-1.721		-0.175	
	(0.455)		(0.070)		(0.467)		(0.085)		(1.408)		(0.105)	
Admit84/		-0.128		0.152		-0.189		0.097		-0.135		0.326
Release84		(0.277)		(0.205)		(0.297)		(0.234)		(0.875)		(0.331)
% of FHH	0.034	0.041	0.000	0.005	0.040	0.049	-0.013	0.007	0.026	-0.027	0.044	0.043
	(0.034)	(0.033)	(0.014)	(0.014)	(0.037)	(0.035)	(0.018)	(0.017)	(0.095)	(0.093)	(0.025)	(0.023)
Unemp R	0.048	0.049	0.010	0.008	0.118	0.113	0.038	-0.028	0.436	0.427	0.085	0.055
	(0.107)	(0.103)	(0.031)	(0.028)	(0.115)	(0.112)	(0.038)	(0.036)	(0.327)	(0.304)	(0.046)	(0.045)
% Poverty	-0.009	-0.003	-0.023	-0.011	-0.007	-0.000	-0.038	-0.028	0.102	0.092	0.033	0.016
	(0.012)	(0.012)	(0.043)	(0.038)	(0.013)	(0.013)	(0.054)	(0.049)	(0.044)	(0.039)	(0.070)	(0.061)
% welfare	0 001	-0.002	0.092	0.063	-0.017	-0.030	0.063	0.046	-0.576	-0.564	-0.186	-0.140
Recipiency	(0.065)	(0.061)	(0.064)	(0.065)	(0.071)	(0.066)	(0.079)	(0.083)	(0.209)	(0.197)	(0.107)	(0.106)
Average	0.000	0.000	-0.001	-0.000	0.000	0.000	0.000	0.001	0.007	0.008	0.002	0.002
Wel Inc	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)	(0.002)	(0.001)	(0.001)
% Blacks	-0.004	-0.002	-0.008	-0.009	-0.002	0.000	0.002	-0.007	0.098	0.090	0.032	0.018
	(0.012)	(0.012)	(0.010)	(0.010)	(0.013)	(0.013)	(0.012)	(0.012)	(0.036)	(0.034)	(0.018)	(0.016)

% College Graduate	0.010	0.014	0.036	0.030	0.014	0.016	0.055	0.027	0.067	0.056	0.060	0.047
	(0.019)	(0.018)	(0.033)	(0.031)	(0.020)	(0.019)	(0.039)	(0.037)	(0.056)	(0.053)	(0.056)	(0.052)
drug enforce	0.421	-0.694	0.033	-0.465	0.437	-0.234	-0.413	4.558	-2.366	-0.114	-0.156	3.901
	(0.355)	(1.364)	(0.520)	(0.707)	(0.378)	(1.450)	(0.683)	(2.232)	(0.974)	(3.962)	(0.813)	(2.515)
drug * admit	0.087		-0.167		-0.295		-0.378		1.318		-0.341	
	(0.700)		(0.128)		(0.720)		(0.194)		(2.913)		(0.228)	
drug * release	-0.233		0.200		0.139		0.450		-0.107		0.387	
	(0.815)		(0.132)		(0.838)		(0.202)		(2.835)		(0.237)	
drug* admit/release		0.825		0.419		0.346		-3.968		-0.983		-3.639
		(1.231)		(0.590)		(1.305)		(1.887)		(3.780)		(2.108)
Central city	0.019	-0.084	0.083	0.136	0.070	-0.056	-0.067	-0.051	-0.654	-0.755	-0.121	-0.127
	(0.200)	(0.200)	(0.184)	(0.175)	(0.213)	(0.210)	(0.232)	(0.223)	(0.596)	(0.558)	(0.288)	(0.280)
Chi-squared	79.311	74.217	55.193	51.817	56.394	51.073	45.550	41.053	62.882	59.390	117.95	117.75

Source: National Longitudinal Survey of Youth.

Appendix Table A.5 Estimates of Female Headed Families, Fixed Effect Logit Model, All States
(Standard Errors in Parentheses)

	1985				1994			
Variables	Whites		Blacks		Whites		Blacks	
Constant	-2.805	-2.840	-6.931	-6.999	-2.802	-1.590	-1.326	-1.171
	(1.330)	(1.359)	(1.601)	(1.606)	(1.503)	(1.757)	(1.774)	(1.851)
Age	0.121	0.123	0.209	0.211	0.040	0.040	0.027	0.023
	(0.033)	(0.033)	(0.036)	(0.037)	(0.033)	(0.033)	(0.032)	(0.032)
Education	-0.104	-0.103	-0.037	-0.029	-0.099	-0.110	0.029	0.031
	(0.031)	(0.031)	(0.044)	(0.044)	(0.032)	(0.032)	(0.039)	(0.039
Income	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Admit94					-0.440		0.090	
					(0.273)		(0.062)	
Release 94					0.450		-0.086	
					(0.318)		(0.065)	
Admit / Release 94						-0.329		0.018
						(0.509)		(0.325)
% FHH	-0.055	-0.044	0.042	0.038	0.009	0.026	0.018	0.017
	(0.041)	(0.038)	(0.022)	(0.021)	(0.039)	(0.037)	(0.016)	(0.016)
Unemp	-0.054	-0.050	0.027	0.026	0.138	0.097	-0.008	0.007
Rate	(0.062)	(0.059)	(0.037)	(0.035)	(0.129)	(0.125)	(0.040)	(0.038)
% Poverty	0.003	0.002	0.045	0.036	-0.001	0.001	0.038	0.027
	(0.011)	(0.012)	(0.062)	(0.063)	(0.014)	(0.014)	(0.046)	(0.044)
% people	-0.045	-0.036	-0.027	-0.042	0.032	0.017	0.060	0.022
on welfare	(0.124)	(0.126)	(0.116)	(0.109)	(0.072)	(0.070)	(0.079)	(0.077)
Average Welf	0.003	0.002	-0.000	0.000	-0.000	-0.001	-0.001	-0.000
Inc	(0.003)	(0.004)	(0.003)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)
% Blacks	-0.003	-0.000	0.005	0.009	-0.004	0.005	-0.001	0.004
	(0.015)	(0.014)	(0.019)	(0.017)	(0.014)	(0.013)	(0.013)	(0.011)
% College	-0.004	-0.005	-0.009	-0.013	0.013	0.013	0.053	0.055
Graduate	(0.021)	(0.021)	(0.037)	(0.037)	(0.021)	(0.021)	(0.038)	(0.037)
Central city	0.618	0.637	0.390	0.388	0.060	0.035	0.085	0.065
	(0.214)	(0.216)	(0.320)	(0.318)	(0.227)	(0.227)	(0.237)	(0.241)
Admit85	-0.006		-0.044					
	(0.515)		(0.110)					
Release 85	-0.175		0.037					
	(0.558)		(0.116)					
Admit/		-0.215		0.081				
Release 85		(0.370)		(0.466)				
Chi-squared	168.54	168.43	114.95	118.12	97.965	91.460	76.340	78.255

Source: National Longitudinal Survey of Youth.

Appendix Table A.6 Estimates of Female-Headed Families by States with and without Sentencing Guidelines, Fixed Effect Logit Model, 1985
(Standard Errors in Parentheses)

	States without Sentencing Guidelines				States with Sentencing Guidelines			
Variables	Whites		Blacks		Whites		Blacks	
Constant	-2.765	-1.619	-7.057	-6.670	2.436	0.799	169.2	-10.361
	(1.401)	(1.430)	(1.656)	(1.652)	(6.775)	(6.894)	(1583.3)	(664.80)
Age	0.116	0.118	0.203	0.205	0.204	0.192	0.233	0.233
	(0.034)	(0.035)	(0.038)	(0.038)	(0.125)	(0.117)	(0.138)	(0.138)
Education	-0.084	-0.084	-0.032	-0.023	-0.576	-0.572	-0.049	-0.049
	(0.033)	(0.033)	(0.045)	(0.046)	(0.184)	(0.172)	(0.182)	(0.182)
Income	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Admit85	-0.107		-0.163		1.824		-5.498	
	(0.544)		(0.128)		(2.657)		(64.487)	
Release 85	-0.182		0.155		2.237		0.637	
	(0.591)		(0.130)		(3.170)		(56.341)	
Admit /		-0.324		-0.201		1.032		15.641
Release 85		(0.408)		(0.549)		(1.333)		(186.10)
% FHH	-0.057	-0.037	0.044	0.037	-0.030	-0.069	0.810	1.768
	(0.043)	(0.039)	(0.022)	(0.021)	(0.323)	(0.298)	(11.255)	(9.324)
Unemp Rate	-0.061	-0.058	0.030	0.031	-1.328	-0.740	-8.431	-6.678
	(0.065)	(0.061)	(0.038)	(0.036)	(0.744)	(0.653)	(65.144)	(22.094)
% Poverty	0.003	0.001	0.049	0.042	0.001	0.036	-13.888	-4.941
	(0.012)	(0.012)	(0.064)	(0.064)	(0.075)	(0.062)	(118.50)	(38.759)
% people on	-0.058	-0.049	0.008	-0.036	2.246	2.041	-1.473	16.847
Welfare	(0.127)	(0.129)	(0.122)	(0.111)	(1.747)	(1.529)	(240.80)	(253.70)
Average Welf	0.004	0.003	-0.001	-0.000	-0.068	-0.066	0.401	-0.400
Inc	(0.004)	(0.004)	(0.003)	(0.003)	(0.050)	(0.045)	(9.453)	(8.270)
% Blacks	-0.004	0.000	0.000	0.008	0.015	0.071	-3.050	-1.005
	(0.015)	(0.015)	(0.021)	(0.018)	(0.102)	(0.086)	(26.622)	(4.804)
% College	-0.010	-0.013	0.008	-0.004	0.035	-0.003	-7.373	-2.254
Graduate	(0.023)	(0.022)	(0.039)	(0.039)	(0.085)	(0.070)	(65.246)	(24.379)
Central city	0.655	0.690	0.419	0.389	-2.149	-0.641	32.616	-17.537
	(0.223)	(0.226)	(0.333)	(0.331)	(1.461)	(1.196)	(269.10)	(150.40)
Chi-squared	144.02	142.82	108.19	110.29	52.220	41.912	21.425	21.415

Source: National Longitudinal Survey of Youth.

Appendix Table A.7 Estimates of Female-Headed Families by States with and without Sentencing Guidelines, Fixed Effect Logit Model, 1994
(Standard Errors in Parentheses)

	States without Sentencing Guidelines				States with Sentencing Guidelines			
Variables	Whites		Blacks		Whites		Blacks	
Constant	-10.027	-12.106	-3.355	-4.156	-2.361	-2.898	-68.810	-22.908
	(3289942)	(178.1)	(1.621)	(1.649)	(4.482)	(4.609)	(843.60)	(206.20)
Age	0.059	0.059	0.032	0.028	-0.122	-0.099	0.007	-0.008
	(0.036)	(0.036)	(0.034)	(0.034)	(0.096)	(0.094)	(0.116)	(0.119)
Education	-0.107	-0.117	0.047	0.049	-0.069	-0.047	-0.093	-0.075
	(0.034)	(0.034)	(0.041)	(0.041)	(0.107)	(0.105)	(0.167)	(0.170)
Income	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Admit 94	-0.338		0.113		-1.769		-2.890	
	(0.287)		(0.066)		(1.984)		(9.767)	
Release 94	0.324		-0.113		3.460		2.877	
	(0.342)		(0.068)		(2.306)		(33.710)	
Admit / Release		-0.415		0.025		0.060		-83.245
94		(0.764)		(0.327)		(0.843)		(186.60)
% FHH	-0.005	0.022	0.021	0.017	-0.008	0.192	1.971	3.965
	(0.041)	(0.039)	(0.016)	(0.016)	(0.251)	(0.209)	(35.279)	(9.167)
Unemp Rate	0.125	0.059	-0.017	0.010	0.823	0.786	-4.980	-6.656
	(0.145)	(0.138)	(0.041)	(0.039)	(0.526)	(0.486)	(59.406)	(18.058)
% Poverty	0.005	0.005	0.015	0.012	-0.041	-0.056	5.391	3.015
	(0.016)	(0.016)	(0.048)	(0.046)	(0.045)	(0.042)	(69.502)	(22.861)
% people	0.011	-0.006	0.112	0.061	0.202	0.071	-6.637	3.806
on welfare	(0.076)	(0.073)	(0.086)	(0.084)	(0.642)	(0.579)	(61.386)	(29.895)
Average Welf	0.000	-0.000	-0.002	-0.001	-0.006	-0.007	0.135	-0.080
Inc	(0.001)	(0.001)	(0.001)	(0.001)	(0.013)	(0.013)	(0.897)	(0.706)
% Blacks	-0.000	0.011	-0.013	-0.006	-0.107	-0.039	-0.116	-0.499
	(0.015)	(0.014)	(0.015)	(0.013)	(0.093)	(0.046)	(1.987)	(1.311)
% College	0.014	0.013	0.063	0.064	0.094	0.045	-0.684	-1.410
Graduate	(0.023)	(0.023)	(0.043)	(0.041)	(0.076)	(0.070)	(12.875)	(4.562)
Central city	-0.088	-0.080	0.104	0.085	1.436	1.810	8.308	-17.933
	(0.250)	(0.252)	(0.246)	(0.249)	(0.892)	(0.849)	(224.90)	(71.278)
Admit 85	-0.776							
	(0.574)							
Release 85	0.533							
	(0.655)							
Chi-squared	85.953	79.190	66.668	66.541	31.879	25.541	19.860	20.205

Source: National Longitudinal Survey of Youth.

Appendix Table A.8 Estimates of the Probability of Being a Female Family Head, Fixed Effect Logit Model, All States

(Standard Errors in Parentheses)

	1985				1994			
Variables	Whites		Blacks		Whites		Blacks	
Constant	-0.605	-0.935	-5.252	-4.400	-1.001	-0494	-0.316	10.111
	(1.452)	(1.460)	(1.794)	(1.809)	(1.589)	(1.858)	(2.333)	(314.9)
Age	0.055	0.057	0.195	0.200	0.008	0.008	0.001	0.003
	(0.035)	(0.035)	(0.041)	(0.041)	(0.036)	(0.036)	(0.040)	(0.040)
Education	-0.155	-0.150	-0.231	-0.219	-0.185	-0.197	-0.161	-0.151
	(0.035)	(0.035)	(0.056)	(0.057)	(0.036)	(0.037)	(0.051)	(0.051)
Income	-0.000	-0.000	-0.000	-0.000	0.000	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Admit94					-0.550		0.078	
					(0.294)		(0.078)	
Release 94					0.570		-0.080	
					(0.340)		(0.086)	
Admit /						-0.496		0.770
Release 94						(0.558)		(0.875)
% FHH	-0.054	-0.036	0.050	0.043	0.017	0.032	0.017	0.031
	(0.044)	(0.040)	(0.025)	(0.023)	(0.042)	(0.040)	(0.021)	(0.190)
Unemp Rate	-0.055	-0.049	0.050	0.044	0.180	0.151	0.002	-0.017
	(0.064)	(0.060)	(0.042)	(0.040)	(0.138)	(0.135)	(0.049)	(0.049)
% Poverty	0.001	-0.000	0.087	0.068	-0.002	-0.000	0.059	0.058
	(0.012)	(0.012)	(0.070)	(0.071)	(0.015)	(0.015)	(0.062)	(0.059)
% people on	-0.082	-0.080	-0.025	-0.031	0.004	-0.011	-0.050	-0.067
Welfare	(0.130)	(0.132)	(0.133)	(0.122)	(0.077)	(0.075)	(0.099)	(0.097)
Average Welf	0.005	0.004	-0.001	-0.000	-0.000	-0.000	0.000	0.001
Inc	(0.004)	(0.004)	(0.004)	(0.004)	(0.001)	(0.001)	(0.002)	(0.002)
% Blacks	-0.013	-0.008	0.006	0.005	-0.000	0.009	0.017	0.017
	(0.015)	(0.015)	(0.022)	(0.018)	(0.015)	(0.014)	(0.015)	(0.014)
% College	-0.000	-0.000	0.022	0.021	0.016	0.016	0.050	0.054
Graduate	(0.023)	(0.022)	(0.045)	(0.045)	(0.022)	(0.022)	(0.045)	(0.042)
Central city	0.745	0.749	0.527	0.562	0.123	0.085	-0.101	0.037
	(0.225)	(0.227)	(0.357)	(0.354)	(0.245)	(0.244)	(0.312	(0.312)
Admit85	0.129		-0.139					
	(0.543)		(0.128)					
Release 85	-0.435		0.158					
	(0.592)		(0.130)					
Admit/		-0.010		-0.491				
Release 85		(0.381)		(0.549)				
Chi-squared	101.896	99.607	91.473	91.042	71.276	66.647	68.054	72.148

Source: National Longitudinal Survey of Youth.

Appendix 4: Regression Results for Module B

Appendix Table B.1 Estimates of Logit Models of Underlying Equations Used to Estimate Darity-Myers Sex-Ratios, Blacks and Whites, 1985
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)
Constant	-0.065	1.601	0.025	1.598	-0.591	15.088
	(.159)	(.125)	(.168)	(.133)	(7.825)	(6.135)
Age	0.002	-0.152	0.003	-0.153	-0.003	-0.150
	(.004)	(.002)	(.005)	(.002)	(.010)	(.005)
Age**2	-0.001	0.002	-0.001	0.002	-0.001	0.002
	(.00005)	(.000002)	(.00006)	(.00003)	(.0001)	(.00006)
Education	-0.007	-0.014	-0.006	-0.013	-0.009	-0.005
	(.004)	(.003)	(.004)	(.003)	(.010)	(.007)
Child under 6	-2.904	-0.659	-2.887	-0.667	-3.008	-0.636
	(.067)	(.020)	(.072)	(.022)	(.177)	(.051)
Child 6-18	-1.742	-0.160	-1.691	-0.158	-2.107	-0.180
	(.039)	(.013)	(.041)	(.014)	(.125)	(.033)
Abortion Ratio	0.075	0.129	0.078	0.121	0.133	-2.210
	(.028)	(.024)	(.029)	(.024)	(2.199)	(1.730)
Institutiona-lization Ratio	0.025	0.065	0.022	0.054	0.179	0.807
	(.008)	(.006)	(.008)	(.007)	(.217)	(.169)
Mortality Ratio 80	0.184	0.465	0.086	0.470	-0.529	-2.597
	(.105)	(.084)	(.111)	(.090)	(.670)	(.537)
Population Density 80	0.000	0.000	0.000	0.000	-0.012	0.054
	(.000005)	(.00004)	(.00006)	(.00004)	(.044)	(.034)
% of Blacks 80	0.003	0.006	0.003	0.008	0.119	-0.512
	(.002)	(.002)	(.002)	(.002)	(.405)	(.318)
% of people on Welfare 80	-0.030	0.012	-0.025	0.005	0.995	-5.654
	(.011)	(.009)	(.011)	(.009)	(4.488)	(3.525)
AFDC 80	0.001	0.0002	0.0009	0.0003	-0.005	0.031
	(.0002)	(.016)	(.0002)	(.0002)	(.027)	(.021)
Own House	-0.197	-0.654	-0.193	-0.643	-0.208	-0.682
	(.020)	(.016)	(.022)	(.018)	(.053)	(.042)
Chi-squared	28137.287	11762.340	23410.188	9907.049	4768.177	2001.579

Appendix Table B.2 Estimates of Logit Models of Underlying Equations Used to Estimate Darity-Myers Sex-Ratios, Whites, 1985
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)
Constant	0.377	2.758	0.466	2.676	2.615	1.264
	(.202)	(.171)	(.213)	(.180)	(1.601)	(1.306)
Age	-0.010	-0.157	-0.008	-0.158	-0.018	-0.152
	(.004)	(.002)	(.005)	(.003)	(.011)	(.006)
Age**2	-0.001	0.002	-0.001	0.002	-0.001	0.002
	(.00006)	(.00003)	(.00006)	(.00003)	(.0001)	(.0001)
Education	0.003	-0.010	0.003	-0.009	0.003	-0.014
	(.004)	(.003)	(.005)	(.003)	(.011)	(.069)
Child	-2.992	-0.973	-2.948	-0.980	-3.276	-0.937
under 6	(.077)	(.027)	(.081)	(.030)	(.225)	(.069)
Child 6-18	-1.691	-0.324	-1.648	-0.324	-1.996	-0.323
	(.042)	(.016)	(.044)	(.018)	(.131)	(.042)
Abortion Ratio	0.050	0.019	0.055	0.024	-1.352	0.796
	(.032)	(.027)	(.032)	(.028)	(.598)	(.479)
Institutiona-	0.004	-0.008	0.004	-0.008	-0.784	0.959
lization Ratio 80	(.009)	(.008)	(.009)	(.008)	(.688)	(.559)
Mortality Ratio	-0.007	-0.300	-0.170	-0.245	-0.227	-0.170
80	(.137)	(.118)	(.145)	(.126)	(.513)	(.417)
Population	0.00006	0.0002	0.00005	0.0002	-0.001	0.001
Density 80	(.00006)	(.00005)	(.00006)	(.00005)	(.001)	(.001)
% of Blacks 80	0.0003	0.002	-0.0002	0.003		
	(.002)	(.002)	(.002)	(.002)		
% of people on	-0.028	0.003	-0.023	-0.002		
Welfare 80	(.012)	(.010)	(.013)	(.010)		
AFDC 80	0.001	0.0003	0.001	0.0004		
	(.0002)	(.0002)	(.0002)	(.0002)		
Own House	-0.214	-0.604	-0.212	-0.591	-0.222	-0.680
	(.022)	(.018)	(.024)	(.020)	(.058)	(.047)
Chi-squared	24420.540	11625.132	20263.661	9803.741	4185.608	1835.304

Appendix Table B.3 Underlying Equations Used to Estimate Darity-Myers Sex-Ratios, Blacks, 1985
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)
Constant	-0.479	1.818	-0.388	1.613	1.049	8.031
	(.479)	(.359)	(.527)	(.396)	(5.278)	(4.511)
Age	0.052	-0.104	0.049	-0.105	0.064	-0.101
	(.011)	(.006)	(.012)	(.006)	(.027)	(.015)
Age**2	-0.001	0.001	-0.001	0.001	-0.002	0.001
	(.0001)	(.0001)	(.0002)	(.0001)	(.0004)	(.0002)
Education	-0.032	0.011	-0.028	0.012	-0.045	0.015
	(.009)	(.007)	(.011)	(.007)	(.022)	(.016)
Child	-2.493	0.024	-2.559	0.017	-2.217	0.040
under 6	(.139)	(.035)	(.158)	(.038)	(.291)	(.090)
Child 6-18	-1.971	0.121	-1.879	0.119	-2.640	0.150
	(.106)	(.022)	(.110)	(.024)	(.377)	(.062)
Abortion Ratio	0.058	0.015	0.040	-0.050	-1.942	-1.671
	(.098)	(.073)	(.102)	(.076)	(3.737)	(3.060)
Institutiona-	-0.112	0.095	-0.115	0.104	-0.069	-0.198
lization Ratio	(.106)	(.079)	(.114)	(.084)	(.295)	(.226)
80						
Mortality Ratio	0.375	-0.390	0.284	-0.315	0.574	-3.359
80	(.264)	(.209)	(.282)	(.226)	(1.678)	(1.503)
Population	-0.0001	0.0001	-0.0001	0.0001	-0.002	-0.001
Density 80	(.0002)	(.0001)	(.0002)	(.0001)	(.002)	(.002)
% of Blacks 80	0.007	-0.008	0.008	-0.006		
	(.005)	(.004)	(.005)	(.004)		
% of people on	-0.072	0.057	-0.070	0.060		
Welfare 80	(.034)	(.025)	(.034)	(.026)		
AFDC 80	0.002	-0.001	0.002	-0.001		
	(.001)	(.0006)	(.0008)	(.001)		
Own House	-0.013	-0.546	0.002	-0.539	-0.096	-0.618
	(.051)	(.038)	(.055)	(.042)	(.130)	(.100)
Chi-squared	3606.853	618.131	3054.418	522.992	564.052	117.631

Appendix Table B.4 Estimates of Logit Models of Underlying Equations Used to Estimate Expected Welfare Income, Blacks and Whites, 1985
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare
Constant	-2.259	7.397	-2.254	7.278	-1.973	8.063
	(.175)	(.161)	(.191)	(.175)	(.434)	(.529)
Age	0.007	-0.001	0.002	-0.001	0.035	0.0005
	(.006)	(.005)	(.006)	(.006)	(.014)	(.014)
Age**2	-0.001	-0.0001	-0.0004	-0.0001	-0.001	-0.0001
	(.0001)	(.0001)	(.0001)	(.0001)	(.0002)	(.0002)
grade	0.126	-0.004	0.109	0.005	0.198	-0.059
	(.027)	(.025)	(.029)	(.027)	(.068)	(.068)
grade**2	-0.022	-0.002	-0.020	-0.003	-0.028	0.002
	(.001)	(.001)	(.001)	(.001)	(.004)	(.004)
Child	0.516	0.034	0.519	0.028	0.502	0.068
under 6	(.022)	(.022)	(.024)	(.023)	(.058)	(.063)
Child 6-18	0.306	0.160	0.307	0.160	0.317	0.163
	(.018)	(.016)	(.019)	(.017)	(.045)	(.047)
Population	-0.000		0.0001		-0.001	
Density 80	(.0001)		(.0001)		(.002)	
% of	0.024	0.004	0.026	0.006	0.002	-0.016
Blacks 80	(.002)	(.002)	(.003)	(.002)	(.028)	(.022)
Central		0.187		0.183		0.187
City		(.032)		(.035)		(.088)
North East	0.962	0.641	0.749	0.751	0.912	0.180
	(.067)	(.050)	(.089)	(.057)	(.230)	(.184)
Mid-West	0.963	0.408	1.001	0.492	0.308	-0.064
	(.051)	(.047)	(.056)	(.050)	(.188)	(.351)
West	0.587	0.730	0.647	0.829		0.202
	(.068)	(.064)	(.074)	(.068)		(.337)
F		45.006		44.055		3.730
Chi-squared	4956.452		4074.324		947.062	

Appendix Table B.5 Estimates of Logit Models of Underlying Equations Used to Estimate Expected Welfare Income, Whites, 1985
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare
Constant	-2.684	7.777	-2.516	7.680	-2.803	8.794
	(.241)	(.230)	(.259)	(.249)	(.658)	(.806)
Age	0.027	-0.001	0.002	-0.003	0.051	0.012
	(.008)	(.007)	(.009)	(.008)	(.019)	(.017)
Age**2	-0.001	-0.0001	-0.001	-0.0001	-0.001	-0.0003
	(.0001)	(.0001)	(.0001)	(.0001)	(.0002)	(.0002)
grade	0.109	-0.031	0.068	-0.021	0.326	-0.184
	(.036)	(.035)	(.038)	(.037)	(.113)	(.113)
grade**2	-0.021	-0.001	-0.019	-0.002	-0.035	0.006
	(.002)	(.002)	(.002)	(.002)	(.006)	(.006)
Child	0.565	0.098	0.579	0.091	0.498	0.150
under 6	(.028)	(.028)	(.030)	(.031)	(.073)	(.072)
Child 6-18	0.261	0.213	0.254	0.211	0.298	0.204
	(.024)	(.023)	(.027)	(.026)	(.057)	(.056)
Population	-0.0005		-0.0001		0.005	
Density 80	(.0001)		(.0002)		(.002)	
% of Blacks	-0.006	-0.015	-0.006	-0.013	-0.137	-0.031
80	(.004)	(.004)	(.005)	(.004)	(.040)	(.032)
Central		-0.009		-0.067		0.236
City		(.048)		(.054)		(.110)
North East	1.092	0.590	0.814	0.686	0.223	0.128
	(.092)	(.069)	(.120)	(.079)	(.314)	(.275)
Mid-West	0.999	0.299	0.974	0.358	0.117	-0.039
	(.072)	(.066)	(.078)	(.070)	(.196)	(.504)
West	0.675	0.541	0.643	0.590		0.137
	(.090)	(.084)	(.098)	(.089)		(.476)
F		31.923		27.033		5.347
Chi-squared	2872.692		2262.036		641.318	

Appendix Table B.6 Estimates of Logit Models of Underlying Equations Used to Estimate Expected Welfare Income, Blacks, 1985
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare
Variables						
Constant	-1.017	7.117	-1.114	6.938	-1.679	8.314
	(.269)	(.223)	(.300)	(.237)	(.839)	(.835)
Age	-0.024	0.003	-0.027	0.003	-0.013	-0.018
	(.009)	(.008)	(.010)	(.008)	(.024)	(.026)
Age**2	-0.0001	-0.0001	-0.0001	-0.0001	-0.000	0.0002
	(.0001)	(.0001)	(.0001)	(.0001)	(.0003)	(.0003)
grade	0.206	0.021	0.216	0.034	0.159	-0.084
	(.042)	(.035)	(.047)	(.038)	(.094)	(.100)
grade**2	-0.022	-0.003	-0.022	-0.004	-0.019	0.006
	(.002)	(.002)	(.002)	(.002)	(.005)	(.006)
Child	0.510	-0.017	0.497	-0.012	0.541	-0.106
under 6	(.041)	(.033)	(.045)	(.034)	(.109)	(.117)
Child 6-18	0.323	0.099	0.322	0.010	0.345	0.010
	(.028)	(.023)	(.030)	(.023)	(.078)	(.083)
Population	0.0001		0.001		-0.007	
Density 80	(.0002)		(.0002)		(.003)	
% of	-0.0001	0.010	0.002	0.013	0.147	-0.014
Blacks 80	(.003)	(.003)	(.004)	(.003)	(.086)	(.033)
Central		0.179		0.175		0.153
City		(.053)		(.055)		(.168)
North East	0.840	0.711	0.466	0.837	2.419	0.171
	(.104)	(.072)	(.142)	(.079)	(.695)	(.288)
Mid-West	1.194	0.549	1.188	0.684	1.659	-1.174
	(.077)	(.070)	(.086)	(.073)	(.754)	(.707)
West	0.477	1.008	0.560	1.165		-0.336
	(.119)	(.106)	(.126)	(.107)		(.834)
F		21.871		25.874		1.161
Chi-squared	1523.994		1323.776		238.373	

Appendix Table B.7 Estimates of Logit Models of Female-headed Families, 1985
(Standard Errors in Parentheses)

	Total			Non-Sentence Guideline			Sentence Guideline		
Variables	Total	Whites	Blacks	Total	Whites	Blacks	Total	Whites	Blacks
Constant	2.404	1.660	3.702	2.365	1.581	3.698	1.207	2.125	2.423
	(.203)	(.263)	(.372)	(.220)	(.287)	(.401)	(.572)	(.693)	(1.460)
Age	-0.115	-0.114	-0.118	-0.115	-0.112	-0.123	-0.117	-0.122	-0.082
	(.005)	(.006)	(.013)	(.006)	(.007)	(.013)	(.013)	(.015)	(.036)
Age**2	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0002
	(.0001)	(.0001)	(.0001)	(.0001)	(.0001)	(.0001)	(.0001)	(.0001)	(.0004)
grade	0.160	0.248	0.161	0.176	0.266	0.165	0.109	0.161	0.136
	(.024)	(.033)	(.041)	(.026)	(.036)	(.045)	(.063)	(.085)	(.114)
grade**2	-0.011	-0.013	-0.010	-0.011	-0.014	-0.009	-0.009	-0.010	-0.012
	(.001)	(.001)	(.002)	(.001)	(.001)	(.002)	(.003)	(.004)	(.005)
Child	-1.141	-1.217	-0.934	-1.175	-1.257	-0.945	-0.953	-0.947	-0.937
under 6	(.043)	(.056)	(.075)	(.048)	(.062)	(.082)	(.101)	(.129)	(.193)
Child 6-18	-0.362	-0.365	-0.393	-0.370	-0.381	-0.385	-0.312	-0.243	-0.434
	(.025)	(.031)	(.046)	(.027)	(.034)	(.049)	(.061)	(.074)	(.130)
Abortion Ratio	0.655	0.135	-0.046	0.588	0.157	-0.064	3.084	-0.329	1.948
	(.061)	(.057)	(.091)	(.060)	(.057)	(.092)	(.367)	(.394)	(1.499)
Expected	0.005	0.005	0.002	0.005	0.006	0.002	0.003	0.003	0.004
Welfare	(.0002)	(.0003)	(.0002)	(.0002)	(.0004)	(.0002)	(.0004)	(.0004)	(.0006)
D-M Sex Ratio	-1.519	-1.490	-1.599	-1.541	-1.530	-1.629	-1.378	-1.213	-1.281
	(.060)	(.076)	(.132)	(.066)	(.084)	(.143)	(.140)	(.169)	(.307)
Chi-squared	4107.6	1824.2	1057.3	3455.6	1555.6	862.4	730.2	257.3	224.8

Appendix Table B.8 Estimates of Logit Models of Female-headed Families with a Dummy for Sentencing Guidelines, 1985

(Standard Errors in Parentheses)

	Total			Whites			Blacks		
Variables	P(umlf)	p(umf)	p(fhh)	P(umlf)	p(umf)	p(fhh)	P(umlf)	p(umf)	p(fhh)
Constant	-0.064	1.601	2.399	0.378	2.753	1.665	-0.447	1.998	3.703
	(.159)	(.125)	(.203)	(.202)	(.171)	(.263)	(.495)	(.375)	(.372)
Age	0.002	-0.152	-0.115	-0.010	-0.157	-0.115	0.052	-0.104	-0.118
	(.004)	(.002)	(.005)	(.004)	(.002)	(.006)	(.011)	(.006)	(.013)
Age**2	-0.001	0.002	0.001	-0.001	0.002	0.001	-0.001	0.001	0.001
	(.0001)	(.0000)	(.0001)	(.0001)	(.0001)	(.0001)	(.0001)	(.0001)	(.0001)
grade	-0.007	-0.014	0.162	0.003	-0.010	0.250	-0.032	0.011	0.160
	(.004)	(.003)	(.024)	(.004)	(.003)	(.033)	(.009)	(.007)	(.041)
grade**2			-0.011			-0.013			-0.010
			(.001)			(.001)			(.002)
Child	-2.904	-0.659	-1.139	-2.992	-0.973	-1.214	-2.493	0.024	-0.936
under 6	(.067)	(.020)	(.043)	(.077)	(.027)	(.056)	(.139)	(.035)	(.075)
Child 6-18	-1.742	-0.160	-0.362	-1.691	-0.324	-0.364	-1.971	0.122	-0.393
	(.039)	(.013)	(.025)	(.042)	(.016)	(.031)	(.106)	(.022)	(.046)
Abortion	0.074	0.130	0.678	0.049	0.022	0.146	0.055	-0.001	-0.052
Ratio	(.029)	(.024)	(.062)	(.032)	(.027)	(.057)	(.099)	(.073)	(.092)
Institutiona-	0.025	0.065		0.004	-0.008		-0.119	0.062	
lization	(.008)	(.006)		(.009)	(.008)		(.109)	(.081)	
Ratio 80									
Mortality	0.182	0.465		-0.072	-0.294		0.356	-0.498	
Ratio 80	(.105)	(.085)		(.137)	(.118)		(.273)	(.221)	
Population	0.0001	0.0003		0.0001	0.0002		-0.0001	0.0001	
Density 80	(.0001)	(.0001)		(.0001)	(.0001)		(.0002)	(.0001)	
% of Blacks	0.003	0.006		0.0003	0.002		0.007	-0.008	
80	(.002)	(.002)		(.002)	(.002)		(.005)	(.004)	
% of people	-0.029	0.012		-0.028	0.002		-0.072	0.057	
on Welfare	(.011)	(.009)		(.012)	(.010)		(.034)	(.025)	
80									
AFDC 80	0.001	0.0002		0.001	0.0003		0.002	-0.001	
	(.0002)	(.0002)		(.0002)	(.0002)		(.0008)	(.001)	
Own House	-0.198	-0.654		-0.215	-0.604		-0.014	-0.549	
	(.020)	(.016)		(.022)	(.018)		(.051)	(.038)	
Expected			0.005			0.005			0.002
Welfare			(.0002)			(.0003)			(.0002)
D-M Sex			-1.518			-1.490			-1.595
Ratio			(.060)			(.076)			(.132)
Sentence	0.007	-0.002	-0.094	0.005	-0.012	-0.064	0.020	0.105	0.057
Guideline	(.027)	(.021)	(.039)	(.029)	(.024)	(.046)	(.076)	(.057)	(.086)
Chi-sq	28137	26005	4106	24421	11625	1816	3607	622	1062

Appendix Table B.9 Estimates of Logit Models of Underlying Equations Used to Estimate Darity-Myers Sex-Ratios, Blacks and Whites, 1995
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)
Constant	-2.906	3.256	-3.010	3.349	-3.497	2.869
	(.278)	(.220)	(.367)	(.288)	(.519)	(.423)
Age	0.145	-0.150	0.134	-0.145	0.160	-0.157
	(.006)	(.003)	(.008)	(.004)	(.010)	(.005)
Age**2	-0.003	0.002	-0.002	0.002	-0.003	0.002
	(.0001)	(.00003)	(.0001)	(.00004)	(.0001)	(.0001)
Education	0.014	-0.006	0.020	-0.015	0.007	0.008
	(.006)	(.004)	(.007)	(.005)	(.009)	(.006)
Child	-2.348	-0.428	-2.324	-0.364	-2.385	-0.530
under 6	(.076)	(.025)	(.100)	(.032)	(.118)	(.042)
Child 6-18	-1.730	-0.134	-1.646	-0.174	-1.857	-0.082
	(.048)	(.016)	(.061)	(.022)	(.080)	(.025)
Abortion Ratio	-0.329	0.251	-0.394	0.261	0.337	0.594
	(.126)	(.096)	(.156)	(.119)	(.306)	(.233)
Institutiona-	0.034	0.242	0.029	0.229	0.004	0.231
lization Ratio 90	(.019)	(.014)	(.022)	(.017)	(.041)	(.032)
Mortality Ratio	0.341	-1.007	0.583	-1.060	0.046	-0.847
	(.215)	(.176)	(.283)	(.230)	(.390)	(.324)
Population	0.0001	-0.00003	0.0001	-0.00002	-0.0002	-0.0001
Density 94	(.00002)	(.00002)	(.00002)	(.00002)	(.0002)	(.0002)
% of Blacks 94	-0.001	0.0004	-0.002	0.001	0.012	0.001
	(.002)	(.001)	(.002)	(.002)	(.005)	(.004)
% of people on	-0.045	0.021	-0.043	0.011	-0.014	0.046
Welfare 94	(.013)	(.010)	(.019)	(.015)	(.024)	(.019)
AFDC 94	0.001	-0.0002	0.001	-0.0002	0.002	-0.0002
	(.0002)	(.0001)	(.0002)	(.0002)	(.0004)	(.0003)
Own House	-0.354	-0.694	-0.409	-0.664	-0.283	-0.741
	(.028)	(.023)	(.037)	(.029)	(.044)	(.035)
Chi-squared	10608.6	6383.7	6023.352	3671.208	4613.662	5653.864

Appendix Table B.10 Estimates of Logit Models of Underlying Equations Used to Estimate Darity-Myers Sex-Ratios, Whites, 1995
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)
Constant	-2.584	3.361	-2.327	3.223	-1.958	3.346
	(.375)	(.298)	(.461)	(.355)	(1.211)	(.978)
Age	0.131	-0.159	0.119	-0.152	0.145	-0.169
	(.007)	(.003)	(.009)	(.004)	(.010)	(.005)
Age**2	-0.002	0.002	-0.002	0.002	-0.003	0.002
	(.0001)	(.00003)	(.0001)	(.00004)	(.0001)	(.0001)
Education	0.014	-0.008	0.024	-0.021	0.002	0.009
	(.006)	(.004)	(.008)	(.006)	(.009)	(.007)
Child under 6	-2.422	-0.733	-2.364	-0.725	-2.503	-0.749
	(.087)	(.035)	(.113)	(.045)	(.138)	(.054)
Child 6-18	-1.741	-0.275	-1.628	-0.331	-1.908	-0.201
	(.054)	(.021)	(.068)	(.029)	(.091)	(.032)
Abortion Ratio	0.010	-0.047	0.532	-0.163	-0.117	0.377
	(.265)	(.212)	(.360)	(.283)	(.548)	(.440)
Institutiona-lization Ratio 90	0.009	0.100	0.346	0.029	0.131	-0.142
	(.112)	(.090)	(.146)	(.116)	(.351)	(.290)
Mortality Ratio	0.233	-0.771	0.099	-0.589	-1.054	-0.760
	(.307)	(.249)	(.376)	(.295)	(.882)	(.712)
Population Density 94	.0001	-0.00000	0.0001	0.00000	-0.001	0.0001
	(.00002)	(.00002)	(.00003)	(.00002)	(.0003)	(.0002)
% of Blacks 94	-0.001	0.0004	-0.005	0.001	0.013	0.001
	(.002)	(.002)	(.003)	(.002)	(.005)	(.004)
% of people on Welfare 94	-0.044	0.024	-0.065	0.016	0.005	0.024
	(.015)	(.012)	(.022)	(.018)	(.029)	(.023)
AFDC 94	0.001	-0.00002	0.0001	0.0002	0.002	-0.0002
	(.0002)	(.0002)	(.0003)	(.0002)	(.0006)	(.0005)
Own House	-0.373	-0.698	-0.413	-0.659	-0.322	-0.757
	(.032)	(.026)	(.041)	(.034)	(.049)	(.040)
Chi-squared	8992.3	5685.8	5109.3	3299.9	3921.9	2410.2

Appendix Table B.11 Estimates of Logit Models of Underlying Equations Used to Estimate Darity-Myers Sex-Ratios, Blacks, 1995
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)
Constant	-3.394	2.575	-2.714	3.012	-6.782	1.764
	(.622)	(.447)	(.884)	(.652)	(1.630)	(1.282)
Age	0.209	-0.097	0.190	-0.097	0.246	-0.095
	(.016)	(.007)	(.019)	(.009)	(.028)	(.012)
Age**2	-0.003	0.001	-0.003	0.001	-0.004	0.001
	(.0002)	(.0001)	(.0003)	(.0001)	(.0004)	(.0001)
Education	0.019	0.011	0.009	0.009	0.040	0.013
	(.014)	(.009)	(.018)	(.012)	(.025)	(.015)
Child under 6	-1.998	0.210	-2.103	0.378	-1.914	-0.036
	(.161)	(.043)	(.223)	(.058)	(.231)	(.070)
Child 6-18	-1.695	0.118	-1.701	0.086	-1.705	0.160
	(.104)	(.028)	(.135)	(.037)	(.165)	(.044)
Abortion Ratio	-0.476	-0.333	-0.779	-0.382	1.269	-0.046
	(.296)	(.216)	(.401)	(.298)	(.921)	(.720)
Institutiona-lization Ratio 90	-0.020	0.017	-0.111	0.066	0.263	-0.045
	(.059)	(.043)	(.108)	(.081)	(.171)	(.137)
Mortality Ratio	0.130	-1.148	0.252	-1.656	2.508	-0.799
	(.456)	(.346)	(.730)	(.558)	(1.597)	(1.271)
Population Density 94	0.0002	-0.00000	0.0002	-0.00002	0.001	-0.001
	(.0001)	(.00005)	(.0001)	(.0001)	(.001)	(.001)
% of Blacks 94	-0.008	-0.006	-0.013	-0.009	-0.027	0.002
	(.005)	(.004)	(.007)	(.005)	(.020)	(.015)
% of people on Welfare 94	-0.089	0.053	-0.068	0.047	-0.124	0.091
	(.035)	(.025)	(.055)	(.041)	(.056)	(.041)
AFDC 94	0.001	0.001	0.001	0.001	-0.005	0.001
	(.001)	(.0004)	(.001)	(.001)	(.004)	(.003)
Chi-squared	1604.2	465.6	915.2	312.0	708.9	182.0

Appendix Table B.12 Estimates of Logit Models of Underlying Equations Used to Estimate Expected Welfare Income, Blacks and Whites, 1995
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare
Constant	-2.597	7.174	-2.579	7.221	-2.830	7.037
	(.227)	(.223)	(.291)	(.275)	(.373)	(.391)
Age	0.007	-0.010	0.017	-0.010	-0.009	-0.009
	(.006)	(.007)	(.008)	(.008)	(.010)	(.011)
Age**2	-0.0005	0.0001	-0.001	0.0001	-0.0003	0.0001
	(.0001)	(.0001)	(.0001)	(.0001)	(.0001)	(.0001)
grade	0.245	0.062	0.231	0.066	0.268	0.057
	(.036)	(.035)	(.045)	(.044)	(.059)	(.058)
grade**2	-0.025	-0.005	-0.025	-0.005	-0.027	-0.004
	(.002)	(.002)	(.002)	(.002)	(.003)	(.003)
Child	0.687	0.031	0.678	0.009	0.703	0.078
under 6	(.023)	(.023)	(.029)	(.027)	(.040)	(.043)
Child 6-18	0.353	0.158	0.329	0.167	0.639	0.148
	(.019)	(.020)	(.024)	(.025)	(.030)	(.033)
Population	-0.0001		-0.0001		0.001	
Density 94	(.00004)		(.00004)		(.0003)	
% of Blacks 94	0.012	0.012	0.009	0.008	0.020	0.017
	(.003)	(.003)	(.003)	(.003)	(.007)	(.007)
Central		0.212		0.266		0.099
City		(.039)		(.046)		(.071)
North East	0.383	0.613	0.246	0.761	0.610	0.402
	(.058)	(.055)	(.070)	(.064)	(.113)	(.121)
Mid-West	0.235	0.414	0.177	0.411	0.415	0.505
	(.055)	(.054)	(.067)	(.063)	(.103)	(.114)
West	0.222	0.920	0.157	1.005	0.453	0.755
	(.071)	(.070)	(.082)	(.076)	(.157)	(.173)
F		32.141		32.138		5.597
Chi-squared	4160.3		2623.2		1262.6	

Appendix Table B.13 Estimates of Logit Models of Underlying Equations Used to Estimate Expected Welfare Income, Whites, 1995
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare
Constant	-2.316	7.116	-2.635	7.425	-2.018	6.617
	(.286)	(.318)	(.376)	(.398)	(.467)	(.589)
Age	0.022	-0.017	0.037	-0.026	-0.003	0.008
	(.009)	(.010)	(.011)	(.011)	(.014)	(.018)
Age**2	-0.001	0.0002	-0.001	0.0003	-0.0003	-0.0001
	(.0001)	(.0001)	(.0001)	(.0001)	(.0002)	(.0002)
grade	0.161	0.072	0.198	0.070	0.103	0.053
	(.044)	(.049)	(.060)	(.063)	(.066)	(.083)
grade**2	-0.022	-0.004	-0.023	-0.005	-0.019	-0.003
	(.002)	(.002)	(.003)	(.003)	(.003)	(.004)
Child	0.743	0.040	0.690	0.020	0.841	0.102
under 6	(.030)	(.034)	(.037)	(.039)	(.052)	(.069)
Child 6-18	0.311	0.204	0.281	0.217	0.364	0.192
	(.025)	(.031)	(.031)	(.037)	(.042)	(.059)
Population	0.0001		0.0001		0.001	
Density 94	(.0001)		(.0001)		(.001)	
% of Blacks 94	-0.023	0.006	-0.025	0.002	-0.017	0.007
	(.004)	(.004)	(.005)	(.005)	(.010)	(.013)
Central		0.228		0.317		0.016
City		(.062)		(.070)		(.130)
North East	0.156	0.656	0.044	0.810	0.325	0.392
	(.076)	(.077)	(.092)	(.088)	(.161)	(.187)
Mid-West	-0.013	0.332	0.012	0.336	0.009	0.360
	(.071)	(.075)	(.084)	(.084)	(.151)	(.188)
West	-0.038	0.908	-0.114	1.000	0.255	0.672
	(.087)	(.091)	(.099)	(.097)	(.209)	(.264)
F		18.664		19.722		3.070
Chi-squared	2455.6		1596.1		884.1	

Appendix Table B.14 Estimates of Logit Models of Underlying Equations Used to Estimate Expected Welfare Income, Blacks, 1995
(Standard Errors in Parentheses)

	Total		Non-Sentence Guideline		Sentence Guideline	
Variables	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare
Constant	-1.999	7.472	-1.503	7.128	-3.150	7.958
	(.370)	(.302)	(.449)	(.377)	(.675)	(.510)
Age	-0.015	0.002	-0.015	0.015	-0.013	-0.018
	(.010)	(.009)	(.013)	(.011)	(.016)	(.014)
Age**2	-0.0002	-0.0001	-0.0002	-0.0002	-0.0002	0.0002
	(.0001)	(.0001)	(.0002)	(.0001)	(.0002)	(.0002)
grade	0.328	0.047	0.232	0.068	0.500	0.0001
	(.062)	(.047)	(.073)	(.059)	(.119)	(.080)
grade**2	-0.027	-0.005	-0.022	-0.006	-0.036	-0.002
	(.003)	(.002)	(.004)	(.003)	(.006)	(.004)
Child	0.646	0.040	0.746	0.010	0.505	0.092
under 6	(.042)	(.030)	(.054)	(.037)	(.067)	(.051)
Child 6-18	0.380	0.121	0.378	0.120	0.373	0.124
	(.030)	(.024)	(.039)	(.032)	(.046)	(.036)
Population	-0.0001		-0.00000		-0.0002	
Density 94	(.0001)		(.0001)		(.0004)	
% of Blacks 94	0.003	0.007	-0.001	0.004	0.021	0.014
	(.005)	(.004)	(.006)	(.005)	(.009)	(.008)
Central City		-0.015		0.044		-0.130
		(.056)		(.072)		(.090)
North East	0.767	0.598	0.534	0.738	1.468	0.448
	(.093)	(.076)	(.116)	(.092)	(.180)	(.154)
Mid-West	0.824	0.585	0.692	0.605	1.127	0.664
	(.089)	(.077)	(.119)	(.099)	(.148)	(.133)
West	0.909	0.917	0.776	0.977	1.710	0.935
	(.128)	(.108)	(.153)	(.125)	(.371)	(.309)
F		16.216		14.162		4.713
Chi-squared	1275.8		7623.0		551.6	

Appendix Table B.15 Estimates of Logit Models of Female-headed Families, 1995
(Standard Errors in Parentheses)

	Total			Non-Sentence Guideline			Sentence Guideline		
Variables	Total	Whites	Blacks	Total	Whites	Blacks	Total	Whites	Blacks
Constant	-1.269	-2.675	0.935	-0.678	-1.990	1.466	-2.520	-3.611	0.349
	(.423)	(.589)	(.612)	(.541)	(.742)	(.822)	(.681)	(.979)	(.913)
Age	0.009	0.021	0.013	-0.003	0.016	-0.015	0.019	0.011	0.043
	(.011)	(.015)	(.020)	(.014)	(.019)	(.027)	(.018)	(.023)	(.031)
Age**2	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(.0001)	(.0002)	(.0002)	(.0002)	(.0002)	(.0003)	(.0002)	(.0003)	(.0004)
grade	0.332	0.503	0.173	0.280	0.386	0.241	0.391	0.682	0.035
	(.059)	(.082)	(.083)	(.075)	(.103)	(.107)	(.095)	(.135)	(.128)
grade**2	-0.016	-0.021	-0.009	-0.014	-0.016	-0.013	-0.018	-0.029	-0.003
	(.002)	(.003)	(.003)	(.003)	(.004)	(.004)	(.004)	(.005)	(.005)
Child	-0.775	-0.905	-0.465	-0.732	-0.859	-0.449	-0.737	-0.852	-0.421
under 6	(.050)	(.067)	(.086)	(.065)	(.090)	(.112)	(.077)	(.097)	(.132)
Child 6-18	-0.346	-0.377	-0.344	-0.345	-0.367	-0.388	-0.290	-0.298	-0.222
	(.037)	(.050)	(.062)	(.047)	(.066)	(.080)	(.056)	(.072)	(.095)
Abortion Ratio	1.540	0.064	-0.269	1.265	0.062	-0.368	3.649	0.075	0.477
	(.105)	(.289)	(.151)	(.116)	(.308)	(.166)	(.292)	(.853)	(.486)
Expected	0.004	0.006	0.002	0.004	0.005	0.002	0.004	0.006	0.002
Welfare	(.0002)	(.0004)	(.0002)	(.0003)	(.001)	(.0002)	(.0004)	(.001)	(.0003)
D-M Sex Ratio	-1.203	-1.146	-1.429	-1.164	-1.083	-1.392	-1.126	-1.031	-1.342
	(.074)	(.094)	(.167)	(.101)	(.134)	(.217)	(.107)	(.125)	(.261)
Chi-squared	3256.2	1578.6	808.7	1873.5	836.1	535.3	1418.2	732.7	272.1

Appendix Table B.16 Estimates of Logit Models of Female-headed Families with a Dummy for Sentencing Guidelines, 1995
(Standard Errors in Parentheses)

	Total			Whites			Blacks		
Variables	P(umlf)	p(umf)	p(fhh)	P(umlf)	p(umf)	p(fhh)	P(umlf)	p(umf)	p(fhh)
Constant	-2.919	3.248	-1.297	-2.615	3.415	-2.681	-3.352	2.591	1.013
	(.280)	(.222)	(.424)	(.378)	(.300)	(.589)	(.631)	(.452)	(.613)
Age	0.145	-0.150	0.009	0.131	-0.159	0.021	0.209	-0.097	0.012
	(.006)	(.003)	(.011)	(.007)	(.003)	(.014)	(.016)	(.007)	(.020)
Age**2	-0.003	0.002	-0.001	-0.002	0.002	-0.001	-0.003	0.001	-0.001
	(.0001)	(.0001)	(.0001)	(.0001)	(.0000)	(.0002)	(.0002)	(.0001)	(.0002)
grade	0.014	-0.006	0.332	0.014	-0.008	0.501	0.019	0.011	0.176
	(.006)	(.004)	(.059)	(.006)	(.004)	(.082)	(.014)	(.009)	(.083)
grade**2			-0.016			-0.021			-0.010
			(.002)			(.003)			(.003)
Child	-2.348	-0.428	-0.777	-2.422	-0.733	-0.906	-1.998	0.210	-0.452
under 6	(.077)	(.025)	(.050)	(.087)	(.035)	(.067)	(.161)	(.043)	(.085)
Child 6-18	-1.730	-0.134	-0.347	-1.740	-0.275	-0.377	-1.695	0.118	-0.339
	(.048)	(.016)	(.037)	(.054)	(.021)	(.050)	(.104)	(.028)	(.062)
Abortion Ratio	-0.328	0.251	1.557	0.001	-0.037	0.090	-0.527	-0.354	-0.324
	(.126)	(.096)	(.107)	(.265)	(.212)	(.291)	(.321)	(.235)	(.154)
Institutiona-	0.034	0.242		0.129	0.040		-0.030	0.013	
lization Ratio 90	(.019)	(.014)		(.122)	(.098)		(.064)	(.046)	
Mortality Ratio	0.346	-1.004		0.237	-0.776		0.142	-1.143	
94	(.215)	(.177)		(.307)	(.248)		(.456)	(.347)	
Population	0.0001	-.0000		0.0001	-.0000		0.0002	-.0000	
Density 94	(.0001)	(.0000)		(.0000)	(.0000)		(.0001)	(.0000)	
% of Blacks 94	-0.001	0.0004		-0.001	0.001		-0.008	-0.007	
	(.002)	(.001)		(.002)	(.002)		(.005)	(.004)	
% of people on	-0.044	0.022		-0.041	0.020		-0.090	0.053	
Welfare 94	(.014)	(.011)		(.016)	(.013)		(.035)	(.026)	
AFDC 94	0.001	-.0002		0.001	0.0000		0.001	0.001	
	(.0002)	(.0001)		(.0002)	(.0002)		(.001)	(.0005)	
Own House	-0.354	-0.694		-0.374	-0.698		-0.271	-0.593	
	(.028)	(.023)		(.032)	(.026)		(.065)	(.047)	
Expected			0.004			0.006			0.002
Welfare			(.0002)			(.0004)			(.0002)
D-M Sex Ratio			-1.205			-1.146			-1.413
			(.074)			(.094)			(.167)
Sentence	0.011	0.006	0.050	0.025	-0.043	0.049	-0.031	-0.012	-0.156
Guideline	(.029)	(.022)	(.043)	(.035)	(.028)	(.051)	(.076)	(.054)	(.083)
Chi-squared	10609	6384	3259	8992	5688	1576	1604	466	806

Appendix Table B.17 Estimates of Logit Models of Underlying Equations Used to Estimate Darity-Myers Sex-Ratios, Blacks and Whites, 1995
(Standard Errors in Parentheses)

	Total		Non-Drug Enforcement		Drug Enforcement	
Variables	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)
Constant	-2.906	3.256	-3.244	3.329	-2.969	3.197
	(0.278)	(0.220)	(0.543)	(0.435)	(0.347)	(0.272)
Age	0.145	-0.150	0.144	-0.146	0.145	-0.152
	(0.006)	(0.003)	(0.009)	(0.005)	(0.008)	(0.004)
Age**2	-0.003	0.002	-0.002	0.002	-0.003	0.002
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education	0.014	-0.006	0.024	-0.005	0.006	-0.007
	(0.006)	(0.004)	(0.009)	(0.006)	(0.008)	(0.005)
Child under 6	-2.348	-0.428	-2.559	-0.450	-2.232	-0.410
	(0.077)	(0.025)	(0.135)	(0.039)	(0.093)	(0.033)
Child 6-18	-1.730	-0.134	-1.640	-0.175	-1.780	-0.102
	(0.048)	(0.016)	(0.071)	(0.025)	(0.066)	(0.021)
Abortion Ratio	-0.329	0.251	-0.212	0.421	-0.251	0.198
	(0.126)	(0.096)	(0.190)	(0.146)	(0.234)	(0.180)
Institutiona-lization Ratio 80	0.034	0.242	0.023	0.224	0.020	0.244
	(0.019)	(0.014)	(0.033)	(0.025)	(0.025)	(0.019)
Mortality Ratio 80	0.341	-1.007	0.362	-1.162	0.437	-0.897
	(0.215)	(0.176)	(0.445)	(0.364)	(0.251)	(0.205)
Population Density 80	0.000	-0.000	-0.000	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
% of Blacks 80	-0.001	0.000	0.011	0.001	-0.004	-0.001
	(0.002)	(0.001)	(0.004)	(0.003)	(0.003)	(0.002)
% of people on Welfare 80	-0.045	0.021	-0.066	0.022	-0.011	0.036
	(0.013)	(0.010)	(0.021)	(0.017)	(0.021)	(0.016)
AFDC 80	0.001	-0.000	0.001	-0.000	0.001	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Own House	-0.354	-0.694	-0.296	-0.691	-0.401	-0.699
	(0.028)	(0.023)	(0.044)	(0.034)	(0.037)	(0.030)
Chi-squared	10608.595	6383.701	4164.464	2688.778	6484.033	3712.360

Appendix Table B.18 Estimates of Logit Models of Underlying Equations Used to Estimate Darity-Myers Sex-Ratios, Whites, 1995
(Standard Errors in Parentheses)

	Total		Non- Drug Enforcement		Drug Enforcement	
Variables	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)
Constant	-2.584	3.361	-3.005	3.702	-2.828	3.122
	(0.375)	(0.298)	(0.740)	(0.587)	(0.515)	(0.402)
Age	0.131	-0.159	0.135	-0.157	0.128	-0.161
	(0.001)	(0.003)	(0.010)	(0.005)	(0.009)	(0.004)
Age**2	-0.002	0.002	-0.002	0.002	-0.002	0.002
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education	0.014	-0.008	0.024	-0.006	0.005	-0.009
	(0.006)	(0.004)	(0.009)	(0.007)	(0.008)	(0.006)
Child	-2.422	-0.733	-2.670	-0.781	-2.288	-0.700
under 6	(0.087)	(0.035)	(0.157)	(0.055)	(0.105)	(0.044)
Child 6-18	-1.741	-0.275	-1.695	-0.300	-1.774	-0.256
	(0.054)	(0.021)	(0.082)	(0.033)	(0.073)	(0.028)
Abortion Ratio	0.010	-0.047	0.546	0.119	0.208	-0.204
	(0.265)	(0.212)	(0.575)	(0.459)	(0.416)	(0.329)
Institutiona-	0.094	0.100	-0.143	-0.137	0.367	0.075
lization Ratio	(0.112)	(0.090)	(0.505)	(0.397)	(0.153)	(0.122)
80						
Mortality Ratio	0.233	-0.771	0.106	-1.085	0.252	-0.515
80	(0.307)	(0.249)	(0.574)	(0.462)	(0.420)	(0.332)
Population	0.000	-0.000	-0.001	-0.000	0.000	-0.000
Density 80	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
% of Blacks 80	-0.001	0.000	0.015	-0.000	-0.001	-0.000
	(0.002)	(0.002)	(0.005)	(0.004)	(0.003)	(0.003)
% of people on	-0.044	0.024	-0.038	0.030	-0.012	0.037
Welfare 80	(0.015)	(0.012)	(0.032)	(0.026)	(0.024)	(0.019)
AFDC 80	0.001	-0.000	0.001	-0.000	0.001	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Own House	-0.373	-0.698	-0.289	-0.726	-0.441	-0.679
	(0.032)	(0.026)	(0.048)	(0.039)	(0.042)	(0.034)
Chi-squared	8992.290	5685.809	3559.399	2463.706	5490.749	3229.361

Appendix Table B.19 Estimates of Logit Models of Underlying Equations Used to Estimate Darity-Myers Sex-Ratios, Blacks, 1995
(Standard Errors in Parentheses)

	Total		Non- Drug Enforcement		Drug Enforcement	
Variables	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)	P(unmarried M in LF)	P(unmarried F)
Constant	-3.394	2.575	-4.993	1.950	-2.412	3.158
	(0.622)	(0.447)	(1.262)	(0.966)	(0.917)	(0.656)
Age	0.209	-0.097	0.186	-0.091	0.231	-0.102
	(0.016)	(0.007)	(0.024)	(0.011)	(0.022)	(0.009)
Age**2	-0.003	0.001	-0.003	0.001	-0.004	0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education	0.019	0.011	0.018	0.014	0.017	0.007
	(0.014)	(0.009)	(0.023)	(0.015)	(0.019)	(0.012)
Child	-1.998	0.210	-2.124	0.204	-1.946	0.228
under 6	(0.161)	(0.043)	(0.269)	(0.067)	(0.201)	(0.058)
Child 6-18	-1.695	0.118	-1.481	0.020	-1.903	0.216
	(0.104)	(0.028)	(0.143)	(0.042)	(0.152)	(0.038)
Abortion Ratio	-0.476	-0.333	1.869	0.439	-1.252	-0.502
	(0.296)	(0.216)	(1.170)	(0.832)	(0.554)	(0.411)
Institutiona-	-0.020	0.017	-0.353	0.024	-0.088	-0.027
lization Ratio	(0.059)	(0.043)	(0.179)	(0.129)	(0.084)	(0.062)
80						
Mortality Ratio	0.130	-1.148	1.708	-0.998	-0.589	-0.751
80	(0.456)	(0.346)	(1.035)	(0.842)	(0.657)	(0.483)
Population	0.000	-0.000	-0.009	0.000	0.000	0.000
Density 80	(0.000)	(0.000)	(0.004)	(0.003)	(0.000)	(0.000)
% of Blacks 80	-0.008	-0.006	0.034	0.007	-0.018	-0.027
	(0.005)	(0.004)	(0.020)	(0.014)	(0.008)	(0.006)
% of people on	-0.089	0.053	-0.088	0.038	-0.039	0.100
Welfare 80	(0.035)	(0.025)	(0.053)	(0.044)	(0.054)	(0.039)
AFDC 80	0.001	0.001	0.003	-0.001	0.001	-0.001
	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Own House	-0.271	-0.593	-0.328	-0.485	-0.242	-0.675
	(0.065)	(0.047)	(0.103)	(0.074)	(0.084)	(0.063)
Chi-squared	1604.157	465.588	626.559	170.405	996.078	337.220

Appendix Table B.20 Estimates of Logit Models of Underlying Equations Used to Estimate Expected Welfare Income, Blacks and Whites, 1995
(Standard Errors in Parentheses)

	Total		Non- Drug Enforcement		Drug Enforcement	
	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare
Variables						
Constant	-2.597	7.174	-2.232	7.468	-2.963	7.093
	(0.227)	(0.223)	(0.358)	(0.336)	(0.299)	(0.299)
Age	0.007	-0.010	0.008	0.003	0.007	-0.017
	(0.006)	(0.007)	(0.011)	(0.016)	(0.008)	(0.008)
Age**2	-0.000	0.000	-0.000	-0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
grade	0.245	0.062	0.232	-0.018	0.249	0.111
	(0.036)	(0.035)	(0.058)	(0.054)	(0.047)	(0.046)
grade**2	-0.025	-0.005	-0.025	-0.001	-0.026	-0.007
	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)
Child	0.687	0.031	0.714	-0.015	0.678	0.061
under 6	(0.023)	(0.023)	(0.039)	(0.040)	(0.029)	(0.030)
Child 6-18	0.353	0.158	0.316	0.120	0.381	0.184
	(0.019)	(0.020)	(0.030)	(0.031)	(0.024)	(0.026)
Population	-0.000		0.001		-0.000	
Density 80	(0.000)		(0.000)		(0.000)	
% of	0.012	0.012	-0.011	0.009	0.025	0.009
Blacks 80	(0.003)	(0.003)	(0.007)	(0.005)	(0.004)	(0.004)
Central		0.212		0.171		0.243
City		(0.039)		(0.061)		(0.052)
North East	0.383	0.613	-0.078	0.686	0.639	0.516
	(0.058)	(0.055)	(0.140)	(0.075)	(0.095)	(0.088)
Mid-West	0.235	0.414	0.069	0.352	0.365	0.373
	(0.055)	(0.054)	(0.113)	(0.080)	(0.082)	(0.081)
West	0.222	0.920	-0.238	0.764	0.555	0.894
	(0.071)	(0.070)	(0.123)	(0.119)	(0.102)	(0.099)
F						
Chi-squared	4160.318		1556.432		2644.383	

Appendix Table B.21 Estimates of Logit Models of Underlying Equations Used to Estimate Expected Welfare Income, Whites, 1995
(Standard Errors in Parentheses)

	Total		Non- Drug Enforcement		Drug Enforcement	
	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare
Variables						
Constant	-2.316	7.116	-2.117	7.994	-2.393	6.836
	(0.286)	(0.318)	(0.455)	(0.533)	(0.378)	(0.411)
Age	0.022	-0.017	0.028	-0.018	0.019	-0.014
	(0.009)	(0.010)	(0.014)	(0.015)	(0.011)	(0.013)
Age**2	-0.001	0.000	-0.001	0.000	-0.001	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
grade	0.161	0.072	0.183	-0.077	0.141	0.137
	(0.044)	(0.049)	(0.072)	(0.090)	(0.056)	(0.060)
grade**2	-0.022	-0.004	-0.022	0.002	-0.021	-0.007
	0.002	(0.002)	(0.003)	(0.004)	(0.003)	(0.003)
Child	0.743	0.040	0.766	0.033	0.731	0.047
under 6	(0.030)	(0.034)	(0.048)	(0.051)	(0.038)	(0.046)
Child 6-18	0.311	0.204	0.287	0.228	0.329	0.183
	(0.025)	(0.031)	(0.038)	(0.045)	(0.034)	(0.044)
Population	0.000		0.003		0.000	
Density 80	(0.000)		(0.001)		(0.000)	
% of Blacks 80	-0.023	0.006	-0.075	0.001	-0.015	0.002
	(0.004)	(0.004)	(0.012)	(0.008)	(0.006)	(0.006)
Central		0.228		0.079		0.347
City		(0.062)		(0.089)		(0.089)
North East	0.156	0.656	-0.505	0.828	0.259	0.469
	(0.076)	(0.077)	(0.176)	(0.105)	(0.122)	(0.124)
Mid-West	-0.013	0.332	-0.354	0.291	0.023	0.262
	(0.071)	(0.075)	(0.150)	(0.103)	(0.109)	(0.117)
West	-0.38	0.908	-0.578	0.722	0.183	0.859
	(0.087)	(0.091)	(0.151)	(0.141)	(0.128)	(0.136)
F						
Chi-squared	2455.590		1023.152		1463.029	

Appendix Table B.22 Estimates of Logit Models of Underlying Equations Used to Estimate Expected Welfare Income, Blacks, 1995
(Standard Errors in Parentheses)

	Total		Non Drug Enforcement		Drug Enforcement	
	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare	P(welf>0)	Ln-Welfare
Variables						
Constant	-1.997	7.472	-1.164	6.896	-2.869	7.787
	(0.370)	(0.302)	(0.577)	(0.425)	(0.492)	(0.439)
Age	-0.015	0.002	-0.030	0.035	-0.006	-0.016
	(0.010)	(0.009)	(0.017)	(0.014)	(0.012)	(0.011)
Age**2	-0.000	-0.000	-0.000	-0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
grade	0.328	0.047	0.253	0.046	0.379	0.042
	(0.062)	(0.047)	(0.097)	(0.065)	(0.081)	(0.069)
grade**2	-0.027	-0.005	-0.024	-0.005	-0.029	-0.005
	(0.003)	(0.002)	(0.005)	(0.004)	(0.004)	(0.003)
Child	0.646	0.040	0.631	-0.027	0.665	0.085
under 6	(0.042)	(0.030)	(0.073)	(0.048)	(0.051)	(0.038)
Child 6-18	0.380	0.121	0.320	0.006	0.410	0.180
	(0.030)	(0.024)	(0.051)	(0.040)	(0.037)	(0.030)
Population	-0.000		-0.001		-0.000	
Density 80	(0.000)		(0.001)		(0.000)	
% of	0.003	0.007	0.007	0.011	0.016	0.005
Blacks 80	(0.005)	(0.004)	(0.009)	(0.007)	(0.007)	(0.006)
Central		-0.015		0.091		-0.047
City		(0.056)		(0.102)		(0.071)
North East	0.767	0.598	0.632	0.551	1.246	0.596
	(0.093)	(0.076)	(0.311)	(0.102)	(0.158)	(0.120)
Mid-West	0.824	0.585	0.945	0.546	0.982	0.596
	(0.089)	(0.077)	(0.207)	(0.123)	(0.125)	(0.109)
West	0.909	0.917	1.101	0.979	1.145	0.902
	(0.128)	(0.108)	(0.335)	(0.276)	(0.171)	(0.142)
F						
Chi-squared	1275.845		423.135		880.810	

Appendix Table B.23 Estimates of Female-headed Families, Simple Logit model, 1995
(Standard Errors in Parentheses)

	Total			Non- Drug Enforcement			Drug Enforcement		
Variables	Total	Whites	Blacks	Total	Whites	Blacks	Total	Whites	Blacks
Constant	-1.269	-2.675	0.935	-1.094	-2.607	0.638	-1.791	-2.700	0.873
	(0.423)	(0.589)	(0.612)	(0.614)	(0.878)	(0.854)	(0.592)	(0.801)	(0.897)
Age	0.009	0.021	0.013	0.002	0.010	0.034	0.013	0.024	-0.012
	(0.011)	(0.015)	(0.020)	(0.017)	(0.021)	(0.031)	(0.015)	(0.020)	(0.027)
Age**2	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
grade	0.332	0.503	0.173	0.300	0.516	0.053	0.372	0.492	0.289
	(0.059)	(0.082)	(0.083)	(0.084)	(0.121)	(0.113)	(0.082)	(0.112)	(0.122)
grade**2	-0.016	-0.021	-0.009	-0.015	-0.022	-0.004	-0.017	-0.021	-0.014
	(0.002)	(0.003)	(0.003)	(0.003)	(0.005)	(0.005)	(0.003)	(0.004)	(0.005)
Child	-0.775	-0.905	-0.465	-0.698	-0.905	-0.326	-0.840	-0.882	-0.545
under 6	(0.050)	(0.067)	(0.086)	(0.076)	(0.103)	(0.129)	(0.068)	(0.088)	(0.118)
Child 6-18	-0.346	-0.377	-0.344	-0.272	-0.340	-0.273	-0.397	-0.376	-0.356
	(0.037)	(0.050)	(0.062)	(0.052)	(0.072)	(0.086)	(0.051)	(0.068)	(0.086)
Abortion Ratio	1.540	0.064	-0.269	1.216	0.008	-0.074	2.706	0.151	-0.387
	(0.105)	(0.289)	(0.151)	(0.132)	(0.454)	(0.178)	(0.195)	(0.414)	(0.361)
Expected	0.004	0.006	0.002	0.003	0.004	0.002	0.006	0.008	0.003
Welfare	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
D-M Sex Ratio	-1.203	-1.146	-1.429	-1.058	-1.073	-1.228	-1.272	-1.139	-1.420
	(0.074)	(0.094)	(0.167)	(0.112)	(0.140)	(0.268)	(0.098)	(0.125)	(0.209)
Chi-squared	3256.205	1578.578	808.715	1184.688	600.441	295.050	2235.444	990.485	556.130

Appendix Table B.24 Estimates of Logit Models of Female-headed Families with a Dummy for States with and without Minimum Drug Sentences, 1985
(Standard Errors in Parentheses)

	Total			Whites			Blacks		
Variables	P(umlf)	p(umf)	p(fhh)	P(umlf)	p(umf)	p(fhh)	P(umlf)	p(umf)	p(fhh)
Constant	-2.950	3.159	-1.423	-2.639	3.329	-2.666	-3.315	2.140	0.724
	(0.280)	(0.222)	(0.426)	(0.376)	(0.299)	(0.591)	(0.651)	(0.472)	(0.621)
Age	0.145	-0.150	0.008	0.131	-0.159	0.021	0.209	-0.097	0.012
	(0.006)	(0.003)	(0.011)	(0.007)	(0.003)	(0.015)	(0.016)	(0.007)	(0.020)
Age**2	-0.003	0.002	-0.001	-0.002	0.002	-0.001	-0.003	0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
grade	0.015	-0.006	0.331	0.014	-0.008	0.501	0.019	0.010	0.177
	(0.006)	(0.004)	(0.059)	(0.006)	(0.004)	(0.082)	(0.014)	(0.009)	(0.084)
grade**2			-0.016			-0.021			-0.010
			(0.002)			(0.003)			(0.003)
Child	-2.348	-0.428	-0.775	-2.422	-0.733	-0.899	-1.999	0.212	-0.461
under 6	(0.077)	(0.025)	(0.050)	(0.087)	(0.035)	(0.067)	(0.161)	(0.043)	(0.086)
Child 6-18	-1.730	-0.134	-0.343	-1.740	-0.275	-0.374	-1.695	0.121	-0.339
	(0.048)	(0.016)	(0.037)	(0.055)	(0.021)	(0.050)	(0.104)	(0.028)	(0.062)
Abortion	-0.289	0.320	1.671	0.298	0.070	0.058	-0.533	-0.056	-0.131
Ratio	(0.131)	(0.099)	(0.109)	(0.294)	(0.234)	(0.306)	(0.326)	(0.238)	(0.160)
Institutiona-	0.030	0.234		0.098	0.103		-0.019	0.015	
lization	(0.019)	(0.015)		(0.112)	(0.090)		(0.059)	(0.043)	
Ratio 80									
Mortality	0.353	-0.976		0.207	-0.775		0.076	-0.862	
Ratio 80	(0.215)	(0.176)		(0.307)	(0.249)		(0.475)	(0.359)	
Population	0.000	-0.000		0.000	-0.000		0.000	-0.000	
Density 80	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)	
% of Blacks	-0.001	-0.000		-0.002	-0.000		-0.007	-0.009	
80	(0.002)	(0.001)		(0.002)	(0.002)		(0.005)	(0.004)	
% of people	-0.042	0.030		-0.039	0.027		-0.092	0.072	
on Welfare	(0.014)	(0.011)		(0.016)	(0.012)		(0.036)	(0.027)	
80									
AFDC 80	0.001	-0.000		0.001	-0.000		0.001	-0.000	
	(0.000)	(0.000)		(0.000)	(0.000)		(0.001)	(0.000)	
Own House	-0.355	-0.696		-0.376	-0.699		-0.272	-0.591	
	(0.028)	(0.023)		(0.032)	(0.026)		(0.065)	(0.047)	
Expected			0.004			0.005			0.002
Welfare			(0.000)			(0.000)			(0.000)
D-M Sex			-1.199			-1.143			-1.436
Ratio			(0.074)			(0.094)			(0.168)
Sentence	0.034	0.067	0.211	0.081	0.034	0.012	-0.033	0.165	0.225
Guideline	(0.030)	(0.024)	(0.044)	(0.036)	(0.028)	(0.054)	(0.080)	(0.059)	(0.086)
Chi-sq	10609.879	6391.841	3285.392	8997.462	5687.202	1572.374	1604.325	473.535	821.255

Appendix Table B.25 Estimates of Female-headed Families, Fixed Effect Logit Model, 1985
(Standard Errors in Parentheses)

	Total			Non-Sentence Guideline			Sentence Guideline		
Variables	Total	Whites	Blacks	Total	Whites	Blacks	Total	Whites	Blacks
Constant	1.971	1.427	4.039	1.896	1.368	4.083	2.912	1.920	4.168
	(0.453)	(0.483)	(0.503)	(0.461)	(0.497)	(0.524)	(0.536)	(0.674)	(1.122)
Age	-0.115	-0.115	-0.119	-0.115	-0.113	-0.125	-0.116	-0.120	-0.075
	(0.005)	(0.006)	(0.013)	(0.006)	(0.007)	(0.014)	(0.013)	(0.015)	(0.037)
Age**2	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
grade	0.173	0.245	0.164	0.187	0.260	0.168	0.108	0.159	0.159
	(0.024)	(0.033)	(0.042)	(0.026)	(0.036)	(0.045)	(0.064)	(0.085)	(0.115)
grade**2	-0.011	-0.013	-0.010	-0.012	-0.014	-0.009	-0.009	-0.010	-0.013
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.005)
Child	-1.150	-1.223	-0.953	-1.182	-1.263	-0.955	-1.067	-0.976	-0.995
under 6	(0.043)	(0.056)	(0.077)	(0.048)	(0.062)	(0.083)	(0.104)	(0.131)	(0.198)
Child 6-18	-0.364	-0.365	-0.405	-0.371	-0.381	-0.395	-0.373	-0.257	-0.494
	(0.025)	(0.031)	(0.047)	(0.027)	(0.034)	(0.050)	(0.063)	(0.075)	(0.136)
Abortion Ratio									
Expected	0.005	0.005	0.002	0.006	0.006	0.002	0.004	0.003	0.004
Welfare	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
D-M Sex Ratio	-1.525	-1.499	-1.634	-1.544	-1.541	-1.660	-1.552	-1.255	-1.436
	(0.061)	(0.076)	(0.134)	(0.067)	(0.085)	(0.146)	(0.142)	(0.170)	(0.322)
Chi-squared	4125.5	1906.7	1117.0	3470.1	1629.6	914.58	687.34	265.76	228.40

Appendix Table B.26 Estimates of Female-headed Families, Fixed Effect Logit Model, 1995
(Standard Errors in Parentheses)

	Total			Non-Sentence Guideline			Sentence Guideline		
Variables	Total	Whites	Blacks	Total	Whites	Blacks	Total	Whites	Blacks
Constant	-1.104	-2.522	1.722	-0.636	-1.871	1.674	-1.710	-3.465	1.122
	(0.446)	(0.606)	(0.707)	(0.548)	(0.763)	(1.246)	(0.675)	(0.981)	(0.965)
Age	0.023	0.020	0.020	0.020	0.020	-0.008	0.033	0.009	0.044
	(0.011)	(0.015)	(0.021)	(0.014)	(0.019)	(0.028)	(0.018)	(0.023)	(0.032)
Age**2	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
grade	0.368	0.512	0.133	0.295	0.384	0.183	0.415	0.707	0.031
	(0.060)	(0.083)	(0.084)	(0.076)	(0.104)	(0.109)	(0.094)	(0.136)	(0.129)
grade**2	-0.017	-0.022	-0.008	-0.014	-0.016	-0.011	-0.020	-0.030	-0.002
	(0.002)	(0.003)	(0.004)	(0.003)	(0.004)	(0.005)	(0.004)	(0.005)	(0.005)
Child	-0.842	-0.908	-0.454	-0.841	-0.884	-0.436	-0.832	-0.871	-0.390
under 6	(0.051)	(0.068)	(0.088)	(0.066)	(0.092)	(0.114)	(0.077)	(0.099)	(0.133)
Child 6-18	-0.402	-0.378	-.0348	-0.438	-0.387	-0.394	-0.361	-0.310	-0.204
	(0.038)	(0.050)	(0.064)	(0.048)	(0.067)	(0.083)	(0.056)	(0.074)	(0.096)
Abortion Ratio									
Expected	0.004	0.006	0.002	0.004	0.005	0.002	0.004	0.006	0.002
Welfare	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)
D-M Sex Ratio	-1.321	-1.140	-1.447	-1.376	-1.118	-1.429	-1.285	-1.049	-1.279
	(0.075)	(0.095)	(0.173)	(0.101)	(0.137)	(0.224)	(0.107)	(0.127)	(0.267)
Chi-squared	3153.5	1629.4	903.19	1759.9	862.63	609.67	1264.1	766.88	288.88

Appendix B.27 Estimates of Female-headed Families, Fixed Effect Logit Model, 1995
(Standard Errors in Parentheses)

	Total			Non-Drug Enforcement			Drug Enforcement		
Variables	Total	Whites	Blacks	Total	Whites	Blacks	Total	Whites	Blacks
Constant	-1.104	-2.522	1.722	-1.172	-2.728	0.379	-1.173	-2.407	1.698
	(0.446)	(0.606)	(0.707)	(0.623)	(0.894)	(0.879)	(0.589)	(0.814)	(0.979)
Age	0.023	0.020	0.020	0.026	0.008	0.032	0.031	0.028	-0.003
	(0.011)	(0.015)	(0.021)	(0.017)	(0.021)	(0.032)	(0.015)	(0.020)	(0.028)
Age**2	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
grade	0.368	0.512	0.133	0.331	0.542	0.048	0.369	0.485	0.217
	(0.060)	(0.083)	(0.084)	(0.085)	(0.123)	(0.113)	(0.082)	(0.113)	(0.124)
grade**2	-0.017	-0.022	-0.008	-0.016	-0.023	-0.004	-0.017	-0.020	-0.011
	(0.002)	(0.003)	(0.004)	(0.003)	(0.005)	(0.005)	(0.003)	(0.004)	(0.005)
Child	-0.842	-0.908	-0.454	-0.796	-0.908	-0.301	-0.959	-0.919	-0.545
under 6	(0.051)	(0.068)	(0.088)	(0.077)	(0.104)	(0.133)	(0.069)	(0.089)	(0.121)
Child 6-18	-0.402	-0.378	-0.348	-0.356	-0.340	-0.260	-0.495	-0.405	-0.364
	(0.038)	(0.050)	(0.064)	(0.053)	(0.073)	(0.088)	(0.052)	(0.069)	(0.090)
Abortion Ratio									
Expected	0.004	0.006	0.002	0.003	0.004	0.002	0.006	0.008	0.003
Welfare	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
D-M Sex Ratio	-1.321	-1.140	-1.447	-1.253	-1.080	-1.150	-1.471	-1.181	-1.419
	(0.075)	(0.095)	(0.173)	(0.112)	(0.142)	(0.280)	(0.010)	(0.127)	(0.217)
Chi-squared	3153.5	1629.4	903.19	1103.5	620.87	304.55	2051.7	1027.9	633.19

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"The Unintended Impacts of Sentencing Guidelines on Family Structure"

Submitted to:
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Non-Technical Report

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February 2000

FINAL REPORT

Approved By: Louise Lyles

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Introduction

For several years, there has been a policy discussion that an unstable family structure will increase the likelihood that a person will turn to crime. Existing evidence in some ways bears this out. Nearly four of ten prison inmates reported growing up in female-headed family (Snell, 1993: 30), as compared to the general population where eight of ten families were two-parent homes (US Bureau of the Census, 1992). Furthermore, nearly one-third of all inmates in state prisons indicated that a brother had also been incarcerated -- again far in excess of the general risk of incarceration (Snell, 1993: 30). This data imply that dysfunctional families and/or dysfunctional environments contribute to, or at least are correlated with factors that lead to, crime and incarceration (Wilkinson, 1980).

In light of the above evidence a new question has emerged. New evidence suggests that a reverse process may be at work: that incarceration may destabilize families or neighborhoods. If true, a lack of understanding of such evidence could have a troubling impact on public policies that deal with punishment and imprisonment. After all, is society being served if its very efforts at punishment and rehabilitation are only exacerbating the problem?

In 1990, Darity and Myers found early evidence of a decline in the marriage market. They developed a model of black family structure where the apparent cause of extremely high rates of female family headship among African Americans was the low availability of marriageable males. The low availability of males, in turn, was seen to be a consequence of factors such as homicide and incarceration.

The disturbing implication of this finding is that incarceration may unintentionally affect family structure, which in turn, may increase crime and violence. In other words, incarceration may unleash a chain of events that further contributes to crime and violence and thus necessitates further crime control and corrections.

One aspect of any study into a possible relationship between incarceration and family structure should focus on sentencing guidelines. There has been a trend, over the last several years, to equalize

and toughen prison sentences by writing sentencing guidelines that judges should follow when imposing punishment. But is it possible that such sentencing reforms, which were designed to reduce sentencing disparities, could unintentionally contribute to the destabilization of families and/or neighborhoods? Is it possible that longer prison sentences and higher incarceration rates that lead to a greater flow of inmates into prisons have inadvertently induced dislocations in local marriage markets that, in turn, contribute to the decline of two-parent families. And, could these unstable families lead to greater crime?

Goals of the Project

This project, supported by the National Institute of Justice, sought to investigate a possible relationship between sentencing guidelines and family structure. It was mandated to uncover any relationships between sentencing guidelines and changes in family and community structure by studying related issues among different populations. Common results among the approaches used would yield a greater understanding of such a relationship or prove that none exists.

To prove such a thesis by direct observations is difficult. After all observing a social change, such as a decline in marriage rates, does not inform the researcher with clear, concrete reasons for such a decline. Rather, the causes must be uncovered by studying various populations and issues related to the hypothesis and finding common results that point to the reasons behind the change. Furthermore, such social processes may manifest themselves differently across different racial and ethnic groups, so different approaches to understanding each population are also needed.

The research team developed three research modules that employed a variety of data sets and approaches to understand family destabilization and community distress, which cannot be observed directly. Three different data sets were used to discover any causal relationships between male withdrawal from productive spheres of the economy and resulting changes in the community and families. To best understand the role sentencing reform may play in such a social process, one of the data sets was constructed from information obtained from inmates in a state with sentencing guidelines.

Examining a state that had undergone sentencing reform would help inform policy makers in other states of the possible generalizations and patterns that may emerge.

The research modules approached the issue of sentencing guidelines and family structure by studying:

- The flow of inmates into prison (Module A)
- The role and issues related to sentencing reform (Module B)
- Family disruption in a single state (Module C)

Project Implementation

Literature Review

The first step of the project was an extensive review of existing research. Two distinct trends in the research as it relates to sentencing and family structure emerged:

1. The phenomenon of incarceration breeding crime
2. The unintended consequences of imprisonment

The second body of literature focused on three consequences of imprisonment:

- The impact of imprisonment on the employment of released inmates
- The impact on the destabilization of local communities
- The effect of incarceration on family structure and stability.

It is the third consequence that was of most relevance to this project. The research in this area arises from the fact that the other impacts - both explicit and implicit - revert over and over to the issue of family structure. Two examples are the work of Clear (1996) and Sampson (1995). Clear theorized that incarceration's negative impact on family structure was a conduit through which prison may affect

moral and social cohesion. It was not clear how this occurred - through absent role models; younger and younger people turning to crime when older males are imprisoned; or damage to local marriage markets - but a mediating influence was family. Therefore it is important to examine the impact of imprisonment on the family.

Sampson used 1980 census data to demonstrate that the linkage between violence and social destabilization is the observed structure of families. After controlling for employment, income, age, population density, and region, the presence of married-couple families reduces juvenile murder and robbery rates. On the other hand, the presence of unmarried females, aged 15-19, positively related to adult murders and robberies. Sampson therefore concluded that unfavorable marriage markets and family instability contribute to higher rates of violence in communities and support the notion that family instability is a factor in social destabilization.

This area of research also demonstrated the need to pursue this project's hypothesis by race. Darity and Myers (1983; 1984) argued that the withdrawal of males from the marriage pool has a larger negative impact on black families than on white families because the black community already faces a larger male deficit. Furthermore, the marriage market in the black community faces a shortage sooner - as early as age 15 - than does the white community leading to a devastating impact on the formation of two-parent families in the black community.

Sampson confirmed this work when he concluded that an increase in the availability of males improves the prospects of black family stability in larger amounts than among whites. Or, put differently, the destabilizing impact of a male shortage is larger in the black community than the white.

Both studies clearly indicated the need to measure family stability separately for blacks and whites, and when possible for Latinos and other ethnic groups.

Categorization of States

The two sets of states - those with and without sentencing guidelines and those with and without mandatory minimum drug-related sentences - were determined by following the definitions of the Bureau of Justice Assistance (BJA). The BJA defines two types of sentencing guidelines (Bureau of Justice, 1996), which are combined to form the list below. The BJA defines presumptive sentencing guidelines as:

> Sentencing that meets the following conditions: (1) the appropriate sentence for an offender in a specific case is presumed to fall within a range of sentences authorized by sentencing guidelines that are adopted by a legislatively created sentencing body, usually a sentencing commission; (2) sentencing judges are expected to sentence within the range or provide written justification for departure; (3) the guidelines provide for some review, usually appellate, of the departure. Presumptive guidelines may employ determinate or indeterminate sentencing structure.

Voluntary/advisory guidelines are:

> Recommended sentencing policies that are not required by law. Usually based on past sentencing practices, they serve as a guide to judges. The legislature has not mandated their use. Voluntary/ advisory guidelines may employ determinate or indeterminate sentencing structures.

In the following table, voluntary/advisory guidelines states are indicated by an asterisk. All others are presumptive states.

States with sentencing guidelines are those defined as using sentencing guidelines as their primary form of sentencing. If states have more than one form of sentencing the more dominant form is how they were categorized by the Bureau of Justice. Sixteen states fulfilled this definition. States were categorized based on their sentencing structures as of February 1994, with the exception of North Carolina, where guidelines took effect in October 1994 (Bureau of Justice, 1996).

U.S. States and the District of Columbia which Do and Do not Employ Sentencing Guidelines, as of February 1994	
States with Sentencing Guidelines	States without Sentencing Guidelines
Arkansas*	Alabama
Delaware	Alaska
Florida	Arizona
Kansas	California
Louisiana*	Colorado
Maryland*	Connecticut
Michigan*	Dist. of Columbia
Minnesota	Georgia
North Carolina	Hawaii
Oregon	Idaho
Pennsylvania	Illinois
Tennessee	Indiana
Utah	Iowa
Virginia*	Kentucky
Washington	Maine
Wisconsin*	Massachusetts
	Mississippi
	Missouri
	Montana
	Nebraska
	Nevada
	New Hampshire
	New Jersey
	New Mexico
	New York
	North Dakota
	Ohio
	Oklahoma
	Rhode Island
	South Carolina
	South Dakota
	Texas
	Vermont
	West Virginia
	Wyoming
Source: Bureau of Justice Assistance, *National Assessment of Structured Sentencing*, Washington, DC: Bureau of Justice Assistance, 1996, pp. 20 - 21.	
* voluntary/advisory guidelines states	

Over 30 states have mandatory minimum incarceration sentences for drug-related offenses. It is difficult, however, to ascertain the true range of offenses that are subject to the mandatory sentences. From state to state, the penalties that apply vary widely based on type of drug, amount of drug, or if the offender is "drug-dependent" (Bureau of Justice, 1996).

U.S. States and the District of Columbia which Do Have and Do Not Have Mandatory Minimum Incarceration Sentences for Drug- Related Offenses, February 1994			
States with Minimum Sentences		States without Minimum Sentences	
Alabama	Massachusetts	Hawaii	Virginia
Alaska	Michigan	Kansas	Washington
Arizona	Minnesota	Kentucky	Wyoming
Arkansas	Mississippi	Louisiana	
California	Missouri	Maine	
Colorado	Montana	Nebraska	
Connecticut	Nevada	New Hampshire	
Delaware	New Jersey	New Mexico	
Dist. of Columbia	North Carolina	New York	
Florida	North Dakota	Ohio	
Georgia	Pennsylvania	Oklahoma	
Idaho	Rhode Island	Oregon	
Illinois	South Carolina	Tennessee	
Indiana	South Dakota	Texas	
Iowa	West Virginia	Utah	
Maryland	Wisconsin	Vermont	
Source: Bureau of Justice Assistance, National Assessment of Structured Sentencing, Washington, DC: Bureau of Justice Assistance, 1996, pp. 20-21.			

Project Design

This project combined multiple data sets and statistical approaches to examine a common question of substantial public policy concern: Does incarceration increase family instability? The analysis was divided into three research modules, each of which used different data and different levels of aggregation. This approach allowed the research team to see if similar results on the relationship between incarceration and family structure emerged from the different data measures and approaches.

The three modules shared a common initial frame of reference. Data from individual-level observations (i.e., respondent age, education, or race) was merged with data from location-specific observations (i.e., unemployment rate, population density, or welfare rate). Analysis in all three modules sought to measure the presence and impact of any relationship between sentencing and family instability. In all three modules, tests were also conducted to determine differences between races and time periods. In addition, tests were conducted to see if results were large enough to be statistically significant and of

value to the results or if they were too small to be indicative of any relationship between incarceration and family structure.

Two types of variables were used in each module: independent and dependent. Independent variables are information obtained directly. They include age, unemployment, welfare rate, or household location. Dependent variables are obtained by manipulating independent variables in research equations. Some dependent variables include inmates with dependent children, families headed by females, or the probability of families being headed by a female.

The variables used in each of the research modules are outlined in the Table 1.

Table 1: Dependent and Independent Variables

	Module A	Module B	Module C
Dependent Variables	Probability of unmarried female with children under 18 Probability of unmarried with no adult male present, given female with children under 18	Darity-Myers Sex Ratio Probability of female headed family	*Individual Level* Currently married? Married at time of arrest – not now married? Lived with mother only most of time growing up? Own children? Married to mother when children were born? *Zip Code Level* Percent of families headed by females Percent of females unmarried, no male present Percent of children living with unmarried female, no adult male present Percent of families moved since 1985 Sex-ratio
Independent Variables	*Individual Level* Age, education, arrests, experience, siblings, family background, income, housing tenure *County/Census Tract Level* Poverty, housing status, female-headed families, admissions to prison, releases from prison, age distribution, mobility	*Individual Level* Age, education, experience, region, children in household, central city location *State Level* State unemployment rate, male institutionalization rate, mortality ratio, homicide ratio	*Individual Level* Age, education, experience, criminal history, siblings, incarceration of siblings, incarceration of parents, living arrangements as child *Zip Code Level* Victimization rates, sex ratios, female-headed families, mobility, poverty, housing tenure, age distribution

Module Design

The three modules were designed to approach the issue of incarceration and family from distinct but complementary approaches. Three different groups of data sets with some unique and some overlapping variables were developed. Each module asked questions appropriate to the data sets and variables used.

Module A - The Flow of Inmates

The central question of Module A was: How does the flow of inmates in or out of prisons translate into individual family outcomes? To answer this question four research questions/equations were asked:

a. Does the flow of inmates in the county of residence (admission to/release from prison) contribute to the probability that a female is unmarried or living in a family with no adult male present?

b. Does this inmate flow contribute to the probability that a family head is female?

c. Does the effect depend on whether there is control for other location-specific factors, such as underclass characteristics?

d. Does the effect differ between racial and ethnic groups?

Three data sets were used in this module: the Urban Institute's Underclass Database (UDB, 1980 and 1990), the National Longitudinal Survey of Youth (NLSY, 1985 and 1994), and the National Correctional Reporting Program (NCRP, 1984 and 1993).

Module B - Sentencing Reforms

Module B examined the effects of statewide incarceration and sentencing changes on marriage markets and family structure. The research questions were:

a. Is female-family headship more pronounced in states that have undergone sentencing reforms?

b. Does the effect of sentencing reforms on female-family headship differ between races?

c. Is there a more pronounced marriageable male shortage in states with sentencing reforms?

d. Does the shortage, if any, differ between races?

This module used the Current Population Survey (CPS, 1985 and 1995) as well as other data sets that provide state level data. The sources for the data included the U.S. Census, Statistical Abstracts, Bureau of Labor Statistics, and the Center for Disease Control.

Module C - Family Status and Incarceration in a Single State

The central hypothesis of Module C was: neighborhoods that lose young men to imprisonment are different from other neighborhoods and as such contribute to the differences in outcomes that prisoners face. Focusing on inmates in Minnesota, the questions were:

a. Do zip code level characteristics of locations from which inmates come influence the probability that one will be incarcerated?

b. Does the effect of individual and zip code level characteristics vary if calculated by aggregate or individual measures?

To gather data for this module, social workers interviewed all inmates entering the Minnesota prison system between July 1, 1997 and April 27, 1998. The interview data was then merged with criminal histories, census data from the zip codes where inmates lived, and victimization data from a crime survey conducted in Minnesota.

Results

Module A

This module's focus was the relationship between family instability - as measured by female headed families - and three societal characteristics - underclass measures in county of residence, individual characteristics, and flows of inmates.[1]

The data set was created by merging NLSY, UDB, and NCRP data.[2] Researchers were then able to estimate changes in childbearing, marital dissolution, and female-family headship that can be

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[1] Tables with results of all analyses are found in Appendix A.

[2] The reliability of this analysis may be limited when being compared to other population samples such as census tract or current population surveys. The NLSY tracks a younger population (subjects as young as 14 in 1979) than other samples. Therefore, issues affecting parenthood and family headship may have been delayed until later in the study.

attributed to inmate flows. Three analyses were conducted using the newly developed data set. The first analysis focused on family structure in 1985 and 1994. It used three factors to measure family structure:

- Percentage of families headed by a female
- Percentage of women in families who are family heads
- Percentage of women who have never married but had a child

The analysis found that:

- In both years studied, blacks were more likely than whites to experience female-headed families, a female head of family, or out of wedlock births.
- Between 1985 and 1994, living in a female-headed family or being a female head of family increased for both blacks and whites, while the percent of never married women with a child remained steady.

If one compared states with and without sentencing reforms, the same results as above emerged:

- In both years studied, blacks in either type of state were more likely than whites to live in a female-headed family, be a female head of family, or have an out of wedlock birth.
- In states without guidelines, the percentage of women who were never married but had a child remained steady. In states with guidelines, the black rate for this measure declined 45 percent, while it increased among whites 44 percent.

In comparing the proportion of the community affected by these different family structures, each structure was higher for both blacks and whites in states without sentencing guidelines than in states with guidelines. If the analysis is applied to states with and without minimum sentences for drug related offenses, in 1994 the same pattern emerged showing a greater impact in the black community for all measures. Data from 1985 was not available for this analysis.

The second analysis looked at the effects of prison admission or release and the ratio of admissions to releases on family structure in 1985 and 1994. For 1985, the model used did not yield any statistically significant results.

For 1994, significant results were found for states without mandatory minimum sentences for drug-related offenses. In these states:

- Prison admission increased the number of black female heads of family, while release reduced it.
- The ratio of admissions to releases indicates that overall admissions have a greater impact on family structure than do releases.
- The same trend was found for women who have never married but have had a child.

The third and final analysis in this module used a different kind of equation to study the effect of imprisonment on family structure. In 1985, few statistically significant results emerged. In all states and states without sentencing guidelines, prison release helped reduce the number of never married white women with children.

The 1994 analysis produced the greatest number of statistically significant results among the models that measured the effect of prison admissions/releases and the ratio of admissions to releases on family structure.

- Among all states, prison release increased and prison release decreased the number of black female-headed families and the number of black out of wedlock births. The ratio of admission to releases indicates that admissions have a greater impact on out of wedlock births than do releases.
- The same findings as above are found in states without sentencing guidelines.
- In states with mandatory minimum drug sentences, the admission/release ratio among blacks indicates that admissions affect an increase in out of wedlock births.

At the conclusion of Module A, it was clear that due to the low number of statistically significant results, the research team could not confirm or dispute a relationship between sentencing guidelines or minimum drug related sentences and family structure and stability.

Module B

Module B examined the effects of statewide incarceration and sentencing changes on marriage markets and family structure. The hypothesis tested was that there are no differences in the impact of incarceration on sex ratios and/or family structures in states with and without sentencing reforms and in states with and without minimum drug related sentences.[3]

The first stage of this module involved calculating the sex ratio for all categories of states. Four measures involving sex ratio and welfare recipiency were then computed. The first measured the average sex ratio and expected amount of welfare received by family heads.[4] This was measured for the overall population and by states with and without sentencing guidelines. The results for 1995 yielded more statistically significant results than did the results for 1985.

In 1985 in states without sentencing guidelines, whites had a higher sex ratio (e.g., a greater number of unmarried men in the population) than did the general population. In states with sentencing guidelines, white family heads received significantly lower welfare payments than did the general population.

In 1995, unlike 1985, states with and without minimum drug-related sentences could be examined. This additional control contributed to a greater number of significant results.

- In states with sentencing guidelines, the general population and white population had a much higher sex ratio than did the black population.
- In states without sentencing guidelines, the welfare received by blacks was 9 to 23 times higher than among the general and white populations respectively.
- In states without mandatory minimum drug sentences, whites had a higher sex ratio than did the general population, while they received less welfare than did the general population.

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[3] Tables displaying the results of Module B can be found in Appendix B.

[4] The Darity-Myers Sex Ratio is the ratio of unmarried males in labor force or school to unmarried females).

The second equation used measured the effect of sentencing guidelines and minimum drug-related sentences (1995 only) on sex ratio and female headed families. This equation found that:

- In 1985 and1995, the partial effect of sex ratio helped reduce the number of female-headed families. The impact was greater among blacks than whites.
- In 1985, the partial and total effect of sentencing guidelines helped reduce female family headship slightly among the general population.
- In 1995, the partial effect of sentencing guidelines reduced black female family headship.

Examining the effects of minimum drug sentences in 1995 yielded:

- Among the general population and black population, minimum sentences reduced the sex ratio (fewer unmarried men in the labor force), but among whites the ratio increased.
- In all populations, but most significantly in the black community, sex ratio helps reduce female family headship, i.e., the higher the ratio the lower the rate of female family headship.
- The partial and total effect of minimum drug sentences increased female-headed families in the general and black populations.

The third analysis in Module B examined the relationship between sex ratio, female-headed families, and welfare receipt in 1985 and 1995. The same two results were found in both years for all three samples tested - all states, states with and without sentencing guidelines, and states with and without mandatory minimum drug-related sentences:

- Sex ratio reduced female-headed families.
- Welfare receipt increased the number of female-headed families.

Although the same trends were found across population samples, the level of impact did vary. Between 1985 and 1995:

- Among the general population and whites, the role of sex ratio in reducing female-headed families declined slightly in all states and in states without sentencing guidelines. It increased in states with sentencing guidelines.
- Among blacks the role of sex ratio increased in all three categories of states.

- The impact of welfare on female-family headship decreased among the general population and blacks, but increased among whites in all states and states with sentencing guidelines.

- In states without guidelines, the impact of welfare declined among the general population, but the impact increased among blacks and whites. The impact among blacks, however, was six times higher than among whites.

Trend data was not available in regard to drug sentencing, since no data was available for 1985.

In 1995, the following can be seen:

- The largest impact of sex ratio, in states with and without minimum sentencing, on reducing female-headed families was among whites, whose impact was twice as large as among blacks.

- Welfare had a much larger impact in increasing the number of female-headed families among blacks than whites. The impact was comparable in states with and without minimum sentences.

The final analysis for Module B examined the same issues as the previous analysis, but used a different kind of equation. The same general trends emerged in this analysis as above -- sex ratio reduces the number of female-headed families while welfare recipiency increases them.

Between 1985 and 1995, the overall impact of sex ratio in reducing female-headed families was more than twice as great on whites than on blacks. By category of state, however, the impact of sex ratio was:

- Its role in reducing female-headed families in all three categories of states grew, among the general population and blacks.

- Among whites, the impact lessened in all states and states without guidelines, but increased in states with guidelines.

During the same period, the role of welfare recipiency was about six times higher among blacks than whites. Overall, however:

- The size of impact in increasing female-family headship decreased among blacks in all states and states with sentencing guidelines, and increased in states without guidelines.

- Among the general population, an increase was seen only in states with guidelines.

- For whites, the impact of welfare increased in all three categories of states.

In 1995 for states with and without mandatory drug related sentences:

- The impact of sex ratio on reducing female- headed families was greatest among the general population.
- Between whites and blacks, the impact was twice as great among whites than among blacks.
- In examining the impact of welfare recipiency on more female-headed families, the impact is greater in states with minimum sentencing for all population groups, but less so than was seen in the previous analysis.

The findings of Module B support a connection between sex ratio and family structure, but there is no conclusive evidence that sentencing guidelines or minimum drug related sentences affect family structure.

Module C

This final module started with the hypothesis: neighborhoods that lose young men to imprisonment are different from other neighborhoods and as such contribute to the differences in outcomes that prisoners face, i.e., they have left dependents behind in the neighborhood. The module, therefore, sought to measure the location specific factors that may influence when inmates leave behind children and compared them to individual inmate factors. This module only examined inmates in Minnesota, a state with sentencing guidelines.[5]

The data set was constructed by merging information gained from the inmate interviews with criminal records and census data from the zip codes where inmates lived. In addition, victimization data were merged into the data set, which permitted an examination of whether the location inmates left or their own individual characteristics are more predictive of an inmate leaving behind children.

Two analyses were conducted. The first measured what factors determined if an inmate left behind dependents at the time of incarceration. A variety of individual and location specific variables

[5] Tables displaying the results of Module C can be found in Appendix C.

were analyzed. The second analysis measured the impact of the different determinants in measuring the likelihood an inmate left behind dependent children.

For the first analysis which extracted the factors that determine if dependent children are left behind at incarceration, it was found that the contribution of individual factors in determining if dependent children are left behind was 16 times greater than the contribution of location factors. The only statistically significant location characteristic was poverty. Meanwhile, gender, age, education, race, and employment at time of arrest were all significant individual characteristics.

Thus, this analysis shows that individual inmate characteristics, and not factors relating to inmates' neighborhoods, are the main determinant in the probability an inmate will leave behind children.

The second analysis measured the impact of dominant inmate and location specific factors on the likelihood that an inmate left behind children. In this analysis, data were not obtained from individual Minnesota inmates. Rather, the individual characteristics used in this analysis were the characteristics of all inmates from a particular zip code. This was done to measure the likelihood of incarceration.

Significant determinants that emerge from this analysis were age, employment at time of arrest, first-time admission, and poverty. Older inmates, who were employed at the time of their arrest, were first time offenders, and came from higher poverty zip codes are more likely to have dependents.

The analysis also measured individual and location factors together and separately to determine the relative importance of each variable in determining incarceration. Individual characteristics have a greater impact than do location factors.

These two analyses lend little support to the hypothesis that it is the location from which inmates come that explains whether inmates leave behind children or not. Instead, inmates who have worked within six months or are first time offenders are the most likely to leave behind children - regardless of the neighborhood or zip code from which they come.

It should be noted, however, that although these two analyses do not sustain the effect of location hypothesis, they still suggest that imprisonment hurts families most when persons imprisoned were recently employed or were first time offenders.

Conclusion

The results of the three modules support parts of the underlying theory that imprisonment increases female-headed families, but overall the results do not concretely support this hypothesis. After the examination of three different data sets at different points in time and using different notions of family structure, there is little consistent support for the theoretically plausible hypothesis that there are strong unintended impacts of imprisonment policies on family structure.

A full discussion of related literature, data sets and aggregation, and regression results is available in the technical version of this report.

Results

Appendix A:**Module A Tables with Results**

Table A.1 Measures of Family Structure
(Sample Sizes in Parentheses)

Measures	1985 Blacks	1985 Whites	1994 Blacks	1994 Whites
All States				
Percentage of Families that Are Headed by Females[a]	18.346 (1221)	7.842 (2665)	29.084 (1365)	10.358 (2539)
Percentage of Females in Families Who Are Family Heads[b]	32.893 (681)	14.595 (1432)	50.509 (786)	18.799 (1399)
Percentage of Women Who Have Never Married Who Have Had a Baby[c]	50.385 (520)	14.450 (782)	47.619 (315)	16.402 (189)
States with Sentencing Guidelines				
Percentage of Families that Are Headed by Females[a]	17.895 (95)	6.803 (294)	23.113 (212)	8.492 (577)
Percentage of Women in Families Who Are Family Heads[b]	30.357 (56)	12.903 (155)	39.516 (124)	15.077 (325)
Percentage of Women who Have Never Married Who Have Had a Baby[c]	46.153 (39)	7.22 (97)	25.806 (31)	12.820 (39)
States without Sentencing Guidelines				
Percentage of Families that Are Headed by Females[a]	18.384 (1126)	7.971 (2371)	30.182 (1153)	10.907 (1962)
Percentage of Women in Families Who Are Family Heads[b]	33.120 (625)	14.800 (1277)	52.568 (662)	19.926 (1074)
Percentage of Women who Have Never Married Who Have Had a Baby[c]	50.73 (481)	15.47 (685)	50.000 (284)	17.333 (150)
States with Mandatory Minimum Sentences for Drug Related Offenses				
Percentage of Families that Are Headed by Females[a]		29.426 (836)	10.967 (1541)	
Percentage of Women in Families Who Are Family Heads[b]		51.037 (482)	19.836 (852)	
Percentage of Women who Have Never Married Who Have Had a Baby[c]		46.753 (231)	15.493 (142)	
States without Mandatory Minimum Sentences for Drug Related Offenses				
Percentage of Families that Are Headed by Females[a]			33.188 (229)	9.322 (472)
Percentage of Women in Families Who Are Family Heads[b]			58.461 (130)	17.742 (248)
Percentage of Women who Have Never Married Who Have Had a Baby[c]			50.000 (84)	19.149 (47)

Source: National Longitudinal Survey of Youth 1979-1996

a. The whole sample: Males and females living in their own housing unit as a member of non- single families.

b. The whole sample: Females living in their own housing unit as a member of non-single families.

c. The whole sample: Females who have never married.

Table A.2 The Marginal Effects of Imprisonment on Family Structure, Simple Logit Model, 1985

Dependent Variables:	Female Headed Families		Females Who Are Family Heads		Never Married Women Who Have Given Birth	
Measures	Black	White	Black	White	Black	White
All States						
Admission Rate	-.004	-.002	-.018	-.003	-.002	.018
Release Rate	.004	-.004	.024	-.022	.006	-.026
Admission /Release	-.019	-.004	-.077	-.000	-.061	.006
States with Sentencing Guidelines						
Admission Rate	.056	.003	.030	-.020	.009	-.027
Release Rate	-.062	.113	-.041	.319	-.006	.246
Admission /Release	.156	.030	.148	.082	.107	-.038
States without Sentencing Guidelines						
Admission Rate	-.009	-.007	-.026	-.014	-.005	.017
Release Rate	.009	-.004	.059	-.048	.031	-.205
Admission /Release	-.025	-.007	-.084	-.008	-.066	.005

Source: National Longitudinal Survey of Youth 1979-1996, Urban Institute Underclass Data Base, National Corrections Program Data Base

* Asterisks indicate Wald test for significance of coefficients * $p<.10$ ** $p<.05$

Table A.3 The Marginal Effects of Imprisonment on Family Structure, Simple Logit Model, 1994

Dependent Variables:	Female Headed Families		Females Who Are Family Heads		Never Married Women Who Have Given Birth	
Measures	Black	White	Black	White	Black	White
All States						
Admission Rate	.001	-.044	-.006	-.087	-.002	-.016
Release Rate	.004	.051	.013	.100	.009	.014
Admission /Release	-.005	-.032	.046	-.066	-.083	-.176
States with Sentencing Guidelines						
Admission Rate	.003	-.032	-.003	-.042	-.009	-.054
Release Rate	-.015	.054	-.017	.097	-.0003	.056
Admission /Release	-.023	.003	-.157	-.012	-.199	-.057
States without Sentencing Guidelines						
Admission Rate	-.0004	-.043	-.010	-.086	.003	-.007
Release Rate	.004	.049	.014	.095	-.0003	.008
Admission /Release	-.006	-.067	.038	-.128	-.050	-.020
States with Mandatory Minimum Sentences for Drug Related Offenses						
Admission Rate	-.003	-.042	-.017	-.093	-.004	-.009
Release Rate	.009	.048	.027	.103	.010	.010
Admission /Release	.052	-.023	-.050	-.062	-.168	-.027
States without Mandatory Minimum Sentences for Drug Related Offenses						
Admission Rate	.031	-.049	.076**	-.050	.043*	-.019
Release Rate	-.032	.066	-.085**	.083	-.043*	.011
Admission /Release	-.033	-.089	.935**	-.112	.349	-.019

Source: National Longitudinal Survey of Youth 1979-1996, Urban Institute Underclass Data Base, National Corrections Program Data Base

* Asterisks indicate Wald test for significance of coefficients * p<.10 ** p<.05

Table A.4 The Marginal Effects of Imprisonment on Family Structure, Fixed Effect Logit Model, 1985

Dependent Variables:	Female Headed Families		Females Who Are Family Heads		Never Married Women Who Have Given Birth	
Measures	Black	White	Black	White	Black	White
All States						
Admission Rate	-.005	-.003	-.029	.012	-.024	.007
Release Rate	.005	-.008	.033	-.041	.019	-.022*
Admit /Release	.010	-.009	-.105	-.009	-.103	.009
States with Sentencing Guidelines						
Admission Rate	-.326	.020	.481	.025	-1.430	.0000
Release Rate	.038	.026	-.884	.065	1.659	.0000
Admit /Release	.313	.017	5.151	.036	-8.819	.0000
States without Sentencing Guidelines						
Admission Rate	-.020	-.005	-.056	.005	-.051	.011
Release Rate	.019	-.008	.057	-.045	.044	-.028**
Admit /Release	-.025	-.014	-.170	-.021	-.156	.010

Source: National Longitudinal Survey of Youth 1979-1996, Urban Institute Underclass Data Base, National Corrections Program Data Base

* Asterisks indicate Wald test for significance of coefficients * p<.10 ** p<.05

Table A.5 The Marginal Effects of Imprisonment on Family Structure, Fixed Effect Logit Model, 1994

Dependent Variables:	Female Headed Families		Females Who Are Family Heads		Never Married Women Who Have Given Birth	
Measures	Black	White	Black	White	Black	White
All States						
Admission Rate	.021*	-.031	.019	-.070	.061**	-.002
Release Rate	-.020*	.031	-.020	.073	-.076**	.002
Admit /Release	.004	-.026	.042	-.063	1.346***	-.029
States with Sentencing Guidelines						
Admission Rate	-.002	-.067	-.0000	-.169	-.359	.0000
Release Rate	.002	.131	.0000	.331	.408	-.0000
Admit /Release	-.0000	.002	-.0000	.010	-3.222	-.001
States without Sentencing Guidelines						
Admission Rate	.024**	-.012	.025	-.027	.068**	-.0001
Release Rate	-.024**	.011	-.028	.025	-.088**	.0000
Admit /Release	.005	-.009	.270	-.037	1.773***	-.002
States with Mandatory Minimum Sentences for Drug Related Offenses						
Admission Rate	.017	-.009	.013	-.027	.026	.002
Release Rate	-.016	.009	-.010	.025	-.015	-.004
Admit /Release	.203*	-.007	.043	-.012	.947*	-.004
States without Mandatory Minimum Sentences for Drug Related Offenses						
Admission Rate	.021	-.044	-.029	-.075	-.0000	.001
Release Rate	-.005	.095	.041	.202	.0000	-.0002
Admit /Release	-.203	-.079	-.001	-.084	3.151	.001

Source: National Longitudinal Survey of Youth 1979-1996, Urban Institute Underclass Data Base, National Corrections Program Data Base

* Asterisks indicate Wald test for significance of coefficients * p<.10 ** p<.05

Appendix B: **Module B Tables with Results**

Table B.1 Means of Darity-Myers Sex Ratio and Welfare Estimates, 1985

	Darity-Myers Sex Ratio	Expected Welfare
All States		
Total (N=39803)	0.363	$ 16 .900
Blacks (N=4461)	0.255	$165.453
Whites(N=35342)	0.379	$ 6.805
States with Sentencing Guidelines		
Total (N=5275)	0.355	$ 20.523***
Blacks (N=601)	0.266	$152.723
Whites (N=4674)	0.360	$ 12.085***
States without Sentencing Guidelines		
Total (N=34529)	0.366***	$ 16.485
Blacks (N=3860)	0.255	$170.833***
Whites(N=30669)	0.383***	$ 6.077

Source: Current Population Survey

- Asterisks indicate t test for the difference between states with sentencing guideline states and those without sentencing guidelines * p<.10 ** p<.05 *** p<.01

Table B.2 Means of Darity-Myers Sex Ratio and Welfare Estimates, 1995

	Darity-Myers Sex Ratio	Expected Welfare
All States		
Total (N=21312)	0.433	$ 19.370
Blacks (N=2661)	0.277	$171.410
Whites(N=18651)	0.458	$ 7.420
States with Sentencing Guidelines		
Total(N=8052)	0.464***	$ 18.240
Blacks (N=1012)	0.285***	$155.548
Whites(N=7040)	0.491***	$ 6.543
States without Sentencing Guidelines		
Total(N=13260)	0.414	$ 20.435***
Blacks (N=1649)	0.269	$186.444***
Whites(N=11611)	0.439	$ 8.108***
States with Mandatory Minimum Drug-Related Sentences		
Total(N=13304)	0.431	$ 19.470
Blacks (N=1597)	0.284	$201.475***
Whites(N=11707)	0.452	$ 6.478
States without Mandatory Minimum Drug-Related Sentences		
Total(N=8008)	0.436***	$ 19.845***
Blacks (N=1064)	0.272	$129.592
Whites(N=6944)	0.466***	$ 9.897***

Source: Current Population Survey

* Asterisks indicate t test for the difference between sentencing guideline states and non- sentencing guideline states * p<.10 ** p<.05 *** p<.01

Table B.3 Effects of Sentencing Guidelines and Mandatory Minimum Drug Sentences on Sex Ratio and Female-headed Families, 1985 and 1995

	Total	Blacks	Whites
Effect of Sentencing Guidelines			
1985			
Partial Effect of Sentencing Guidelines on Sex Ratio [a]	0.001	-0.003	0.002
Partial Effect of Sex Ratio on Female-headed Families [b]	-.194***	-.399***	-.151***
Partial Effect of Sentencing Guidelines on Female-headed Families [c]	-0.012**	0.014	-0.007
Total Effect of Sentencing Guidelines on Female-headed Families [d]	-0.012*	0.015	-0.007
1995			
Partial Effect of Sentencing Guidelines on Sex Ratio [a]	0.001	-0.002	0.010
Partial Effect of Sex Ratio on Female-headed Families [b]	-.114***	-.342***	-.079***
Partial Effect of Sentencing Guidelines on Female-headed Families [c]	0.005	-0.038*	0.003
Total Effect of Sentencing Guidelines on Female-headed Families [d]	0.005	-0.037	0.003
Effect of Mandatory Minimum Drug Sentences: 1995			
Partial Effect of Minimum Sentences on Sex Ratio [a]	-.003*	-.009*	.008*
Partial Effect of Sex Ratio on Female-headed Family [b]	-.114***	-.349***	-.079***
Partial Effect of Drug enforcement on Female-headed Family [c]	.020***	.055*	.001
Total Effect of Drug enforcement on Female-headed Family [d]	.020***	.058*	.0002

Source: Current Population Survey

$$a.\ \frac{\partial sex\text{ - }ratio}{\partial x} \quad b.\ \frac{\partial FHH}{\partial sexratio} \quad c.\ \frac{\partial FHH}{\partial x} \quad d.\ \frac{\partial FHH}{\partial sex\text{ - }ratio} * \frac{\partial sex\text{ - }ratio}{\partial x} + \frac{\partial FHH}{\partial x},$$

where x is for sentencing guidelines or minimum drug sentences. * p<.10 ** p<.05 *** p<.01

Table B.4 Elasticity of Sex Ratio and Welfare Recipiency on Female Headed Families
Simple Logit Model, 1985 and 1995

	Sex Ratio		Welfare	
	1985	1995	1985	1995
All States				
Total	-0.469***	-0.466***	0.074***	0.067***
Blacks	-0.203***	-0.233***	0.197***	0.193***
Whites	-0.501***	-0.486***	0.032***	0.038***
States with Sentencing Guidelines				
Total	-0.420***	-0.470***	0.060***	0.063***
Blacks	-0.156***	-0.238***	0.254***	0.155***
Whites	-0.387***	-0.470***	0.028***	0.037***
States without Sentencing Guidelines				
Total	-0.479***	-0.428***	0.076***	0.067***
Blacks	-0.209***	-0.214***	0.192***	0.194***
Whites	-0.519***	-0.438***	0.032***	0.038***
States with Mandatory Minimum Sentences for Drug-Related Offenses				
Total		-0.493***		0.098***
Blacks		-0.208***		0.284***
Whites		-0.479***		0.046***
States without Mandatory Minimum Sentences for Drug-Related Offenses				
Total		-0.409***		0.050***
Blacks		-0.215***		0.162***
Whites		-0.458***		0.032***

Source: Current Population Survey
* p<.10 ** p<.05 *** p<.01

Table B.5 Elasticity of Sex Ratio and Welfare on Female-headed Families
Fixed Effect Logit Model, 1985 and 1995

	Sex Ratio		Welfare	
	1985	1995	1985	1995
All States				
Total	-.471***	-.508***	.078***	.074***
Blacks	-.210***	-.217***	.202***	.181***
Whites	-.504***	-.481***	.032***	.038***
States with Sentencing Guidelines				
Total	-.472***	-.535***	.069***	.071***
Blacks	-.175***	-.209***	.262***	.147***
Whites	-.400***	-.476***	.029***	.038***
States without Sentencing Guidelines				
Total	-.480***	-.506***	.079***	.074***
Blacks	-.216***	-.224***	.197***	.203***
Whites	-.523***	-.450***	.032***	.038***
States with Mandatory Minimum Sentences for Drug Related Offenses				
Total		-.569***		.105***
Blacks		-.182***		.275***
Whites		-.493***		.046***
States without Mandatory Minimum Sentences for Drug Related Offenses				
Total		-.484***		.058***
Blacks		-.208***		.170***
Whites		-.462***		.033***

Source: Current Population Survey
* p<.10 ** p<.05 *** p<.01

Appendix C: Module C Tables with Results

Table C.1 Determinants of Incarceration on Inmate Family Structure
Individual Level Analysis (Wald statistics in Parentheses)

Dependent Variables: Having Dependents (N=811)				
Independent Variables	Coef	(1) $P\|_{x=max}$	(2) $P\|_{x=min}$	$(P\|_{x=max} - P\|_{x=min})/(X_{max} - X_{max})$
Constant	-2.750 (6.266)			
Male (inmate)	-.700 (4.064)	.620	.750	-.131
Age (inmate)	.096 (64.911)	.970	.350	.014
Education (inmate)	-.106 (3.331)	.501	.827	-.019
Black (inmate)	.798 (15.142)	.726	.567	.158
Veteran (inmate)	-.231 (.464)	.585	.632	-.047
Being Employed at Arrest (inmate)	.494 (5.822)	.703	.607	.096
New Admission (inmate)	.130 (.259)	.632	.605	.026
Came from Other States (inmate)	.312 (2.867)	.646	.583	.063
Sub Total (1)				.162
Proportion of Victimized Experience (location)	-.001 (.036)	.604	.632	-.0002
Proportion of people at Poverty Level (location)	.042 (5.254)	.797	.509	.007
Proportion of Living in their Own House (location)	.019 (3.301)	.729	.391	.004
Proportion of People with Age under 18 (location)	-.010 (.249)	.596	.680	-.002
Proportion of Blacks (location)	.001 (.004)	.634	.628	.0001
Sub Total (2)				.009

Source: Department of Correction, Census 1990, and Minnesota Crime Survey

Table C.2 Effects of Incarceration on Inmate Family Structure
(T statistics in Parentheses)

Independent Variables		Dependent Variables: Log-Odds of Inmates with Dependents (N=202 zip code level) Characteristics of Inmates	Characteristics of Locations	Characteristics of Inmates and Locations
	Constant	-11.378 (-2.069)	-6.957 (-1.657)	-26.411 (-3.860)
	Males	-2.090 (-.730)		-2.171 (-.777)
Characteristics of Inmates	Age	.476*** (6.258)		.475*** (6.424)
	Education	-.412 (-1.225)		-.182 (-.548)
	Blacks	.756 (.500)		3.560** (1.951)
	Veterans	-1.477 (-.679)		-1.901 (-.885)
	Employed at least 6 Months when Arrested	2.532** (1.938)		2.663 (2.058)**
	First Time Admissions	3.808** (2.076)		4.111*** (2.280)
	Came from Other States	1.353 (.948)		1.070 (.757)
Characteristics of Locations	Victimization Rate		.431 (.123)	1.261 (.403)
	Poverty Rate		.219*** (2.457)	.294*** (3.696)
	Home Ownership Rate		.070 (1.137)	.112** (2.080)
	Percent of Population Under 18		.027 (.223)	.018 (.171)
	Percent of Blacks		-.079 (-.663)	-.168 (-1.453)
	F	8.399	1.499	6.807
Percentage of Variance of the Dependent Variables explained by the Characteristics of Inmates			***28.32***	
Percentage of Variance of the Dependent Variables explained by the Characteristics of Locations			***6.18***	

Source: Department of Correction, Census 1990, and Minnesota Crime Survey
* Asterisks indicate Wald test for significance of coefficients
* p<.10 ** p<.05 *** p<.01

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