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June 10, 2019

Members of the Michigan Legislature:

The attached report is provided pursuant to Sec. 33a of Public Act 465 of 2014. The Criminal Justice Policy Commission was tasked with conducting a systematic review of Michigan's sentencing guidelines. Of particular interest is the ability of the sentencing guidelines to reduce sentencing disparities based on factors other than offense characteristics and offender characteristics, and to ensure that offenders with similar offense and offender characteristics receive substantially similar sentences. The Commission has focused its efforts on examining outcomes among "straddle cells" – that is, convictions for which the sentencing guidelines support either a term of imprisonment or an intermediate sanction. Straddle cell sentencing was selected for examination because of the large amount of judicial discretion involved in these cases.

In December 2018 the Commission released its first report[1] examining straddle cell sentencing for Class D offenses. The current report, representing the second step of our review process, analyzes 11,058 selected felony convictions for Class E offenses. Findings suggest that sentencing disparities exist based on multiple factors, as detailed in the accompanying report.

To continue its systematic review, the Commission soon will finalize analyses of two additional felony classes (B and C) and prepare a final report summarizing our findings and offering specific recommendations to address sentencing disparities that exist across felony classes.

As Chair of the Commission, I am grateful for the opportunity to help provide rigorous, objective data that can be used to develop and guide evidence-based crime policy in Michigan. In this time of burgeoning and bipartisan support for criminal justice reform efforts, I hope the Commission's latest report will serve as a useful resource to assist members of the legislature in identifying ways to improve Michigan's criminal justice system. Thank you for your consideration of our report. Please do not hesitate to contact me should you have any questions.

Respectfully,

Amanda Burgess-Proctor, Ph.D.
Chair, Criminal Justice Policy Commission

[1] All reports from the CJPC's series on straddle cell sentencing are available online at: https://council.legislature.mi.gov/CouncilAdministrator/cjpc

Criminal Justice Policy Commission

Evaluation of Straddle Cell Sentencing in Michigan

Class E Felonies

Final Report
June 6, 2019

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Executive Summary

Utilizing the past six years of felony sentencing data from across the state, the Criminal Justice Policy Commission (CJPC) has begun a systematic evaluation of straddle cell sentencing in Michigan. In 1998, the Michigan Legislature adopted sentencing guidelines to reduce disparities in sentencing for people convicted of felonies. In many cases, the guidelines provide judges with recommendations for an intermediate sentence (i.e., jail and/or probation) or a presumptive prison sentence. In other instances, the recommendations permit judges complete discretion to impose either an intermediate sanction or a prison term if the offense details and offender's prior criminal record place them within a "straddle cell" for sentencing. As part of a series[1] on straddle cell sentencing decisions, this report addresses the following questions for offenders convicted of class E felonies:

Research Question 1: To what extent are prison sentences, relative to intermediate sanctions, imposed on offenders convicted of a **class E** felony and scoring within a straddle cell?

Research Question 2: For straddle cell offenders with similar offense and offender characteristics, are there disparities in the rate of prison sentences? If so, what factors or characteristics are contributing to such disparities?

We identified 11,058 cases, using Michigan Department of Corrections' data, of individuals sentenced between 2012-2017 and scoring within a straddle cell for class E offenses, excluding habitual offenders and those with a special status[2] during the offense. Of these cases, 2,753 (24.9%) received prison sentences and 6,318 (57.14%) received a jail sentence or a combination of jail and probation, and 1,952 (17.65%) received probation only.

A logistic regression was used to evaluate whether there are disparities in the rate at which offenders are sentenced to prison as opposed to intermediate sanctions. Using this regression technique, we can consider multiple factors at the same time and estimate how each factor is associated with the probability that an offender receives a prison sentence, allowing for more suitable "apple to apple" comparisons. When reviewing results from this analysis, it is important to keep the following in mind. These results describe correlations between certain factors and the probability that an offender is sentenced to prison as opposed to jail and/or probation. These results should not be interpreted as causal (i.e., going to trial will make you more likely to receive a prison sentence) because there may be additional factors outside our model that provide a plausible explanation, such as plea bargains, for why a significant difference exists.

Ultimately, our analysis found that eight factors had statistically significant associations with the probability of being sentenced to prison for class E straddle cell offenders. In the presence of significant differences in sentencing outcomes for offenders, we conclude that there are sentencing disparities across these factors:

- **Circuit Court where sentence is imposed**
- **Type of Crime (Crime Group[3])**
- **Conviction Method (Found Guilty at Trial vs. Pleading Guilty)**
- **Attorney Status (Retained vs. Appointed)**
- **Gender**
- **Race**
- **Age**
- **Employment Status**

Further, we conclude that sentencing disparities were not found for offenders across these factors: Offense Group (Assaultive vs. Non-Assaultive), Hispanic Ethnicity, High School Diploma/GED, Alcohol Abuse History, Drug Abuse History, and History of Mental Health Treatment.[4]

[1] A previous report by the CJPC focusing on class D straddle cell decisions was released on December 8, 2018 and is available online at: http://council.legislature.mi.gov/Content/Files/cjpc/EvaluationofStraddleCellSentencinginMichiganMichiganLegislature.pdf

[2] Special statuses include the following: HYTA, Probation, District Court Probation, Delay of Sentence, Parole, Jail, State Prisoner, Bond, Juvenile Court Supervision, Federal Probation, and Federal Parole.

[3] Felony offenses are classified into six groups: 1) Crimes against a person, 2) Crimes against property, 3) Crimes involving a controlled substance, 4) Crimes against public order, 5) Crimes against public safety, and 6) Crimes against public trust. The three most common offenses for each crime group are listed in Table A-1 of the appendix.

[4] Data collected by the MDOC regarding an offender's history with drug and alcohol abuse, as well as prior mental health treatment, rely on self-reported information, which may be incomplete. Additionally, these data do not reflect clinical assessments and offenders may have differing conceptions of what constitutes substance abuse or mental health treatment.

Table E-1 summarizes the results from our regression analysis, indicating which factors were statistically significant and the direction of the relationship.[5] For example, the first row shows that offenders who retained an attorney were less likely on average to receive a prison sentence when compared to similar offenders with an appointed attorney. This difference considers or *"controls for"* the offense's severity, the offender's prior criminal record, the type of crime, whether the offense was assaultive in nature, the circuit court, and if there was a trial, as well as multiple demographic factors (e.g., gender, race/ethnicity, age).

Table E-1: Summary of Significant Findings[6]

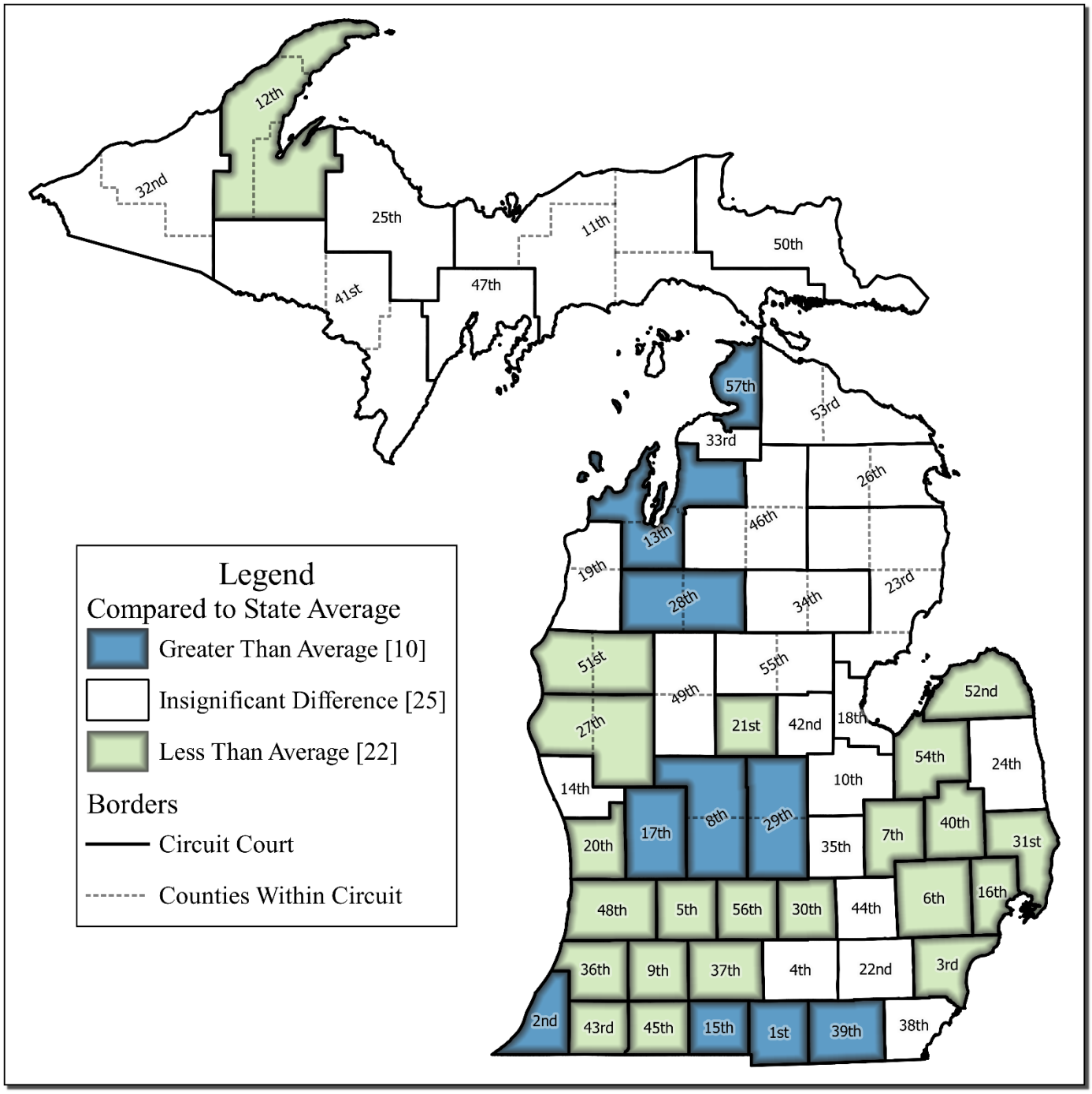
Variable	Average Relationship to Receiving a Prison Sentence
Attorney Status (Retained vs. Appointed)	Those who retained their attorney were ***less*** likely to receive a prison sentence than offenders with appointed attorneys.
Conviction Method (Found Guilty at Trial vs. Pled Guilty)	Those found guilty at trial were ***more*** likely to receive a prison sentence than those who pled guilty.
Employment	Employed offenders were ***less*** likely to receive a prison sentence than unemployed offenders.
Circuit Court	Compared to the statewide average for prison sentencing (28.98%): • 10 Circuits were ***more*** likely • 25 Circuits were ***less*** likely • 22 Circuits didn't differ significantly
Offender Race (Black or African American vs. White)	Whether an offender received a prison sentence differed significantly between black and white offenders, however the relationship between race and prison sentencing varied depending on the type of crime committed, gender, and age.
Racial Disparities for Male Offenders (Black or African American Men vs. White Men)	
Crime Groups with Significant Differences	Description of Results
• Crimes Against Public Safety (e.g., 3rd-Degree fleeing and eluding a police officer, Possession or sale of firearm by a felon)	Comparing sentencing outcomes for black and white men convicted of a public safety crimes, we found black men under 40 years old were ***more*** likely to receive a prison sentence than white offenders of the same age. The difference is ***largest*** when offenders are young and becomes ***smaller*** until age 40, after which sentencing did not differ significantly.
• Concealed Weapons	Comparing sentencing outcomes for black and white men convicted of concealed weapon crimes, we found black men under 35 years old were ***more*** likely to receive a prison than white offenders of the same age. The difference is ***largest*** when offenders are young and becomes ***smaller*** until age 35, after which sentencing did not differ significantly.
• Crimes Against A Person • Crimes Against Property • Crimes Against Public Order • OWI - 3rd	For younger offenders, the differences in sentencing outcomes between black and white men were not significant for person, property, public order, and OWI-3rd convictions. However, for older offenders convicted of these crimes we found that black men were ***less*** likely to receive a prison sentence compared to white men of the same age and crime.
Racial Disparities for Female Offenders (Black or African American Women vs. White Women)	
Crime Groups with Significant Differences	Description of Results
• Crimes Against Public Safety (e.g., 3rd-Degree fleeing and eluding a police officer, Possession or sale of firearm by a felon)	Comparing sentencing outcomes for black and white women convicted of a public safety crimes, we found black women under 50 years old were ***more*** likely to receive a prison sentence than white offenders of the same age. The difference is ***largest*** when offenders are young and becomes ***smaller*** until age 50, after which sentencing did not differ significantly.
• Concealed Weapons	Comparing sentencing outcomes for black and white women convicted of concealed weapon crimes, we found black women under 45 years old were ***more*** likely to receive a prison than white offenders of the same age. The difference is ***largest*** when offenders are young and becomes ***smaller*** until age 45, after which sentencing did not differ significantly.
Gender (Female vs. Male)	Overall, female offenders were ***less*** likely to receive a prison sentence when compared to similar male offenders. The size of the difference in sentencing between women and men varied depending on the type of crime committed, race, and age.
Gender Disparities for Black or African American Offenders (Women vs. Men)	
Crime Groups with Significant Differences:	Description of Results
• Crimes Against A Person • Crimes Against Public Safety • OWI - 3rd	For black offenders under 40 years old, we found black women were ***less*** likely than black men to receive a prison sentence for crimes against people, public safety, and OWI - 3rd. The differences between black women and black men is ***largest*** when offenders are young and becomes ***smaller*** up to age 40, after which sentencing did not differ significantly.
Gender Disparities for White Offenders (Women vs. Men)	
Crime Groups with Significant Differences:	Description of Results
• Crimes Against A Person • Crimes Against Property • Controlled Substance Crimes • Crimes Against Public Safety • OWI - 3rd • Crimes Against Public Trust	For the majority of crimes groups we found that white female offenders were ***less*** likely to receive a prison sentence than white male offenders. These differences are ***largest*** when offenders are young and narrows for older offenders. By age 55, the differences in sentencing between white women and men are no longer significant.

[5] Table E-1 does not include an exhaustive list of the crime groups for which the differences across race or gender was not statistically significant. These findings are discussed further in the results section of this report.

[6] The sample for these results included all individuals sentenced between 2012-2017 and scored within a straddle cell for class E offenses, excluding habitual offenders and those with a special status during the offense (see supra note 1).

The circuit court results included in Table E-1 identified whether courts sentenced offenders to prison significantly more often, less often, or approximately the same as the state average. Figure E-1 below maps the 10 above-average circuits in blue, 22 below-average circuits in green, and 25 circuits that did not differ significantly for the state average in white.

Figure E-1: Probability of Receiving a Prison Sentence[7]
Comparing Circuit Courts to the State Average (28.98%)



[7] For each circuit court, the total number of cases, the percent sentenced to prison, and the differences from the statewide average (28.98%) are provided in Table 8 on page 19. Differences marked with asterisks are statistically significant, with one, two, or three asterisks denoting 95%, 99%, and 99.9% confidence levels, respectively.

I. Introduction

Among the responsibilities of the CJPC specified in PA 465 of 2014 is to conduct ongoing research regarding the effectiveness of the sentencing guidelines. The commission is further tasked with making recommendations to the legislature that accomplish a variety of goals, including reducing sentencing disparities based on factors other than offense and offender characteristics and ensuring that offenders with similar offense and offender characteristics receive substantially similar sentences. Given that charge, the commission has prepared this report to address the following research questions:

> ***Research Question 1***: To what extent are prison sentences, relative to intermediate sanctions, imposed on offenders convicted of a **class E** felony and scoring within a straddle cell?
>
> ***Research Question 2***: For straddle cell offenders with similar offense and offender characteristics, are there disparities in the rate of prison sentences? If so, what factors or characteristics are contributing to such disparities?

Before a determination can be made regarding whether disparities exist in sentencing, a measure of the sentencing outcome must be clearly defined. To this end, the sentencing outcome of interest for this report is whether an individual receives a prison sentence or an intermediate sanction (e.g., probation, jail, or combination of probation and jail). To best evaluate trends and disparities in the "in-or-out" of prison decision, this study's sample has been narrowed to offenders for whom their guideline score places them within a straddle cell. This decision was made because the recommended ranges within straddle cells include both intermediate sanctions and prison sentences as appropriate. Furthermore, to ensure we are comparing "apples to apples", our analysis excludes habitual offenders and those with a special status during the offense (HYTA, Probation, District Court Probation, Delay of Sentence, Parole, Jail, State Prisoner, Bond, Juvenile Court Supervision, Federal Probation, Federal Parole).

A couple important distinctions need to be made clear regarding the underlying data and analysis before proceeding. The first is that, our data relies on the information gathered from pre-sentence investigation (PSI) reports, which are only prepared after an individual is convicted of a felony offense. Therefore, only cases resulting in a conviction, either by plea or trial, are included. Secondly, the focus of the research in this report is on sentencing outcomes, specifically whether individuals receive a prison sentence or an intermediate sanction (e.g., probation, jail, or combination of probation and jail). As such, the relationships explored in this report only pertain to the "in-or-out" of prison sentencing decision and do not reflect any possible correlation with other elements of the criminal justice system leading to and resulting in conviction, such as arrest and charging decisions. Furthermore, the length of the sentence imposed is not an outcome explicitly studied in this report.

The remainder of this report proceeds as follows. Section II outlines the basic structure of sentencing guidelines in Michigan. In section III, we describe our data and provide summary statistics to address the first research question. The empirical approach used to evaluate the straddle cell sentencing trends is described in section IV. Results from our analysis are reported and discussed in Section V. Finally, section VI summarizes this report, discusses limitations of the analysis, and details the benefit of continued research into this area.

II. Sentencing Guidelines Overview

Michigan's sentencing guidelines provide guidance to judges in determining the minimum sentence for an individual convicted of a felony offense. The guidelines and suggested ranges are considered advisory only. However, the scoring of the guidelines is still required for sentencing. Broadly speaking, there are four factors that drive the determination of the applicable guideline range: 1) the offense's crime group, 2) the offense's crime class, 3) the severity of the offense, and 4) the offender's prior criminal record.

The crime group and crime class for each felony are specified within the statutory language defining the offense. There are six crime groups[8]: 1) Crimes against a person, 2) Crimes against property, 3) Crimes involving a controlled substance, 4) Crimes against public order, 5) Crimes against public safety, and 6) Crimes against public trust; and nine crime classes: A, B, C, D, E, F, G, H, and second-degree murder (M2).

The sentencing guidelines are presented in a series of nine grids, one for each crime class (M2, A-H). As a refence, the grid for class E felonies is included on the next page. The rows for each grid denote the offense variable (OV) score, which is based on multiple characteristics of the offense committed to determine its severity. The grid's columns indicate the prior record variable (PRV) score, which represents the extent of the offender's prior criminal involvement. The intersection of the OV and PRV levels are referred to as cells. Within the guidelines, there are three cell classifications: prison, straddle, and intermediate. The definitions for each cell type, as presented in the sentencing guidelines manual (SGM),[9] are as follows:

> **Prison cells** are those cells for which the minimum sentence recommended exceeds one year of imprisonment. Prison cells are those cells that are unmarked in the sentencing grids, i.e., not shaded (as are straddle cells) and not asterisked (as are intermediate sanction cells). When an offender's OV and PRV levels place him or her in a prison cell, a minimum sentence within the range indicated in the cell is an appropriate sentence.
>
> **Straddle cells** are those cells in which the lower limit of the recommended range is one year or less and the upper limit of the recommended range is more than 18 months. MCL 769.34(4)(c). Straddle cells appear shaded in the sentencing grids. When an offender's OV and PRV levels place him or her in a straddle cell, a minimum sentence within the range indicated in the cell OR an intermediate sanction (which may include a jail term of not more than 12 months) is an appropriate sentence.
>
> **Intermediate sanction** cells are those cells in which the upper limit recommended by the guidelines is 18 months or less. MCL 769.34(4)(a). These cells are marked with an asterisk in the sentencing grids. When an offender's OV and PRV levels place him or her in an intermediate sanction cell, an intermediate sanction (which may include a jail term of 0-12 months or the cell maximum, whichever is less) is an appropriate sentence.

[8] Table A-1 in the appendix lists the 3 most common felonies within our sample for each crime group.

[9] This section presents a brief overview of the Michigan Sentencing Guidelines Manual to provide basic background information regarding the guidelines structure. The full SGM is prepared by the Michigan Judicial Institute and contains an in-depth explanation of the guidelines. The SGM can be accessed online at: https://mjieducation.mi.gov/benchbooks/sgm.

Figure 1: Sentencing Grid for Class E Offenses --- MCL 777.66

Includes Ranges Calculated for Habitual Offenders (MCL 777.21 (3)(a)-(c))

OV Level	PRV Level A: 0 Points		B: 1-9 Points		C: 10-24 Points		D: 25-49 Points		E: 50-74 Points		F: 75+ Points		Offender Status
I 0-9 Points	0	3*	0	6*	0	9*	5	23	7	23	9	23	
		3*		7*		11*		28		28		28	HO2
		4*		9*		13*		34		34		34	HO3
		6*		12*		18*		46		46		46	HO4
II 10-24 Points	0	6*	0	9*	0	11*	7	23	10	23	12	24	
		7*		11*		13*		28		28		30	HO2
		8*		13*		16*		34		34		36	HO3
		12*		18*		22		46		46		48	HO4
III 25-34 Points	0	9*	0	11*	0	17*	10	23	12	24	14	29	
		11*		13*		21		28		30		36	HO2
		13*		16*		25		34		36		43	HO3
		18*		22		34		46		48		58	HO4
IV 35-49 Points	0	11*	0	17*	5	23	12	24	14	29	19	38	
		13*		21		28		30		36		47	HO2
		16*		25		34		36		43		57	HO3
		22		34		46		48		58		76	HO4
V 50-74 Points	0	14*	5	23	7	23	14	29	19	38	22	38	
		17*		28		28		36		47		47	HO2
		21		34		34		43		57		57	HO3
		28		46		46		58		76		76	HO4
VI 75+ Points	0	17*	7	23	12	24	19	38	22	38	24	38	
		21		28		30		47		47		47	HO2
		25		34		36		57		57		57	HO3
		34		46		48		76		76		76	HO4

Intermediate sanction cells are marked by asterisks, straddle cells are shaded, and prison cells are unmarked.

For the E grid, there are six offense variable levels (I-VI) and six prior record levels (A-F), totaling 36 cells. Intermediate cells are marked by asterisks, straddle cells are shaded grey, and prison cells are unmarked. Within each, the recommended minimum sentence length is expressed as a range of months. The number on the left side of the cell denotes the lower limit of this range. The four values on the right of each cell represent the upper limit of the minimum sentencing range for that cell, depending on whether an offender is being charged as a habitual offender. The number in the top right corner of each cell indicates the upper limit for a non-habitual offender. A series of three additional upper limits are included in each cell for sentencing second, third, and fourth habitual offenders (HO2, HO3, HO4). Because our analysis excludes habitual offenders, these additional upper limits shown are not relevant for our purposes. As an example, for class E felonies the recommended range for non-habitual offenders scoring in cell C-IV (i.e., having a prior record level C and offense variable level IV) would be 5-23 months.

III. Data

The data utilized in this analysis was provided by the Michigan Department of Corrections (MDOC) and contains all felony convictions sentenced between January 1, 2012 through December 31, 2017. The datasets provided detail the specifics of the offender and offenses used to score his or her prior record and offense variable scores during the pre-sentence investigation (PSI) reports. In addition to these variables, demographic characteristics of the offender, such as gender, age, race, and education level are also included. Of the 9 sentencing grids within the guidelines, only 6 contain straddle cells: B, C, D, E, F, and G. For each of the nine sentencing grids, the statutory maximum associated with that crime class, the number of straddle cells within that grid, and the number of straddle cell observations in our dataset are included in Table 1 below.

Table 1: Straddle Cells Across Sentencing Guideline Grids

Crime Class	Statutory Maximum Penalty[10]	Straddle Cells in Grid	Number of Obs.	Percent of Obs.
M2	Life	0	*NA*	*NA*
A	Life	0	*NA*	*NA*
B	20 Years	2	*666*	2.85%
C	15 Years	5	1,732	7.40%
D	10 years	11	4,823	20.62%
E	**5 years**	**14**	**11,058**	**47.28%**
F	4 years	9	4,074	17.42%
G	2 years	3	1,037	4.43%
H	Jail	0	*NA*	*NA*
Total		**44**	**23,390**	**100%**

In total, there are 11,058 observations for individuals sentenced between 2012-2017 and scoring within a straddle cell for class E offenses, excluding habitual offenders and those with a special status during the offense. Of these cases, 2,753 (24.9%) received prison sentences, 6,318 (57.1%) received a jail sentence or a combination of jail and probation, and 1,952 (17.65%) were sentenced to probation.

Table 2: Straddle Cell Sentencing Outcomes for Class E Felony Convictions

Sentence	Obs.	Percent
Prison	2,753	24.90%
Jail	1,791	16.20%
Jail & Probation	4,527	40.94%
Probation	1,952	17.65%
Other[11]	35	0.32%
Total	***11,058***	

[10] According to the SGM, "In most cases, using the statutory maximum to divide the guidelines offenses into discrete crime classes resulted in categories of offenses that shared the same statutory maximum penalty. There are offenses that do not adhere to the standard."

[11] Other Sentences include: Community Service Only, FIA (DSS), and Fines/Costs/Restitution Only.

Below we present the sentencing outcomes for varying offenders' OV levels and PRV levels. Table 3 shows the number of convictions within each straddle cell on the E-grid, followed by number and percentage of those convictions that received a prison sentence. For example, in cell C-IV, there are 482 convictions. Of those 482 cases, 131 or 27.18% received a prison sentence.

Table 3: Class E Convictions and Prison Sentences by Offense Variable and Prior Record Levels

	PRV Level					
OV Level	**A** 0 Points	**B** 1-9 Points	**C** 10-24 Points	**D** 25-49 Points	**E** 50-74 Points	**F** 75+ Points
I 0-9 Points				**2,729** Prison: 407 14.91%	**1,127** Prison: 251 22.27%	**699** Prison: 173 24.75%
II 10-24 Points				**2,631** Prison: 567 21.55%	**1,111** Prison: 361 32.49%	**690** Prison: 262 37.97%
III 25-34 Points				**571** Prison: 182 31.87%	**242** Prison: 110 45.45%	
IV 35-49 Points			**482** Prison: 131 27.18%	**303** Prison: 128 42.24%		
V 50-74 Points		**106** Prison: 19 17.92%	**248** Prison: 100 40.32%			
VI 75+ Points		**36** Prison: 14 38.89%	**83** Prison: 48 57.83%			

The rate of prison sentences reported in Table 3 ranges from a low of 14.91% of cases (D-I) to a high of 57.83% (C-VI). It is important to note that differences across these straddle cells do not imply sentencing disparities, but rather demonstrate an intended function of the guidelines. Consider offenders in adjacent cells C-IV (27.18%) and C-V (40.32%). These individuals have the same prior record level in both cells, while individuals in C-V were convicted of a higher severity offense. Given this, it is not surprising that individuals in cell C-V are more often sentenced to prison than cell C-IV. The same analysis can be applied when comparing C-IV (27.18%) to D-IV (42.24%). In this scenario, offenders have committed similarly severe offenses, but those in cell D-IV have more extensive prior criminal records. The data in Table 3 shows that this pattern of differences across adjacent cells is consistent for the E-grid.

With an understanding of how often prison sentences and intermediate sanctions are imposed for each straddle cell in the E-grid, the next question is: are there disparities in sentencing outcomes for offenders with similar PRV and OV scores? Thus, the next step in the evaluation is to look within cells to see if additional factors may be related to the sentencing outcome. In the following section the factors considered in our model are discussed in detail, along with any significant inferences or additions we made regarding the data.

IV. Methodology

A. Ethnicity and Race

A variety of sentencing factors and demographic variables were included in our analysis to account for the specifics of each sentencing decision. These control variables include: the sentencing cell (i.e., PRV and OV Levels), whether the offense was assaultive in nature, whether the conviction was the result of a trial, and the circuit court, as well as multiple demographic factors: gender, race, ethnicity, age, graduated high school/GED, employment status, drug and alcohol abuse history, and mental health treatment. Due to limitations of the dataset, some demographic variables of interest were unavailable. Most notably missing was a field indicating whether the offender identified as Hispanic.

Historically, the MDOC has used the six categories below to identify an offender's race:

- American Indian or Alaskan Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Island
- White
- Unknown

While an additional variable for ethnicity was available, in practice this field is seldom populated. To address this potential shortcoming in the data, we took the following steps to attempt to infer whether an offender was likely to identify as Hispanic.

Following the decennial census, the U.S. Census Bureau creates a list of the most common surnames reported[12]. In addition to the number of times each name was reported, the list includes basic demographic information, such as the percentage of individuals who self-identified as Hispanic or Latino. For example, the most common surname, SMITH, was reported 2,442,977 times in the 2010 census with 2.4% of those individuals identifying as Hispanic or Latino. Merging the MDOC and census data, we could see the percentage of people with the offender's last name that self-identified as Latino or Hispanic. Using 50% as the threshold, we then coded each offender as Hispanic if the majority of people with the same surname identified as Hispanic or Latino.

Limitations from this approach included being unable to match some rare (i.e., reported less than 100 times in the 2010 census) or hyphenated surnames with the census data, as well as being unable to account for the possibility of changes in surnames as a result of marriage. Of the 245,389 offenders in the full dataset[13], 226,494 (92.3%) were matched to the census data, while the remaining 18,895 (7.7%) were unable to be matched. Ideally, the ethnicity of the offender would be collected within the original dataset of demographic characteristics. However, in the absence of this, using self-identified census data to infer Hispanic ethnicity provides a practical way of considering this factor.

[12] The dataset available at https://www.census.gov/topics/population/genealogy/data/2010_surnames.html contains a list of all surnames reported 100 or more times for the 2010 census. The list includes 162,253 surnames which represent 265,667,228 people. Additionally, one row indicating "All Other Names" accounts for 29,312,001 individuals.

[13] Matching the census information with the MDOC data was performed before the sample was narrowed to the final sample of non-habitual or special status offenders scoring in a straddle cell for class E offenses. The number of offenders and matching percentage reported here reflect all offenders in our dataset across all grids, cell types, habitual status, and other special statuses.

Additional limitations were presented when including the offender's race in our analysis. In particular, issues arose from the small number of convictions for offenders identifying as American Indian or Alaskan Native, Asian, and Native Hawaiian or Other Pacific Island. Combined, these three racial categories only accounted for 161 convictions in our dataset. In contrast, there are 4,877 Black or African American offenders and 6,181 White offenders within our data. With so few cases, analyzing these three racial groups and drawing any meaningful conclusions would not be possible. As such the 161 cases were excluded from the final sample, and the analysis was limited to Black or African American offenders and White offenders only.

B. Case-Specific and Offender Variables

Including the created measure of Hispanic ethnicity, there are nine offender-specific characteristics explored in our model: age, gender, race, ethnicity, high school diploma/GED, employment status, history of drug abuse, history of alcohol abuse, and prior mental health treatment. Data collected by the MDOC regarding an offender's history with drug and alcohol abuse, as well as prior mental health treatment, rely on self-reported information and offenders may have differing conceptions of what constitutes substance abuse or mental health treatment. In addition to the offender characteristics, eight case-specific factors are included in our model: sentencing cell (PRV, OV), crime group, trial or plea conviction, sentencing month, year of the sentence, if offense was assaultive in nature, whether their attorney was retained or appointed, and the circuit court.

Summary statistics for the offender characteristics and case factors are provided in Table 4 for the 11,058 observations included in this study's sample. Again, this analysis only includes individuals sentenced between 2012-2017 and scoring within a straddle cell for class E offenses, excluding habitual offenders and those with a special status during the offense (HYTA, Probation, District Court Probation, Delay of Sentence, Parole, Jail, State Prisoner, Bond, Juvenile Court Supervision, Federal Probation, Federal Parole).

Table 4: Class E Felony Convictions and Prison Sentences by Case-Specific and Offender Demographic Variables

Variable	All Convictions		Percent Sentenced to Prison
	Percent	Number	
Cell (PRV, OV Level)			
B, V	1.0%	106	17.9%
B, IV	0.3%	36	38.9%
C, IV	4.4%	482	27.2%
C, V	2.2%	248	40.3%
C, VI	0.8%	83	57.8%
D, I	24.7%	2,729	14.9%
D, II	23.8%	2,631	21.6%
D, III	5.2%	571	31.9%
D, IV	2.7%	303	42.2%
E, I	10.2%	1,127	22.3%
E, II	10.0%	1,111	32.5%
E, III	2.2%	242	45.5%
F, I	6.3%	699	24.7%
F, II	6.2%	690	38.0%
Crime Group			
Person	12.8%	1,415	30.4%
Property	37.8%	4,184	22.5%
Controlled Substance	3.2%	351	22.8%
Public Order	3.1%	346	26.0%
Public Safety	42.6%	4,713	25.2%
Public Trust	0.4%	49	40.8%
Convicted By			
Bench	0.2%	24	62.5%
Jury	0.9%	98	68.4%
Nolo Contendere	10.3%	1,144	25.6%
Plea	87.7%	9,698	24.5%
Plea Under Advisement	0.9%	94	0.0%
Sentencing Year			
2012	16.5%	1,821	24.3%
2013	16.5%	1,823	26.3%
2014	15.4%	1,707	27.0%
2015	16.8%	1,862	25.7%
2016	17.1%	1,891	23.9%
2017	17.7%	1,954	22.5%

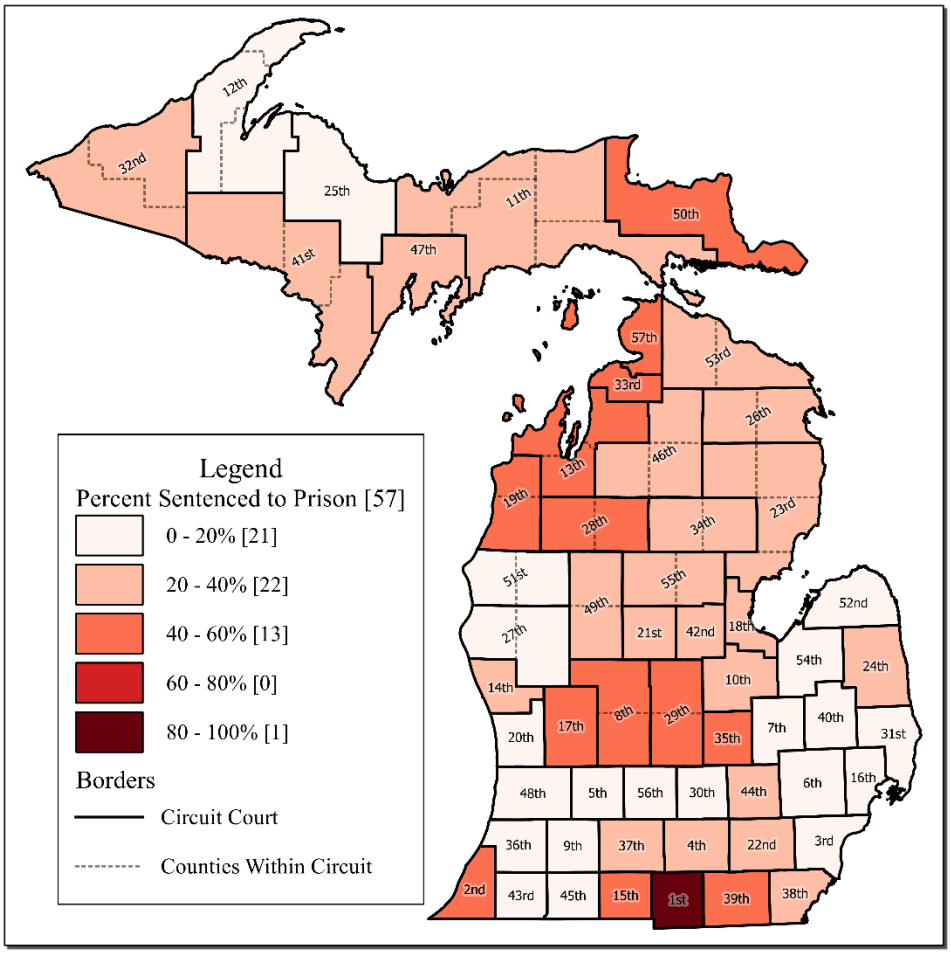
Variable	All Convictions		Percent Sentenced to Prison
	Percent	Number	
Offense Group 1 & 2			
Group 1 (Assaultive)	38.3%	4,231	25.9%
Group 2 (Non-Assaultive)	61.7%	6,827	24.3%
Attorney Status			
Appointed	80.5%	8,907	25.7%
Retained	19.5%	2,151	21.7%
Gender			
Female	12.2%	1,353	19.1%
Male	87.8%	9,705	25.7%
Race			
Black or African American	44.1%	4,877	22.4%
White	55.9%	6,181	26.9%
Ethnicity			
Hispanic	4.0%	442	27.6%
Non-Hispanic	96.0%	10,634	24.7%
High School Diploma/GED			
Yes	63.1%	6,975	25.0%
No	36.9%	4,083	24.7%
Employed			
Yes	39.4%	4,352	18.5%
No	60.6%	6,706	29.0%
Drug Abuse			
Yes	61.6%	6,808	25.4%
No	38.4%	4,250	24.1%
Alcohol Abuse			
Yes	47.2%	5,216	26.5%
No	52.8%	5,842	23.5%
Drug or Alcohol Abuse			
Yes	73.3%	8,101	25.8%
No	26.7%	2,957	22.5%
Mental Health Treatment			
Yes	36.7%	4,053	25.5%
No	63.3%	7,005	24.5%

Table 4 offers a detailed breakdown of our dataset's composition and the rates for imposing prison sentences. For example, public safety crimes were the most prevalent crime group, accounting for 4,713 or 42.6% of class E convictions. Of the 4,713 public safety convictions, 25.2% received a prison sentence. Approximately 98.9% of the convictions were the result of a plea (Plea, Plea Under Advisement, or Nolo Contendere), compared to only 1.1% reached from either a bench or jury trial. Over the six-year period for our data, the number of cases each year is relatively stable, averaging around 1,850 cases per year. Demographically, our data is nearly 88% male, 63.1% have earned either a high school diploma or GED, and the racial composition of the data is split between Black or African American (44%) and White (56%) offenders. While 5,216 individuals reported a history of alcohol abuse, a greater number reported having a history of drug abuse (6,808). When combined, there appears to be significant overlap between these two groups, with 8,101 reporting having a history of abusing alcohol or drugs. Again, it is important to note that drug and alcohol abuse information is self-reported to the MDOC.

C. Circuit Court

Due to the number of circuit courts in Michigan, the descriptive statistics for circuit courts are presented geographically below, rather than including the information alongside Table 4. Figure 2 shows the percent of offenders who were sentenced to prison after being convicted of a class E felony and scoring within a straddle cell.

Figure 2: Percent of Convictions Sentenced to Prison by Circuit Court[14]



As the map indicates, 21 circuit courts sentenced less than 20% of these cases to prison. Nearly the same amount, 22 circuits, sentenced between 20 and 40% of these offenders to prison. Far fewer courts imposed prison sentences above 40%, with only 13 circuits between 40 and 60% and none between 60 and 80%. Lastly, the 1st circuit court was the only one to sentence greater than 80% of these offenders to prison. The exact percentages and the number of cases for each circuit are presented alongside the results in Table 8 of the next section.

[14] Figure E2 shows the percent of offenders in each circuit court who were sentenced to prison after being convicted of a class E felony and scoring within a straddle cell. Habitual offenders and those with a special status during the offense (e.g., HYTA, Probation, Parole) are not included in these comparisons.

D. Crime Groups and Offender Demographics

In addition to considering each factor in Table 4 individually, our analysis sought to capture correlations among an offender's race, gender, and age by including interaction terms for these variables. Because of this adjustment our model examines disparities in sentencing for combinations of these groups instead of considering each separately. For example, instead of looking at disparity in prison sentencing between all men and women, our model separately compares men and women of the same race. This approach allows for the associated impact of gender on prison sentencing to differ between races (i.e., possible disparities between white men and women may be different than those between black men and women). Additionally, the model also allows for the same type of variation when determining whether there are disparities in sentencing across race (i.e., possible disparities between black men and white men may be different than those between black women and white women).

One final set of interaction terms were added to the model to address whether offender demographics (e.g., race, gender, age) are systematically connected with certain types of crimes. There are two ways in which we considered how demographics and crime groups may be related:

1) **Does one crime explain most of the convictions for a demographic group?**
2) **Is one demographic group responsible for most of the convictions for a crime?**

Table 5 on the next page addresses the first question by providing the three most frequent class E convictions for each demographic group or combination of race, gender, and age. In Table 5 each combination of race and gender is reported for three different age groups (under 30, between 30 and 40, and over 40 years old) for a total of 12 demographic groups. For example, the first row of Table 1 shows that the most common conviction for black men under 30 was for "Weapons Concealed". This crime accounts for 28.6% or "472 out of the 1,653" convictions for black men under 30 years old and 26.7% of these convictions resulted in a prison sentence. The rightmost two columns show the circuit with the most convictions for this group and crime was the 3rd Circuit (Wayne County) with 236 convictions. Table 5 makes clear that a small number of crimes, such as concealed weapons and OWI-3rd, account for a large percentage of convictions for several demographic groups.

Table 5: Three Most Common Class E Felonies Convictions by Age, Race, and Gender

Age (Count)	Race & Gender (Count)	PACC Code	Percent of Group	Number of Convictions	% Sentenced to Prison	Offense Description	Crime Group	Most Freq. Circuit (County)	Cases in Circuit
Age < 30 (3,571)	Black Men (1,653)	750.227	28.6%	472	26.7%	Weapons-Concealed	Pub Safety	3rd (Wayne)	236
		750.5357	9.0%	149	16.1%	Stolen Property-MV	Property	3rd (Wayne)	104
		257.602A3A	8.2%	135	23.0%	Fleeing Pol Ofc 3rd	Pub Safety	3rd (Wayne)	69
	Black Women (142)	750.356C	24.6%	35	20.0%	Retail Fraud-1st Deg	Property	17th (Kent)	7
		750.249	19.0%	27	3.7%	Utter & Publish	Property	6th (Oakland)	6
		445.65	6.3%	9	11.1%	Identity Theft	Pub Order	16th (Macomb)	3
	White Men (1,546)	750.413	8.3%	128	21.1%	Unlwfl. Driving Away Auto.	Property	36th (Van Buren)	10
		257.6256D	7.2%	111	27.9%	OWI - 3rd	Pub Safety	3rd (Wayne)	13
		750.356C	7.0%	108	31.5%	Retail Fraud-1st Deg	Property	16th (Macomb)	19
	White Women (230)	750.249	20.0%	46	10.9%	Utter & Publish	Property	3rd (Wayne)	6
		750.356C	19.1%	44	15.9%	Retail Fraud-1st Deg	Property	17th (Kent)	10
		750.110A4	7.4%	17	17.6%	Home Invasion - 3rd	Person	15th (Branch)	5
30 ≤ Age ≤ 40 (3,578)	Black Men (1,283)	750.227	15.6%	200	18.0%	Weapons-Concealed	Pub Safety	3rd (Wayne)	135
		750.224F	12.7%	163	33.7%	Weapons-Felon	Pub Safety	3rd (Wayne)	92
		257.6256D	10.7%	137	21.2%	OWI - 3rd	Pub Safety	3rd (Wayne)	60
	Black Women (161)	750.356C	26.7%	43	32.6%	Retail Fraud-1st Deg	Property	17th (Kent)	16
		750.249	18.6%	30	23.3%	Utter & Publish	Property	3rd (Wayne)	12
		257.6256D	6.2%	10	10.0%	OWI - 3rd	Pub Safety	9th (Kalamazoo)	2
	White Men (1,772)	257.6256D	26.5%	470	25.5%	OWI - 3rd	Pub Safety	3rd (Wayne)	61
		750.356C	7.8%	139	32.4%	Retail Fraud-1st Deg	Property	17th (Kent)	30
		750.814	6.5%	115	27.0%	Dom Viol- 3rd	Person	17th (Kent)	14
	White Women (362)	750.356C	22.4%	81	34.6%	Retail Fraud-1st Deg	Property	17th (Kent)	18
		257.6256D	12.7%	46	6.5%	OWI - 3rd	Pub Safety	17th (Kent)	8
		750.249	12.4%	45	15.6%	Utter & Publish	Property	2nd (Berrien)	8
40 < Age (3,909)	Black Men (1,455)	257.6256D	16.2%	235	24.7%	OWI - 3rd	Pub Safety	3rd (Wayne)	72
		750.356C	11.5%	167	29.3%	Retail Fraud-1st Deg	Property	3rd (Wayne)	66
		750.224F	10.5%	153	24.2%	Weapons-Felon	Pub Safety	3rd (Wayne)	88
	Black Women (183)	750.356C	41.0%	75	18.7%	Retail Fraud-1st Deg	Property	3rd (Wayne)	21
		750.249	19.7%	36	19.4%	Utter & Publish	Property	3rd (Wayne)	11
		257.6256D	8.2%	15	13.3%	OWI - 3rd	Pub Safety	3rd (Wayne)	7
	White Men (1,996)	257.6256D	42.0%	839	30.5%	OWI - 3rd	Pub Safety	3rd (Wayne)	107
		750.814	6.7%	133	30.1%	Dom Viol- 3rd	Person	17th (Kent)	16
		750.356C	5.9%	117	29.1%	Retail Fraud-1st Deg	Property	3rd (Wayne)	34
	White Women (275)	257.6256D	24.4%	67	23.9%	OWI - 3rd	Pub Safety	3rd (Wayne)	7
		750.356C	20.7%	57	19.3%	Retail Fraud-1st Deg	Property	3rd (Wayne)	11
		750.249	10.9%	30	20.0%	Utter & Publish	Property	3rd (Wayne)	5

From Table 5 we know which crimes each demographic group are commonly convicted; however, it is also important to consider the most prevalent crimes overall and each demographic groups' share of these convictions. Table 6, on the following page, shows the three most common class E felonies for each crime group. In addition, the columns on the right indicate the percent of convictions each demographic group is responsible for. The first row of Table 6 shows that Domestic Violence 3rd is the most common Crime Against a Person for class E felonies. 511 out of the 1,415 (36.1%) person crimes were for Domestic Violence 3rd and 29% of those convictions received a prison sentence. Of these 511 convictions, 6.8% were black men under 30, while 26% were white men over 40.

From Table 6 we see that crimes against public safety accounted for the largest number of convictions (4,713), with the two most common public safety convictions being OWI – 3rd (41.7%) and Weapons-Concealed (22.3%). Looking at the demographic breakdown for these two crimes, we see that convictions are not equally distributed among the groups, but rather concentrated within a single demographic group. For OWI – 3rd, the group is white men over 40 years old, accounting for 42.7% of all OWI – 3rd convictions. Likewise, for concealed weapons, black men under 30 years old accounted for 45% of all the convictions.

Table 6: Three Most Common Class E Felonies by Crime Group
- Percent of Convictions by Age, Race, and Gender -

						age < 30				30 ≤ age ≤ 40				40 < age			
Crime Group (Count)	PACC Code	Offense Description	Number of Convictions	Percent of Crime Group	Percent Sentenced to Prison	Black Men	Black Women	White Men	White Women	Black Men	Black Women	White Men	White Women	Black Men	Black Women	White Men	White Women
Person (1,415)	750.814	Dom Viol- 3rd	511	36.1%	29.0%	6.8%	0.4%	9.4%	0%	12.5%	0.2%	22.5%	1.2%	19.4%	0.6%	26.0%	1.0%
	750.110A4	Home Invasion - 3rd	367	25.9%	28.6%	19.9%	2.2%	25.9%	4.6%	9.5%	0.8%	12.3%	1.6%	7.6%	0.3%	13.1%	2.2%
	257.6255A	OWI Causing Injury	150	10.6%	34.7%	4.7%	2.7%	34.7%	6.7%	4.0%	0.7%	13.3%	6.0%	1.3%	2.7%	19.3%	4.0%
Property (4,184)	750.356C	Retail Fraud-1st Deg	1,001	23.9%	28.7%	8.5%	3.4%	10.6%	4.3%	5.7%	4.3%	13.9%	8.1%	16.6%	7.4%	11.7%	5.6%
	750.249	Utter & Publish	677	16.2%	16.7%	9.0%	4.0%	13.9%	6.8%	9.6%	4.4%	12.9%	6.6%	13.0%	5.3%	10.0%	4.4%
	750.5357	Stolen Property-MV	401	9.6%	15.0%	36.9%	1.0%	11.7%	1.2%	17.2%	1.0%	7.7%	0.7%	14.5%	1.2%	5.7%	1.0%
CS (351)	333.74012BA	Controlled Substance[1]	273	77.8%	23.4%	4.4%	0%	23.1%	4.0%	7.7%	0%	18.7%	7.0%	6.2%	0.7%	22.7%	5.5%
	333.17766C2C	Controlled Substance[2]	66	18.8%	16.7%	0%	0%	16.7%	4.5%	1.5%	0%	24.2%	15.2%	3.0%	0%	28.8%	6.1%
	333.74022B	Controlled Substance[3]	6	1.7%	50.0%	0%	0%	50.0%	16.7%	33.3%	0%	0%	0%	0%	0%	0%	0%
Pub Order (346)	445.65	Identity Theft	186	53.8%	23.7%	14.5%	4.8%	4.8%	5.4%	14.0%	2.7%	9.7%	9.1%	17.7%	2.2%	5.9%	9.1%
	750.505B	Accs Aftr Felon	42	12.1%	42.9%	38.1%	0%	19.0%	14.3%	2.4%	2.4%	7.1%	2.4%	9.5%	2.4%	0%	2.4%
	445.4332	Buying/Selling Metal	36	10.4%	8.3%	0%	0%	8.3%	0%	13.9%	0%	22.2%	0%	36.1%	0%	19.4%	0%
Pub Safety (4,713)	257.6256D	OWI - 3rd	1,964	41.7%	26.7%	1.2%	0%	5.7%	0.5%	7.0%	0.5%	23.9%	2.3%	12.0%	0.8%	42.7%	3.4%
	750.227	Weapons-Concealed	1,050	22.3%	22.2%	45.0%	0.6%	8.5%	0.4%	19.0%	0.8%	6.6%	0.7%	13.3%	0.4%	4.8%	0.1%
	750.224F	Weapons-Felon	701	14.9%	29.0%	18.8%	0.1%	8.4%	0.3%	23.3%	0.6%	12.3%	0.1%	21.8%	0.7%	13.1%	0.4%
Pub Trust (49)	333.74012BA	Controlled Substance[1]	37	75.5%	29.7%	0%	0%	16.2%	0%	18.9%	2.7%	18.9%	18.9%	13.5%	0%	10.8%	0%
	451.2508	Securities Act - Gen	4	8.2%	100.0%	0%	0%	0%	0%	25.0%	0%	0%	0%	0%	0%	75.0%	0%
	750.356C	Retail Fraud-1st Deg	3	6.1%	0.0%	0%	0%	33.3%	0%	0%	0%	0%	0%	0%	33.3%	0%	33.3%

Controlled Substance[1] [MCL 333.7401 (2) (b) (ii)] - Delivery or manufacture of schedule 1, 2, or 3 controlled substance

Controlled Substance[2] [MCL 333.17766 c (2) (c)] - Purchasing or possessing ephedrine or pseudoephedrine knowing or having reason to know that it is to be used to manufacture methamphetamine

Controlled Substance[3] [MCL 333. 7402 (2) (b)] - Delivery or manufacture of schedule 1, 2, or 3 counterfeit controlled substance

Based on the analysis of Table 5 and Table 6 the following steps were taken to account for correlations between an offender's demographics (race, gender, age) and crime groups:

- Reclassified OWI – 3rd convictions [MCL 257.625] as their own crime group, removing the 1,964 convictions from the crimes against public safety crime group.
- Reclassified Concealed Weapons convictions [MCL 75.227] as their own crime group, removing the 1,050 convictions from the crimes against public safety crime group.
- Incorporated interactions between the individual crime groups (6 original groups and the two identified above) with the offender's race, gender, and age.

E. Model Specification[15]

Summarizing data using totals and percentages, as above, is important for gaining a better understanding of the data and identifying correlations among variables of interest. However, this type of analysis alone will not allow for comparisons between offenders with similar offense and offender characteristics. Instead, a logistic regression was used to determine whether there are disparities in the in-or-out decision related to additional sentencing factors beyond the guideline scores or the demographic characteristics of the offender. Using this regression technique, we can consider multiple factors at the same time and estimate how each factor is associated with the probability that an offender receives a prison sentence, allowing for more suitable "apple to apple" comparisons. Finally, using this approach we can determine which variables have statistically significant associations with the probability that an offender receives a prison sentence. As used here, a statistically significant result would imply that there are substantial differences in the chance of receiving a prison sentence associated with a given factor. Conversely, insignificant results imply that the factor is not meaningfully related to the outcome.

[15] For more detail on the model specification and estimates, tables showing the full regression model and output are included in the Appendix.

V. Results

A. Summary

The second question our analysis considered was: for offenders with similar offense and offender characteristics, are there disparities in the rate of prison sentences? With our logistic regression, each of the estimated relationships can be thought of as the expected change in the probability of receiving a prison sentence rather than an intermediate sanction, for that variable holding constant the other variables in the model. Table 7 provides a simplified summary of our significant findings regarding sentencing disparities in the in-or-out decision for class E felony convictions. Descriptions of the impact on prison sentencing are presented alongside each of the factors with significant sentencing disparities.

Table 7: Summary of Logistic Regression Results[16]

Variable	Average Relationship to Receiving a Prison Sentence
Attorney Status (Retained vs. Appointed)	Those who retained their attorney were ***less*** likely to receive a prison sentence than offenders with appointed attorneys.
Conviction Method (Found Guilty at Trial vs. Pled Guilty)	Those found guilty at trial were ***more*** likely to receive a prison sentence than those who pled guilty.
Employment	Employed offenders were ***less*** likely to receive a prison sentence than unemployed offenders.
Circuit Court	Compared to the statewide average for prison sentencing (28.98%): • 10 Circuits were ***more*** likely • 25 Circuits were ***less*** likely • 22 Circuits didn't differ significantly
Offender Race (Black or African American vs. White)	Whether an offender received a prison sentence differed significantly between black and white offenders, however the relationship between race and prison sentencing varied depending on the type of crime committed, gender, and age.
Racial Disparities for Male Offenders (Black or African American Men vs. White Men)	
Crime Groups with Significant Differences	Description of Results
• Crimes Against Public Safety (e.g., 3rd-Degree fleeing and eluding a police officer, Possession or sale of firearm by a felon)	Comparing sentencing outcomes for black and white men convicted of a public safety crimes, we found black men under 40 years old were ***more*** likely to receive a prison sentence than white offenders of the same age. The difference is ***largest*** when offenders are young and becomes ***smaller*** until age 40, after which sentencing did not differ significantly.
• Concealed Weapons	Comparing sentencing outcomes for black and white men convicted of concealed weapon crimes, we found black men under 35 years old were ***more*** likely to receive a prison than white offenders of the same age. The difference is ***largest*** when offenders are young and becomes ***smaller*** until age 35, after which sentencing did not differ significantly.
• Crimes Against A Person • Crimes Against Property • Crimes Against Public Order • OWI - 3rd	For younger offenders, the differences in sentencing outcomes between black and white men were not significant for person, property, public order, and OWI-3rd convictions. However, for older offenders convicted of these crimes we found that black men were ***less*** likely to receive a prison sentence compared to white men of the same age and crime.
Racial Disparities for Female Offenders (Black or African American Women vs. White Women)	
Crime Groups with Significant Differences	Description of Results
• Crimes Against Public Safety (e.g., 3rd-Degree fleeing and eluding a police officer, Possession or sale of firearm by a felon)	Comparing sentencing outcomes for black and white women convicted of a public safety crimes, we found black women under 50 years old were ***more*** likely to receive a prison sentence than white offenders of the same age. The difference is ***largest*** when offenders are young and becomes ***smaller*** until age 50, after which sentencing did not differ significantly.
• Concealed Weapons	Comparing sentencing outcomes for black and white women convicted of concealed weapon crimes, we found black women under 45 years old were ***more*** likely to receive a prison than white offenders of the same age. The difference is ***largest*** when offenders are young and becomes ***smaller*** until age 45, after which sentencing did not differ significantly.
Gender (Female vs. Male)	Overall, female offenders were ***less*** likely to receive a prison sentence when compared to similar male offenders. The size of the difference in sentencing between women and men varied depending on the type of crime committed, race, and age.
Gender Disparities for Black or African American Offenders (Women vs. Men)	
Crime Groups with Significant Differences:	Description of Results
• Crimes Against A Person • Crimes Against Public Safety • OWI - 3rd	For black offenders under 40 years old, we found black women were ***less*** likely than black men to receive a prison sentence for crimes against people, public safety, and OWI - 3rd. The differences between black women and black men is ***largest*** when offenders are young and becomes ***smaller*** up to age 40, after which sentencing did not differ significantly.
Gender Disparities for White Offenders (Women vs. Men)	
Crime Groups with Significant Differences:	Description of Results
• Crimes Against A Person • Crimes Against Property • Controlled Substance Crimes • Crimes Against Public Safety • OWI - 3rd • Crimes Against Public Trust	For the majority of crimes groups we found that white female offenders were ***less*** likely to receive a prison sentence than white male offenders. These differences are ***largest*** when offenders are young and narrows for older offenders. By age 55, the differences in sentencing between white women and men are no longer significant.

[16] The sample for these results included individuals sentenced between 2012-2017 and scored within a straddle cell for class E offenses, excluding habitual offenders and those with a special status during the offense (HYTA, Probation, District Court Probation, Delay of Sentence, Parole, Jail, State Prisoner, Bond, Juvenile Court Supervision, Federal Probation, Federal Parole).

Our analysis found eight factors with statistically significant associations with the probability that someone is sentenced to prison. In the presence of significant differences in sentencing outcomes, we conclude that there are sentencing disparities across these factors: crime group, conviction method (found guilty at trial vs. pled guilty), attorney status (retained vs. appointed), race, gender, age, employment status, and the circuit court where the offender was sentenced. Offenders that were less likely to be sentenced to prison included offenders who retained an attorney, compared to those with appointed representation, and offenders who were employed. On the other hand, offenders found guilty at trial were associated with higher rates of prison sentences compared to those who pled guilty.

Summarizing how an offender's race, gender, age, or the type of crime committed relates to the likelihood of being sentenced to prison is more complex than other factors due to the correlations between these variables. Instead of presenting individual comparisons for each crime group and demographic variable (i.e., black vs. white, female vs. male, or young vs. old), Table 7 provides our findings for combinations of these variables. For example, the disparity in prison sentencing associated with race is presented first for male offenders convicted of similar crimes (i.e., black men vs. white men with convictions in the same crime group) and then again for female offenders. Similarly, disparities across gender are summarized first for black offenders convicted of similar crimes and then for white offenders convicted of similar crimes.

Lastly, as Table 7 notes, we found statistically significant differences among circuit courts in the probability of being sentenced to prison. As with the summary statistics, the results for circuit court cannot be stated in as simple of terms as other factors in Table 7 because the results vary greatly across the 57 circuit courts[17]. Instead, we compared how likely each court was to impose a prison sentence to the state average. The results for each circuit court can be grouped into one of three categories: more likely to impose prison sentences, less likely to impose prison sentences, or no significant difference from the state average. The breakdown of circuit courts into these categories as well as the magnitudes of these relationships are presented in the next section, followed by further detailed discussion of the other significant variables.

B. Circuit Courts

Unlike the factors with two categories (e.g., attorney status was either appointed or retained), where the results are interpreted as comparing one group with the other, circuit courts require a more sophisticated approach to evaluate the presence of sentencing disparities. First, the average estimated probability of receiving a prison sentence is calculated for each court, taking into consideration the case specifics and offender characteristics outlined above. The average from each court is then compared against the statewide average to determine if that circuit court differs significantly, either above or below, from the rest of the state. The statewide average from our data was 28.98%, meaning that the average probability of being sentenced to prison was approximately 29%. This statewide value was calculated by taking the average of all 57 circuit courts, giving equal weight to each court's average. Taking this approach, we found that the probability of being sentenced to prison was statistically greater than the state average in 10 circuit courts and statistically less than average in 25 courts. The remaining 22 courts did not differ significantly from the statewide average.

[17] Maps of the counties and circuit courts in Michigan are included in the appendix for reference.

Figure 3 maps out how each circuit court compares to the statewide average for imposing prison sentences. Circuits that are on average less likely to impose prison sentences than the statewide average are shaded green, while blue shaded circuits are more likely to impose prison sentences. Circuits without coloring indicate that the difference between that circuit court and the statewide average was not statistically significant.

Figure 3: Probability of Receiving a Prison Sentence
- Comparing Circuit Courts to the State Average (28.98%) -

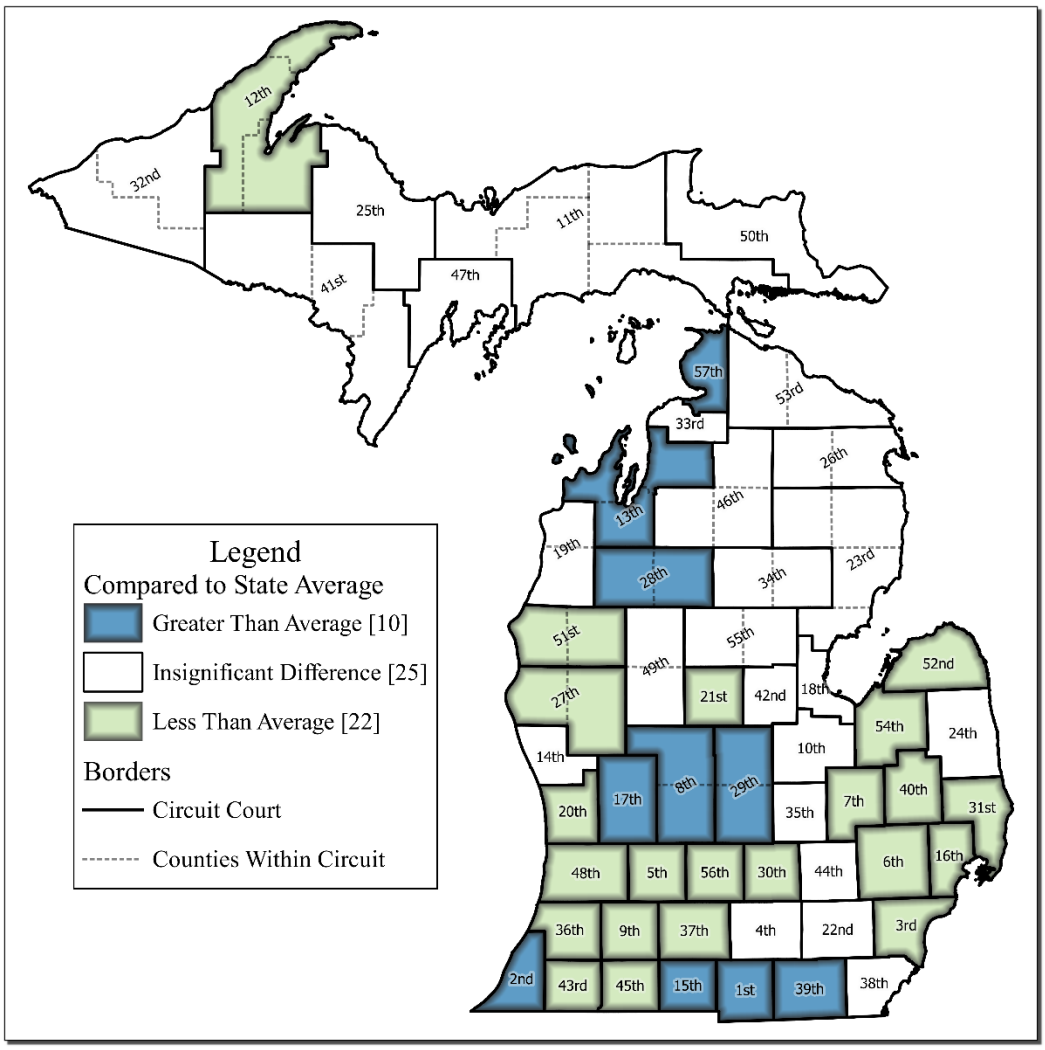


Table 8 combines the percentages shown in Figure 2 with the comparisons illustrated in Figure 3. For each circuit court, the total number of cases, the percent sentenced to prison, and the differences from the unweighted statewide average are provided. Differences marked with asterisks are statistically significant, with one, two, or three asterisks denoting 95%, 99%, and 99.9% confidence levels, respectively.

Table 8: Probability of an Offender Receiving a Prison Sentence by Circuit Court Compared to the State Average (29%)

Circuit	Number of Cases	Percent Sentenced to Prison	Difference from State Average		Counties
			Estimate	Std. Error	
1	38	0.895	0.605***	0.049	Hillsdale
2	451	0.412	0.123***	0.023	Berrien
3	2,849	0.159	-0.13***	0.009	Wayne
4	268	0.325	0.035	0.028	Jackson
5	55	0.164	-0.126**	0.046	Barry
6	351	0.188	-0.102***	0.021	Oakland
7	538	0.182	-0.108***	0.017	Genesee
8	180	0.511	0.221***	0.035	Montcalm and Ionia
9	344	0.099	-0.191***	0.017	Kalamazoo
10	127	0.236	-0.054	0.035	Saginaw
11	42	0.238	-0.052	0.062	Luce, Mackinac, Schoolcraft, and Alger
12	36	0.111	-0.179***	0.050	Houghton, Baraga, and Keweenaw
13	120	0.450	0.16***	0.043	Leelanau, Antrim, and Grand Traverse
14	141	0.312	0.022	0.037	Muskegon
15	69	0.522	0.232***	0.057	Branch
16	547	0.161	-0.129***	0.016	Macomb
17	976	0.431	0.141***	0.016	Kent
18	158	0.247	-0.043	0.033	Bay
19	30	0.433	0.143	0.085	Benzie and Manistee
20	220	0.200	-0.09***	0.027	Ottawa
21	95	0.211	-0.079*	0.040	Isabella
22	429	0.284	-0.005	0.022	Washtenaw
23	72	0.292	0.002	0.051	Iosco, Arenac, Alcona, and Oscoda
24	36	0.361	0.071	0.076	Sanilac
25	47	0.191	-0.098	0.055	Marquette
26	49	0.224	-0.065	0.057	Alpena and Montmorency
27	102	0.078	-0.211***	0.027	Oceana and Newaygo
28	91	0.407	0.117*	0.049	Wexford and Missaukee
29	108	0.417	0.127**	0.045	Gratiot and Clinton
30	312	0.192	-0.098***	0.021	Ingham
31	148	0.155	-0.134***	0.029	St. Clair
32	23	0.348	0.058	0.092	Ontonagon and Gogebic
33	14	0.500	0.21	0.127	Charlevoix
34	107	0.299	0.009	0.042	Ogemaw and Roscommon
35	50	0.400	0.11	0.065	Shiawassee
36	137	0.161	-0.129***	0.031	Van Buren
37	224	0.228	-0.062*	0.027	Calhoun
38	172	0.355	0.065	0.035	Monroe
39	86	0.523	0.233***	0.050	Lenawee
40	94	0.138	-0.152***	0.035	Lapeer
41	33	0.242	-0.047	0.068	Iron, Dickinson, and Menominee
42	46	0.304	0.014	0.064	Midland
43	90	0.167	-0.123**	0.038	Cass
44	85	0.282	-0.008	0.047	Livingston
45	124	0.169	-0.12***	0.033	St. Joseph
46	89	0.382	0.092	0.049	Otsego, Crawford, and Kalkaska
47	28	0.393	0.103	0.085	Delta
48	142	0.127	-0.163***	0.027	Allegan
49	128	0.359	0.07	0.041	Osceola and Mecosta
50	26	0.462	0.172	0.092	Chippewa
51	40	0.175	-0.115*	0.058	Mason and Lake
52	23	0.130	-0.159*	0.067	Huron
53	52	0.308	0.018	0.061	Cheboygan and Presque Isle
54	35	0.114	-0.176***	0.052	Tuscola
55	100	0.260	-0.03	0.042	Clare and Gladwin
56	45	0.133	-0.157**	0.050	Eaton
57	36	0.472	0.182*	0.079	Emmet

Significance Levels: * p<0.05, ** p<0.01, *** p<0.001

In addition to using the simple statewide average, the analysis was conducted again, instead comparing each circuit court to a weighted statewide average[18]. Unlike the simple average, where each circuit is

[18] Figure A-3, in the appendix, maps the significant differences between circuit courts and the weighted state average (24.9%).

represented equally, the weighted average calculation accounts for the number of cases from each court in our dataset, giving more importance to larger courts. The weighted statewide average from our data was 24.9%, meaning that the average probability of being sentenced to prison was 24.9%. When compared with the weighted statewide average, we found that the probability of being sentenced to prison was statistically greater than the state average in 18 circuit courts and statistically less than average in 16 courts. The remaining 23 courts did not differ significantly from the statewide average.

Together, Figure 3 and Table 8 demonstrate that the probability of being sentenced to prison varies greatly depending on which circuit court sentences the straddle cell offender. These findings illustrate the correlations between circuit courts and how often prison sentences are imposed on straddle cell offenders. These results do not suggest that this relationship is causal (i.e., being sentenced in a given circuit court makes an offender more likely to go to prison). This distinction is important because correlations allow us to conclude that there are sentencing disparities between circuit courts. However, the underlying mechanism causing some circuit courts to sentence offenders more or less often to prison is not identified. Additional data beyond the scope of this report is needed to determine the true causal relationship. Considering this, we are limited to using summary statistics to explore possible explanations. While this method may not provide the same statistical rigor as our regression analysis, it does allow us to identify factors for subsequent research.

One possible explanation for sentencing disparities between circuit courts is the availability of additional sentencing resources such as community corrections programming and problem-solving courts (PSC) that divert offenders from prison. In theory, circuit courts where these resources are available may be less likely to impose prison sentences and thus fall into the less-than-state-average category. To explore this, we identified whether community corrections programming was available[19] in each circuit as well as four additional problem-solving courts[20]: 1) Drug and Sobriety Courts, 2) Mental Health Courts, 3) Veterans Treatment Courts, and 4) Swift and Sure Sanctions Probation Programs. Table 9 below and Figure 4, on the next page, contrast the prevalence of community programs and problem-solving courts in circuits that were below average, approximately average, and above average for imposing prison sentences.

Table 9: Problem-Solving Courts and Community Corrections Programs in Circuit Courts

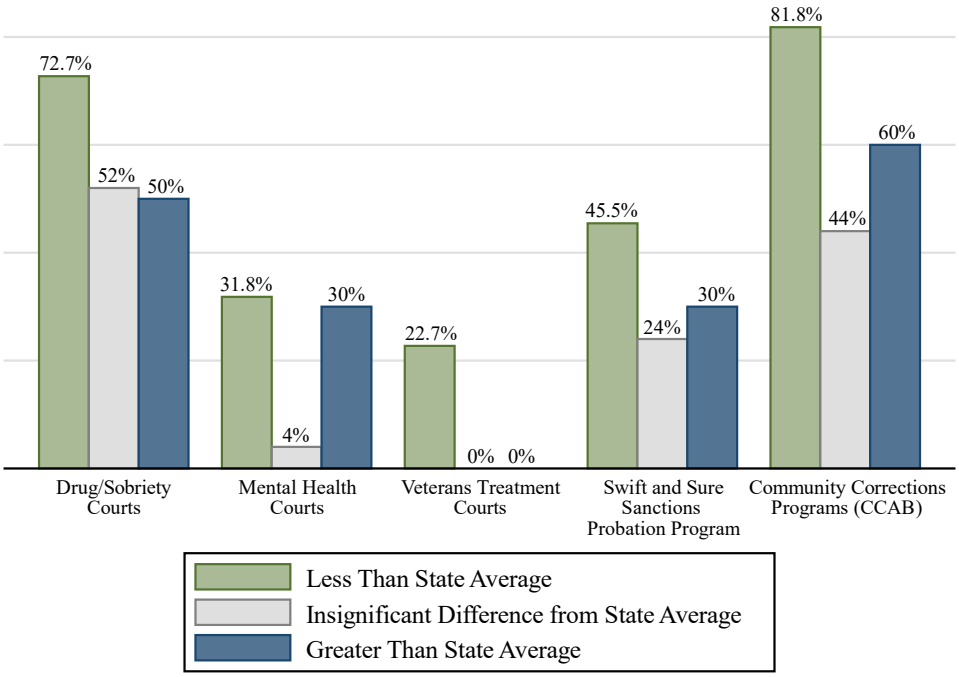
	Less Than Average		Approximately Average		More Than Average	
	Number	Percent	Number	Percent	Number	Percent
Circuit Courts - Total	**22**		**25**		**10**	
Community Corrections Programs	18	81.8%	11	44.0%	6	60.0%
Problem-Solving Courts (PSC)						
Drug/Sobriety Courts	16	72.7%	13	52.0%	5	50.0%
Mental Health Courts	7	31.8%	1	4.0%	3	30.0%
Swift and Sure Sanctions Program	10	45.5%	6	24.0%	3	30.0%
Veterans Treatment Court	5	22.7%	0	0.0%	0	0.0%
At Least One PSC	16	72.7%	14	56.0%	8	80.0%
More Than One PSC	13	59.1%	6	24.0%	2	20.0%

[19] The presence of community corrections programming was determined using the 2017 funds awarded by the MDOC to Community Correction Advisory Boards (CCABs).

[20] SCAO provides information and requirements for establishing problem-solving courts in their *"Guide for Developing a New Problem-Solving Court"* available at https://courts.michigan.gov/Administration/admin/op/problem-solving-courts/Documents/PSC-Guide.pdf.

Overall, we found that the percent of circuits with at least one problem-solving court was approximately the same for less-than-average circuits (72.7%) and greater-than-average circuits (80%). However, each type of problem-solving court was more prevalent in the circuit courts that were less likely to sentence offenders to prison. For example, 72.7% (16/22) of the less-than-average circuit courts had at least one problem-solving court, compared to only 50% (5/10) of above-average courts. Furthermore, 81.8% (18/22) of the below-average courts had community corrections programs, while only 60% (6/10) of the above-average courts had programming.

Figure 4: Percent of Circuit Courts with Problem-Solving Courts and Community Corrections Programs by Comparison to State Average



While the results from Table 9 are somewhat supportive of the underlying theory that circuit courts with alternatives are less likely to impose prison sentences, these findings alone cannot confirm this relationship. Furthermore, from these results we cannot determine whether judges are less likely to use prison because they have alternatives available or whether alternatives are available because judges who would prefer not to use prison are instrumental in promoting problem-solving courts in their circuit court. While a conclusion cannot be drawn about the exact impact of specialty courts, it is clear that Michigan's citizens currently lack equitable access to these courts, as the location of offense will directly dictate if the offender will have access to programs intended for diversion. The legislature must further examine the impact of policies that allow offenders with similar offense types and prior record variables to receive different levels of diversionary programming. Ultimately, these findings are an important first step in a secondary analysis of differences among circuit courts. Further research is necessary to confirm these findings and rule out other possible contributing factors.

C. Interpreting Statistically Significant Results[21]

Odds and Odds Ratios

Whether an offender is sentenced to prison is a binary outcome. That is, an offender either receives a prison sentence or he or she doesn't. Results from modeling this type of outcome using a logistic regression are often presented using odds ratios to allow for easier interpretation. In this section, we will define odds and odds ratios using examples to help illustrate these concepts.

The odds of an event happening, in our case being sentenced to prison, are defined as the probability of that event occurring divided by the probability that the event doesn't occur. As a simple example, say that the probability of Person A being sentenced to prison is .8 or 80%. That same person has .2 or 20% probability he or she is not sentenced to prison. The odds of being sentenced to prison in this example are .8/.2 = 4 or 4 to 1.

An odds ratio is simply the odds for one group divided by the odds for another group. Consider another individual, Person B, who has a 75% chance of being sentenced to prison. The odds of a prison sentence for this person are .75/.25 = 3 or 3 to 1. Comparing the odds for Person A (4) with Person B (3), we get an odds ratio of 4/3 = 1.33. Interpreting this ratio, we can say that the odds of going to prison for Person A are 33% greater than Person B.

Average Marginal Effect (AME)

Throughout the following discussion of results, the average marginal effects (AME) are included alongside of the odds ratios. Instead of comparing the odds of receiving a prison sentence for two groups, such as employed and unemployed offenders, AMEs compare the average difference in the probability of receiving a prison sentence for two groups. For example, to determine the AME of employed offenders, the estimated probability for each employed offender is compared to an otherwise identical unemployed offender. The AME is then calculated by taking the average of all these differences. Table 10 below provides the AME for the statistically significant factors without interaction terms. The AME for offender's race, gender, age, and crime group are presented later, in Table 11.

Table 10: Average Marginal Effects of Variables

Variable	Statistically Significant	Average Marginal Effect (Percentage Points)
Attorney Status (Retained vs. Appointed)	Those who retained their attorney were ***less*** likely to receive a prison sentence than offenders with appointed attorneys.	**-4.2**
Employment Status (Employed vs. Unemployed)	Employed offenders were ***less*** likely to receive a prison sentence than unemployed offenders.	**-9.7**
Conviction Method (Found Guilty vs. Pled Guilty)	Those found guilty at trial were ***more*** likely to receive a prison sentence than those who pled guilty.	**+43.2**
Offense Group (Assaultive vs. Non-Assaultive)	No statistically significant relationship to the "In/Out" of prison sentencing decision.	
Ethnicity		
High School Diploma/GED		
Alcohol Abuse		
Drug Abuse		
Mental Health Treatment		

[21] A table containing odds ratios and standard errors for our regression coefficients is included in the Appendix A.

D. Attorney Status: Retained vs. Appointed

For those who retain their attorney, we found a modest and statistically significant decrease in the likelihood of receiving a prison sentence compared to those whose attorney was appointed. Controlling for the offender's cell, crime type, circuit court, and demographic factors, those who retain an attorney are 4.2 percentage points less likely on average to receive a prison sentence than those with appointed attorneys. Expressed in terms of the odds ratio, the odds of being sentenced to prison for those who retain their attorney are 24% less than otherwise similar offenders with appointed representation.

E. Employment Status

For those who are employed at sentencing, we find a modest and statistically significant decrease in the likelihood of receiving a prison sentence compared to those who were unemployed. Controlling for the offender's cell, crime type, circuit court, and demographic factors, offenders employed at sentencing are 9.7 percentage points less likely on average to receive a prison sentence than unemployed offenders. Expressed in terms of the odds ratio, the odds of being sentenced to prison for employed offenders are 46.9% less than otherwise similar unemployed offenders.

F. Conviction Method: Found Guilty vs. Pled Guilty

Individuals convicted by jury or bench trials are, on average, 43.2 percentage points more likely to be sentenced to prison than similarly scored individuals convicted because of a Plea, Plea Under Advisement, or Nolo Contendere plea. Looking at the odds of being sentenced to prison among these two groups, the contrast is even more notable, with the odds for offenders convicted at trial being more than 9 times greater (820%) than comparable offenders convicted by a plea. Given the magnitude of this difference, in addition to being statistically significant, these results suggest a strong association between going to trial and greater chances of receiving a prison sentence. However, these results should not be interpreted as causal (i.e., going to trial will make you more likely to receive a prison sentence) because there may be additional factors outside our model that provide a plausible explanation, such as plea bargains, for why a large difference exists. Plea bargains may be structured to reduce, or remove altogether, the prospect of being sentenced to prison. In this scenario, we'd expect to see some disparity in sentencing (i.e., those who reach plea agreements being significantly less likely to go to prison).

G. Crime Group and Offender's Race, Gender, and Age

Our results found significant differences in whether an individual receives a prison sentence depending on the offender's race, gender, age, and the crime group. Table 11 provides the AMEs for combinations of race, gender, type of crime and at selected ages. The columns in Table 11 show the percentage point differences between the two groups listed, while the rows indicate the crime group and age (20, 35, and 50) of the offenders being compared. The abbreviation "NSD" is used to indicate the differences between two groups was not statistically significant for that crime group and at that age. As an example, the values in the first comparison column ("Black Men – White Men") provide the average percentage point difference between black men and white men. Negative values in this column imply that black men are less likely than white men to be sentenced to prison. Conversely, positive values indicate black men are more likely than white men to be sentenced to prison.

Table 11: Average Percentage Point Difference in Probability of a Prison Sentence by Race, Gender, Age, and Crime Group

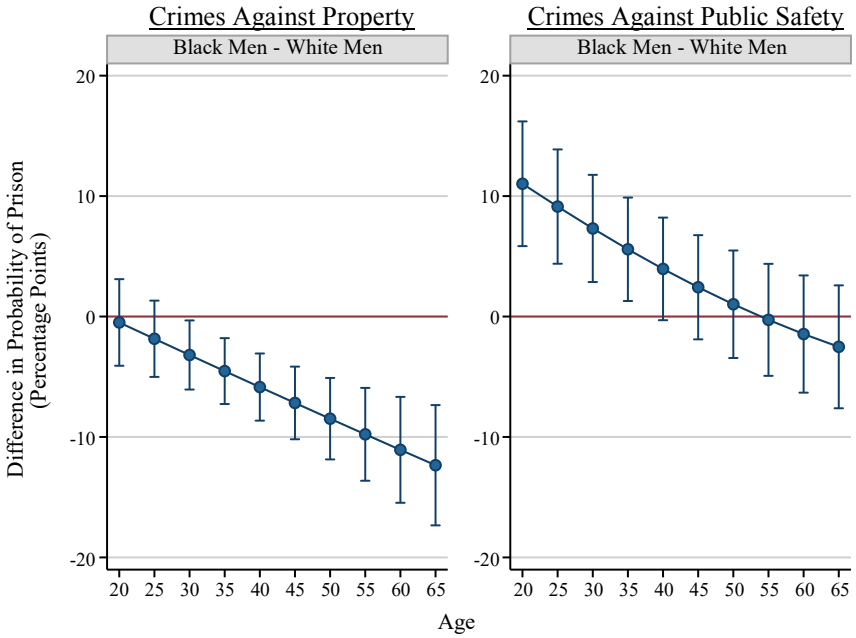
		Percentage Point Difference Between Groups			
	Age	Black Men - White Men	Black Women - White Women	Black Women - Black Men	White Women - White Men
Person (1,415)	20	*NSD*	*NSD*	**-11.3**	**-15.7**
	35	*NSD*	*NSD*	*NSD*	**-12.8**
	50	**-8.4**	*NSD*	*NSD*	**-9.3**
Property (4,184)	20	*NSD*	*NSD*	*NSD*	**-9.7**
	35	**-4.5**	*NSD*	*NSD*	**-6.9**
	50	**-8.5**	*NSD*	*NSD*	*NSD*
Controlled Substance (351)	20	*NSD*	*NSD*	*NSD*	**-16.4**
	35	*NSD*	*NSD*	*NSD*	**-11.9**
	50	*NSD*	*NSD*	*NSD*	*NSD*
Pub Order (346)	20	*NSD*	*NSD*	*NSD*	*NSD*
	35	**-11.7**	*NSD*	*NSD*	*NSD*
	50	**-14.2**	**-10.7**	*NSD*	*NSD*
Pub Safety* (1,693)	20	**+11.0**	**+10.1**	**-18.7**	**-17.7**
	35	**+5.6**	**+7.3**	**-12.6**	**-14.3**
	50	*NSD*	*NSD*	*NSD*	**-10.9**
OWI - 3rd (1,970)	20	*NSD*	*NSD*	**-11.8**	**-14.5**
	35	*NSD*	*NSD*	**-8.0**	**-13.0**
	50	**-6.2**	*NSD*	*NSD*	**-10.5**
Concealed Weapon (1,050)	20	**+11.0**	**+13.8**	*NSD*	*NSD*
	35	*NSD*	**+10.7**	*NSD*	*NSD*
	50	*NSD*	*NSD*	*NSD*	*NSD*
Public Trust (49)	-	There are too few cases to draw meaningful conclusions for most demographic comparisons.			

*Public Safety refers to all crimes against public safety, excluding OWI - 3rd and Concealed Weapon convictions. ** NSD - Not Significantly Different

The results presented in Table 11 highlight a wide range of sentencing disparities depending on the crime group and the demographics of an offender. Looking at the disparities associated with gender, we found that female offenders were generally less likely than male offenders to receive prison sentences. From the two rightmost columns, we see this trend persists for both black and white offenders, although gender disparities for white offenders were found across more crime groups.

Whether an offender received a prison sentence differed significantly between black and white offenders, however the relationship between race and prison sentencing varied depending on the type of crime committed, gender, and age. More notably, our results show that the negatively impacted race differs depending on the type of crime committed. To illustrate this point, consider the differences in sentencing for black and white men convicted of property and public safety crimes. For property crimes, 35-year-old black men were 4.5 percentage points ***less*** likely to receive a prison sentence compared to white men of the same age. Yet, for public safety crimes, 35-year-old black men were 5.6 percentage points ***more*** likely to receive a prison sentence compared to white men of the same age. Figure 5 on the next page, illustrates these trends graphically.

Figure 5: Difference in Probability of Prison Sentence Between Black Men and White Men

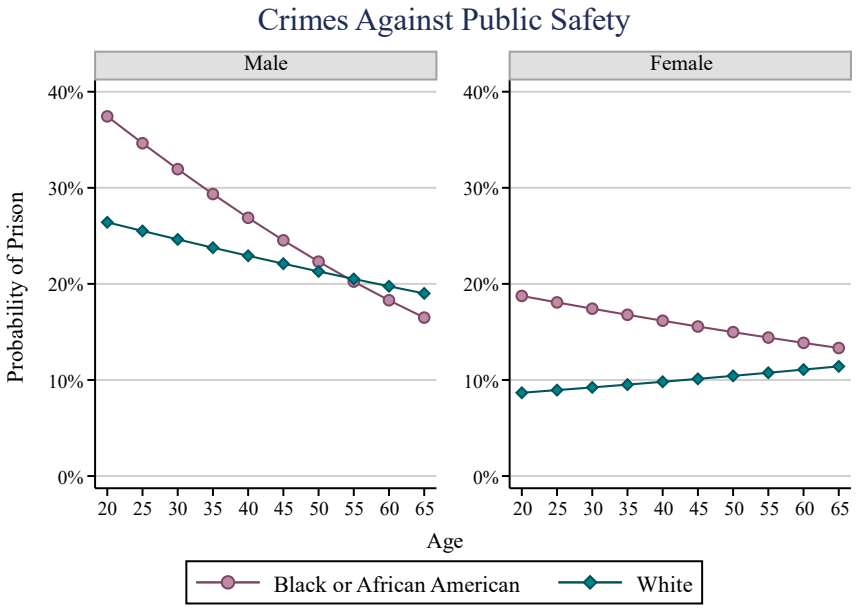


The graph on the left side of Figure 5 plots the average difference between black men and white men convicted of property crimes for a given age. Similarly, the points for the graph on the right represent the average difference between black men and white men convicted of public safety crimes for ages 20-65. The points shown for ages 20, 35, and 50 correspond to the values included in Table 11 (e.g., Left Graph: Property, Age 35 = -4.5, Right Graph: Public Safety, Age 35 = 5.6). Again, negative values indicate that black men are less likely than white men to be sentenced to prison, while positive values indicate black men are more likely than white men to be sentenced to prison. Additionally, if the confidence interval includes zero, we conclude that the difference between the two groups is not statistically significant for that crime group and age (i.e., "NSD").

The left side of Figure 5 shows an insignificant difference between black and white men convicted of property crimes when they're young, however by age 30 we see that black men are statistically less likely to receive a prison sentence. This difference increases and remains statistically significant as male offenders age. The opposite relationship was found for public safety crimes, with young black men being statistically more likely to be sentenced to prison than white men of the same age. This difference was largest for 20-year-old offenders and decreased for older offenders up to age 40, when the difference in prison sentencing for black and white men was no longer statistically significant.

Whether sentencing disparities were found across race, gender, age, or crime group is directly addressed by the presence of statistically significant results. The percentage point differences express, in part, the direction and magnitude of the average disparity in prison sentencing. However, for similar percentage point differences, such as public safety convictions at age 20, the practical impact of the disparities can vary depending on the underlying probabilities of the comparison groups. From Table 11 we saw that at age 20 black men were, on average, 11 percentage points more likely to be sentenced to prison than 20-year-old white men. Similarly, at age 20, black women were, on average, 10.1 percentage points more likely to be sentenced to prison than 20-year-old white women. Figure 6 presents these differences graphically, along with the underlying probabilities for each demographic group.

Figure 6: Probability of a Prison Sentence for Public Safety Crimes* by Race, Gender, and Age



The graph on the left shows the average probability of being sentenced to prison for white men (teal diamonds) and black men (purple circles) convicted of public safety crimes at various ages. For 20-year-olds convicted of public safety crimes, the 11-percentage points difference between black men and white men is shown as the first two points on the left graph: Black Men 37.4%, White Men 26.4%.

The graph on the right shows the average probability of being sentenced to prison for white women (teal diamonds) and black women (purple circles) convicted of public safety crimes at various ages. For 20-year-olds convicted of public safety crimes, the 10.1 percentage points difference between black and white women is shown as the first two points on the right graph: Black Women 18.8%, White Women 8.7%.

With the underlying probabilities provided in Figure 6, the racial disparities can be expressed as percent increase. For example, at age 20, black men are 41.7 percent (37.4-26.4/26.4) more likely than white men to be sentenced to prison for crimes against public safety. Meanwhile, at age 20, black women are more than twice as likely (116.2% = 18.8-8.7/8.7) than white women to be sentenced to prison for crimes against public safety. This example demonstrates how the disparities of the same size can have varying practical impacts. To address the practical impact of disparities, the significant differences across crime groups and the demographics are provided as percent changes in Table 12.

Table 12: Average Percent Difference in Probability of a Prison Sentence by Race, Gender, Age, and Crime Group

		Percent Difference Between Groups			
	Age	Black Men - White Men	Black Women - White Women	Black Women - Black Men	White Women - White Men
Person (1,415)	20	*NSD*	*NSD*	**-39.6%**	**-55.1%**
	35	*NSD*	*NSD*	*NSD*	**-44.5%**
	50	**-28.9%**	*NSD*	*NSD*	**-32.1%**
Property (4,184)	20	*NSD*	*NSD*	*NSD*	**-41.6%**
	35	**-18.0%**	*NSD*	*NSD*	**-27.6%**
	50	**-31.4%**	*NSD*	*NSD*	*NSD*
Controlled Substance (351)	20	*NSD*	*NSD*	*NSD*	**-51.5%**
	35	*NSD*	*NSD*	*NSD*	**-42.2%**
	50	*NSD*	*NSD*	*NSD*	*NSD*
Pub Order (346)	20	*NSD*	*NSD*	*NSD*	*NSD*
	35	**-38.3%**	*NSD*	*NSD*	*NSD*
	50	**-50.2%**	**-31.2%**	*NSD*	*NSD*
Pub Safety* (1,693)	20	**+41.7%**	**+116.2%**	**-49.9%**	**-67.2%**
	35	**+23.5%**	**+76.4%**	**-42.8%**	**-60.0%**
	50	*NSD*	*NSD*	*NSD*	**-51.0%**
OWI - 3rd (1,970)	20	*NSD*	*NSD*	**-44.5%**	**-60.2%**
	35	*NSD*	*NSD*	**-32.7%**	**-49.4%**
	50	**-21.6%**	*NSD*	*NSD*	**-36.7%**
Concealed Weapon (1,050)	20	**+48.0%**	**+107.3%**	*NSD*	*NSD*
	35	*NSD*	**+70.0%**	*NSD*	*NSD*
	50	*NSD*	*NSD*	*NSD*	*NSD*
Public Trust (49)	-	There are too few cases to draw meaningful conclusions for most demographic comparisons.			

*Public Safety refers to all crimes against public safety, excluding OWI - 3rd and Concealed Weapon convictions. ** NSD - Not Significantly Different

VI. Conclusion

A. Summary

This report addresses two sets of questions regarding sentencing outcomes for non-habitual straddle cell offenders convicted of class E felonies.

> ***Research Question 1***: To what extent are prison sentences, relative to intermediate sanctions, imposed on offenders convicted of a **class E** felony and scoring within a straddle cell?
>
> ***Research Question 2***: For straddle cell offenders with similar offense and offender characteristics, are there disparities in the rate of prison sentences? If so, what factors or characteristics are contributing to such disparities?

Using the MDOC's data on felony sentencing from 2012-2017, we identified 11,508 cases for individuals sentenced between 2012-2017 and scoring within a straddle cell for class E offenses, excluding habitual offenders and those with a special status during the offense. Of these cases, 2,753 (24.9%) received prison sentences and 6,318 (57.14%) received a jail sentence or a combination of jail and probation, and 1,952 (17.65%) received probation only. Within the E-grid's straddle cells, the rate of prison sentences ranged from a low of 14.91% of cases (D-I) to a high of 57.83% (C-VI).

The second question our analysis considered was: for offenders with similar offense and offender characteristics, are there disparities in the rate of prison sentences? Our analysis found eight factors with statistically significant associations with the probability that someone is sentenced to prison: conviction method (Trial vs. Plea), attorney status (Retained vs. Appointed), employment status, offense crime group, gender, age, race, and the circuit court where the offender was sentenced.

Our results showed that offenders convicted at trial were associated with higher rates of prison sentences compared to those who were convicted by plea. For attorney status, the probability of being sentenced to prison associated with offenders who retained attorneys was on average 4.2 percentage points less than an otherwise identical offender with appointed representation. Likewise, employed offenders were less likely to receive a prison sentence than comparable unemployed offenders.

Looking at the disparities associated with gender, we found that female offenders were generally less likely than male offenders to receive prison sentences. Our results found this trend persisted for both black and white offenders, although gender disparities for white offenders were found across more crime groups. Whether an offender received a prison sentence differed significantly between black and white offenders, however the relationship between race and prison sentencing varied depending on the type of crime committed, gender, and age. More notably, our results show the disparately impacted race differs depending on the type of crime committed.

Statistically significant differences in the probability of being sentenced to prison were also found when comparing rates among the circuit courts. Each circuit court was categorized as one of three groups: more likely to impose prison sentences, less likely to impose prison sentences, or no significant difference from the state average. Comparing circuit courts to the unweighted state average (29%), we identified 10 circuit courts that were statistically above average, 25 courts below the average, and 22 courts that did not differ significantly from the statewide average. Similar results were found when courts were compared to the weighted state average (24.9%).

B. Limitations and Additional Research Considerations

As stated throughout this report, our analysis focused on offenders scoring with a straddle cell for class E felonies and excluded habitual offenders and those with a special status during the offense. Due to the scope of our research, our findings may not be representative of the relationships found in other felony crime classes (i.e., M2, A-D, and F-H). For example, applying our model to the straddle cells in the C-grid may identify different factors that are significantly related to the "in-or-out" decision. Through continued research on this topic, the CJPC intends to expand the study's scope to include straddle cells from additional felony classes.

Another possible extension of this analysis would be to apply the same regression techniques to evaluate different metrics for sentencing outcomes. In particular, subsequent iterations of this report could address whether sentencing disparities are found in the length of prison sentence determination. Once again, if disparate outcomes are found, this analysis could be used to identify significant factors and estimate their impact.

Lastly, while this report identifies factors that contribute to the "in-or-out" decision, we are unable to look at how recidivism rates vary between those sentenced to prison and those sentenced to intermediate sanctions. Additional data, such as the release dates, are required to detect when an offender recidivates and to calculate cohort recidivism rates. Fortunately, through conversations with the MDOC, we have identified sources for much of the necessary data and are continuing to work with the department to gather the data.

VII. Appendix - Additional Tables and Maps

Figure A-1: Counties of Michigan

Figure A-2: Circuit Courts of Michigan

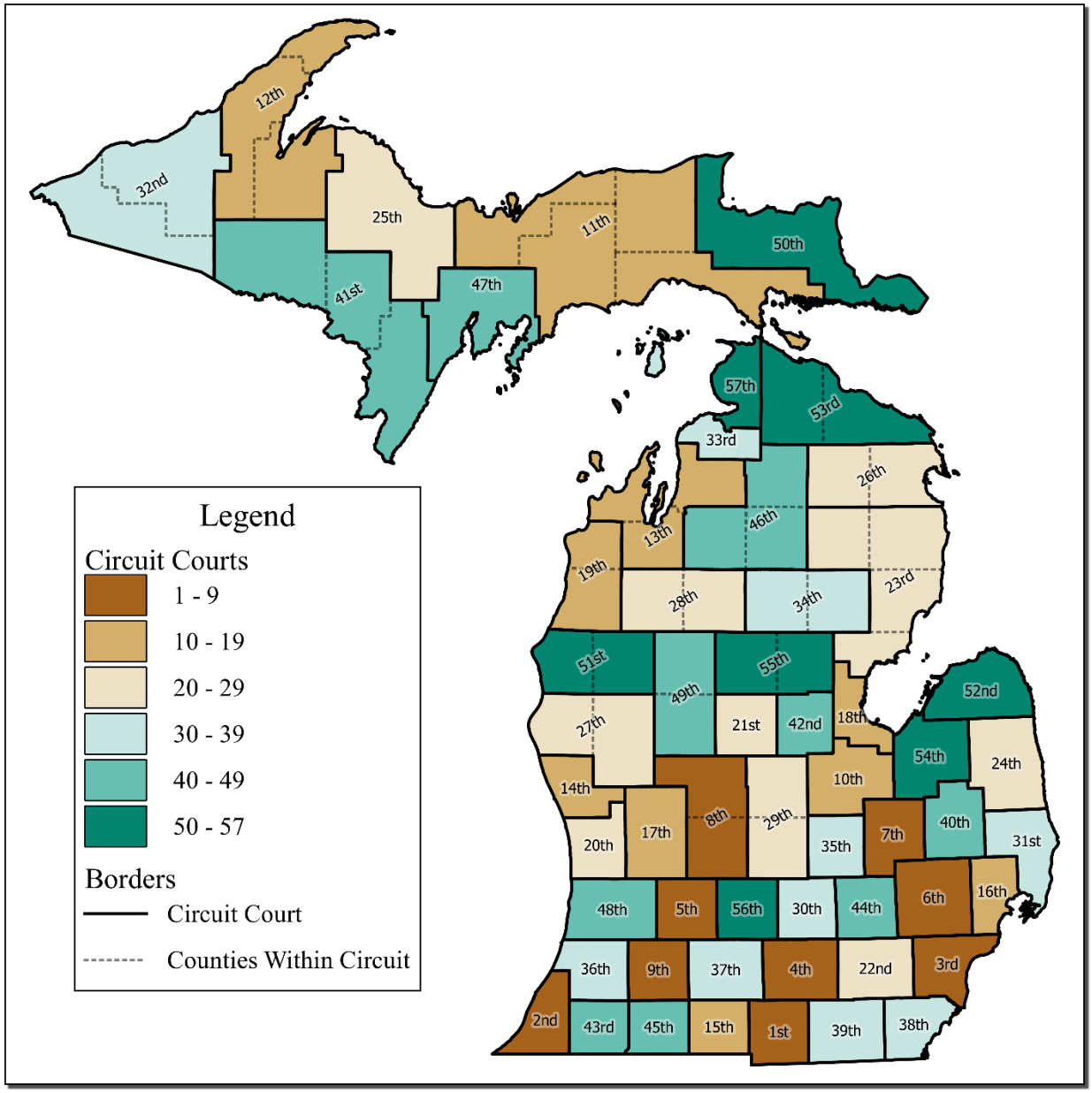
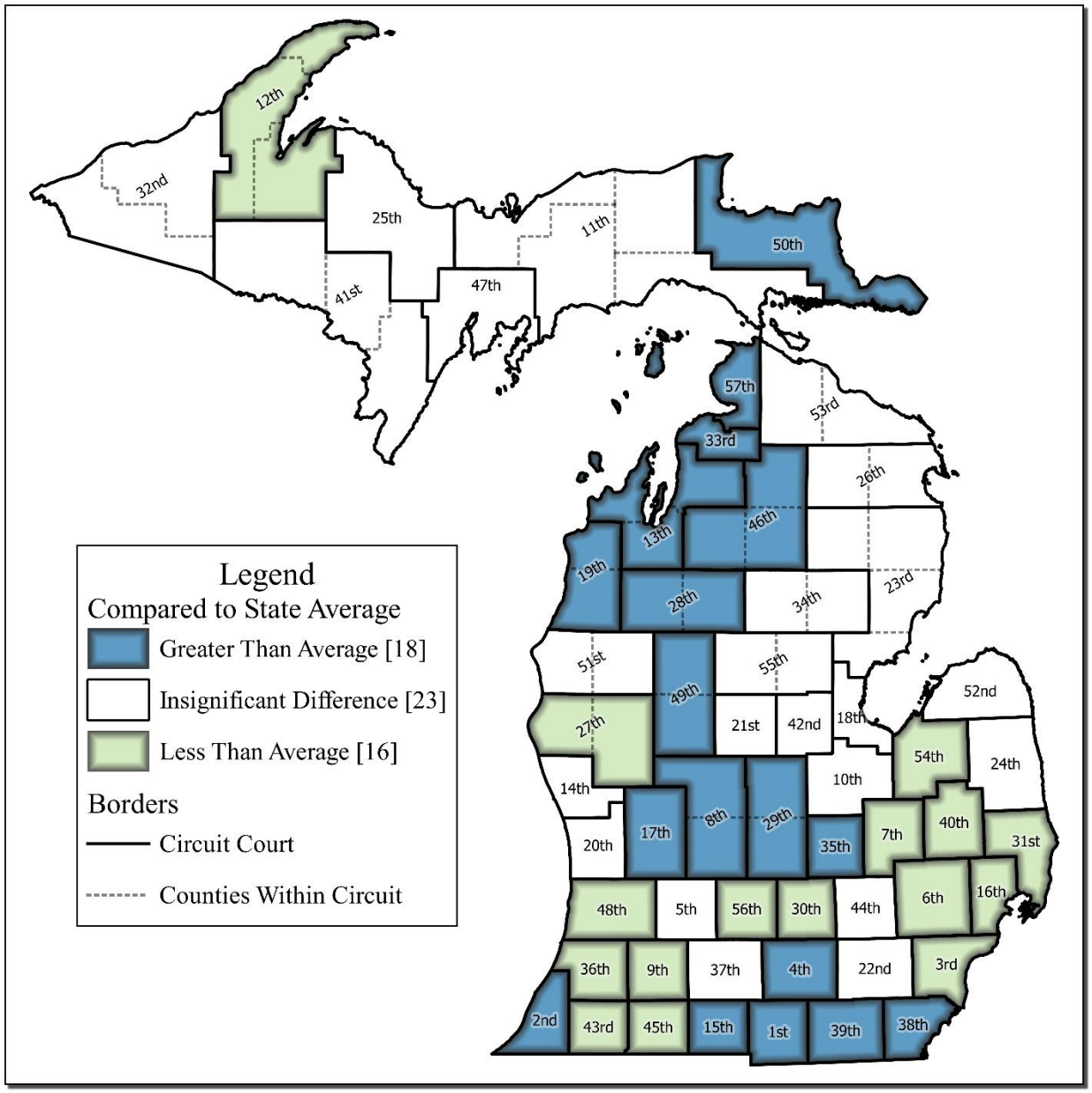


Figure A-3: Probability of Receiving a Prison Sentence
- Comparing Circuit Courts with the Weighted State Average (24.9%)[22]-



[22] Figure A-3 shows how each circuit court compares to the weighted statewide average for imposing prison sentences on offenders convicted of class E felonies and scoring within a straddle cell. Habitual offenders and those with a special status during the offense (e.g., HYTA, Probation, Parole) are not included in these comparisons.

Table A-1: Three Most Common Class E Felonies Convictions by Crime Group - Number of Convictions by Age, Race, and Gender -

						age < 30				30 ≤ age ≤ 40				40 < age			
Crime Group (Count)	PACC Code	Offense Description	Number of Cases	Percent of Crime Group	Percent Sentenced to Prison	Black Men	Black Women	White Men	White Women	Black Men	Black Women	White Men	White Women	Black Men	Black Women	White Men	White Women
Person (1,415)	750.814	Dom Viol- 3rd	511	36.1%	29.0%	35	2	48	0	64	1	115	6	99	3	133	5
	750.110A4	Home Invasion - 3rd	367	25.9%	28.6%	73	8	95	17	35	3	45	6	28	1	48	8
	257.6255A	OWI Causing Injury	150	10.6%	34.7%	7	4	52	10	6	1	20	9	2	4	29	6
Property (4,184)	750.356C	Retail Fraud-1st Deg	1,001	23.9%	28.7%	85	34	106	43	57	43	139	81	166	74	117	56
	750.249	Utter & Publish	677	16.2%	16.7%	61	27	94	46	65	30	87	45	88	36	68	30
	750.5357	Stolen Property-MV	401	9.6%	15.0%	148	4	47	5	69	4	31	3	58	5	23	4
CS (351)	333.74012BA	Controlled Substance[1]	273	77.8%	23.4%	12	0	63	11	21	0	51	19	17	2	62	15
	333.17766C1D	Controlled Substance[2]	66	18.8%	16.7%	0	0	11	3	1	0	16	10	2	0	19	4
	333.74022B	Controlled Substance[3]	6	1.7%	50.0%	0	0	3	1	2	0	0	0	0	0	0	0
Pub Order (346)	445.65	Identity Theft	186	53.8%	23.7%	27	9	9	10	26	5	18	17	33	4	11	17
	750.505B	Accs Aftr Felon	42	12.1%	42.9%	16	0	8	6	1	1	3	1	4	1	0	1
	445.4332	Buying/Selling Metal	36	10.4%	8.3%	0	0	3	0	5	0	8	0	13	0	7	0
Pub Safety (4713)	257.6256D	OWI - 3rd	1,964	41.7%	26.7%	24	0	111	10	137	10	470	46	235	15	839	67
	750.227	Weapons-Concealed	1,050	22.3%	22.2%	472	6	89	4	200	8	69	7	140	4	50	1
	750.224F	Weapons-Felon	701	14.9%	29.0%	132	1	59	2	163	4	86	1	153	5	92	3
Pub Trust (49)	333.74012BA	Controlled Substance[1]	37	75.5%	29.7%	0	0	6	0	7	1	7	7	5	0	4	0
	451.2508	Securities Act - Gen	4	8.2%	100.0%	0	0	0	0	1	0	0	0	0	0	3	0
	750.356C	Retail Fraud-1st Deg	3	6.1%	0.0%	0	0	1	0	0	0	0	0	0	1	0	1

Controlled Substance[1] [MCL 333.7401 (2) (b) (ii)] - Delivery or manufacture of schedule 1, 2, or 3 controlled substance

Controlled Substance[2] [MCL 333.17766 c (2) (c)] - Purchasing or possessing ephedrine or pseudoephedrine knowing or having reason to know that it is to be used to manufacture methamphetamine

Controlled Substance[3] [MCL 333. 7402 (2) (b)] - Delivery or manufacture of schedule 1, 2, or 3 counterfeit controlled substance

Table A-2: Three Most Common Class E Felonies Convictions by Crime Group - Number of Convictions Sentenced to Prison by Age, Race, and Gender -

						age < 30				30 ≤ age ≤ 40				40 < age			
Crime Group (Count)	PACC Code	Offense Description	Number of Cases	Percent of Crime Group	Percent Sentenced to Prison	Black Men	Black Women	White Men	White Women	Black Men	Black Women	White Men	White Women	Black Men	Black Women	White Men	White Women
Person (1,415)	750.814	Dom Viol- 3rd	511	36.1%	29.0%	9	1	15	0	21	0	31	1	28	1	40	1
	750.110A4	Home Invasion - 3rd	367	25.9%	28.6%	25	1	36	3	5	1	12	0	9	0	10	3
	257.6255A	OWI Causing Injury	150	10.6%	34.7%	5	0	16	2	3	0	7	3	1	1	13	1
Property (4,184)	750.356C	Retail Fraud-1st Deg	1,001	23.9%	28.7%	24	7	34	7	21	14	45	28	48	14	34	11
	750.249	Utter & Publish	677	16.2%	16.7%	5	1	21	5	11	7	12	7	12	7	19	6
	750.5357	Stolen Property-MV	401	9.6%	15.0%	24	2	9	1	7	0	8	0	4	0	4	1
CS (351)	333.74012BA	Controlled Substance[1]	273	77.8%	23.4%	2	0	17	2	3	0	13	3	5	0	18	1
	333.17766C1D	Controlled Substance[2]	66	18.8%	16.7%	0	0	1	0	0	0	3	2	0	0	3	2
	333.74022B	Controlled Substance[3]	6	1.7%	50.0%	0	0	2	0	1	0	0	0	0	0	0	0
Pub Order (346)	445.65	Identity Theft	186	53.8%	23.7%	4	1	2	1	5	1	6	7	4	2	3	8
	750.505B	Accs Aftr Felon	42	12.1%	42.9%	7	0	2	3	1	1	2	1	0	0	0	1
	445.4332	Buying/Selling Metal	36	10.4%	8.3%	0	0	0	0	0	0	1	0	0	0	2	0
Pub Safety (4713)	257.6256D	OWI - 3rd	1,964	41.7%	26.7%	7	0	31	2	29	1	120	3	58	2	256	16
	750.227	Weapons-Concealed	1,050	22.3%	22.2%	126	0	14	1	36	3	13	1	23	1	15	0
	750.224F	Weapons-Felon	701	14.9%	29.0%	57	0	20	0	55	0	16	0	37	1	16	1
Pub Trust (49)	333.74012BA	Controlled Substance[1]	37	75.5%	29.7%	0	0	3	0	2	0	3	1	0	0	2	0
	451.2508	Securities Act - Gen	4	8.2%	100.0%	0	0	0	0	1	0	0	0	0	0	3	0
	750.356C	Retail Fraud-1st Deg	3	6.1%	0.0%	0	0	0	0	0	0	0	0	0	0	0	0

Controlled Substance[1] [MCL 333.7401 (2) (b) (ii)] - Delivery or manufacture of schedule 1, 2, or 3 controlled substance

Controlled Substance[2] [MCL 333.17766 c (2) (c)] - Purchasing or possessing ephedrine or pseudoephedrine knowing or having reason to know that it is to be used to manufacture methamphetamine

Controlled Substance[3] [MCL 333. 7402 (2) (b)] - Delivery or manufacture of schedule 1, 2, or 3 counterfeit controlled substance

Table A-3: Three Most Common Class E Felonies Convictions by Crime Group - Percent of Convictions Sentenced to Prison by Age, Race, and Gender -

						age < 30				30 ≤ age ≤ 40				40 < age			
Crime Group (Count)	**PACC Code**	**Offense Description**	**Number of Cases**	**Percent of Crime Group**	**Percent Sentenced to Prison**	Black Men	Black Women	White Men	White Women	Black Men	Black Women	White Men	White Women	Black Men	Black Women	White Men	White Women
Person (1,415)	750.814	Dom Viol- 3rd	511	36.1%	29.0%	25.7%		31.3%		32.8%		27.0%		28.3%		30.1%	
	750.110A4	Home Invasion - 3rd	367	25.9%	28.6%	34.2%		37.9%	17.6%	14.3%		26.7%		32.1%		20.8%	
	257.6255A	OWI Causing Injury	150	10.6%	34.7%			30.8%	20.0%			35.0%				44.8%	
Property (4,184)	750.356C	Retail Fraud-1st Deg	1,001	23.9%	28.7%	28.2%	20.6%	32.1%	16.3%	36.8%	32.6%	32.4%	34.6%	28.9%	18.9%	29.1%	19.6%
	750.249	Utter & Publish	677	16.2%	16.7%	8.2%	3.7%	22.3%	10.9%	16.9%	23.3%	13.8%	15.6%	13.6%	19.4%	27.9%	20.0%
	750.5357	Stolen Property-MV	401	9.6%	15.0%	16.2%		19.1%		10.1%		25.8%		6.9%		17.4%	
CS (351)	333.74012BA	Controlled Substance[1]	273	77.8%	23.4%	16.7%		27.0%	18.2%	14.3%		25.5%	15.8%	29.4%		29.0%	6.7%
	333.17766C1D	Controlled Substance[2]	66	18.8%	16.7%			9.1%				18.8%	20.0%			15.8%	
	333.74022B	Controlled Substance[3]	6	1.7%	50.0%												
Pub Order (346)	445.65	Identity Theft	186	53.8%	23.7%	14.8%			10.0%	19.2%		33.3%	41.2%	12.1%		27.3%	47.1%
	750.505B	Accs Aftr Felon	42	12.1%	42.9%	43.8%											
	445.4332	Buying/Selling Metal	36	10.4%	8.3%									0.0%			
Pub Safety (4713)	257.6256D	OWI - 3rd	1,964	41.7%	26.7%	29.2%		27.9%	20.0%	21.2%	10.0%	25.5%	6.5%	24.7%	13.3%	30.5%	23.9%
	750.227	Weapons-Concealed	1,050	22.3%	22.2%	26.7%		15.7%		18.0%		18.8%		16.4%		30.0%	
	750.224F	Weapons-Felon	701	14.9%	29.0%	43.2%		33.9%		33.7%		18.6%		24.2%		17.4%	
Pub Trust (49)	333.74012BA	Controlled Substance[1]	37	75.5%	29.7%												
	451.2508	Securities Act - Gen	4	8.2%	100.0%												
	750.356C	Retail Fraud-1st Deg	3	6.1%	0.0%												

Footnote: The percent sentenced to prison is not included if there were less than 10 convictions for a crime and demographic.

Controlled Substance[1] [MCL 333.7401 (2) (b) (ii)] - Delivery or manufacture of schedule 1, 2, or 3 controlled substance

Controlled Substance[2] [MCL 333.17766 c (2) (c)] - Purchasing or possessing ephedrine or pseudoephedrine knowing or having reason to know that it is to be used to manufacture methamphetamine

Controlled Substance[3] [MCL 333. 7402 (2) (b)] - Delivery or manufacture of schedule 1, 2, or 3 counterfeit controlled substance

Table A-4: Problem-Solving Courts and Community Corrections Programs in Circuit Courts[23,24]

Circuit	Comparison to State Average for Prison Sentences	Community Corrections Programs[2]	Problem-Solving Courts[1]				Counties
			Drug / Sobriety Courts	Mental Health Courts	Swift & Sure Sanctions Program	Veterans Treatment Court	
1	Above State Average	No	Yes	No	No	No	Hillsdale
2	Above State Average	Yes	Yes	Yes	Yes	No	Berrien
3	Below State Average	Yes	Yes	Yes	Yes	Yes	Wayne
4	Insignificant Difference	Yes	Yes	No	No	No	Jackson
5	Below State Average	Yes	Yes	No	Yes	No	Barry
6	Below State Average	Yes	Yes	Yes	No	No	Oakland
7	Below State Average	Yes	Yes	Yes	No	Yes	Genesee
8	Above State Average	Yes	Yes	No	No	No	Montcalm and Ionia
9	Below State Average	Yes	Yes	Yes	Yes	Yes	Kalamazoo
10	Insignificant Difference	Yes	Yes	No	Yes	No	Saginaw
11	Insignificant Difference	No	No	No	No	No	Luce, Mackinac, Schoolcraft, and Alger
12	Below State Average	No	No	No	No	No	Houghton, Baraga, and Keweenaw
13	Above State Average	Yes	No	Yes	No	No	Leelanau, Antrim, and Grand Traverse
14	Insignificant Difference	Yes	No	Yes	Yes	No	Muskegon
15	Above State Average	No	No	No	No	No	Branch
16	Below State Average	Yes	Yes	Yes	No	Yes	Macomb
17	Above State Average	Yes	No	Yes	No	No	Kent
18	Insignificant Difference	Yes	Yes	No	Yes	No	Bay
19	Insignificant Difference	No	No	No	No	No	Benzie and Manistee
20	Below State Average	Yes	Yes	No	No	No	Ottawa
21	Below State Average	Yes	Yes	No	Yes	No	Isabella
22	Insignificant Difference	Yes	Yes	No	No	No	Washtenaw
23	Insignificant Difference	Yes	Yes	No	No	No	Iosco, Arenac, Alcona, and Oscoda
24	Insignificant Difference	No	No	No	No	No	Sanilac
25	Insignificant Difference	Yes	Yes	No	No	No	Marquette
26	Insignificant Difference	No	No	No	No	No	Alpena and Montmorency
27	Below State Average	No	No	No	No	No	Oceana and Newaygo
28	Above State Average	Yes	No	No	No	No	Wexford and Missaukee
29	Above State Average	No	No	No	Yes	No	Gratiot and Clinton
30	Below State Average	Yes	Yes	Yes	Yes	No	Ingham
31	Below State Average	Yes	No	No	No	No	St. Clair
32	Insignificant Difference	No	No	No	No	No	Ontonagon and Gogebic
33	Insignificant Difference	No	Yes	No	No	No	Charlevoix
34	Insignificant Difference	Yes	No	No	No	No	Ogemaw and Roscommon
35	Insignificant Difference	No	Yes	No	No	No	Shiawassee
36	Below State Average	Yes	Yes	Yes	Yes	No	Van Buren
37	Below State Average	Yes	Yes	No	No	No	Calhoun
38	Insignificant Difference	Yes	No	No	No	No	Monroe
39	Above State Average	No	Yes	No	No	No	Lenawee
40	Below State Average	Yes	No	No	No	No	Lapeer
41	Insignificant Difference	No	Yes	No	Yes	No	Iron, Dickinson, and Menominee
42	Insignificant Difference	Yes	Yes	No	Yes	No	Midland
43	Below State Average	Yes	Yes	No	Yes	No	Cass
44	Insignificant Difference	Yes	Yes	No	Yes	No	Livingston
45	Below State Average	Yes	Yes	No	Yes	No	St. Joseph
46	Insignificant Difference	No	No	No	No	No	Otsego, Crawford, and Kalkaska
47	Insignificant Difference	No	No	No	No	No	Delta
48	Below State Average	Yes	Yes	No	Yes	No	Allegan
49	Insignificant Difference	No	No	No	No	No	Osceola and Mecosta
50	Insignificant Difference	No	Yes	No	No	No	Chippewa
51	Below State Average	No	No	No	No	No	Mason and Lake
52	Below State Average	No	No	No	No	No	Huron
53	Insignificant Difference	No	Yes	No	No	No	Cheboygan and Presque Isle
54	Below State Average	Yes	Yes	No	No	No	Tuscola
55	Insignificant Difference	No	No	No	No	No	Clare and Gladwin
56	Below State Average	Yes	Yes	No	Yes	Yes	Eaton
57	Above State Average	Yes	Yes	No	Yes	No	Emmet

[23] This table shows the Problem-Solving Courts (PSCs) established prior to 2017 for each circuit court. This is not an exhaustive list of all PSCs for every county, as it does not include PSCs within District Courts. These were not included as our analysis focuses on felony sentencing decisions made in circuit courts.

[24] The presence of community corrections programming was determined using the 2017 funds awarded by the MDOC to Community Correction Advisory Boards.

Table A-5: Logistic Regression Coefficients and Odds Ratios[25]

VARIABLES	(1) Logit *Coefficients*	(2) Logit *Odds Ratio*
Conviction Method	2.204***	9.064***
(Found Guilty vs Pled Guilty)	(10.17)	(10.17)
Attorney Status	-0.272***	0.762***
(Retained vs Appointed)	(-4.04)	(-4.04)
Employed	-0.631***	0.532***
	(-11.74)	(-11.74)
Group 1 Offense	-0.109	0.897
(Assaultive vs. Non-Assaultive)	(-0.85)	(-0.85)
Hispanic	0.0538	1.055
	(0.43)	(0.43)
High School Diploma/GED	0.0267	1.027
	(0.51)	(0.51)
History of Drug Abuse	0.0727	1.075
	(1.33)	(1.33)
History of Alcohol Abuse	0.0452	1.046
	(0.8)	(0.8)
Mental Health Treatment	0.0194	1.02
	(0.37)	(0.37)
Crime Group		
Person	0.428	1.534
	(1.48)	(1.48)
Property	Reference Group	
Controlled Substance	0.934	2.545
	(1.93)	(1.93)
Public Order	0.874	2.397
	(1.74)	(1.74)
Public Safety	0.556*	1.744*
	(2)	(2)
Public Trust	0.596	1.815
	(0.49)	(0.49)
OWI - 3rd	0.00715	1.007
	(0.02)	-0.02
Weapons-Concealed	0.169	1.184
	(0.45)	(0.45)
Race		
Black or African American	0.325	1.384
	(1.66)	(1.66)
White	Reference Group	
Female	-1.129***	0.323***
	(-3.49)	(-3.49)
Age	0.0074	1.007
	(1.63)	(1.63)
Black|AA*Female	0.397*	1.488*
	(2.24)	(2.24)
Black|AA*Age	-0.0179***	0.982***
	(-3.70)	(-3.70)
Female*Age	0.0186*	1.019*
	(2.3)	(2.3)
Crime Group*Race		
Person*Black|AA	0.0374	1.038
	(0.24)	-0.24
Property*White	Reference Group	
CS*Black|AA	0.0897	1.094
	(0.22)	(0.22)
Pub Order*Black|AA	-0.448	0.639
	(-1.50)	(-1.50)
Pub Safety*Black|AA	0.638***	1.892***
	(4.09)	(4.09)
Pub Trust*Black|AA	-0.865	0.421
	(-1.07)	(-1.07)
OWI - 3rd*Black|AA	0.185	1.203
	(1.1)	(1.1)
Weapons-Concealed*Black|AA	0.675**	1.964**
	(2.96)	(2.96)
Crime Group*Gender		
Person*Female	-0.397	0.672
	(-1.49)	(-1.49)
Property*Male	Reference Group	
CS*Female	-0.336	0.715
	(-0.83)	(-0.83)
Pub Order*Female	0.533	1.703
	(-1.61)	(-1.61)
Pub Safety*Female	-0.76	0.468
	(-1.61)	(-1.61)
Pub Trust*Female	-1.734	0.177
	(-1.38)	(-1.38)
OWI - 3rd*Female	-0.493	0.611
	(-1.80)	(-1.80)
Weapons-Concealed*Female	-0.0451	0.956
	(-0.08)	(-0.08)
Crime Group*Age		
Person*Age	-0.00612	0.994
	(-0.92)	(-0.92)
CS*Age	-0.0216	0.979
	(-1.71)	(-1.71)
Pub Order*Age	-0.0159	0.984
	(-1.29)	(-1.29)
Pub Safety*Age	-0.0184**	0.982**
	(-2.59)	(-2.59)
Pub Trust*Age	0.0145	1.015
	(0.53)	(0.53)
OWI - 3rd*Age	0.00175	1.002
	(0.25)	(0.25)
Weapons-Concealed*Age	-0.0102	0.99
	(-1.14)	(-1.14)
Constant	-1.351***	0.259***
	(-5.98)	(-5.98)

- Output continued on next page -

[25] Significance Levels: * p<0.05, ** p<0.01, *** p<0.001

VARIABLES	(1) Logit *Coefficients*	(2) Logit *Odds Ratio*
Circuit Court		
1st Circuit Court	3.887***	48.75***
	(7.15)	(7.15)
2nd Circuit Court	1.261***	3.528***
	(10.78)	(10.78)
3rd Circuit Court	Reference Group	
4th Circuit Court	0.943***	2.568***
	(6.24)	(6.24)
5th Circuit Court	-0.286	0.751
	(-0.72)	(-0.72)
6th Circuit Court	0.311*	1.365*
	(1.98)	(1.98)
7th Circuit Court	0.0635	1.066
	(0.49)	(0.49)
8th Circuit Court	1.520***	4.574***
	(8.76)	(8.76)
9th Circuit Court	-0.633**	0.531**
	(-3.26)	(-3.26)
10th Circuit Court	0.237	1.268
	(1.02)	(1.02)
11th Circuit Court	0.483	1.621
	(1.23)	(1.23)
12th Circuit Court	-0.694	0.500
	(-1.24)	(-1.24)
13th Circuit Court	1.348***	3.850***
	(6.58)	(6.58)
14th Circuit Court	0.817***	2.264***
	(4.06)	(4.06)
15th Circuit Court	1.724***	5.605***
	(6.55)	(6.55)
16th Circuit Court	-0.0424	0.958
	(-0.31)	(-0.31)
17th Circuit Court	1.491***	4.443***
	(16.52)	(16.52)
18th Circuit Court	0.380	1.462
	(1.85)	(1.85)
19th Circuit Court	1.153**	3.168**
	(2.92)	(2.92)
20th Circuit Court	0.175	1.192
	(0.93)	(0.93)
21st Circuit Court	0.250	1.285
	(0.92)	(0.92)
22nd Circuit Court	0.599***	1.820***
	(4.70)	(4.70)
23rd Circuit Court	0.797**	2.218**
	(2.85)	(2.85)
24th Circuit Court	1.185**	3.269**
	(3.21)	(3.21)
25th Circuit Court	-0.0586	0.943
	(-0.15)	(-0.15)
26th Circuit Court	0.273	1.313
	(0.75)	(0.75)
27th Circuit Court	-0.814*	0.443*
	(-2.14)	(-2.14)
28th Circuit Court	1.218***	3.380***
	(5.18)	(5.18)
29th Circuit Court	1.274***	3.576***
	(5.89)	(5.89)
30th Circuit Court	-0.00581	0.994
	(-0.03)	(-0.03)
31st Circuit Court	-0.245	0.783
	(-1.01)	(-1.01)
32nd Circuit Court	0.819	2.268
	(1.71)	(1.71)
33rd Circuit Court	1.469**	4.345**
	(2.59)	(2.59)
34th Circuit Court	0.792***	2.208***
	(3.40)	(3.40)
35th Circuit Court	1.367***	3.925***
	(4.36)	(4.36)
36th Circuit Court	-0.229	0.795
	(-0.92)	(-0.92)
37th Circuit Court	0.313	1.367
	(1.76)	(1.76)
38th Circuit Court	0.868***	2.383***
	(4.82)	(4.82)
39th Circuit Court	1.571***	4.810***
	(6.44)	(6.44)
40th Circuit Court	-0.222	0.801
	(-0.71)	(-0.71)
41st Circuit Court	0.232	1.261
	(0.52)	(0.52)
42nd Circuit Court	0.818*	2.267*
	(2.37)	(2.37)
43rd Circuit Court	-0.0397	0.961
	(-0.13)	(-0.13)
44th Circuit Court	0.778**	2.177**
	(2.97)	(2.97)
45th Circuit Court	-0.256	0.774
	(-1.00)	(-1.00)
46th Circuit Court	1.299***	3.665***
	(5.45)	(5.45)
47th Circuit Court	1.005*	2.731*
	(2.36)	(2.36)
48th Circuit Court	-0.527	0.591
	(-1.89)	(-1.89)
49th Circuit Court	1.141***	3.129***
	(5.56)	(5.56)
50th Circuit Court	1.499***	4.475***
	(3.56)	(3.56)
51st Circuit Court	0.175	1.191
	(0.40)	(0.40)
52nd Circuit Court	-0.245	0.783
	(-0.38)	(-0.38)
53rd Circuit Court	0.870**	2.386**
	(2.66)	(2.66)
54th Circuit Court	-0.512	0.599
	(-0.93)	(-0.93)
55th Circuit Court	0.541*	1.717*
	(2.16)	(2.16)
56th Circuit Court	-0.307	0.735
	(-0.67)	(-0.67)
57th Circuit Court	1.546***	4.695***
	(4.29)	(4.29)

- Output continued on next page -

VARIABLES	(1) Logit *Coefficients*	(2) Logit *Odds Ratio*
Cell (PRV, OVL)		
B, V	-0.852**	0.427**
	(-2.92)	(-2.92)
B, VI	0.508	1.662
	(1.33)	(1.33)
C, IV	-0.362*	0.696*
	(-2.41)	(-2.41)
C, V	0.283	1.327
	(1.58)	(1.58)
C, VI	0.875**	2.398**
	(3.22)	(3.22)
D, I	-0.959***	0.383***
	(-8.26)	(-8.26)
D, II	-0.579***	0.561***
	(-5.23)	(-5.23)
D, III	Reference Group	
D, IV	0.427**	1.532**
	(2.66)	(2.66)
E, I	-0.440***	0.644***
	(-3.43)	(-3.43)
E, II	0.0189	1.019
	(0.16)	(0.16)
E, III	0.538**	1.712**
	(3.10)	(3.10)
F, I	-0.249	0.780
	(-1.75)	(-1.75)
F, II	0.415**	1.514**
	(3.12)	(3.12)

VARIABLES	(1) Logit *Coefficients*	(2) Logit *Odds Ratio*
Month (Jan. - Dec.)		
January	Reference Group	
February	0.0555	1.057
	(0.47)	(0.47)
March	0.0576	1.059
	(0.50)	(0.50)
April	0.0612	1.063
	(0.54)	(0.54)
May	0.265*	1.303*
	(2.38)	(2.38)
June	-0.0775	0.925
	(-0.68)	(-0.68)
July	0.0219	1.022
	(0.19)	(0.19)
August	0.0280	1.028
	(0.24)	(0.24)
September	-0.0556	0.946
	(-0.47)	(-0.47)
October	-0.0101	0.990
	(-0.09)	(-0.09)
November	0.123	1.130
	(1.06)	(1.06)
December	-0.0516	0.950
	(-0.43)	(-0.43)
Year (2012-2017)		
2012	Reference Group	
2013	0.110	1.116
	(1.31)	(1.31)
2014	0.0688	1.071
	(0.81)	(0.81)
2015	-0.0198	0.980
	(-0.24)	(-0.24)
2016	-0.0902	0.914
	(-1.06)	(-1.06)
2017	-0.140	0.870
	(-1.64)	(-1.64)

Table A-6: Logistic Regression Output with Odds Ratios Reported

```
. eststo m3c78:
> logit prison i.(cell disp_month disp_year) i.(hisp hs drug alcohol mental_h)
> i.trial i.retain i.grp1 i.employed i.group i.race3 i.female c.age
> i.race3#c.age i.race3#i.female i.female#c.age i.group#(i.race3 i.female c.age)
> i.circuit, or nolog;

Logistic regression                             Number of obs     =     11,058
                                                LR chi2(128)      =    1726.72
                                                Prob > chi2       =     0.0000
Log likelihood = -5342.2751                     Pseudo R2         =     0.1391
```

prison	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
cell						
B5	.426695	.1244282	-2.92	0.003	.2409347	.7556764
B6	1.661706	.6333141	1.33	0.183	.7873032	3.507249
C4	.6964663	.1044158	-2.41	0.016	.5191419	.9343598
C5	1.326581	.2376152	1.58	0.115	.9338302	1.884516
C6	2.398441	.6512284	3.22	0.001	1.40867	4.083651
D1	.383372	.0445136	-8.26	0.000	.3053422	.4813424
D2	.5605812	.0620006	-5.23	0.000	.4513311	.6962767
D4	1.532091	.2458683	2.66	0.008	1.118625	2.098381
E1	.6438019	.0827302	-3.43	0.001	.5004615	.8281973
E2	1.019125	.1235581	0.16	0.876	.8035787	1.292488
E3	1.712332	.2967453	3.10	0.002	1.219202	2.404918
F1	.7799359	.1106926	-1.75	0.080	.5905435	1.030068
F2	1.513832	.2009186	3.12	0.002	1.167091	1.96359
disp_month						
2	1.057097	.1243469	0.47	0.637	.8394357	1.331196
3	1.059249	.1210625	0.50	0.615	.8466683	1.325203
4	1.063124	.1202086	0.54	0.588	.8517997	1.326875
5	1.303012	.1446921	2.38	0.017	1.048159	1.61983
6	.9254178	.1057514	-0.68	0.498	.7397201	1.157733
7	1.022156	.1170694	0.19	0.848	.8166339	1.279401
8	1.028435	.1184505	0.24	0.808	.8206144	1.288885
9	.9459473	.110804	-0.47	0.635	.7519016	1.190071
10	.9899231	.1118218	-0.09	0.929	.7933222	1.235246
11	1.130329	.1302019	1.06	0.288	.9018936	1.416623
12	.9497558	.1145089	-0.43	0.669	.749869	1.202925
disp_year						
2013	1.116319	.0936853	1.31	0.190	.9470054	1.315903
2014	1.071193	.0914687	0.81	0.421	.9061165	1.266343
2015	.9803785	.0826004	-0.24	0.814	.8311454	1.156407
2016	.9137202	.0775569	-1.06	0.288	.7736827	1.079105
2017	.8696741	.0740272	-1.64	0.101	.7360405	1.02757
1.hisp	1.05524	.1322166	0.43	0.668	.8254669	1.348972
1.hs	1.027092	.0539008	0.51	0.610	.9267003	1.13836
1.drug	1.075404	.0586429	1.33	0.182	.9663953	1.196709
1.alcohol	1.046188	.0593984	0.80	0.426	.9360132	1.169332
1.mental_h	1.019612	.0535869	0.37	0.712	.9198121	1.13024
1.trial	9.064429	1.965146	10.17	0.000	5.926551	13.86369
1.retain	.7617399	.0513733	-4.04	0.000	.667421	.8693877
1.grp1	.896857	.1151168	-0.85	0.396	.6973753	1.1534
1.employed	.5319141	.0286028	-11.74	0.000	.4787067	.5910353
group						
Person	1.533837	.4418478	1.48	0.138	.8721196	2.697629
CS	2.544855	1.229484	1.93	0.053	.9872471	6.559946
Pub Order	2.396993	1.200895	1.74	0.081	.897872	6.399103
Pub Safety	1.74427	.4859887	2.00	0.046	1.010304	3.01145
Pub Trust	1.81491	2.224612	0.49	0.627	.1642484	20.05437
OWI - 3rd	1.007173	.3006236	0.02	0.981	.5610931	1.807893
Weapons-Concealed	1.183573	.4482087	0.45	0.656	.5634464	2.486209
race3						
Black|AA	1.384127	.2716197	1.66	0.098	.9421865	2.033363
female						
Female	.3232776	.1047436	-3.49	0.000	.1713097	.6100555
age	1.007423	.0045658	1.63	0.103	.9985142	1.016412
race3#c.age						
Black|AA	.982294	.0047422	-3.70	0.000	.9730432	.9916327
race3#female						
Black|AA#Female	1.487745	.2636396	2.24	0.025	1.051209	2.105561
female#c.age						
Female	1.018746	.0082331	2.30	0.022	1.002736	1.035011

- Output continued on next page -

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group#race3						
Person#Black|AA	1.038156	.1647107	0.24	0.813	.7607002	1.41681
CS#Black|AA	1.093856	.4449188	0.22	0.825	.4928781	2.427621
Pub Order#Black|AA	.6387832	.1913897	-1.50	0.135	.3550747	1.149178
Pub Safety#Black|AA	1.892276	.2949954	4.09	0.000	1.394077	2.568515
Pub Trust#Black|AA	.4210671	.3394677	-1.07	0.283	.0867173	2.044546
OWI - 3rd#Black|AA	1.202824	.2024286	1.10	0.273	.8648674	1.672841
Weapons-Concealed#Black|AA	1.963633	.4480118	2.96	0.003	1.25561	3.070901
group#female						
Person#Female	.6722574	.1789691	-1.49	0.136	.3989586	1.132774
CS#Female	.7146069	.2891909	-0.83	0.406	.3232946	1.579559
Pub Order#Female	1.703399	.5623206	1.61	0.107	.8919092	3.253212
Pub Safety#Female	.4676178	.2212228	-1.61	0.108	.1850123	1.181902
Pub Trust#Female	.1765715	.2221662	-1.38	0.168	.0149941	2.079319
OWI - 3rd#Female	.6107746	.1674975	-1.80	0.072	.35682	1.045473
Weapons-Concealed#Female	.9559156	.5231998	-0.08	0.934	.3269887	2.794514
group#c.age						
Person	.993894	.0066028	-0.92	0.357	.9810366	1.00692
CS	.9786068	.0124085	-1.71	0.088	.9545864	1.003232
Pub Order	.9842149	.0121426	-1.29	0.197	.9607013	1.008304
Pub Safety	.9817637	.0069661	-2.59	0.009	.9682049	.9955124
Pub Trust	1.014645	.0277585	0.53	0.595	.9616722	1.070536
OWI - 3rd	1.001749	.006972	0.25	0.802	.9881768	1.015507
Weapons-Concealed	.9898395	.0088961	-1.14	0.256	.972556	1.00743
circuit						
1	48.7545	26.51767	7.15	0.000	16.78975	141.5745
2	3.527964	.4124267	10.78	0.000	2.805542	4.436408
4	2.567793	.3882988	6.24	0.000	1.90916	3.453646
5	.7510849	.2969001	-0.72	0.469	.3461093	1.629914
6	1.364565	.2141578	1.98	0.048	1.00324	1.856024
7	1.065603	.1394119	0.49	0.627	.8245808	1.377074
8	4.573758	.7942224	8.76	0.000	3.254349	6.428096
9	.5309739	.1031156	-3.26	0.001	.362885	.7769218
10	1.267768	.2953641	1.02	0.309	.8030217	2.001486
11	1.621051	.6381067	1.23	0.220	.7494311	3.506401
12	.4997643	.2800811	-1.24	0.216	.1666208	1.498998
13	3.850202	.7887151	6.58	0.000	2.577001	5.752444
14	2.264342	.4563468	4.06	0.000	1.525436	3.361165
15	5.605425	1.475672	6.55	0.000	3.345979	9.390614
16	.9584606	.1326461	-0.31	0.759	.7307558	1.257119
17	4.442598	.401139	16.52	0.000	3.722021	5.302678
18	1.461894	.2999817	1.85	0.064	.9777968	2.185662
19	3.167615	1.248844	2.92	0.003	1.462659	6.859962
20	1.191602	.2246014	0.93	0.352	.8235515	1.724136
21	1.284656	.3490001	0.92	0.357	.7542973	2.187919
22	1.820413	.2319966	4.70	0.000	1.41805	2.336946
23	2.218343	.6207865	2.85	0.004	1.281818	3.839114
24	3.26935	1.205637	3.21	0.001	1.586953	6.735328
25	.9430705	.3713979	-0.15	0.882	.4358387	2.040621
26	1.313312	.4762744	0.75	0.452	.6451762	2.673359
27	.4429091	.1687185	-2.14	0.033	.209925	.9344693
28	3.379663	.7951611	5.18	0.000	2.131102	5.359726
29	3.576095	.7736095	5.89	0.000	2.340293	5.464467
30	.9942098	.1666831	-0.03	0.972	.7157656	1.380973
31	.7829386	.1900514	-1.01	0.313	.486526	1.259938
32	2.268365	1.0858	1.71	0.087	.8877032	5.796397
33	4.345474	2.462194	2.59	0.010	1.43132	13.19282
34	2.208202	.5141912	3.40	0.001	1.399047	3.485343
35	3.925055	1.232164	4.36	0.000	2.121457	7.262017
36	.7949404	.1974601	-0.92	0.356	.4885392	1.29351
37	1.367342	.2431629	1.76	0.079	.964945	1.937544
38	2.382632	.4296139	4.82	0.000	1.673309	3.392639
39	4.80995	1.172261	6.44	0.000	2.983247	7.755181
40	.8011514	.2516406	-0.71	0.480	.4328658	1.482777
41	1.260597	.5629339	0.52	0.604	.5253666	3.024754
42	2.266765	.7836953	2.37	0.018	1.151113	4.463699
43	.961086	.2912783	-0.13	0.896	.530624	1.740755
44	2.176884	.5700025	2.97	0.003	1.303028	3.636777
45	.7738422	.1988727	-1.00	0.318	.4676262	1.280578
46	3.665135	.8734321	5.45	0.000	2.297426	5.847071
47	2.730663	1.160049	2.36	0.018	1.187566	6.278826
48	.5906472	.1645559	-1.89	0.059	.3421221	1.019707
49	3.128998	.6417679	5.56	0.000	2.093249	4.677239
50	4.475186	1.88368	3.56	0.000	1.96122	10.21165
51	1.191464	.5271623	0.40	0.692	.5005732	2.835923
52	.7829468	.5057107	-0.38	0.705	.2207676	2.776701
53	2.386083	.779063	2.66	0.008	1.258247	4.524862
54	.5994405	.3295603	-0.93	0.352	.204067	1.760838
55	1.717387	.4297512	2.16	0.031	1.05164	2.804587
56	.7353158	.3360945	-0.67	0.501	.3002002	1.801096
57	4.694725	1.693513	4.29	0.000	2.315042	9.520534
_cons	.2590717	.058553	-5.98	0.000	.1663563	.4034603