



MARYLAND DATA ANALYSIS CENTER

Department of Criminology & Criminal Justice

Maryland Criminal Justice Data & Research to Inform Policy

March 5, 2020

The Hotel at the University of Maryland
College Park, MD

This presentation includes the results from multiple studies completed by the Maryland Data Analysis Center during 2015-2019, with the support of Arnold Ventures.

Should the reader have comments or questions about a particular study, please direct your inquiry to the appropriate lead for each project, for which contact information is noted below:

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Introduction: MDAC and Data-driven Policy Reform

James P. Lynch, University of Maryland

Goals of the Center

- Encourage evidence driven policy in the state of Maryland.
 - Policy that is informed by data on the scope and distribution of the problem
 - Policy that is evaluated and modified on the basis of that evaluation
- Evidence driven policy is the exception rather than the rule
- MDAC was an attempt to institutionalize the collection of policy relevant data in the state and the analysis of those data in support of policy making.

Impediments to Evidence Driven Policy

- The absence of timely, curated and linked data on crime and justice.
 - It takes too long to acquire relevant data on crime and justice issue.
 - This is exacerbated by the interconnected nature of CJ issues which require data from multiple agencies.
 - To be influential analyses must be done in months not years.
 - Policy relevant data must be ready and waiting.
- The absence of models for using research in policy making
 - Agencies are not accustomed to having data and analyzing data.
 - Decision-makers do not expect to have data and analyses so they do not look for it.
 - They must get used to putting data into the process.

MDAC's Strategy

- Acquire, curate and link administrative records data from CJ agencies so that it is ready for use in the policy making process.
- Work with agency partners to analyze data and make it meaningful for policy making so as to model the data driven process.
- These processes began separately but we found that data acquisition and bringing data to bear on a specific problem went hand in hand.
 - Data can be acquired only when it informs a burning issue
 - This must be changed if data driven policy is to become the norm.
 - More about this later

Instances in Data Driven Policy

- Changing the Juvenile Score in Adult Criminal Sentencing—the way it is supposed to go.
- Depenalization and de-criminalization of marijuana possession— look before you leap
- Justice Re-investment Act—the spirit is willing but the data sharing is weak

Results for the Alternate Adjudication #2 Score

(0=0; 1=1-2; 2=3+ adjudications only)

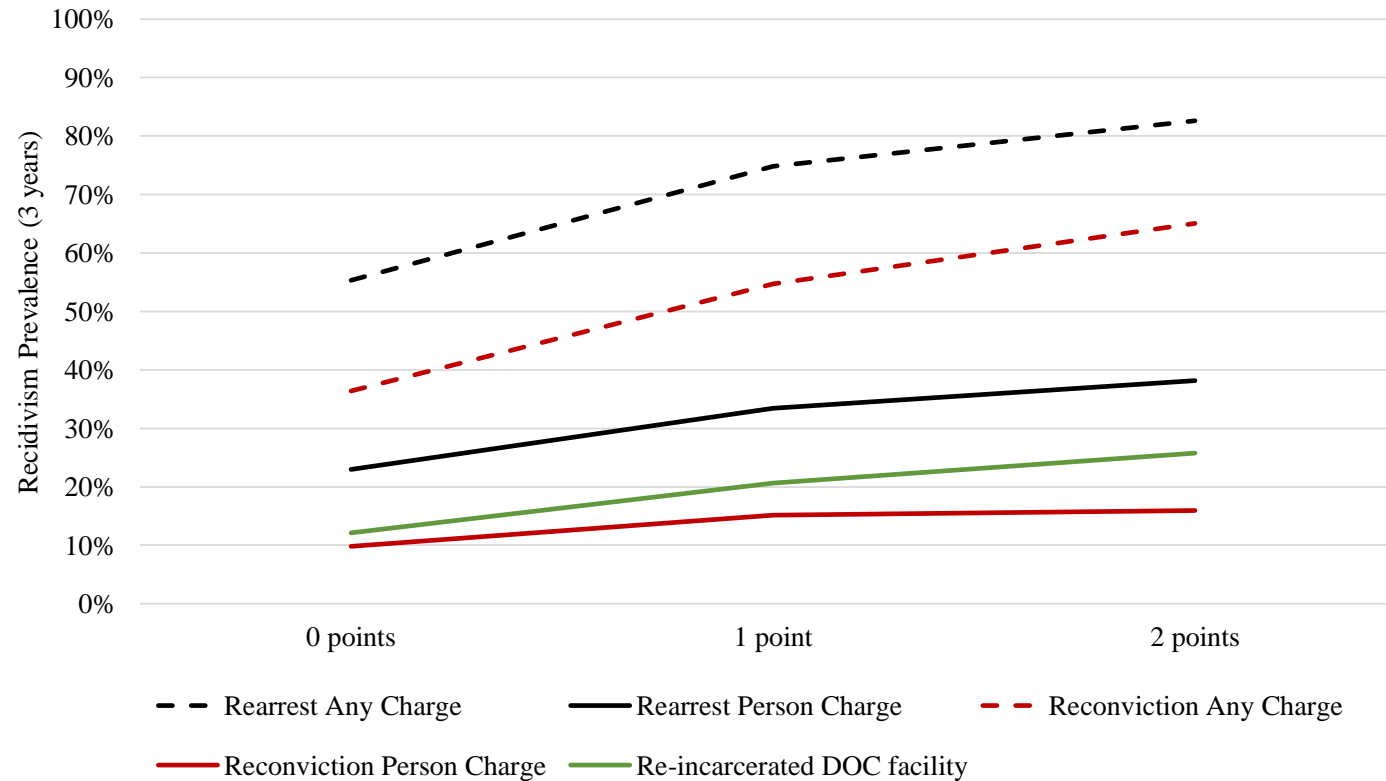
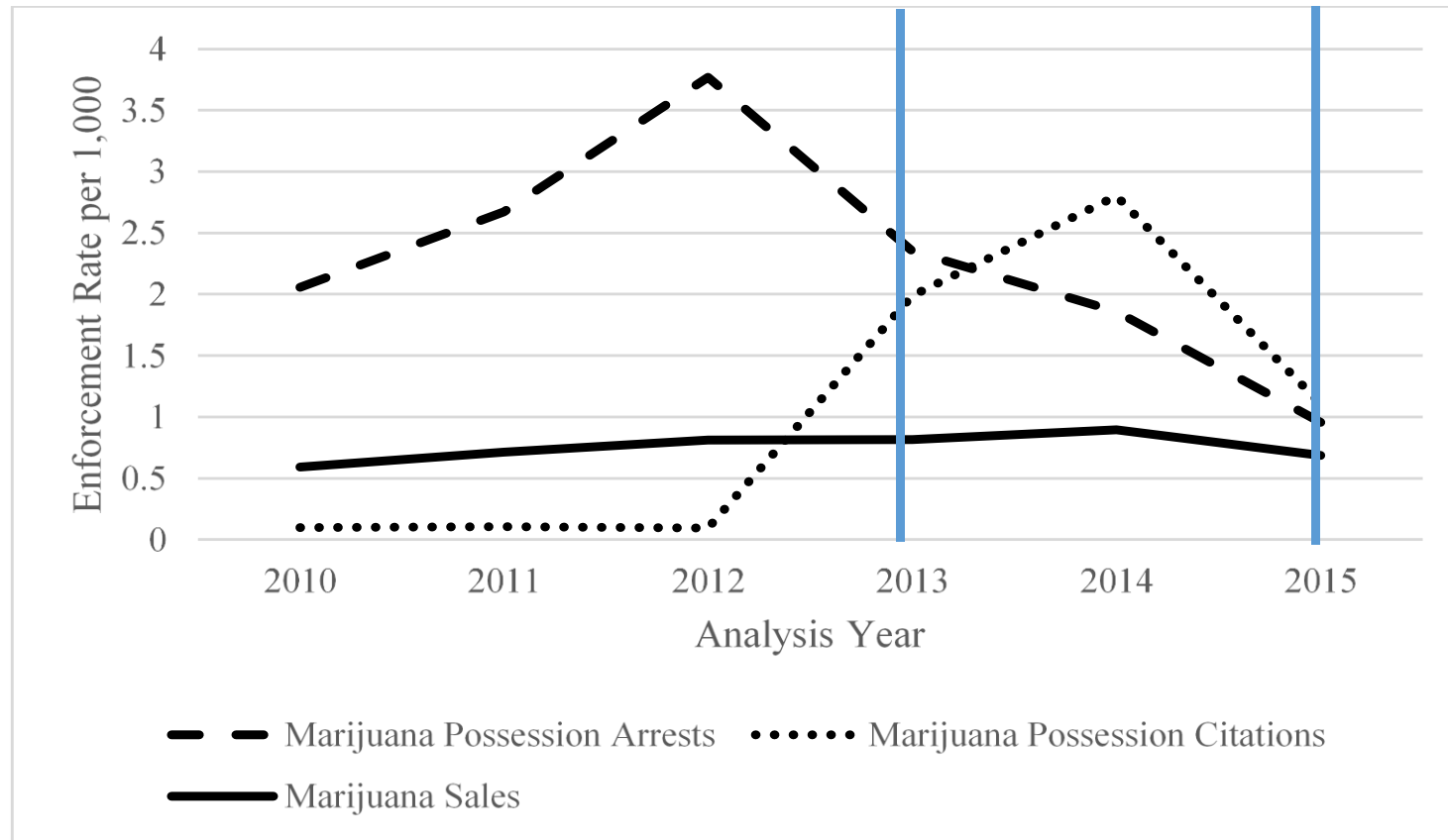


Figure 1. County-Level Marijuana-Related Enforcement Rates per 1,000 (2010-2015)



Evidence-based Policy in Maryland

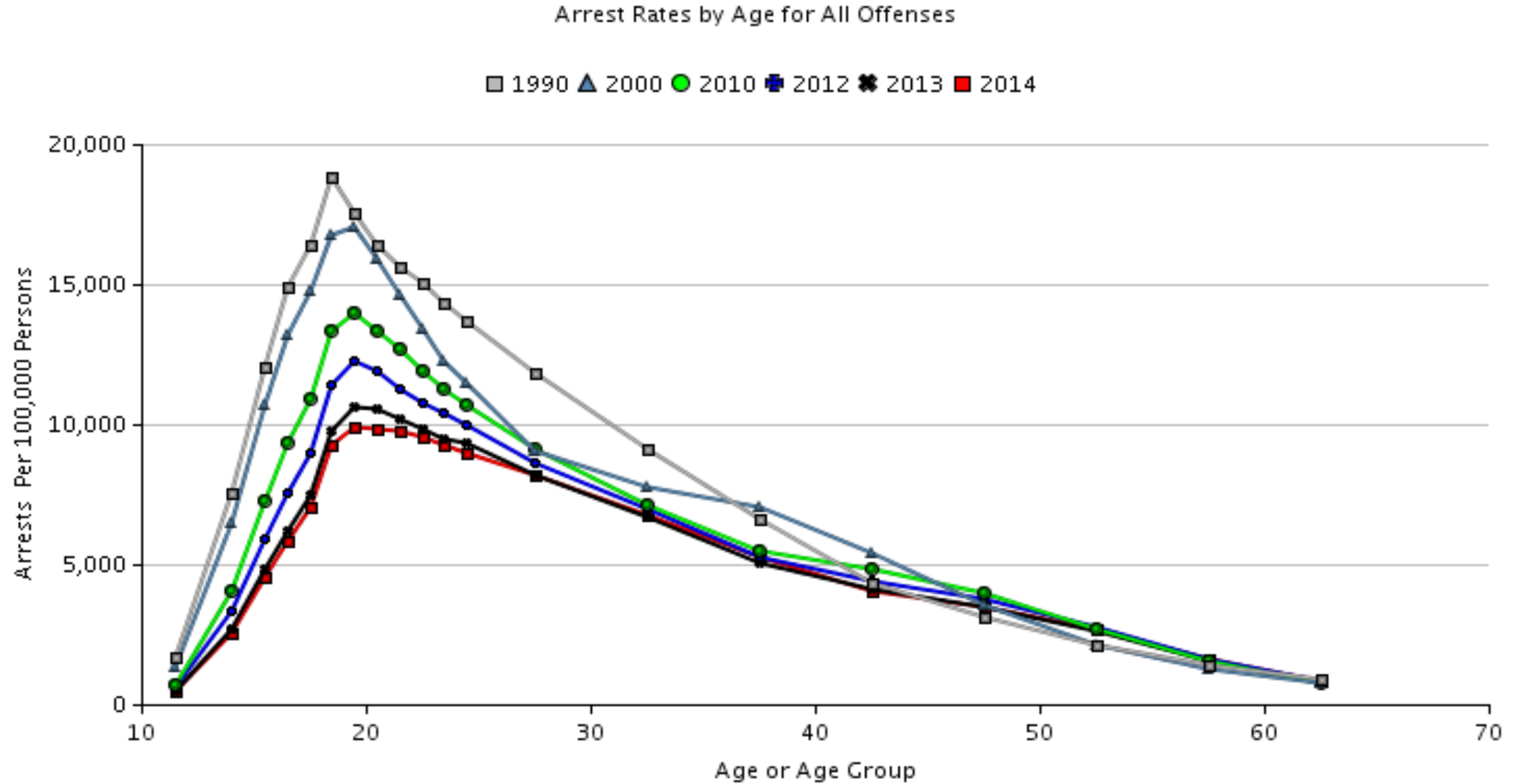
- Maryland's embrace of evidence based policy in the criminal justice system is highly variable.
- We continue to believe that demonstrating the utility of empirical evidence will build support for data sharing and the analytical capability to use those data in the state.
- There are some legal changes that would facilitate data sharing that we will discuss later
- In the meantime, we will share with you a number of additional projects that we have done to encourage interest in specific issues and partnerships around the state.

Declines in Juvenile Delinquency and Trends in Juvenile Arrest Rates

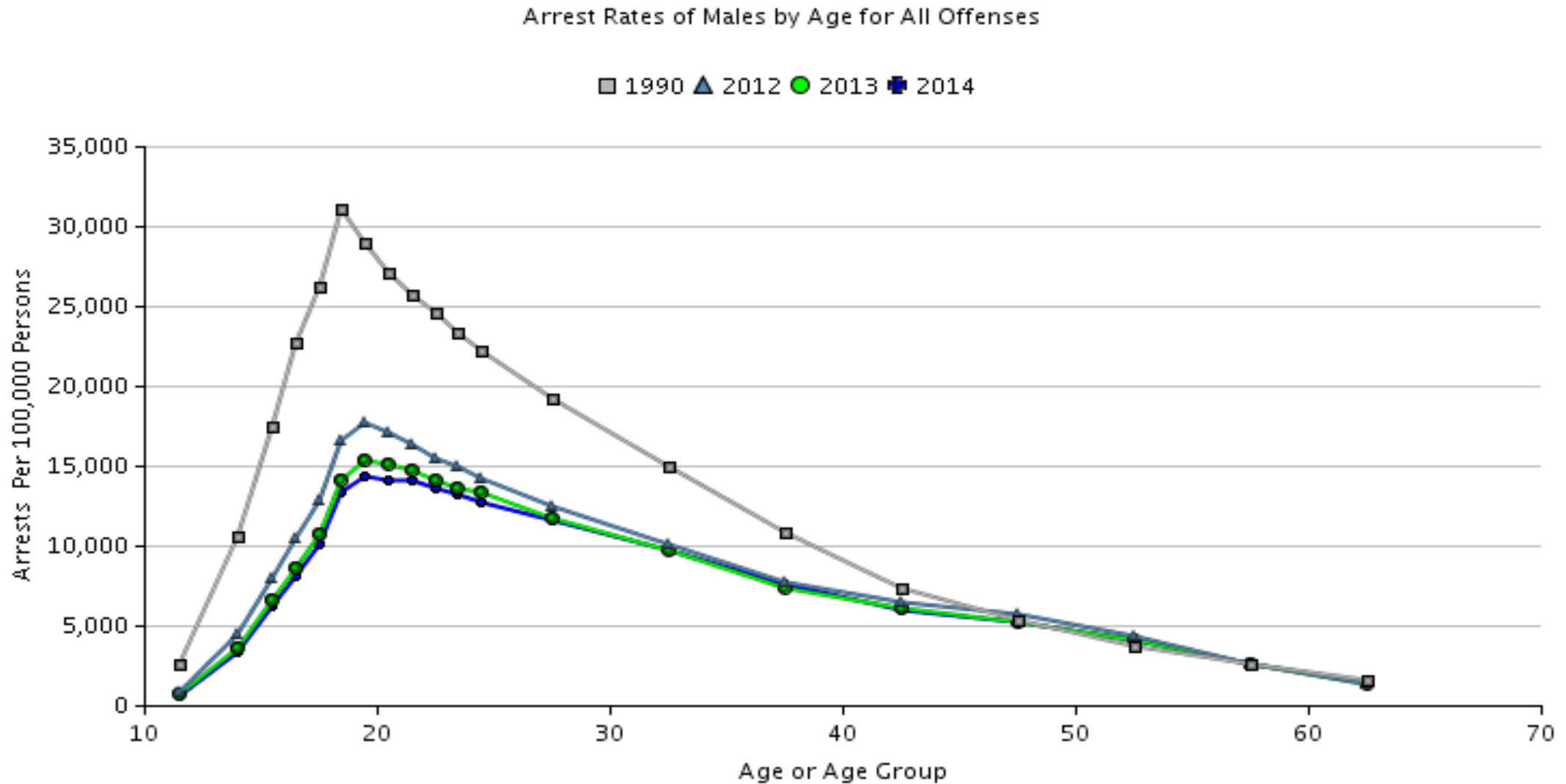
Jinney Smith
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Meghan Kozlowski-Serra
University of Maryland

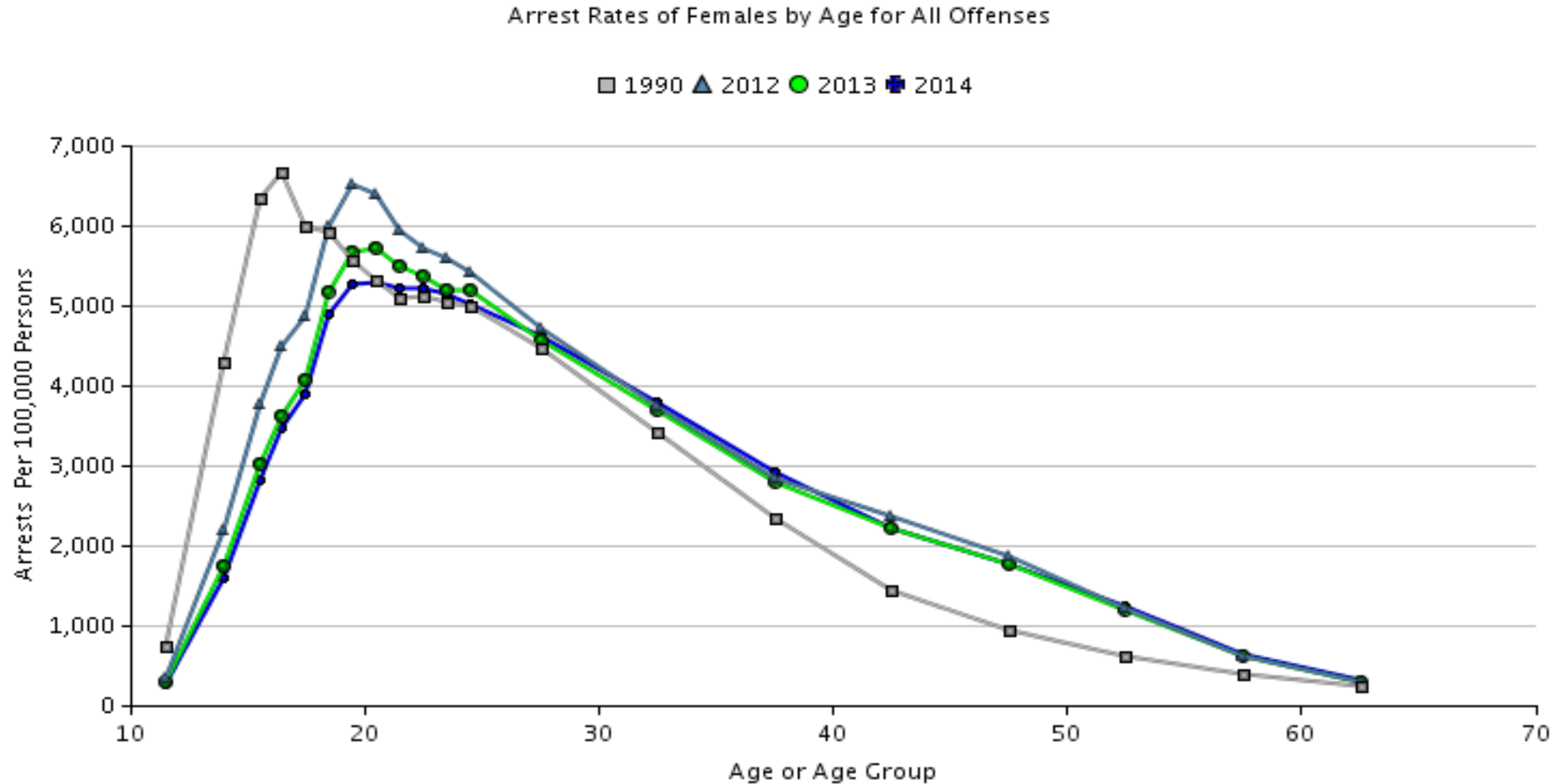
BJS - National Age-Arrest Curves, 1990 – 2000 – 2010 – 2012-14



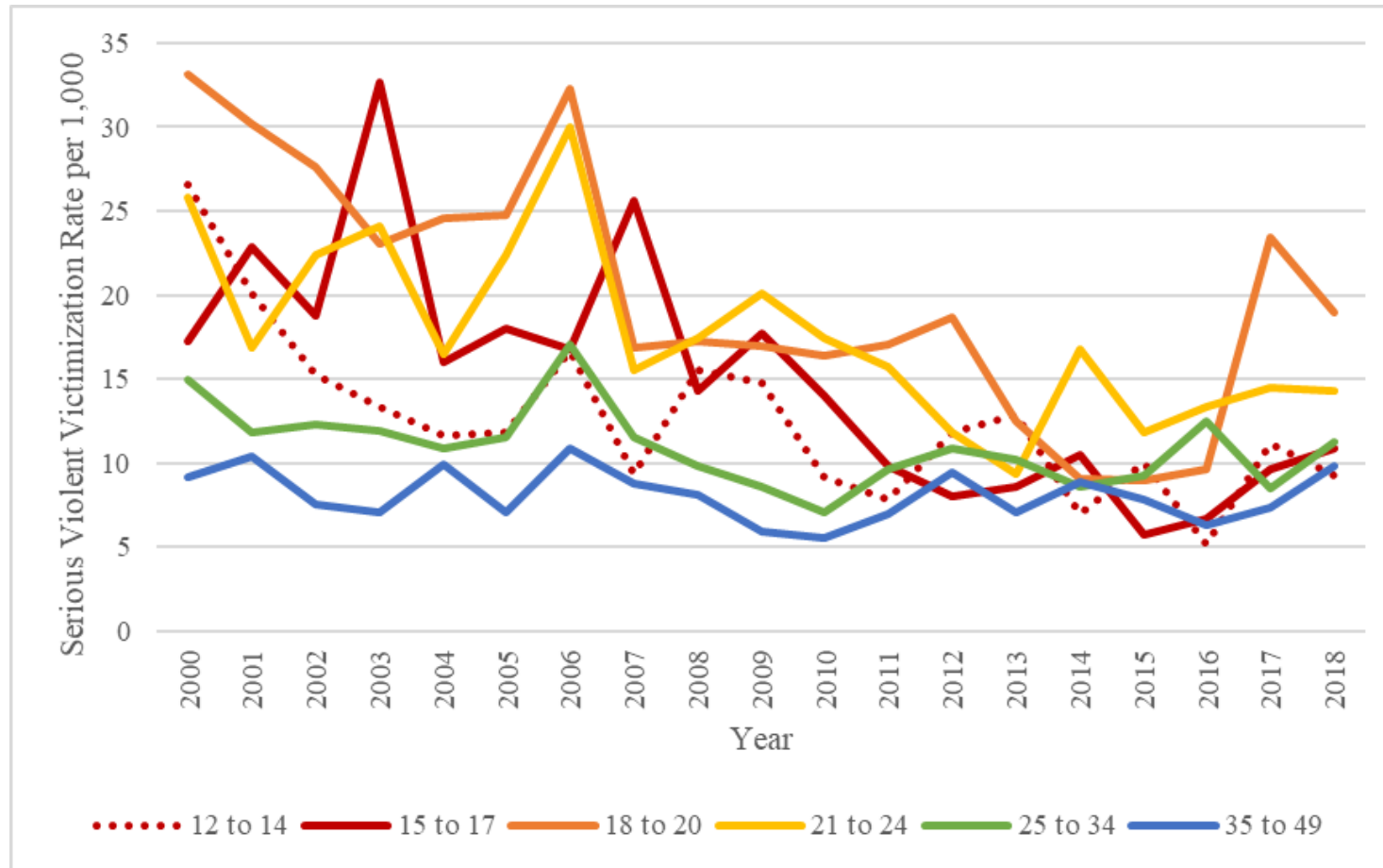
BJS - National Male Age-Arrest Curves 1990 & 2012-2014



BJS - National Female Age-Arrest Curves 1990 & 2012-2014



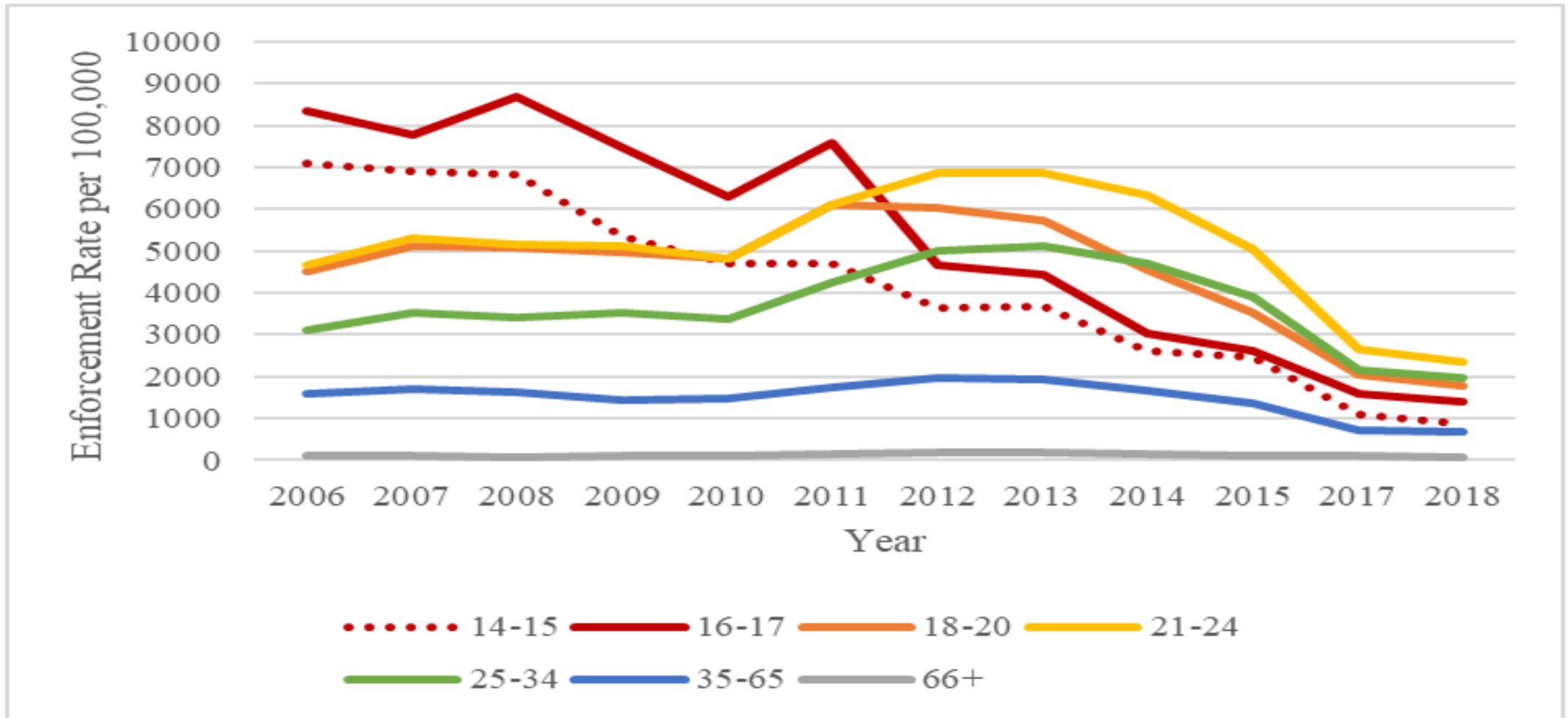
NCVS Serious Violent Victimization Rates by Age Group, 2000-2018



* Serious violent victimization includes rape, sexual assault, robbery and aggravated assault

Prince George's County, MD

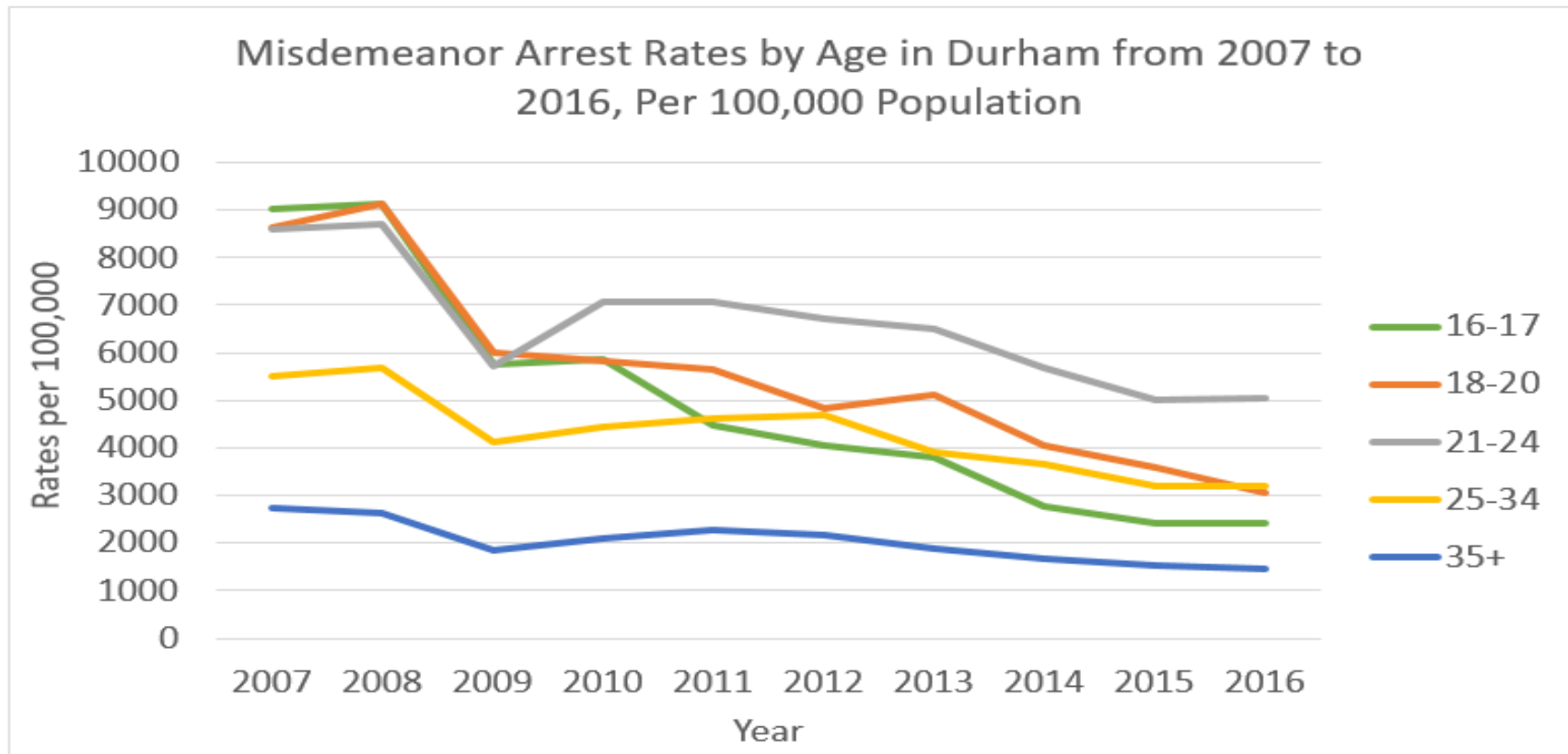
(Kozlowski-Serra, M., Smith, J., Glazener, E., Mitchell, J., and Lynch, J. P. (2019). Tracking Enforcement Rates in Prince George's County, Maryland, 2006-2018. Report prepared for the Research Network on Misdemeanor Justice. College Park, Maryland: University of Maryland.)



Durham, NC

(Taylor, L.C., Moore, K.L., Brown, R.A., Troy, B.N., & Schiess, J. (2019). *Misdemeanor Arrest Trends in the City of Durham, North Carolina, 2007-2016*. Report Prepared for the Data Collaborative for Justice. Durham, NC: North Carolina Central University.)

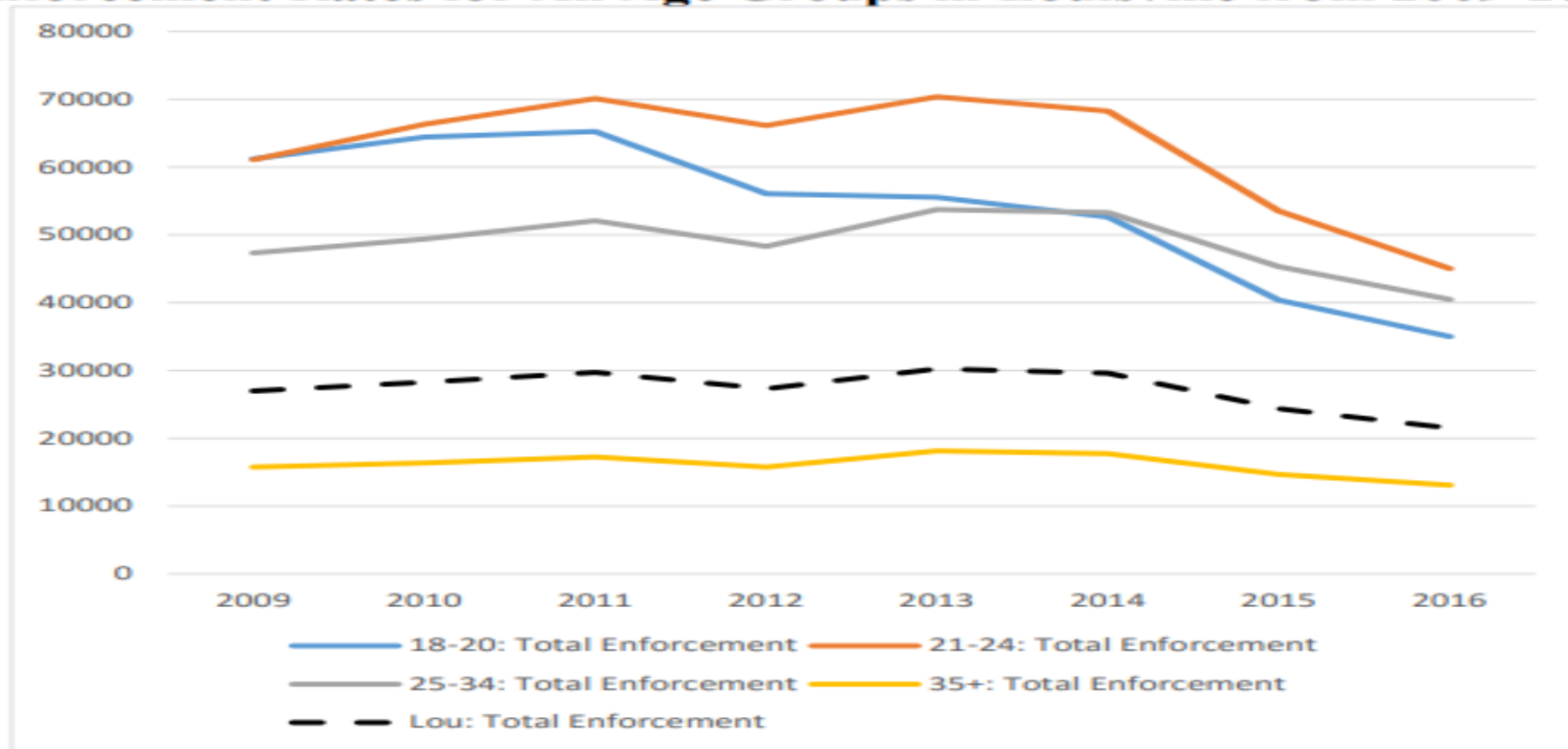
Figure 5: Misdemeanor Arrest Rates by Age for Durham from 2007-2016, Per 100,000 Population



Louisville, KY

(Schaefer, B.P., Hughes, T.W., & Jude, D. (2018). Tracking enforcement rates in Louisville, 2009-2016. Report Presented to the Metro Criminal Justice commission. Louisville, Kentucky.)

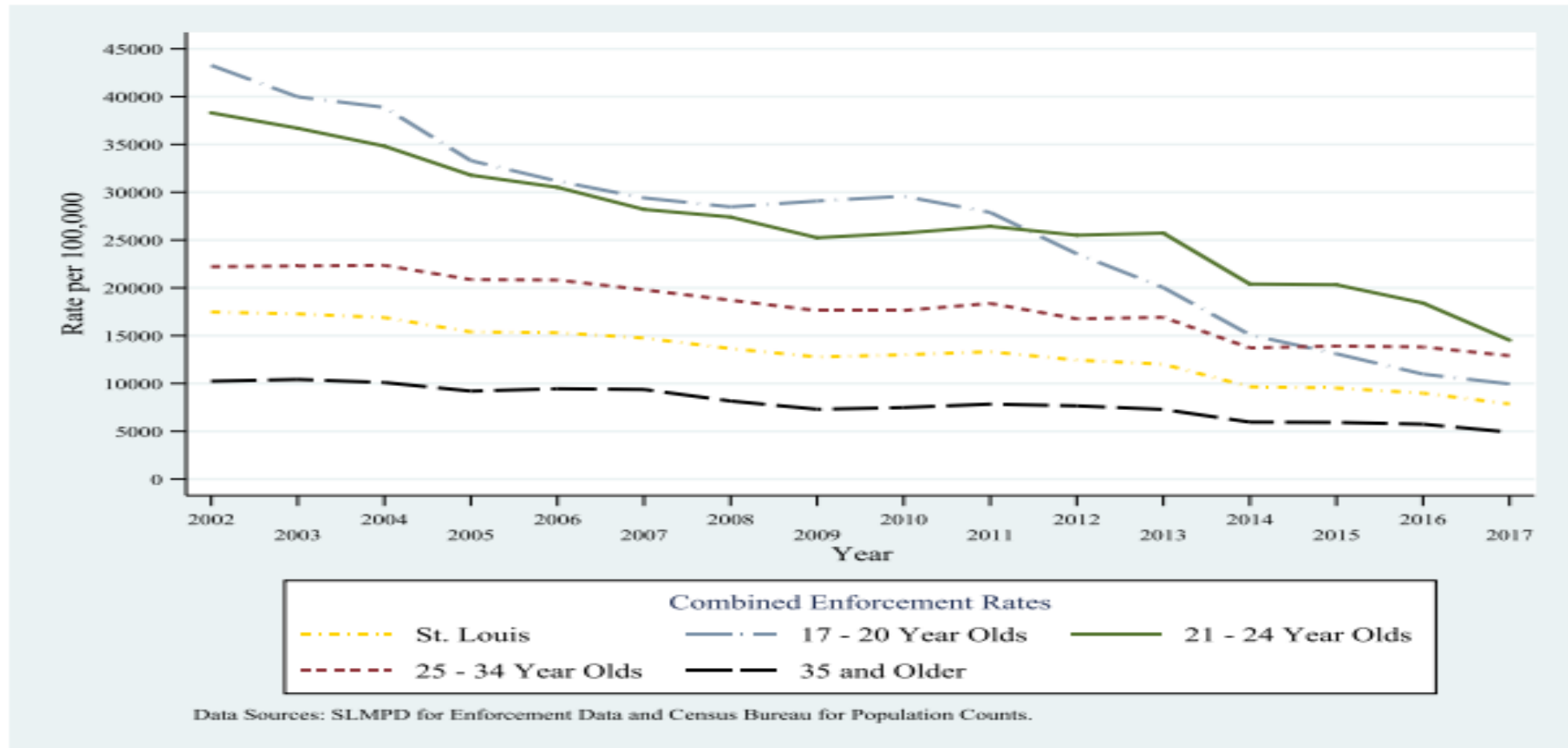
**Figure 6:
Enforcement Rates for All Age Groups in Louisville from 2009-2016**



St. Louis, MO

(Slocum, L.A., Huebner, B.M., Rosenfeld, R., & Greene, C. (2018). Tracking enforcement rates in the City of St. Louis, 2002-2017. Report Prepared for the Research Network on Misdemeanor Justice. St. Louis, Missouri: University of Missouri – St. Louis.)

Figure 25: Combined Enforcement Rates by Age in the City of St. Louis, 2002–2017



Seattle, WA

(Helfgott, J.B., Parkin, W., Fisher, C., Morgan, L., & Kaur, S. (October 25, 2018). Trends in Misdemeanor Arrests, Referrals, & Charges in Seattle - Final Report. Seattle, WA.)

Arrest Trends by Age

Figure 9: Seattle Police Department Misdemeanor Arrest Rates by Age Group per 100,000 Population, Ages 18-65, 2008-2016.

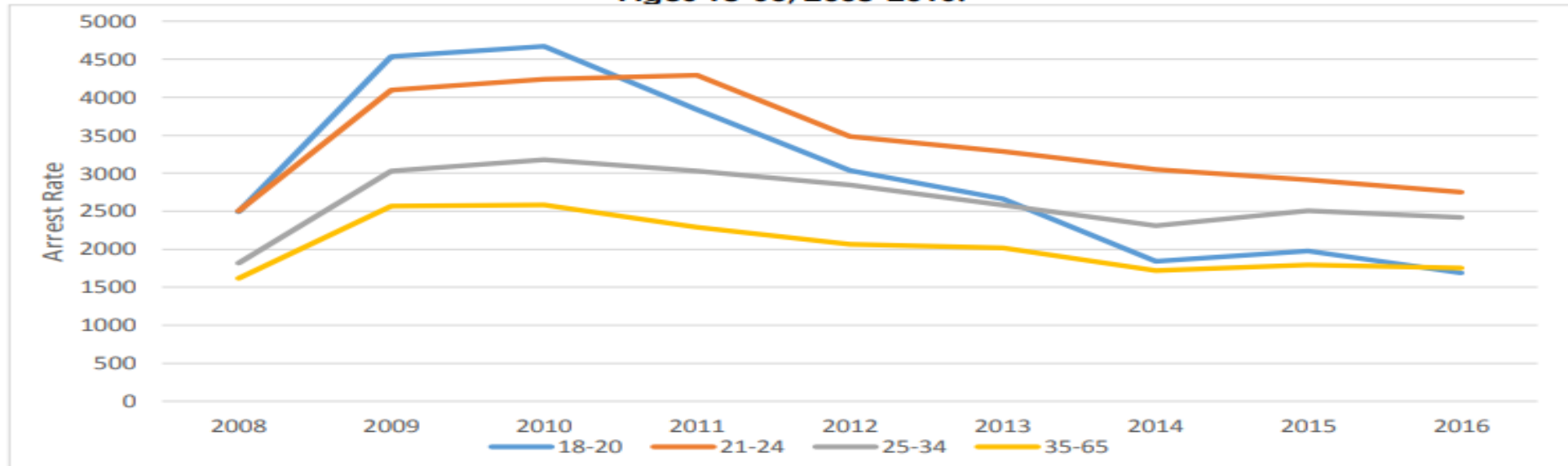
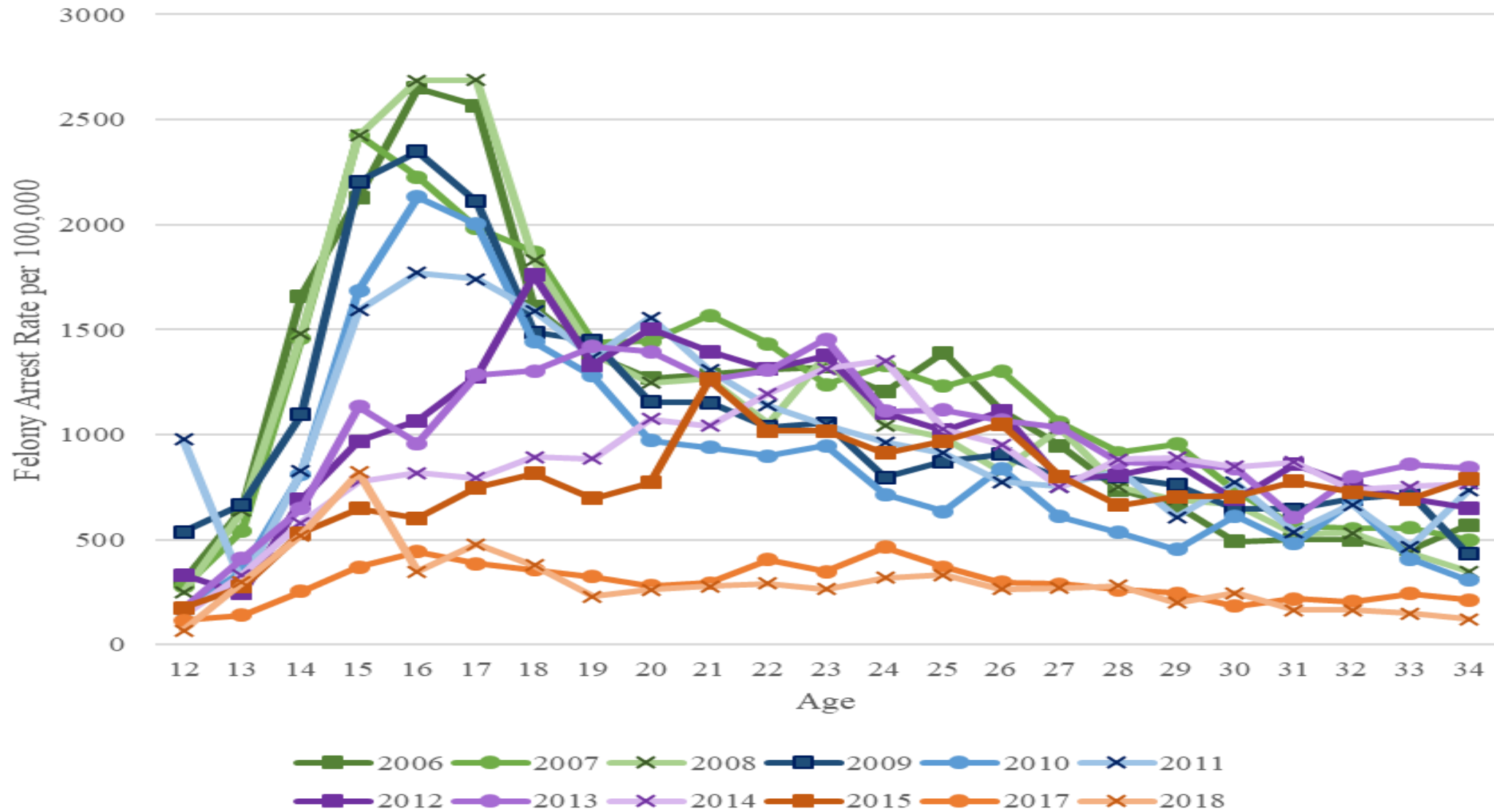
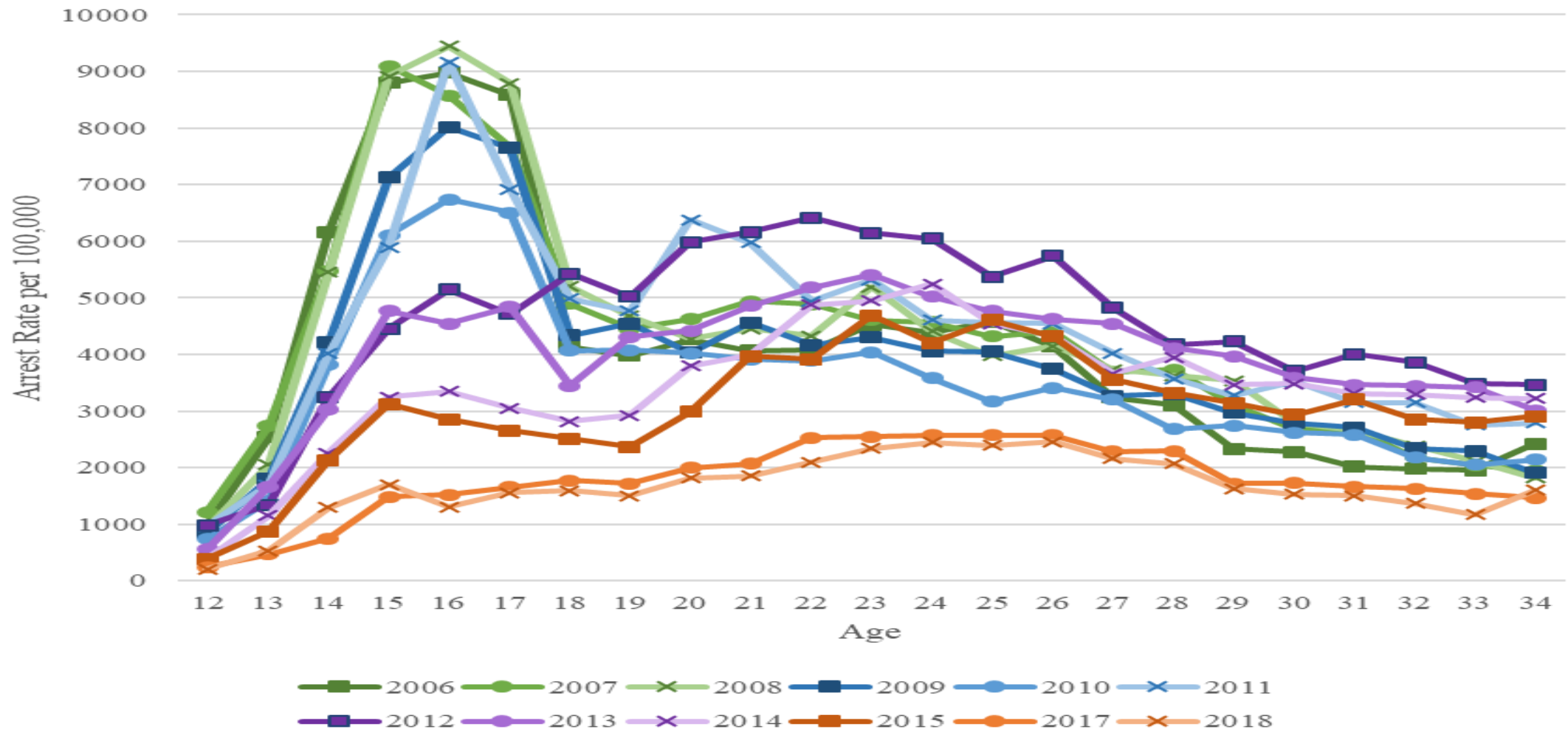


Figure 9 shows age-related misdemeanor arrest rates in Seattle from 2008 to 2016. From 2008 to 2009 there was an increase in misdemeanor arrests for 18-20 year-olds (from 1,688-2,493); for 21-24 year-olds (2,503-2,749); for 25-34 year-olds (1,817-2,421); and for 35-65 year-olds (1,616-1,749). The most significant increases in the number of misdemeanor arrests over the study period from 2008-2016 occurred for individuals 25-34 years-old. From 2008 to approximately 2011 there was a rise in arrests followed by a

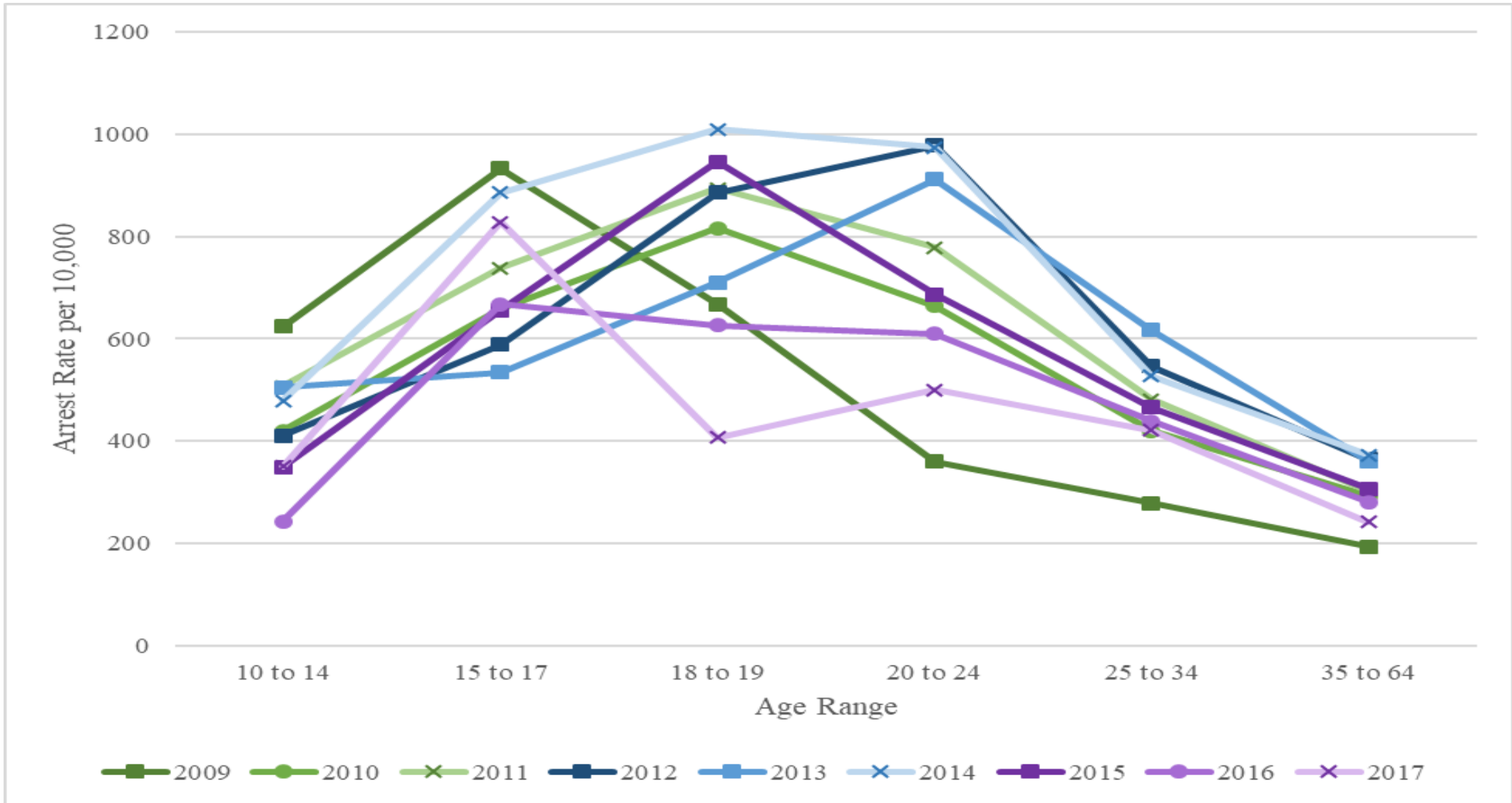
Prince George's Felony Arrests by Age Group



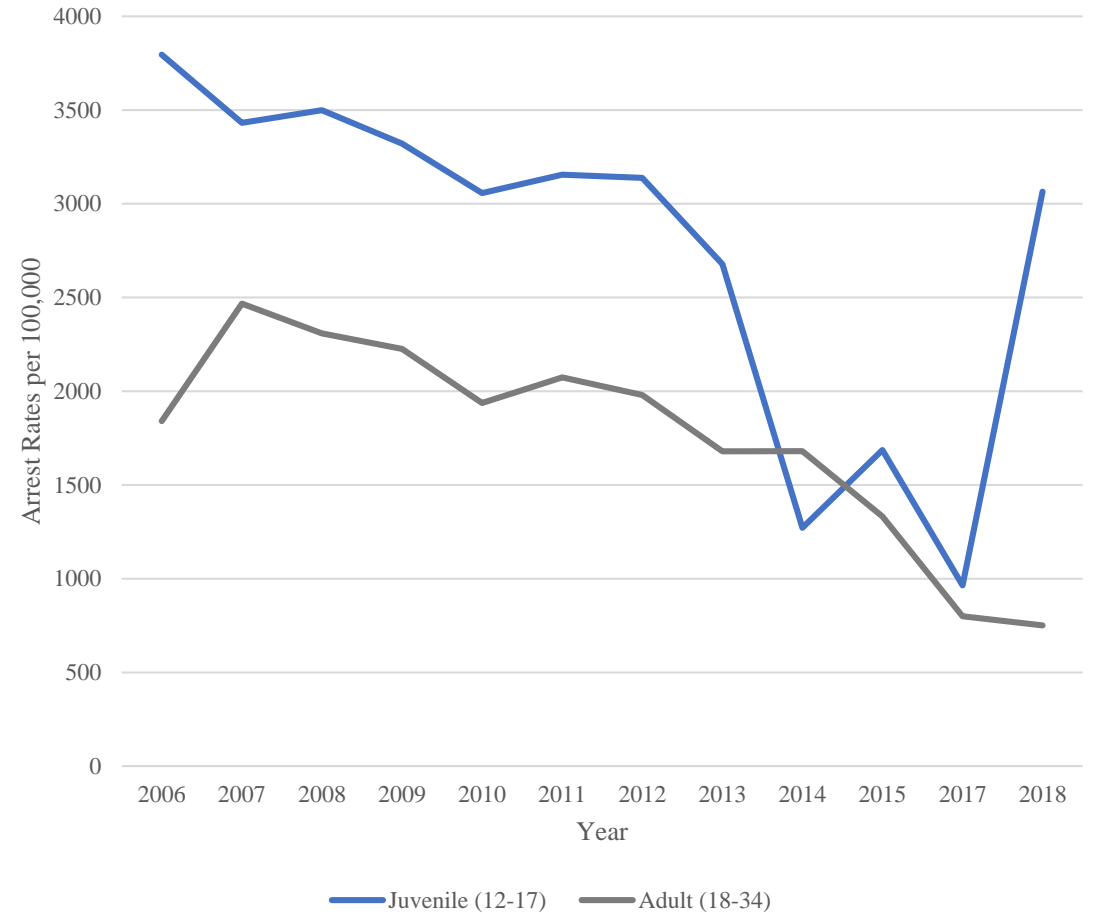
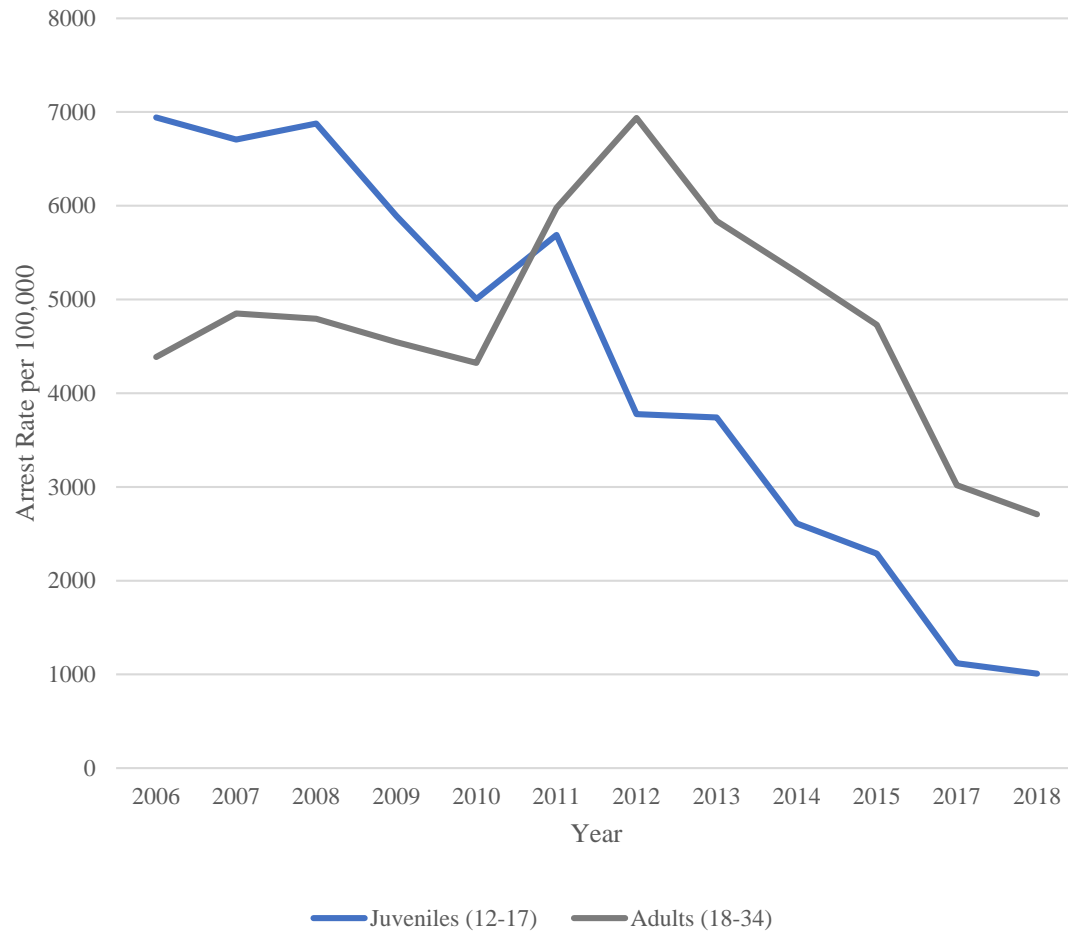
Prince George's All Arrests by Age Group



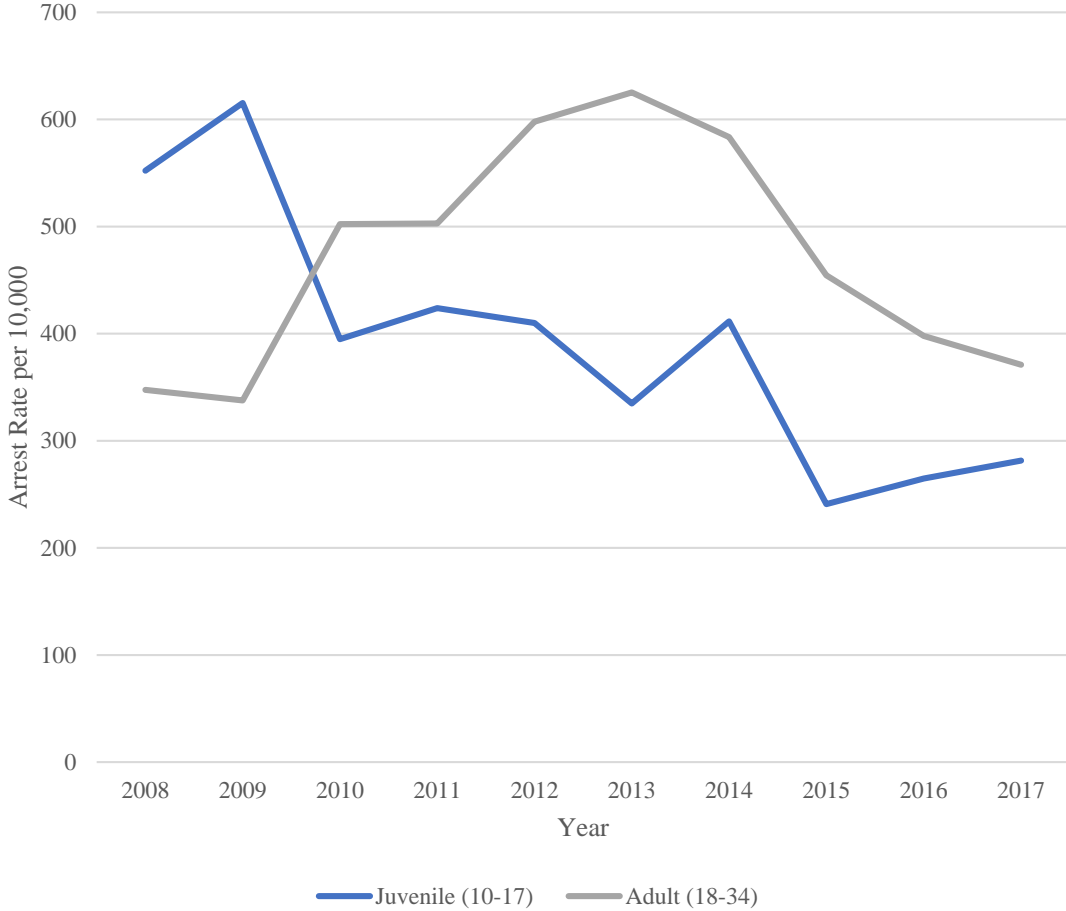
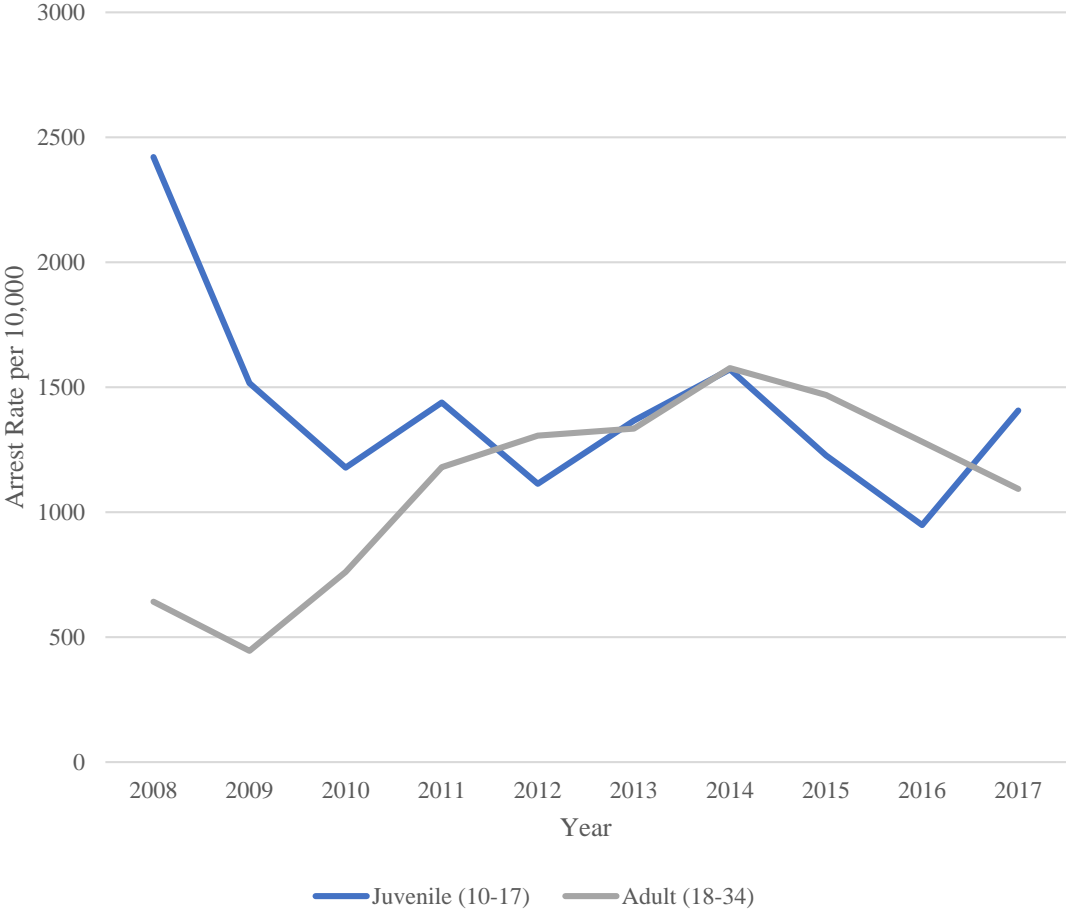
Hagerstown All Arrests by Age Group



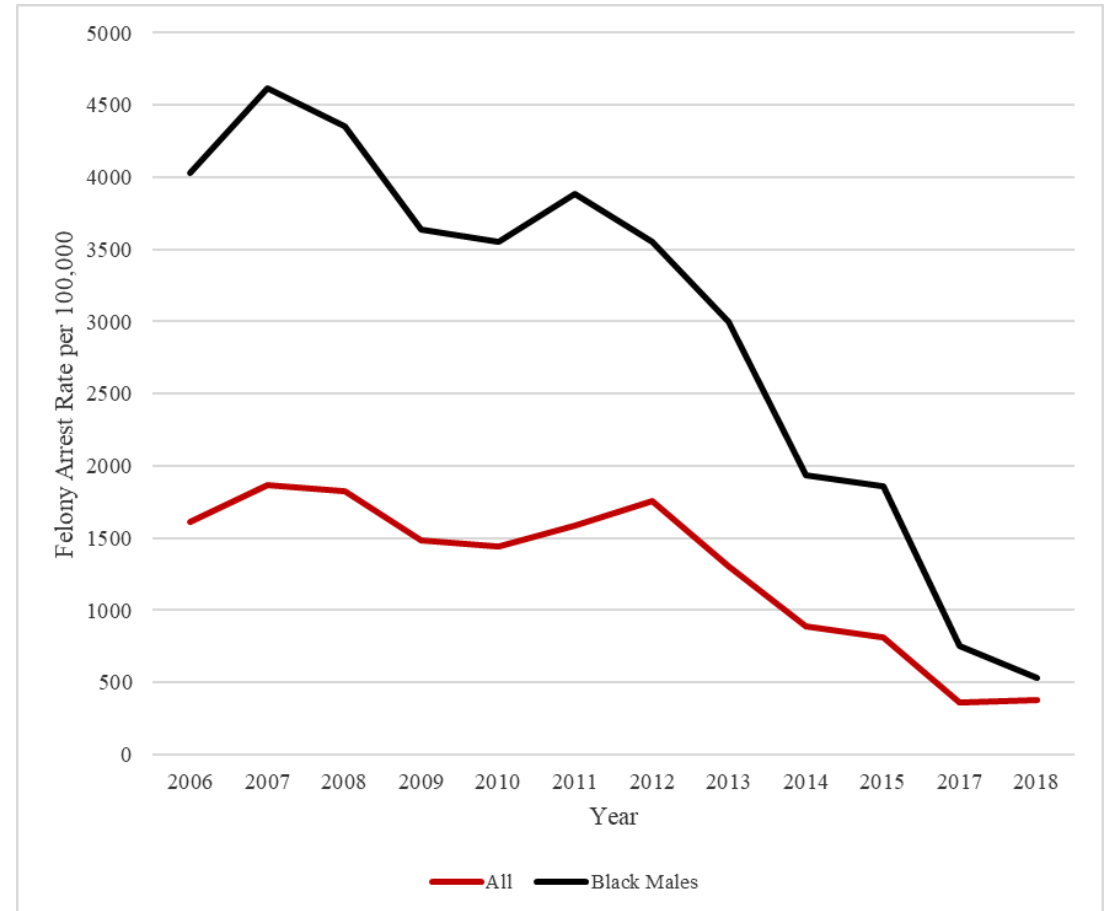
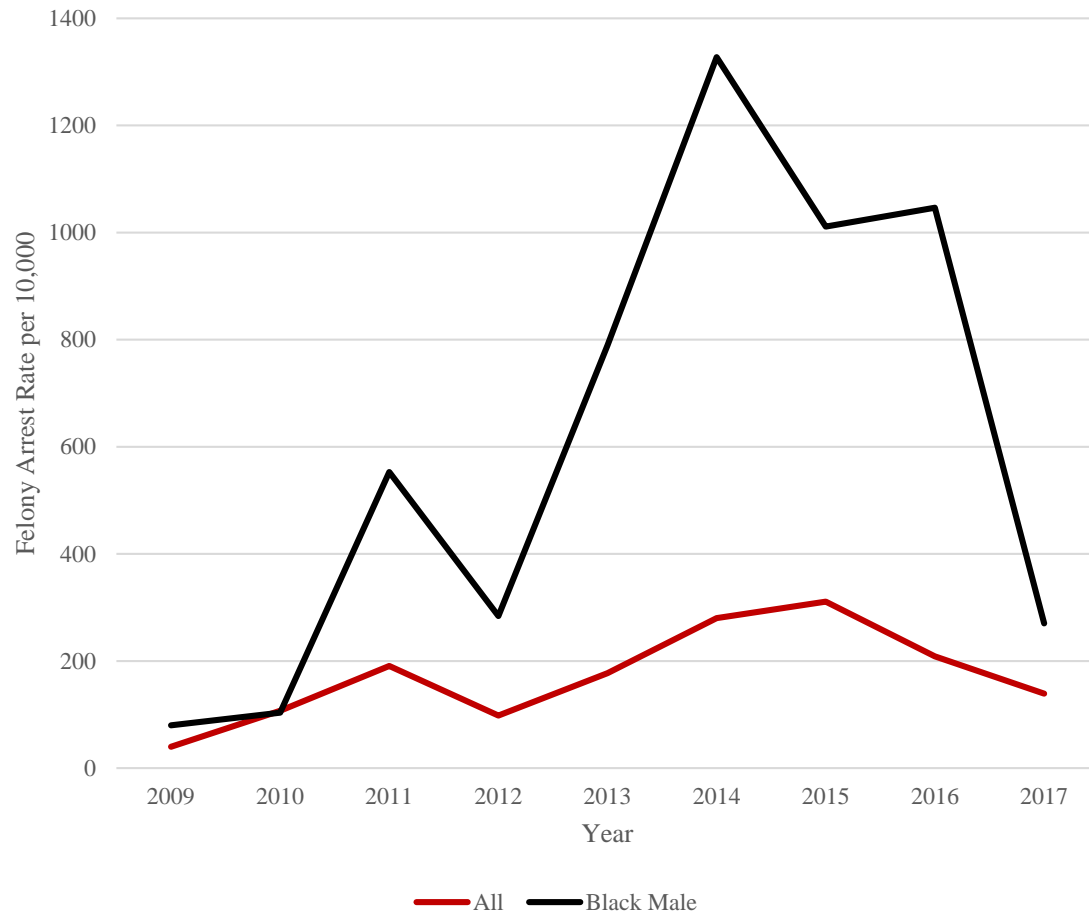
Prince George's: Juvenile Arrest Rates Crossing Under Adults for Black (L) and White (R) for All Offenses



Hagerstown: Juvenile Arrest Rates Crossing Under Adults for Black (L) and White (R) for All Offenses



Comparison Felony Arrest Rates, in Hagerstown (L, ages 18-19) and Prince George's (R, age 18)



Total Complaints at DJS, and % Contributed by Police

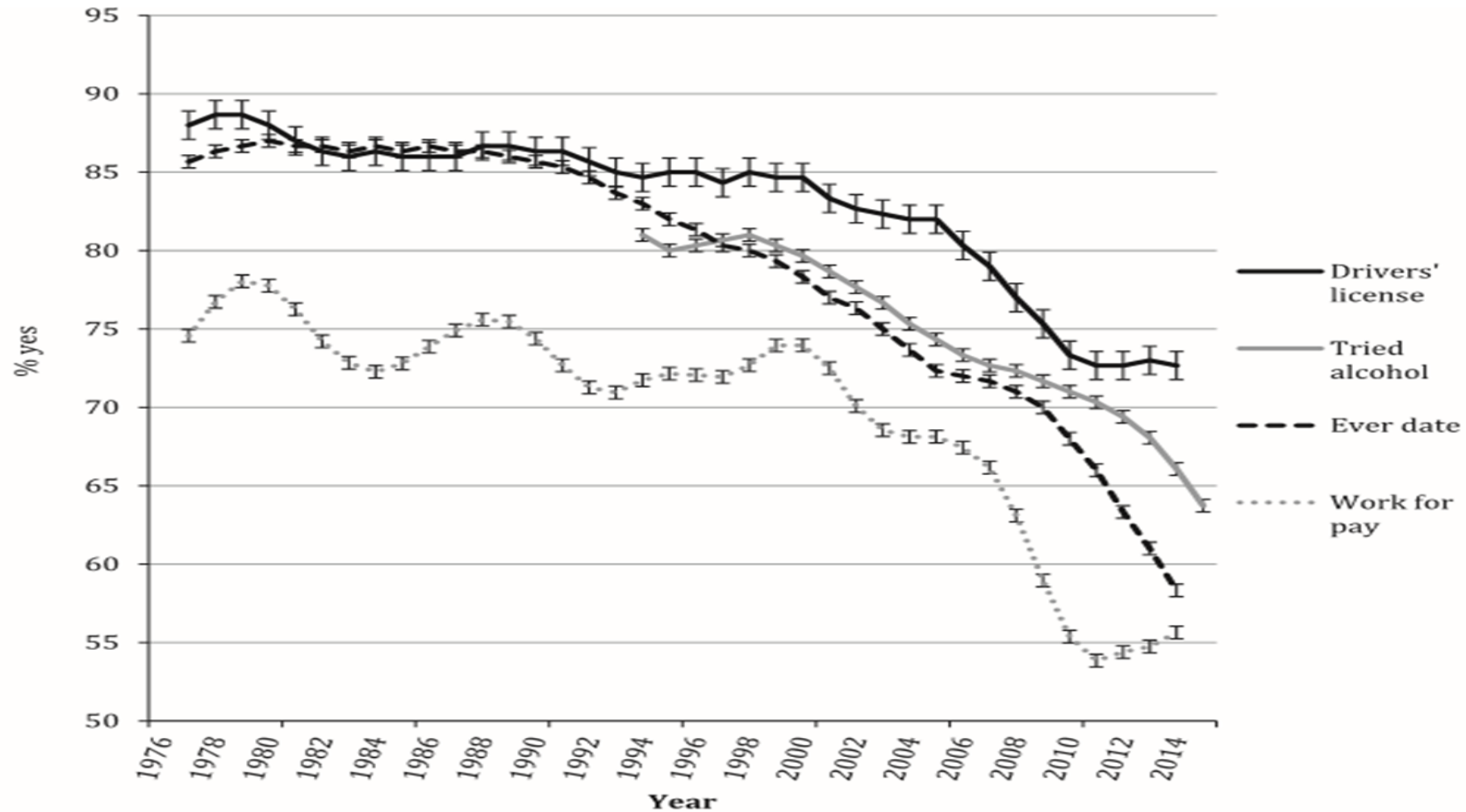


Total Formal Complaints by % Violent, 2011 & 2018



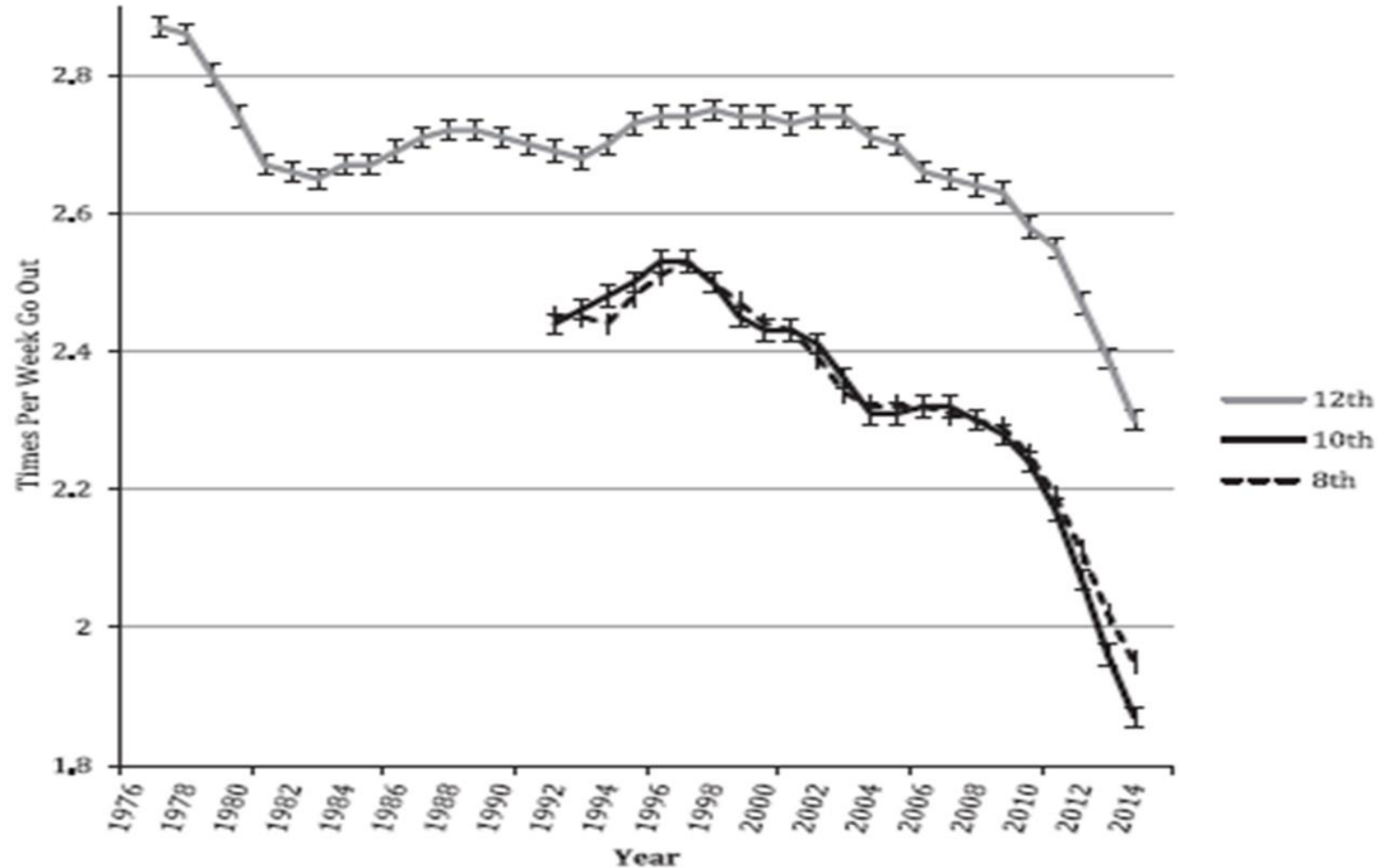
Changes in Youth Behavior – 12th graders

(Twenge & Park, “The Decline in Adult Activities Among U.S. Adolescents, 1976–2016” in *Child Development*, 2017).



Changes in Youth Behavior – Out without Parents

(Twenge & Park, “The Decline in Adult Activities Among U.S. Adolescents, 1976–2016” in *Child Development*, 2017).



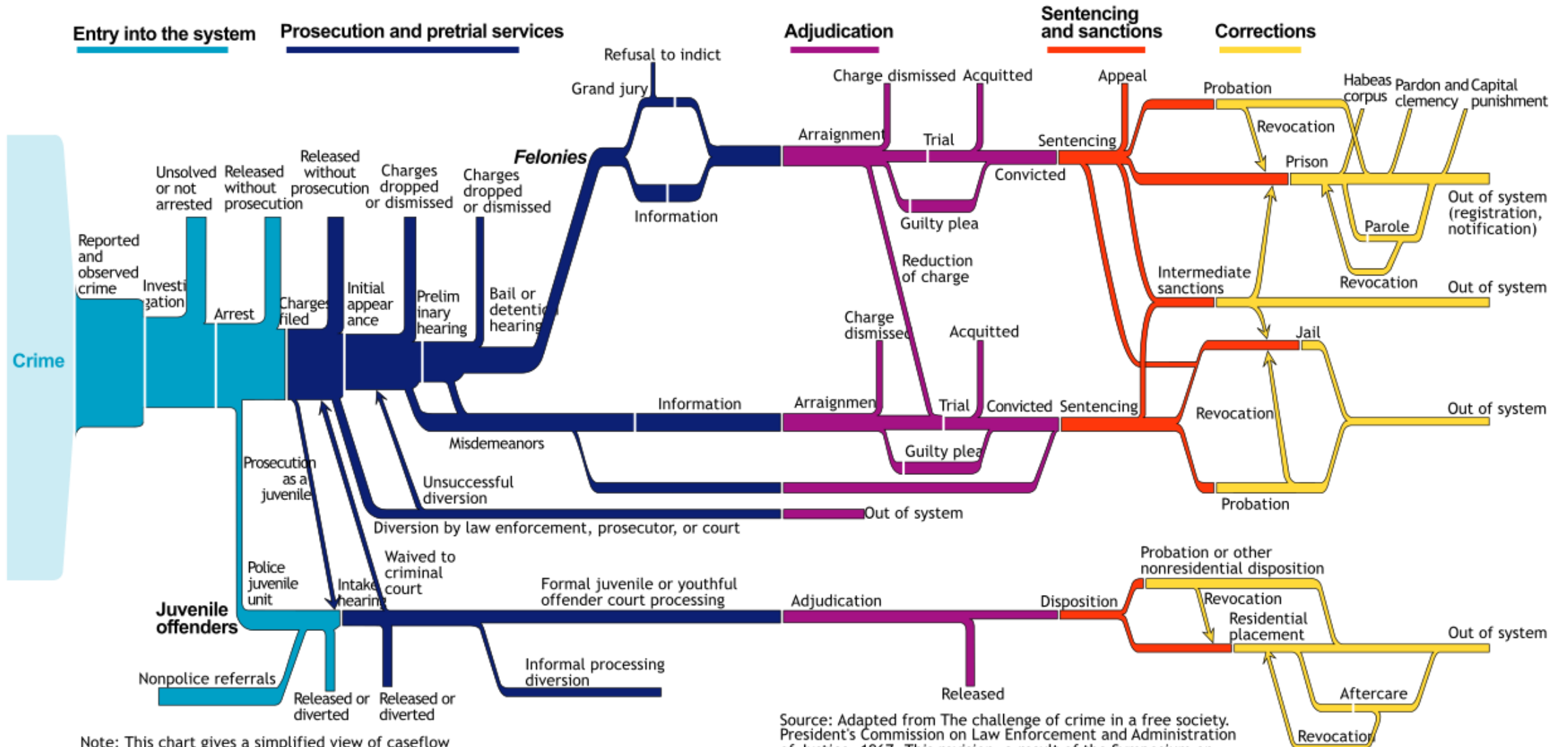
Follow the Cases: Sentencing Outcomes for UCR Part I Arrests

Jinney Smith
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Emily Glazener
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Meghan Kozlowski-Serra
University of Maryland

What is the sequence of events in the criminal justice system?



Note: This chart gives a simplified view of caseload through the criminal justice system. Procedures vary among jurisdictions. The weights of the lines are not intended to show actual size of caseloads.

Source: Adapted from The challenge of crime in a free society. President's Commission on Law Enforcement and Administration of Justice, 1967. This revision, a result of the Symposium on the 30th Anniversary of the President's Commission, was prepared by the Bureau of Justice Statistics in 1997.

Data

- UCR Part I arrests from Prince George's County (2013 + 2015) and Hagerstown (2013 + 2016)
- UCR Part I Offenses: homicide, rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft, and arson
- Sentencing Commission guidelines data, January 2013 - March 2019; Prince George's and Washington County Cir

Points Assigned, Default to Adopted Weighting Strategy

Match Field	Default	Adopted
First Name	20	30
Last Name	20	20
Month of Birth	20	10
Day of Birth		15
Year of Birth		15
Race	20	5
Gender	20	5
<i>TOTAL</i>	<i>=100</i>	<i>=100</i>
Match Found	60	75 + drop S<A

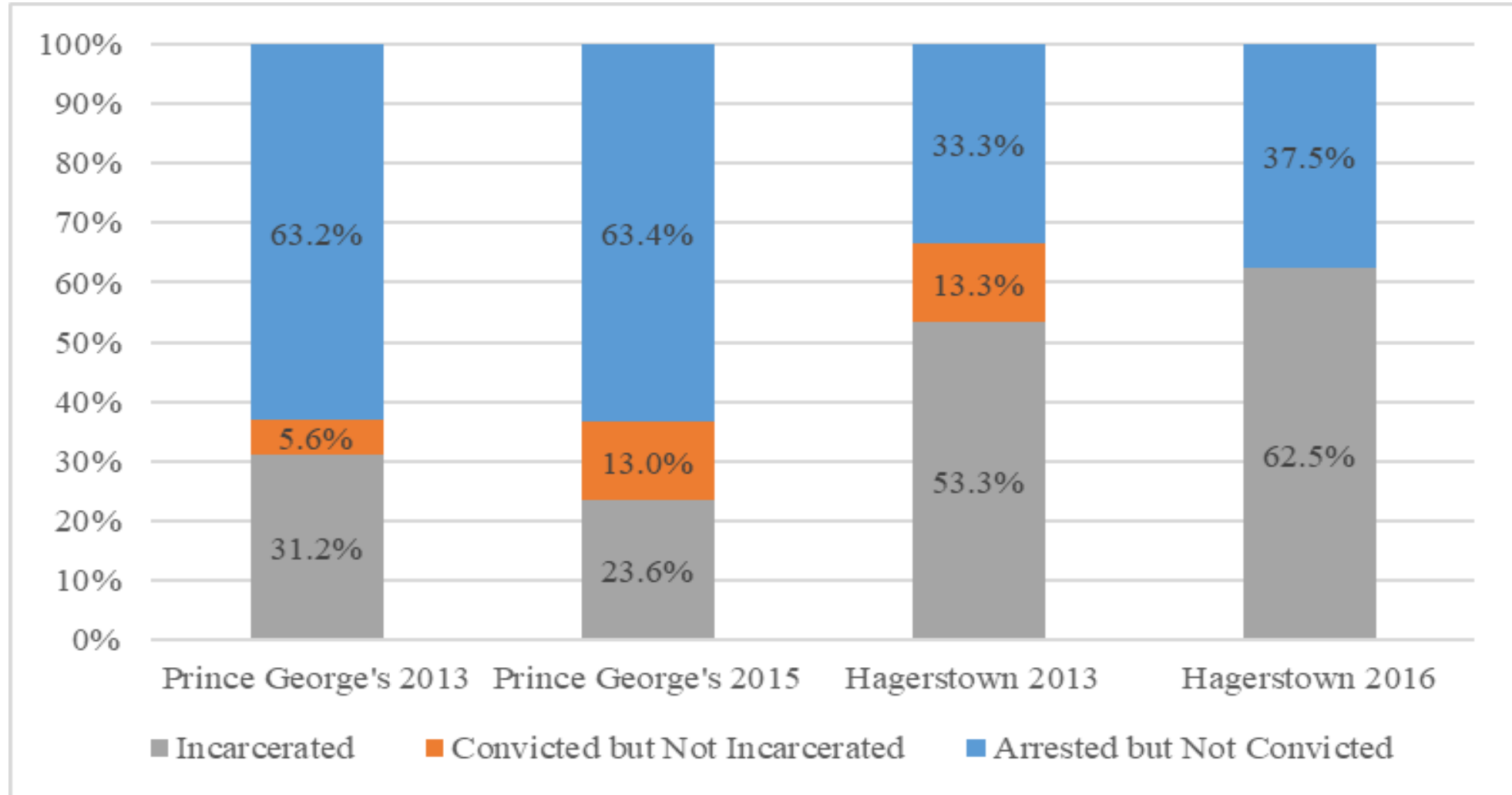
Outcomes of All UCR Part I Arrests Linked

	Prince George's (2013)		Prince George's (2015)		Hagerstown (2013)		Hagerstown (2016)	
	N	%	N	%	N	%	N	%
Arrests	2,283	--	1,753	--	458	--	351	--
Convictions	402	17.6%	330	18.8%	104	22.7%	98	27.9%
Incarceration	314	78.1%	207	62.7%	75	72.1%	68	69.4%
Median Sentence	41.15	--	51.13	--	30.00	--	42.30	--

Convicted Offenses for Robbery Arrests

Prince George's			
<i>Sentenced Offense Category</i>	<i>Frequency</i>	<i>%</i>	<i>Cumulative %</i>
Robbery	168	66.67	66.67
Assault and Other Bodily Woundings	31	12.30	78.97
Weapons Crimes	24	9.52	88.49
Hagerstown			
<i>Sentenced Offense Category</i>	<i>Frequency</i>	<i>%</i>	<i>Cumulative %</i>
Robbery	10	66.67	66.67
Assault and Other Bodily Woundings	2	13.33	80.00

Outcomes for Robbery Arrests

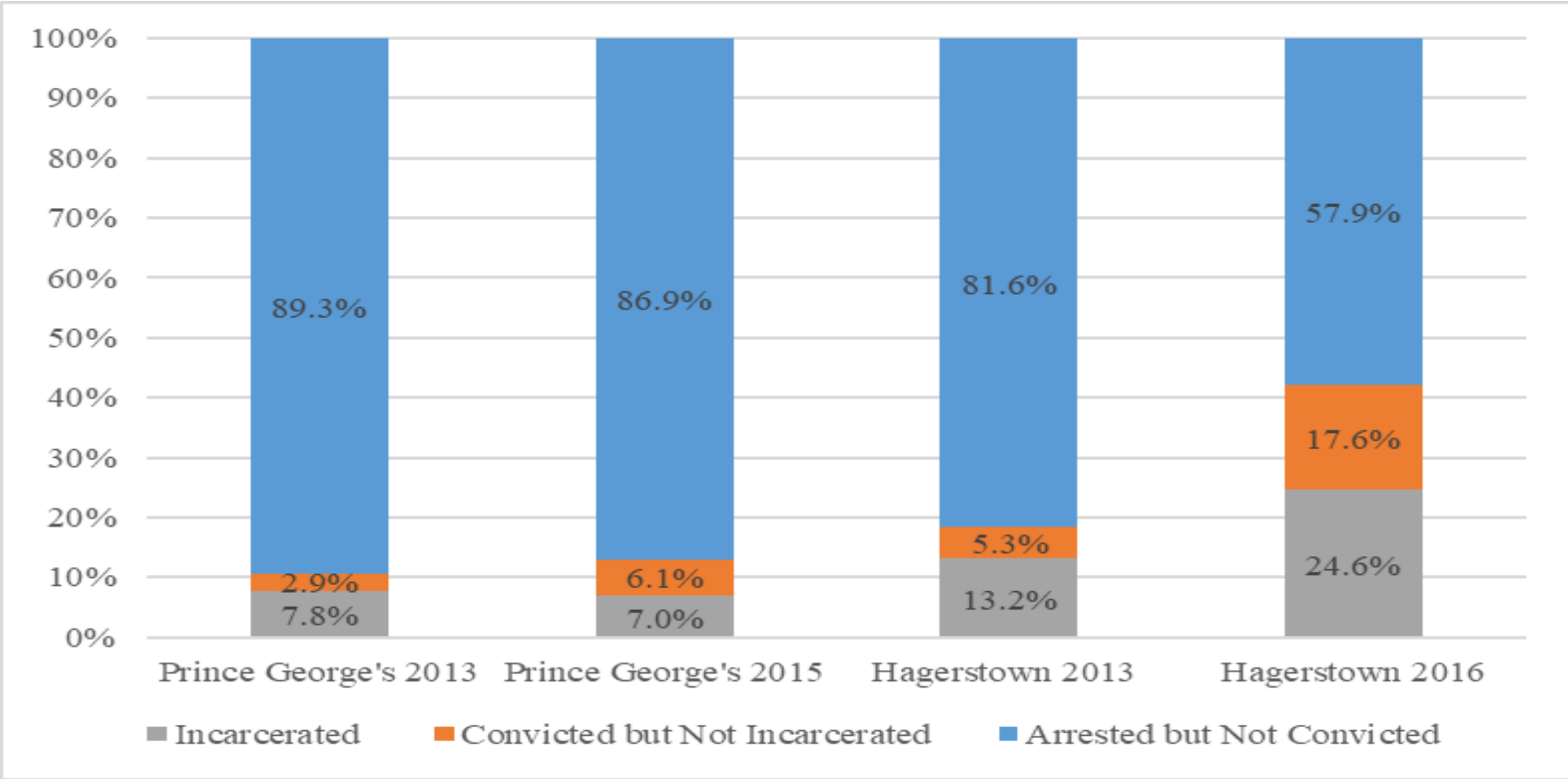


Convicted Offenses for Aggravated Assault Arrests

Prince George's			
<i>Sentenced Offense Category</i>	<i>Frequency</i>	<i>%</i>	<i>Cumulative %</i>
Assault and Other Bodily Woundings	92	63.01	63.01
CDS and Paraphernalia	10	6.85	69.86
Abuse and Other Offensive Conduct	8	5.48	75.34
Murder	8	5.48	80.82

Hagerstown			
<i>Sentenced Offense Category</i>	<i>Frequency</i>	<i>%</i>	<i>Cumulative %</i>
Assault and Other Bodily Woundings	20	52.63	52.63
CDS and Paraphernalia	7	18.42	71.05
Robbery	4	10.53	81.58

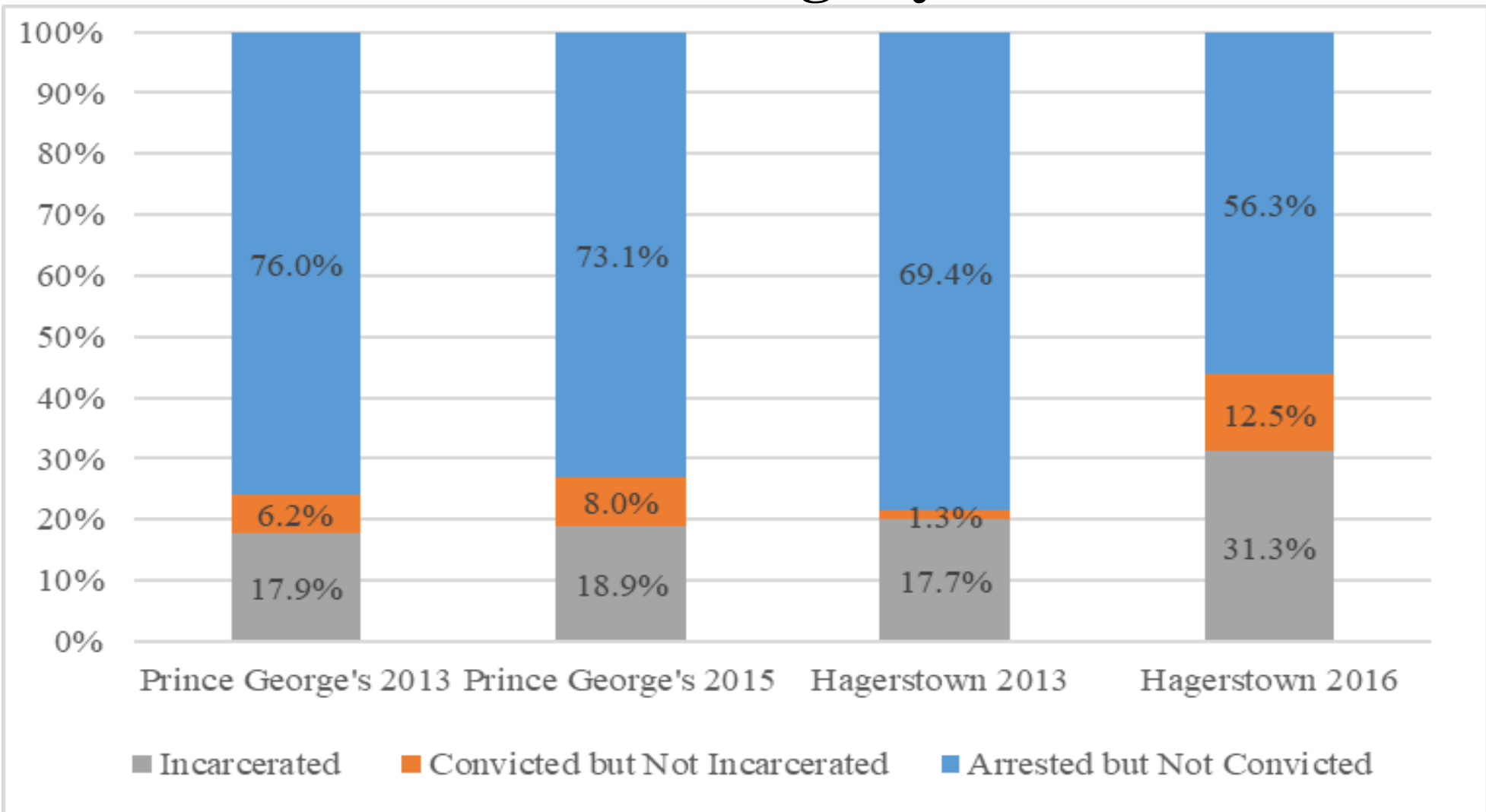
Outcomes for Aggravated Assault Arrests



Convicted Offenses for Burglary Arrests

Prince George's			
<i>Sentenced Offense Category</i>	<i>Frequency</i>	<i>%</i>	<i>Cumulative %</i>
Burglary and Related Crimes	84	64.12	64.12
Theft, Crimes Involving	18	13.74	77.86
Weapons Crimes	8	6.11	83.97
Hagerstown			
<i>Sentenced Offense Category</i>	<i>Frequency</i>	<i>%</i>	<i>Cumulative %</i>
Burglary and Related Crimes	23	48.94	48.94
Theft, Crimes Involving	9	19.15	68.09
CDS and Paraphernalia	6	12.77	80.85

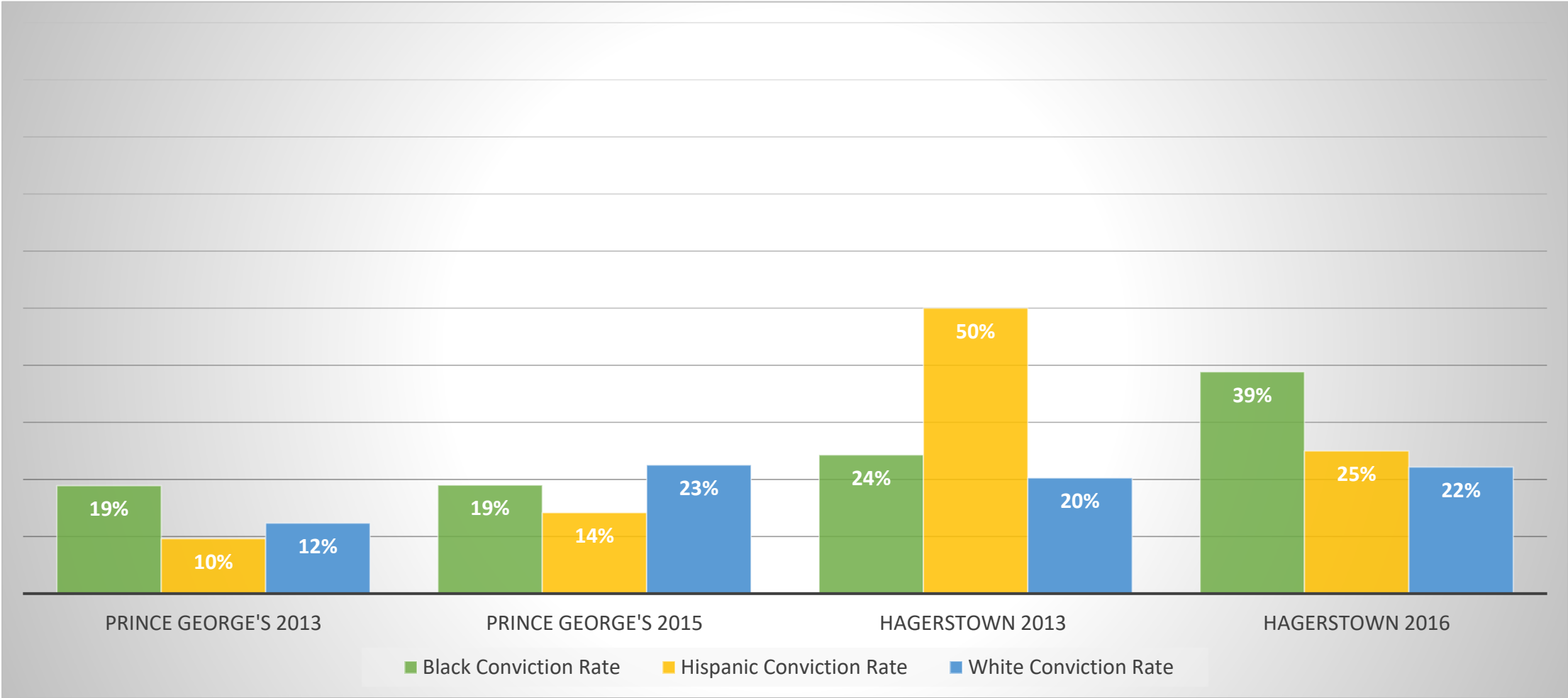
Outcomes for Burglary Arrests



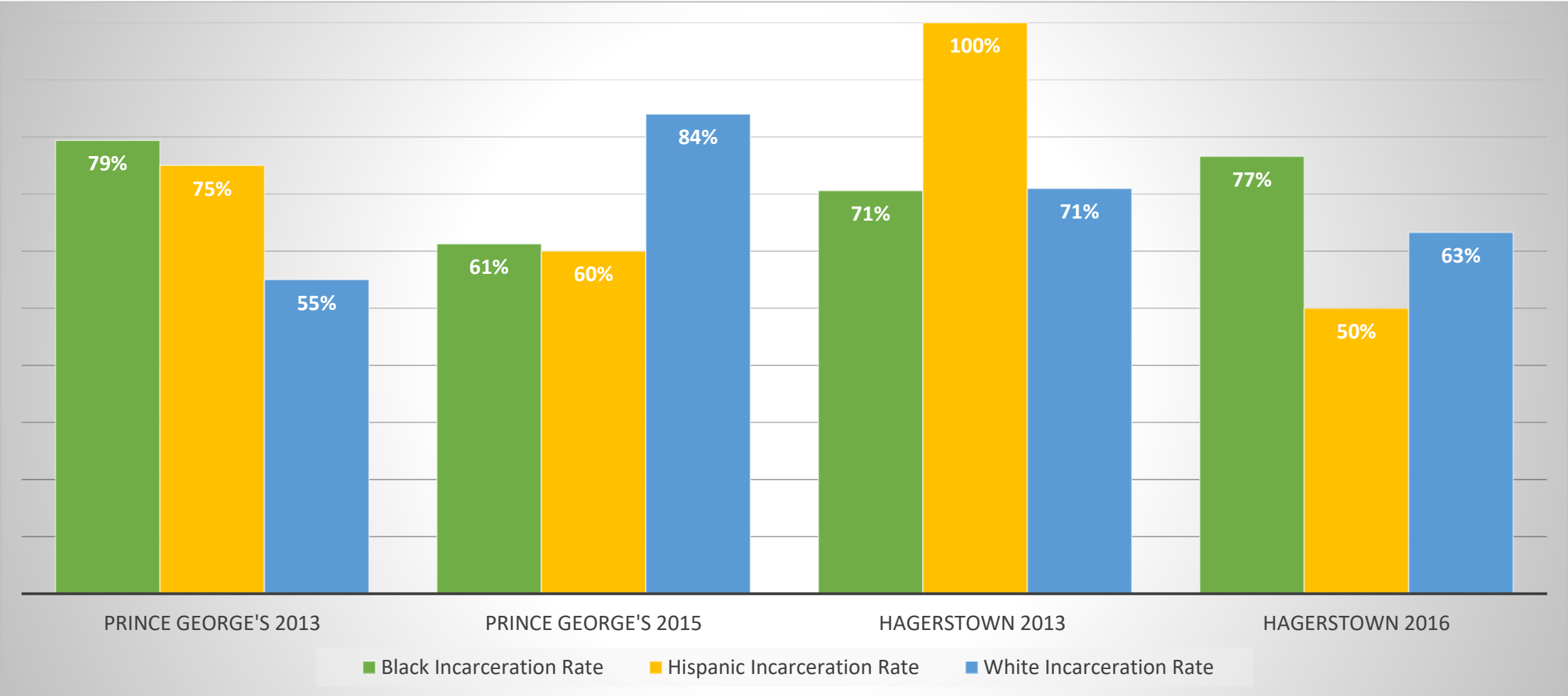
Median Incarceration Sentence Length (months)

	Prince George's (2013)	Prince George's (2015)	Hagerstown (2013)	Hagerstown (2016)
Robbery	44.9	52.4	48.0	46.5
Aggravated Assault	48.0	45.9	50.8	49.2
Burglary	18.0	24.5	30.0	42.3
Larceny	21.0	32.7	30.0	36.6

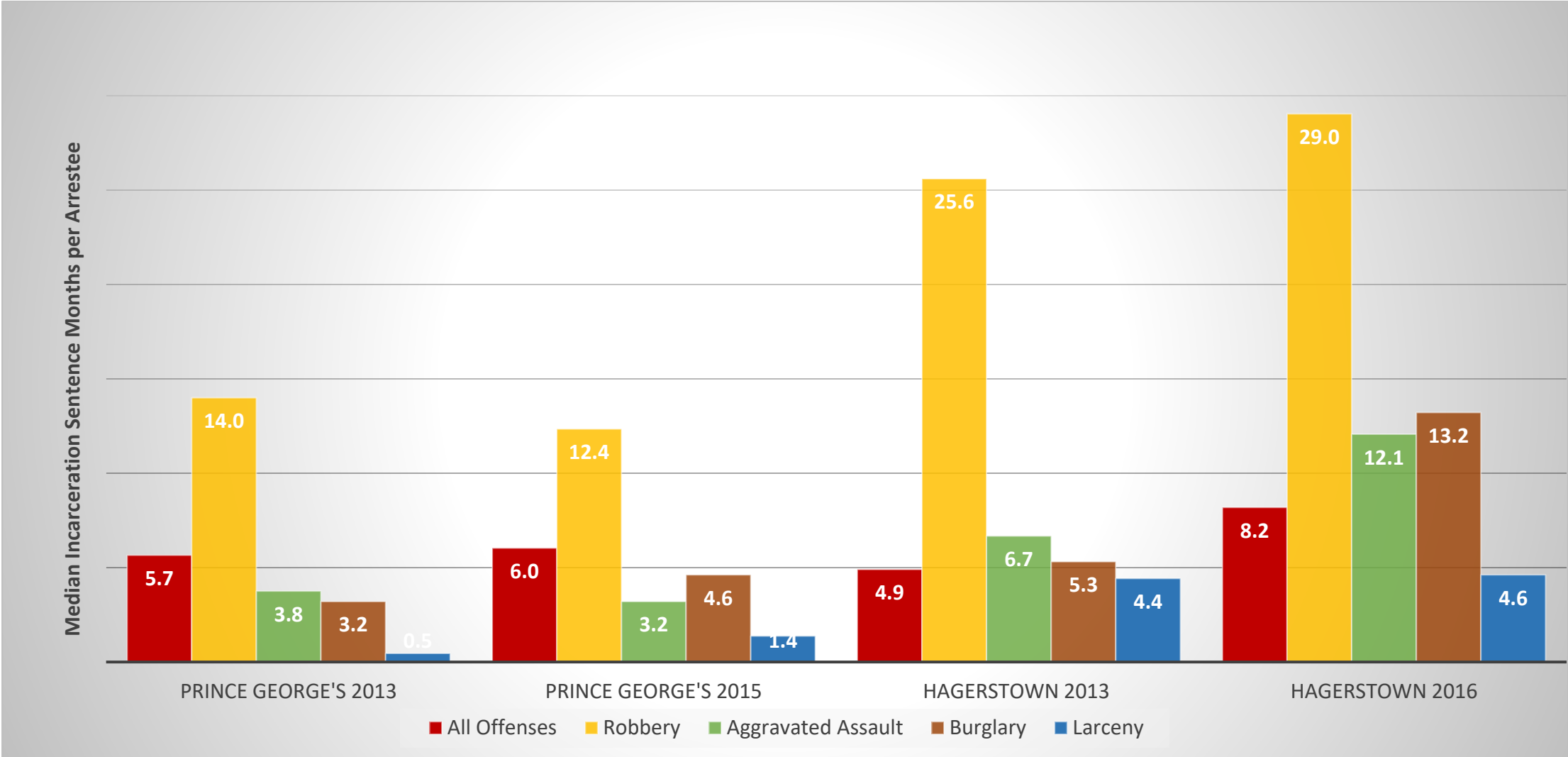
Conviction Rates by Race – All Offenses



Incarceration Rates by Race – All Offenses



Average Incarceration Sentence Months per Arrestee



Patterns and Variation in Maryland Circuit Court Sentencing Patterns

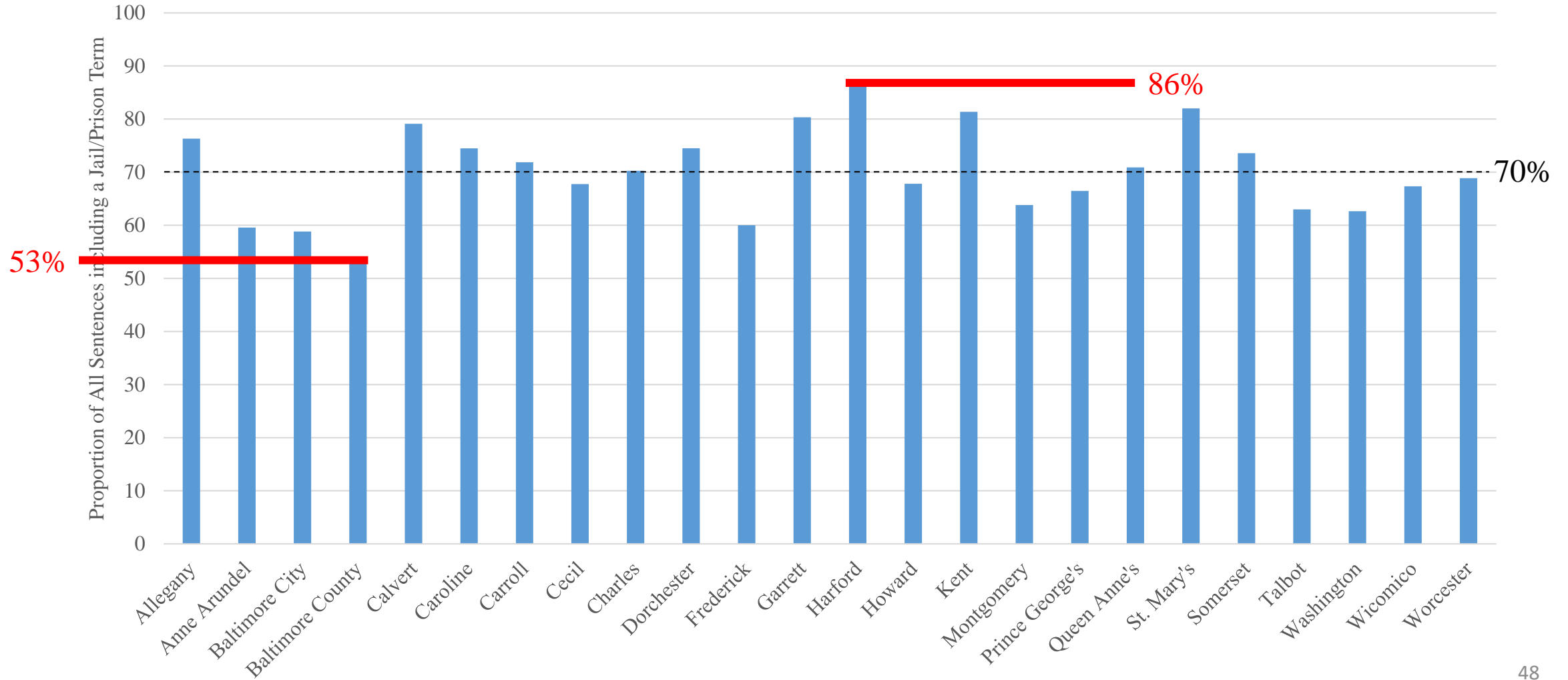
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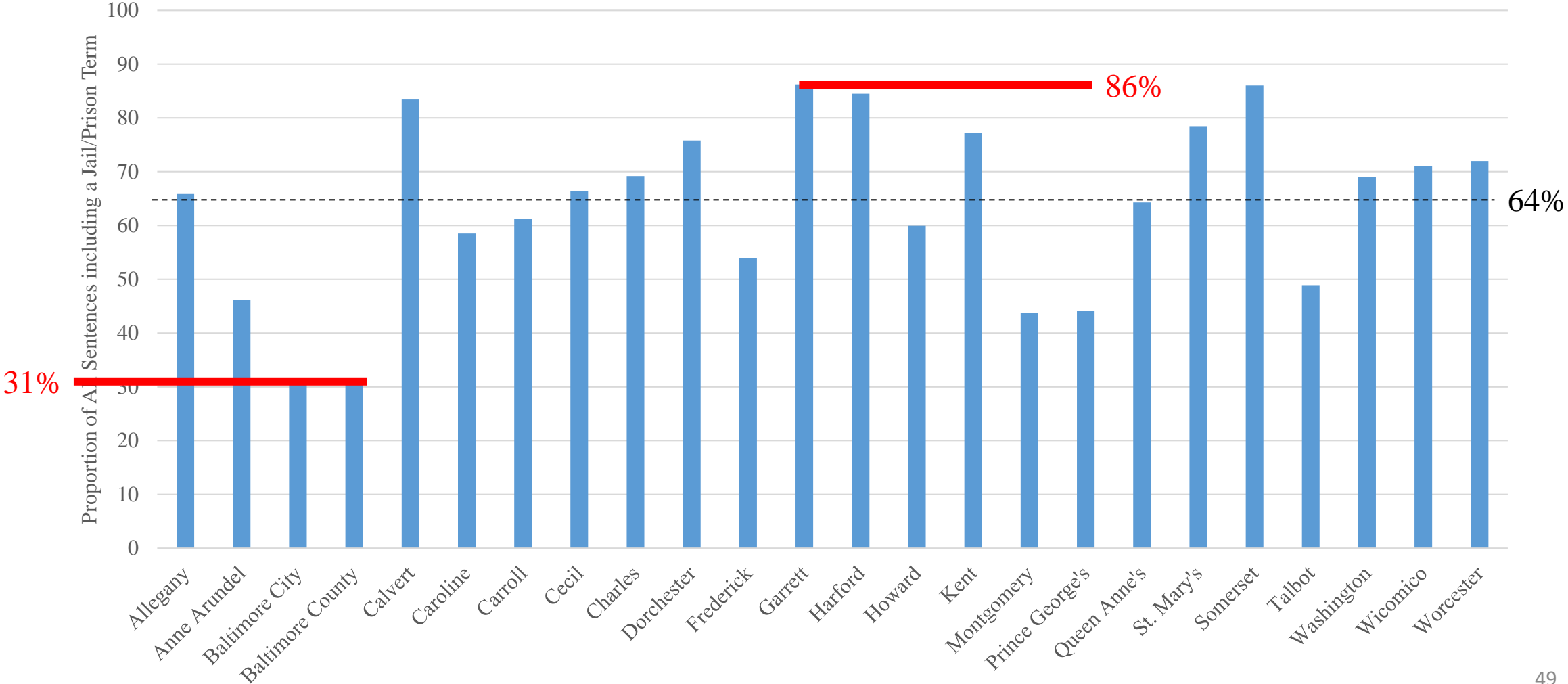
Sentencing Variation across Counties

- Equal justice under law?
- Creates uncertainty for policy – Sentencing reforms are adopted state-wide but implemented locally
- Evidence in prior empirical studies [e.g., Fearn, 2005; Kautt, 2002; Johnson, 2006; Ulmer and Johnson, 2004]
 - Court community and focal concerns
- Data: 2008-2018 cohort of offenders sentenced at the Maryland Circuit Court (MSCCSP)

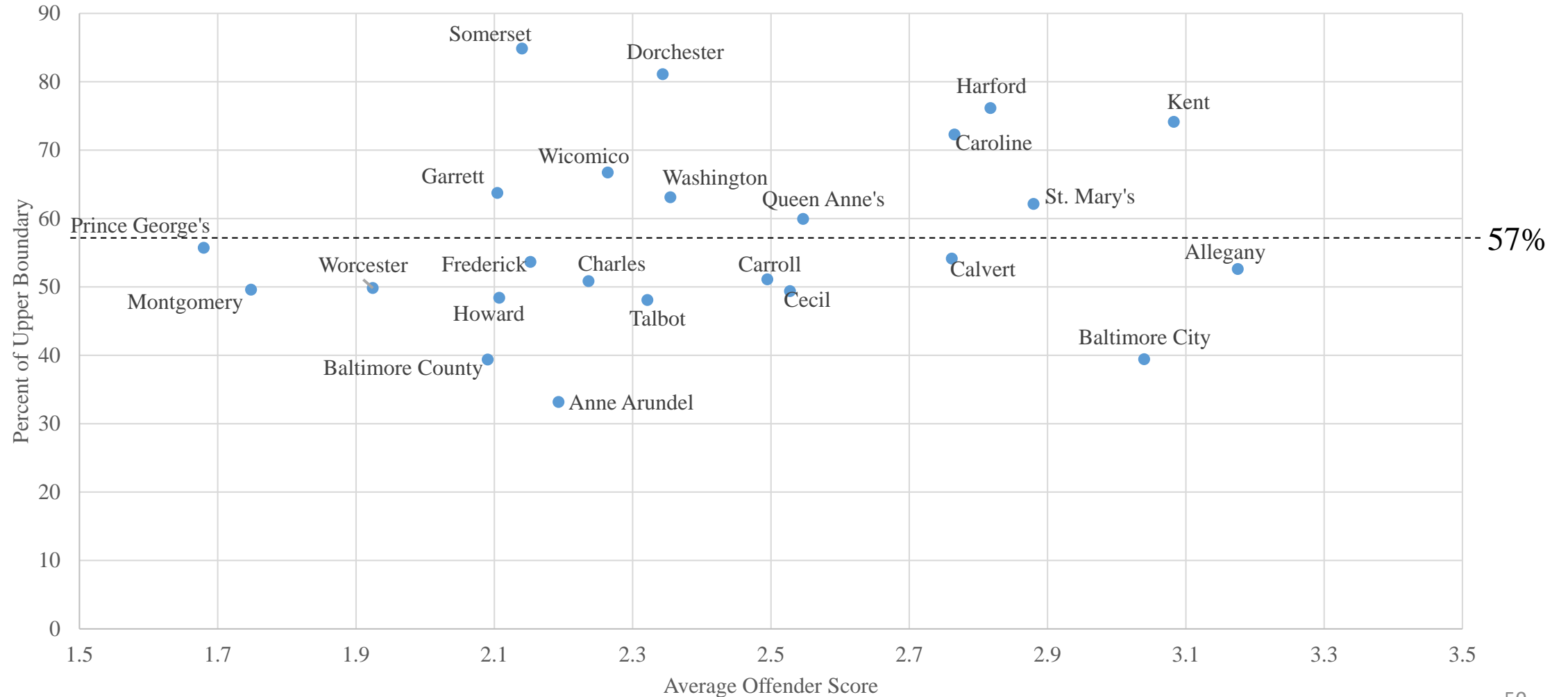
Proportion Incarceration Sentences (Person Offenses)



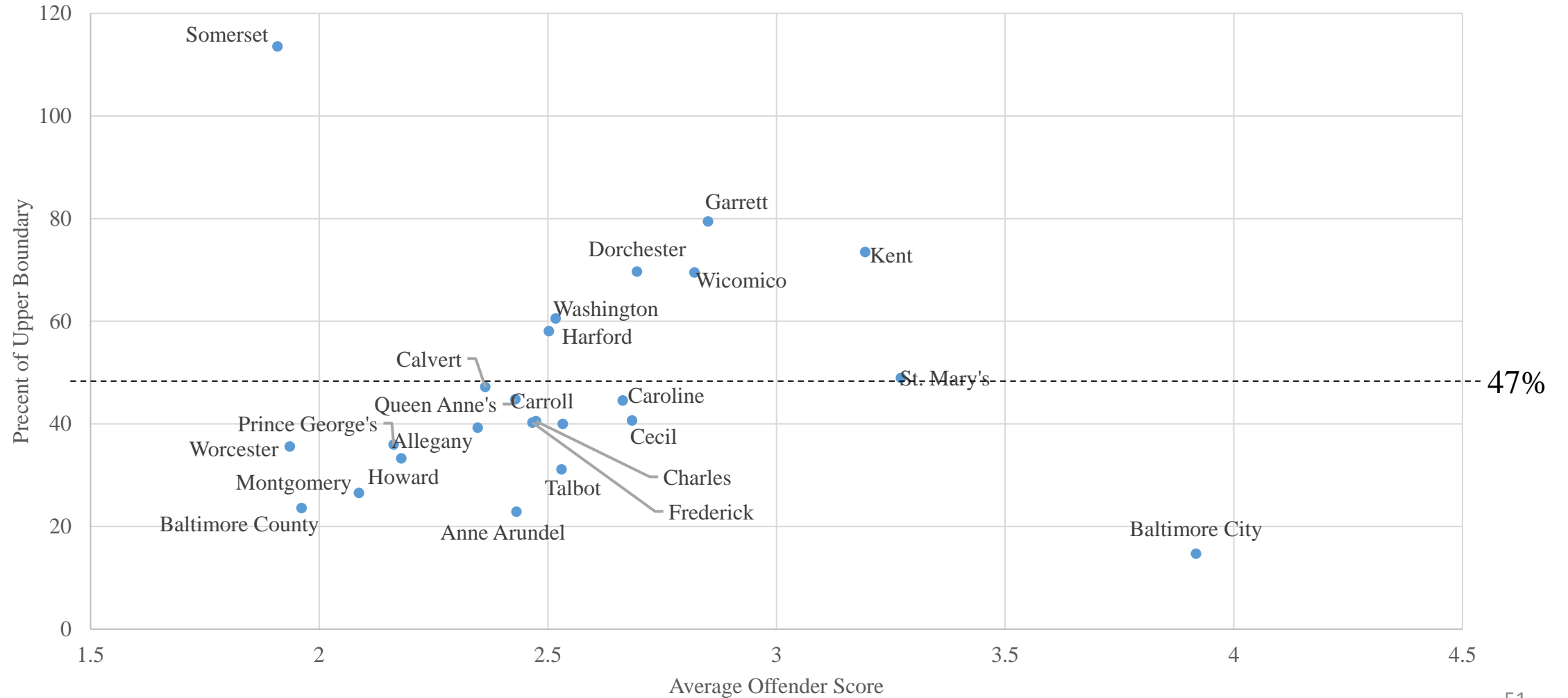
Proportion Incarceration Sentences (Drug Offenses)



Percent Max by Offender Score (Person Offenses)



Percent Max by Offender Score (Drug Offenses)

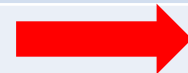


What Predicts “In/Out” Sentence Decision?

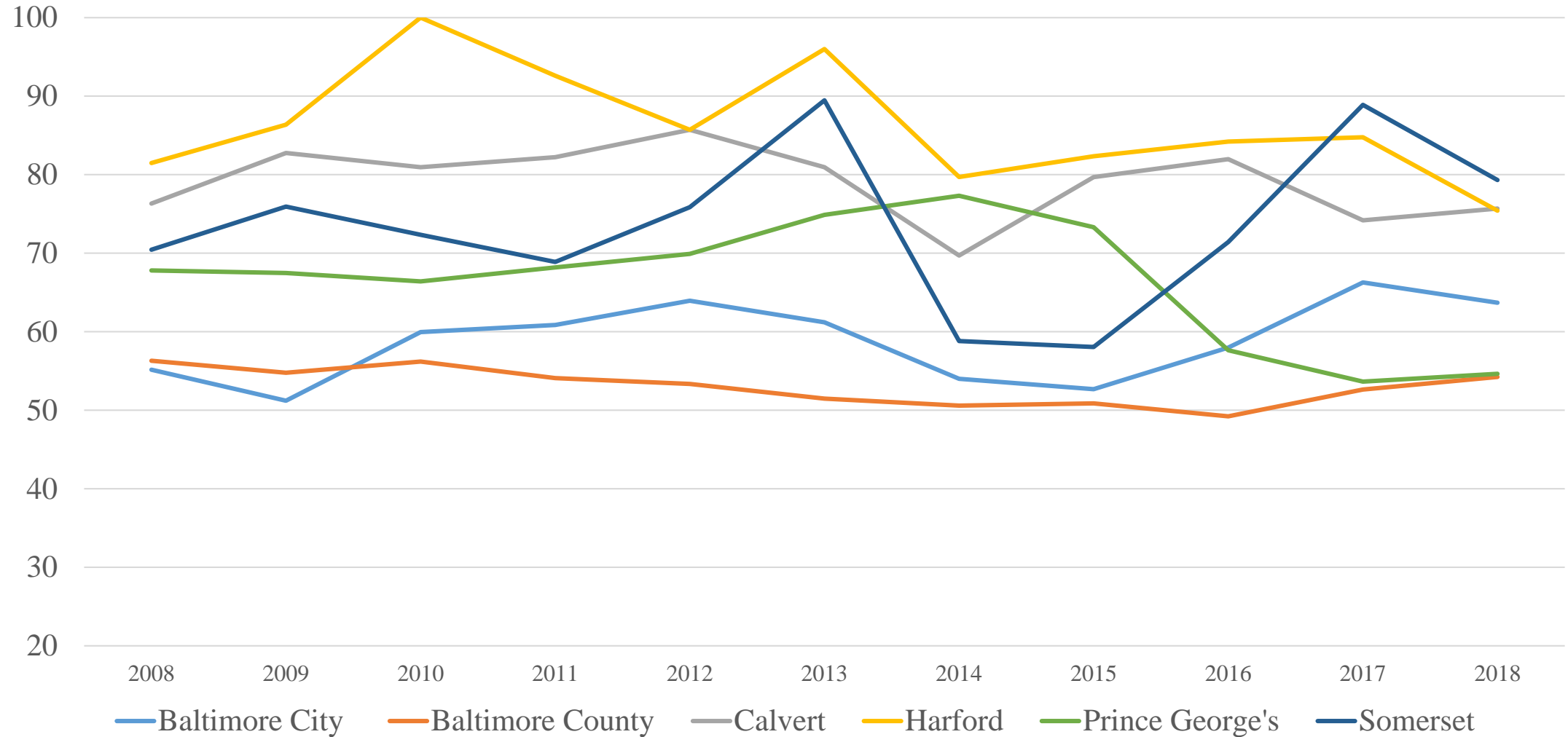
		Offense Type		
		Person	Property	Drug
Offense Seriousness		8.720 (2.282)***	5.120 (3.112)	7.072 (3.189)**
Offender Score		4.591 (2.767)	6.212 (2.256)**	2.085 (3.127)
Age at Sentence		-.161 (.184)	-.725 (.384)*	.364 (.451)
Non-White Defendant		-.003 (.055)	.051 (.062)	.153 (.085)*
Male Defendant		.304 (.066)***	-.093 (.120)	-.191 (.167)
Private Representation		.011 (.066)	.012 (.078)	-.077 (.088)
Trial Rate		.313 (.120)**	.692 (.199)***	.655 (.275)**
Violent Crime Rate		-.004 (.005)	-.011 (.005)**	-.003 (.012)
Filing Caseload		-.013 (.004)***	-.020 (.005)***	-.022 (.006)***
Jail Percent Capacity		.012 (.034)	-.035 (.050)	.002 (.051)
Court Size				
	Small Court	7.959 (2.427)***	9.597 (3.497)**	7.923 (5.062)
	Large Court	-8.661 (5.334)	-11.421 (5.589)*	-27.534 (6.029)***
	Baltimore City	-9.737 (7.335)	-7.053 (10.286)	-40.694 (16.805)**

R² and Testing for Differences between Models

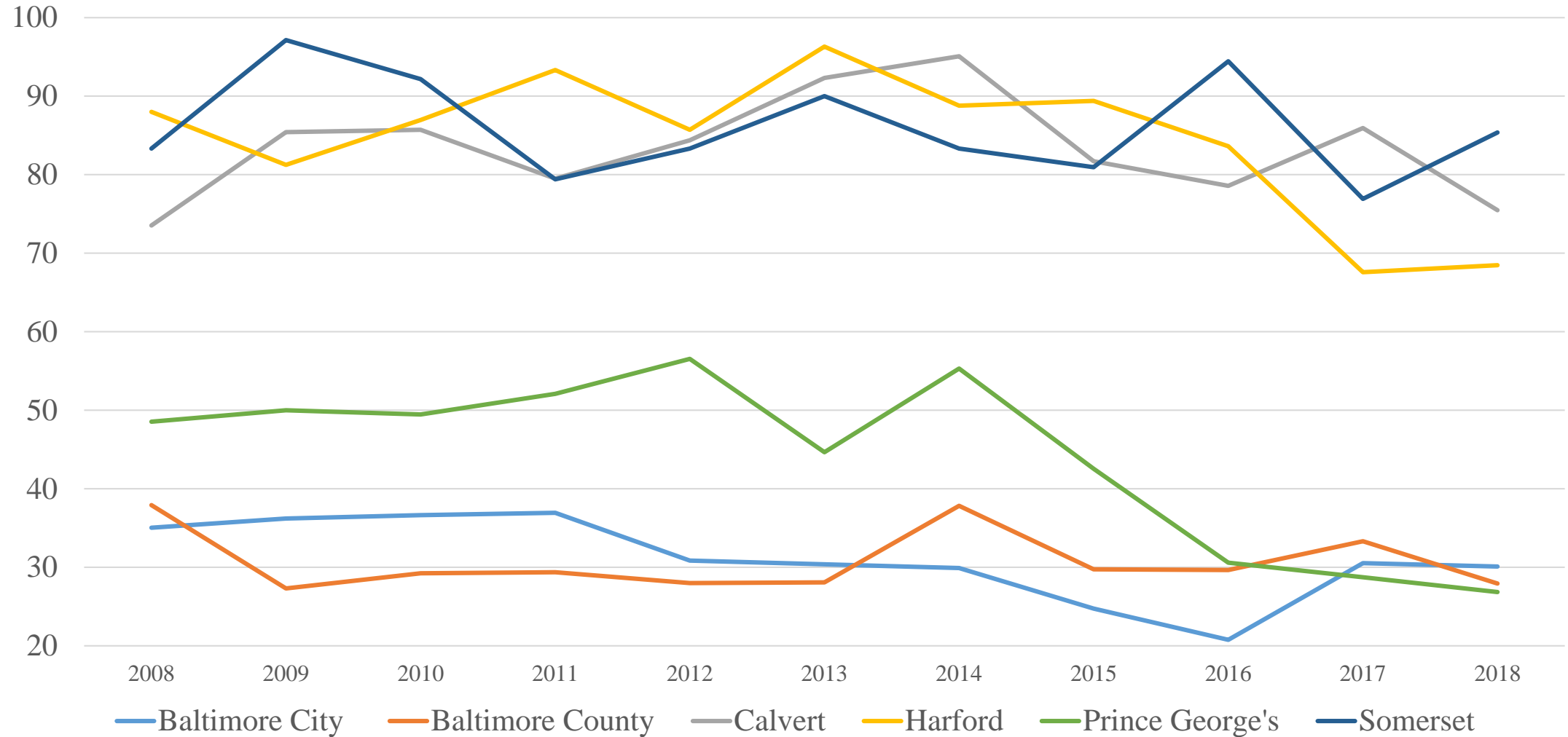
		Case & Offender Variables R ²	Total R ²	F-Test
Proportion Incarcerated				
	Person	.3968	.5815	13.46 (.0000)***
	Property	.2691	.5194	24.45 (.0000)***
	Drug	.1277	.6346	61.23 (.0000)***
Average Incarceration Sentence				
	Person	.4669	.5571	9.96 (.0000)***
	Property	.2122	.2616	1.23 (.3265)
	Drug	.1472	.1876	1.68 (.1633)
Average Percent Max				
	Person	.0784	.2264	22.27 (.0000)***
	Property	.1491	.2244	6.76 (.0002)***
	Drug	.1294	.4737	7.50 (.0001)***



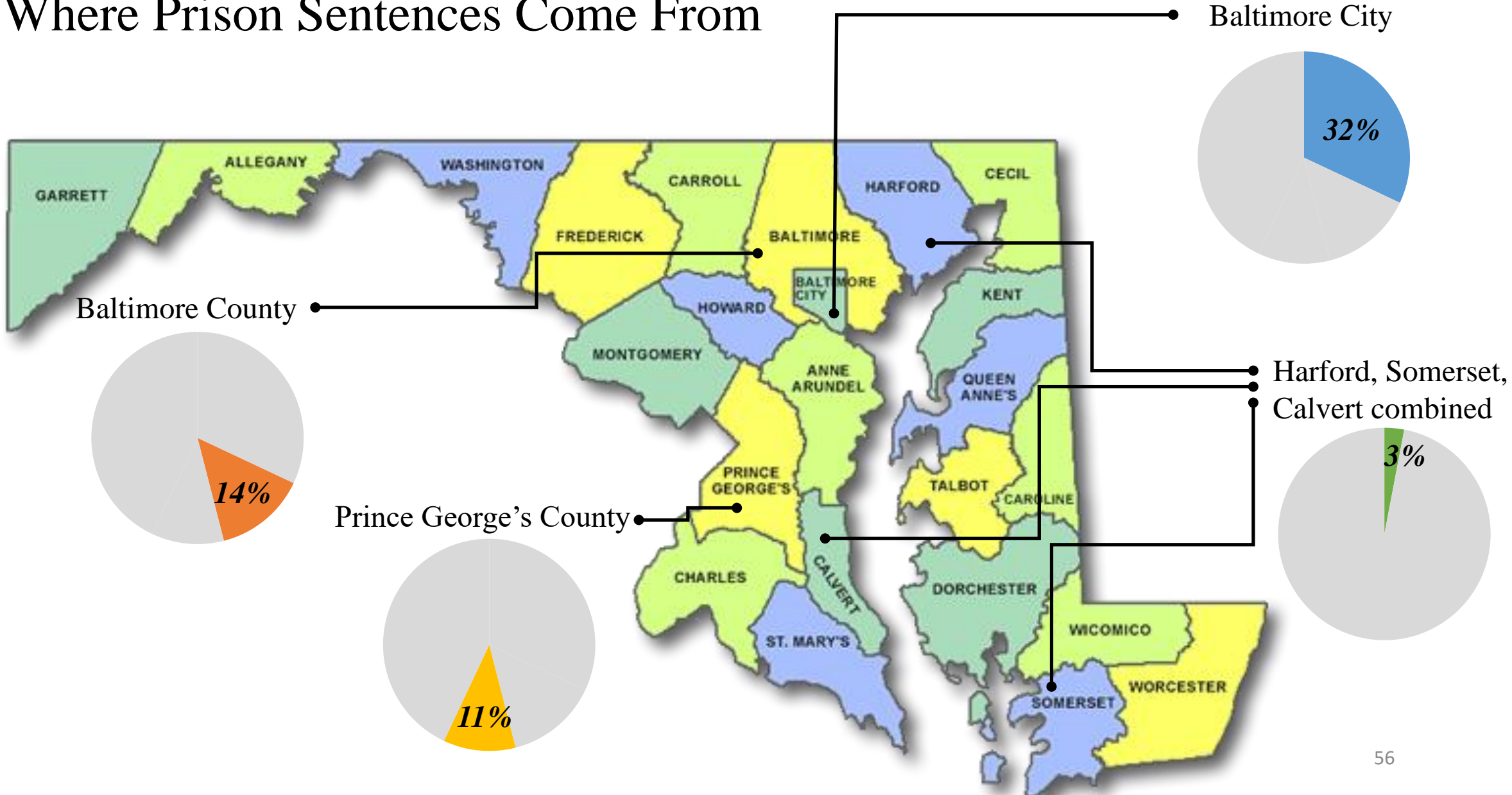
% of Person-Crime Sentences Resulted in Incarceration



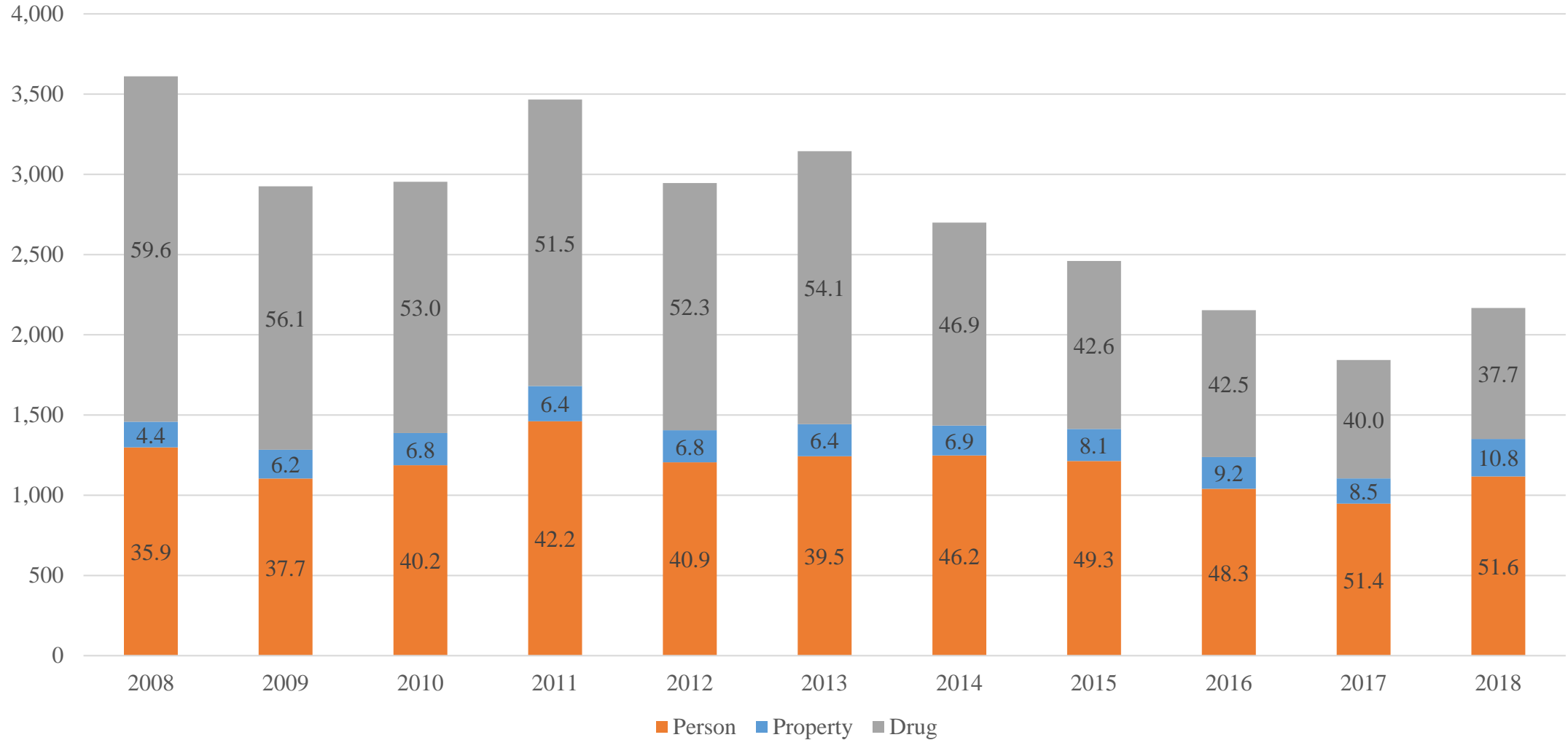
% of Drug-Crime Sentences Resulted in Incarceration



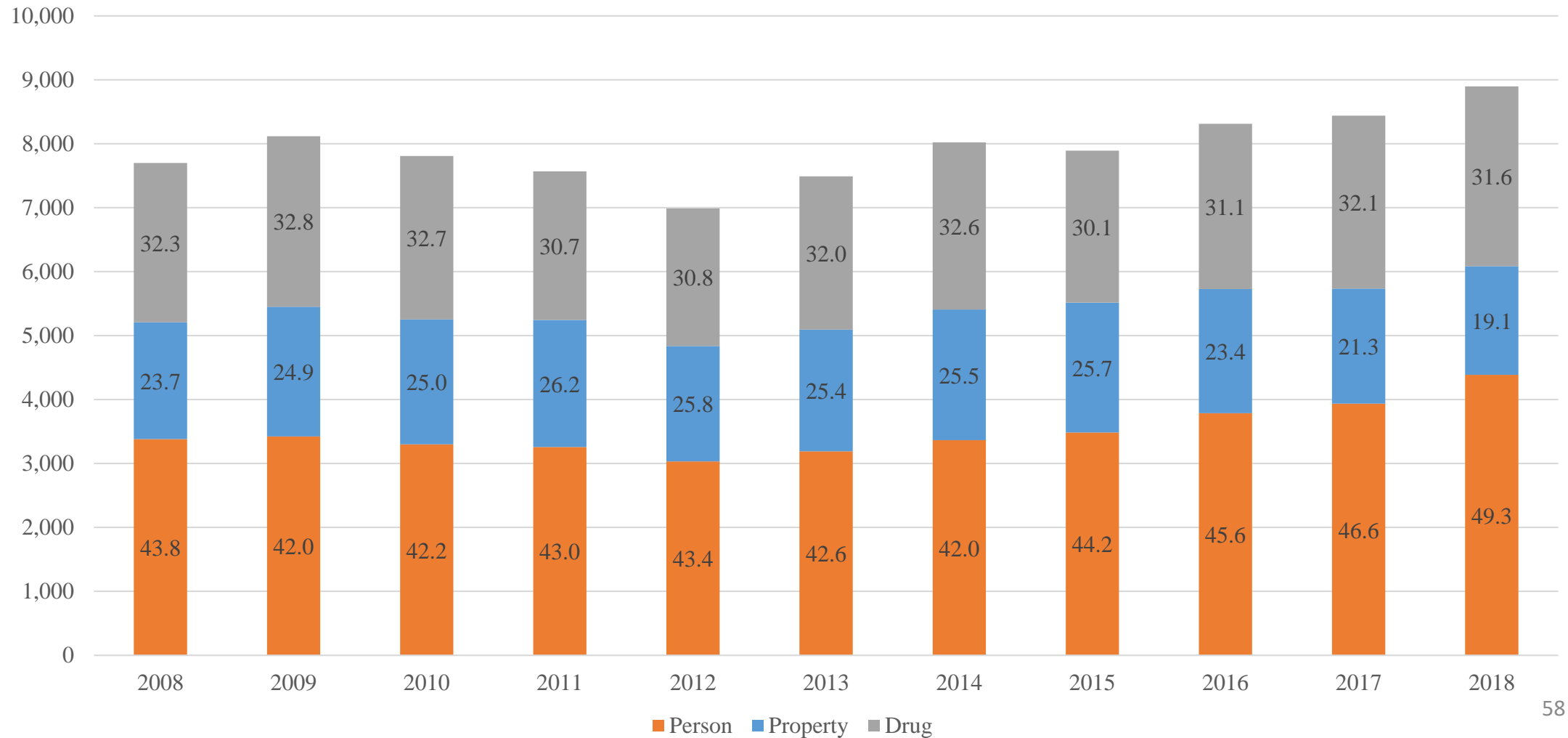
Where Prison Sentences Come From



Total Volumes of Sentences in Baltimore City



Total Volumes of Sentences in Other Counties

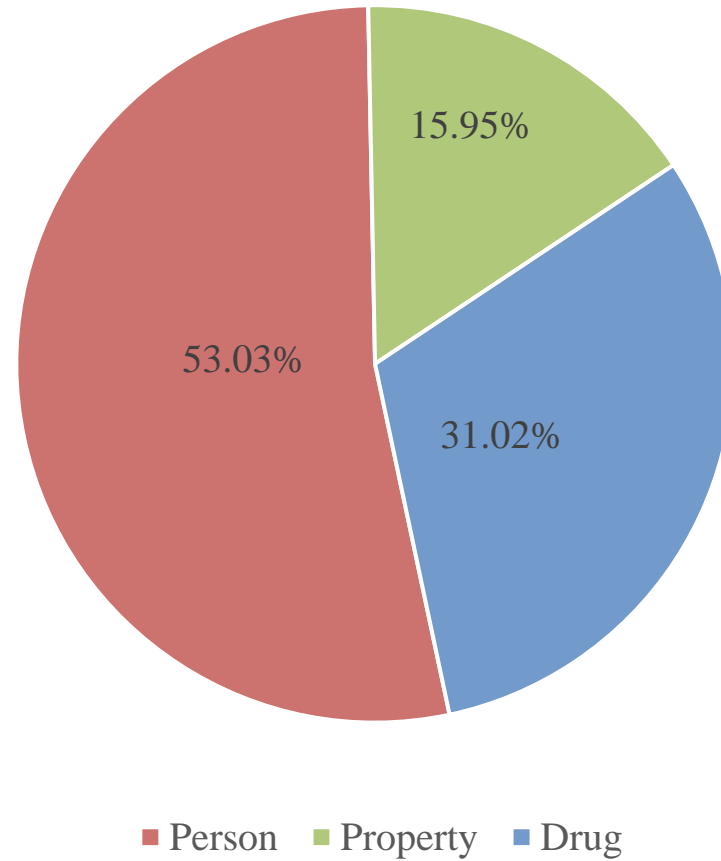


Criminal History, Recidivism, and Expungement

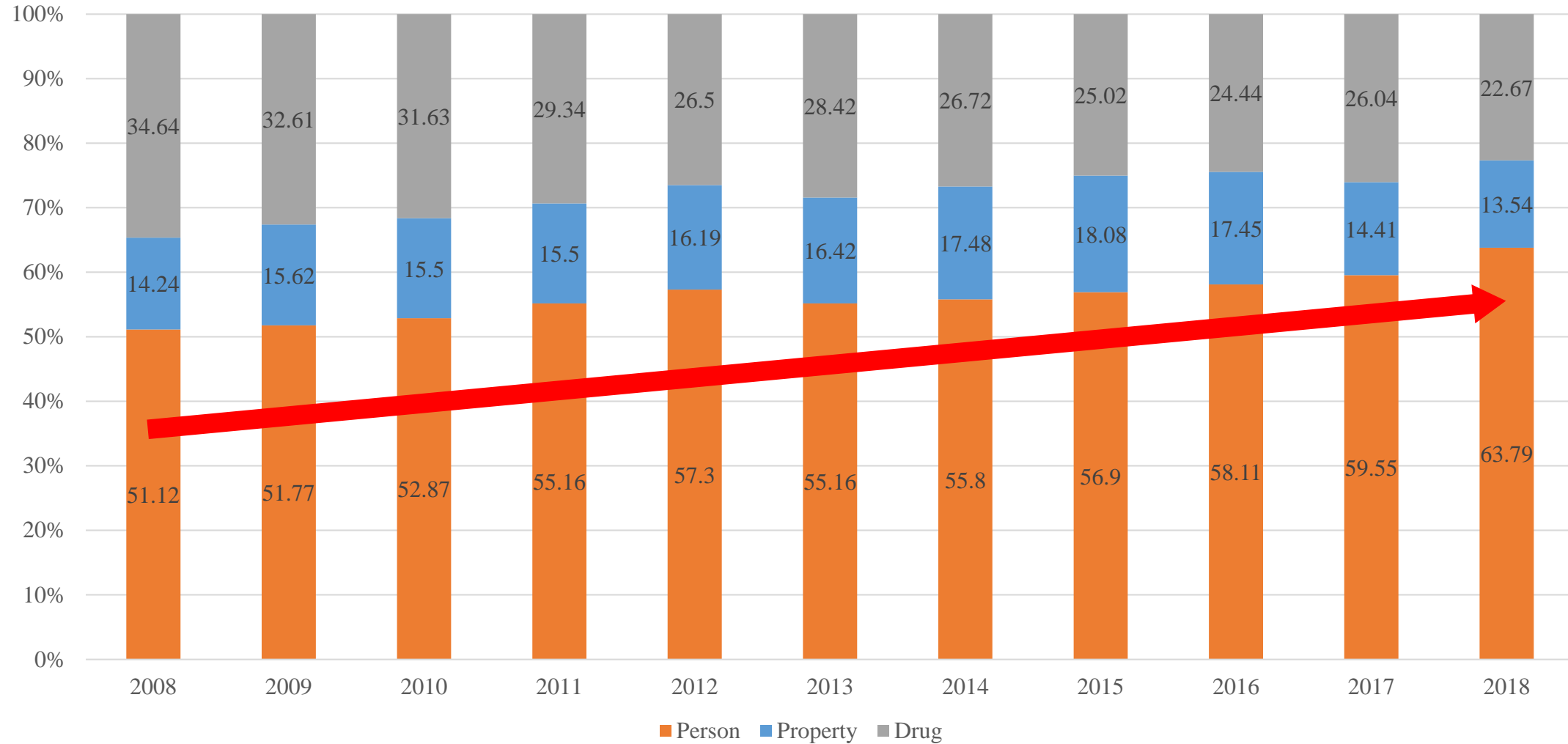
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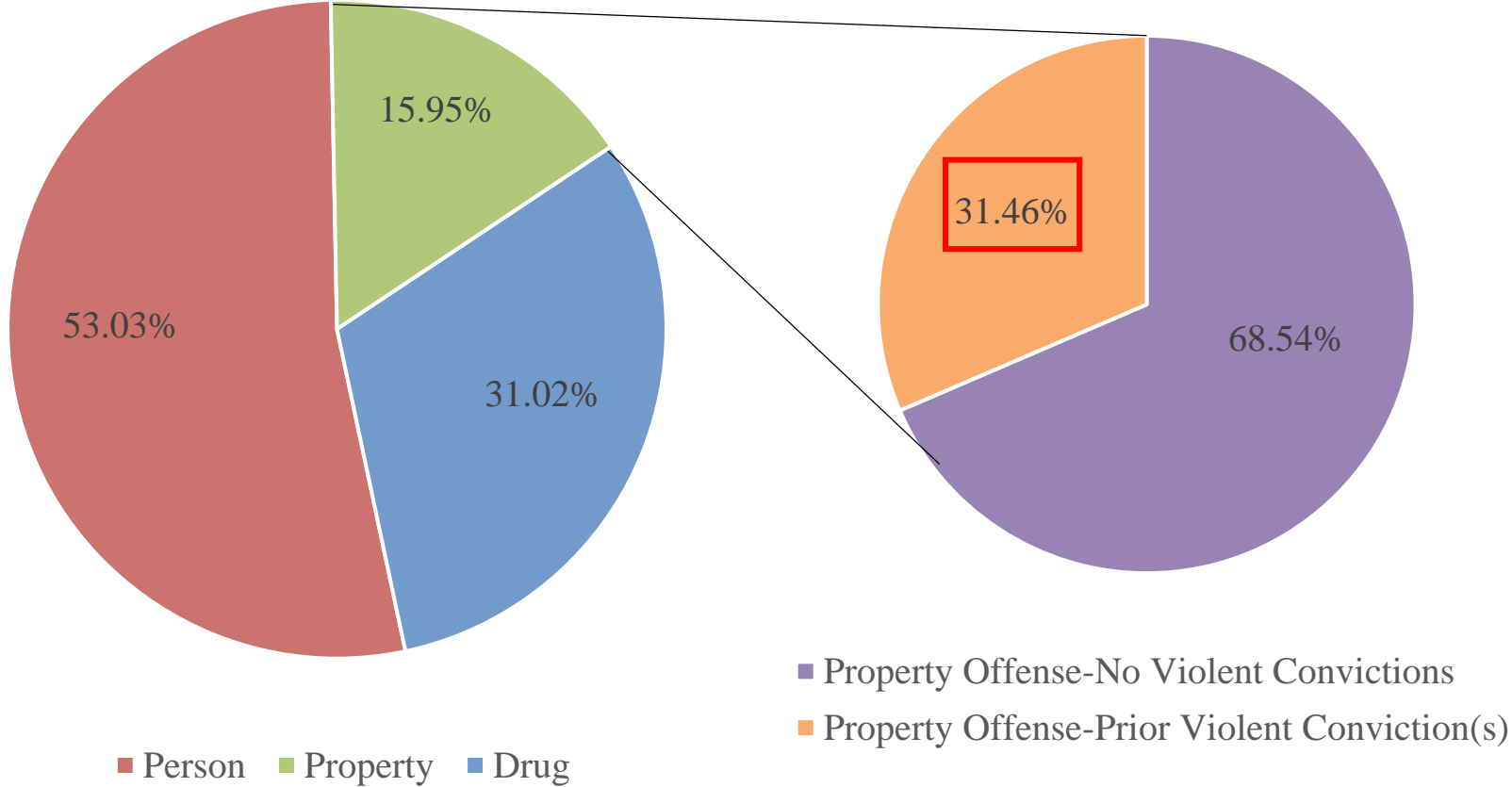
State Prison Sentences by Present Offense (2008-2012)



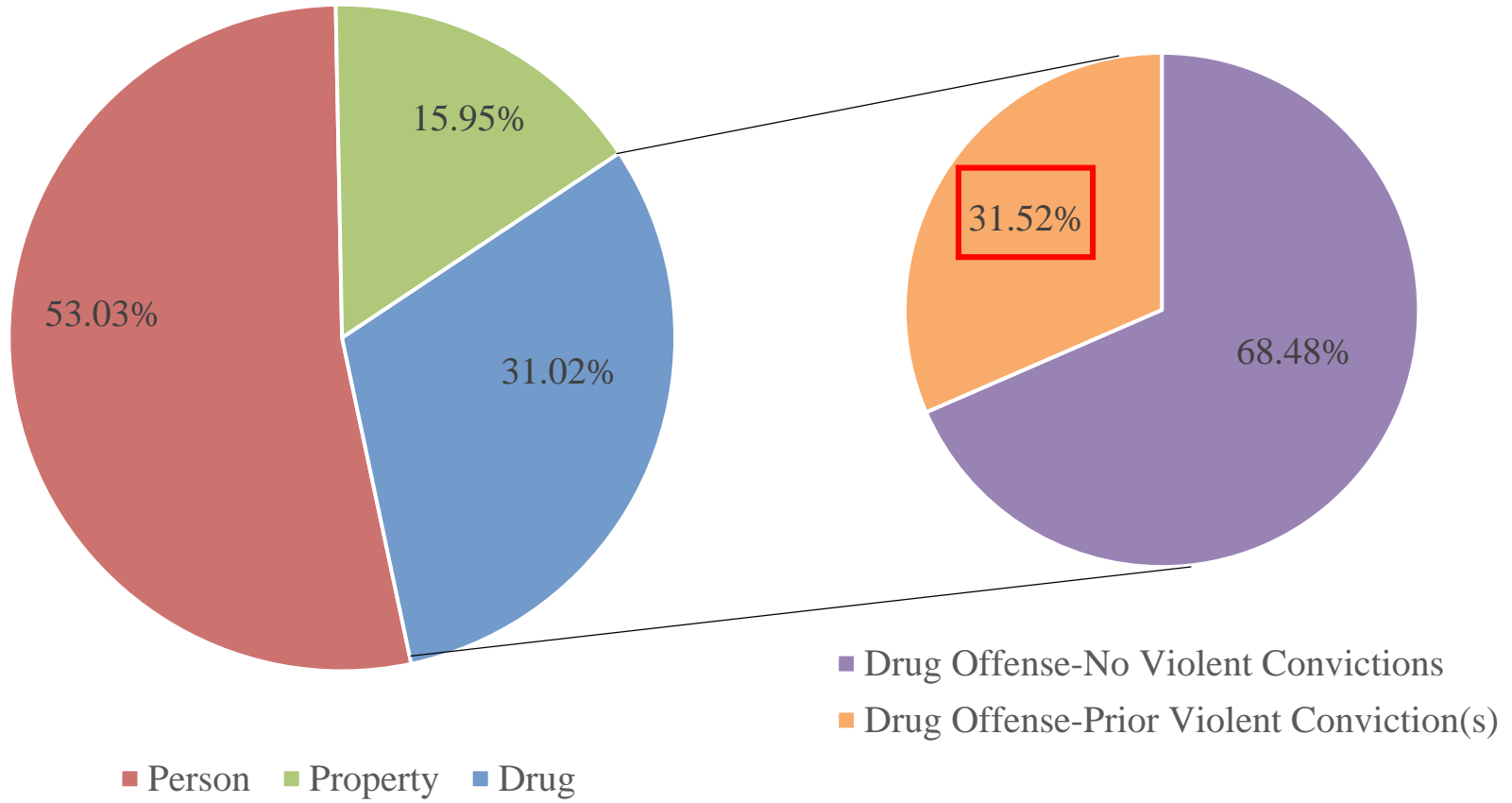
State Prison Sentences by Present Offense



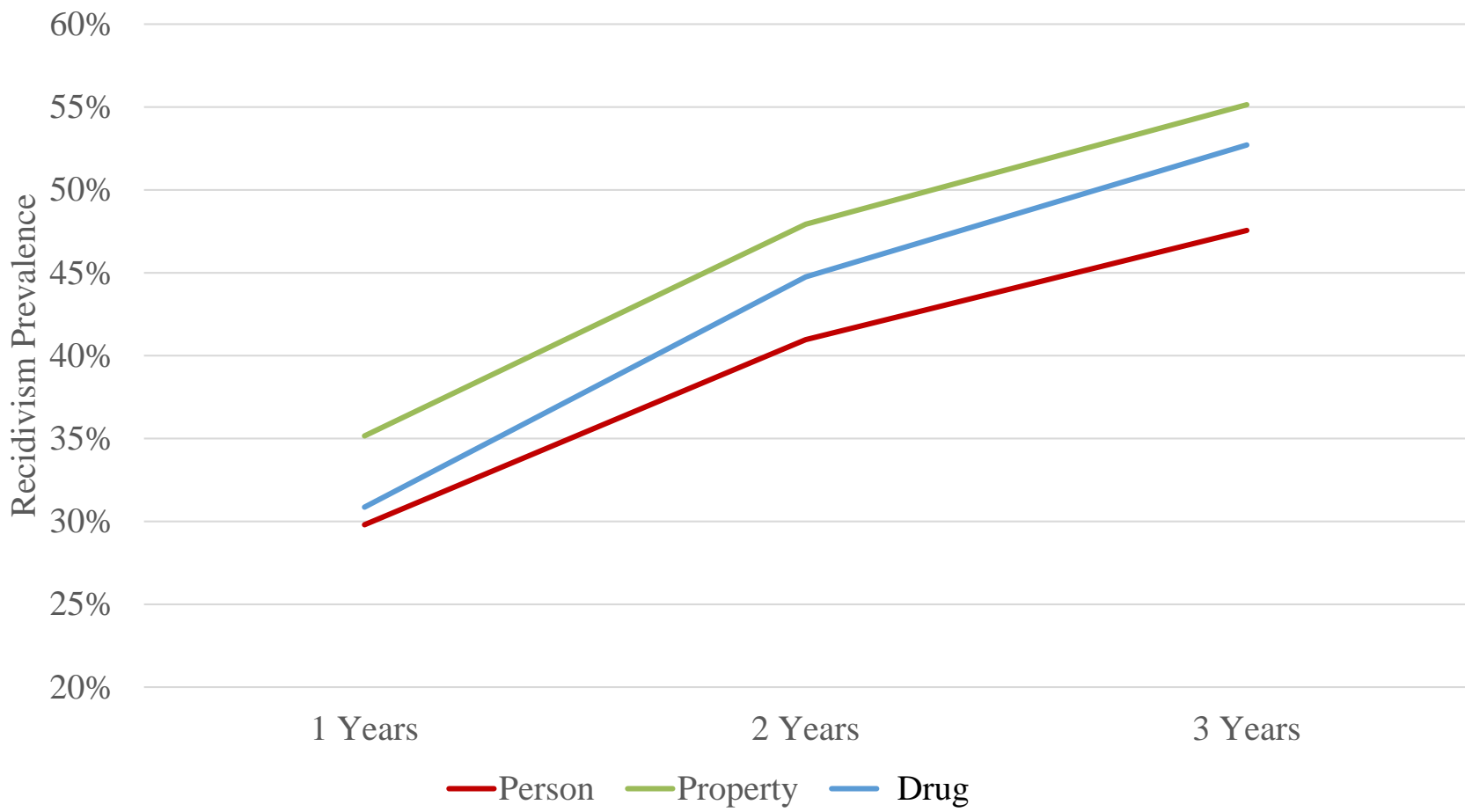
Property Offenders Sentenced to Prison with Prior Violent Convictions



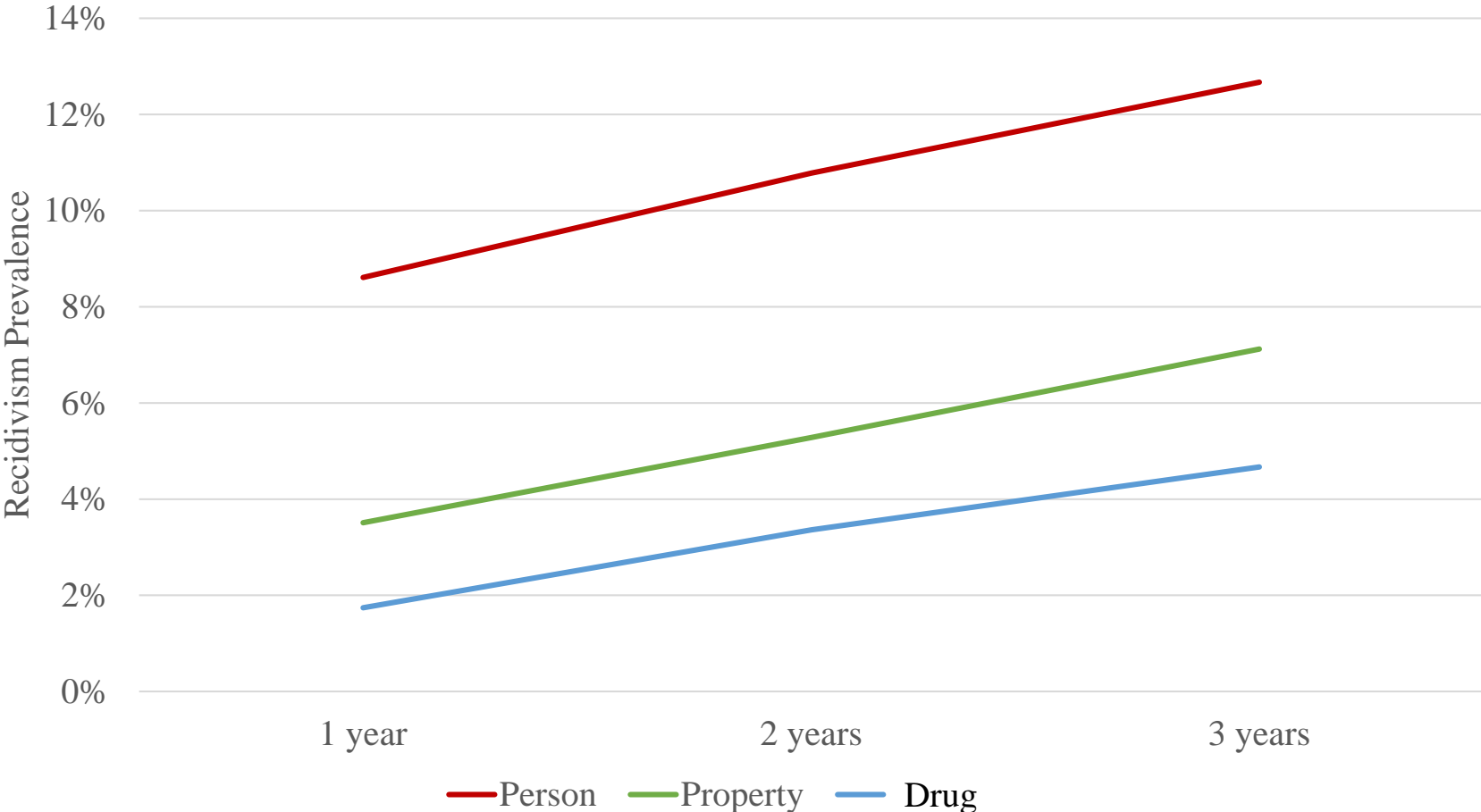
Drug Offenders Sentenced to Prison with Prior Violent Convictions



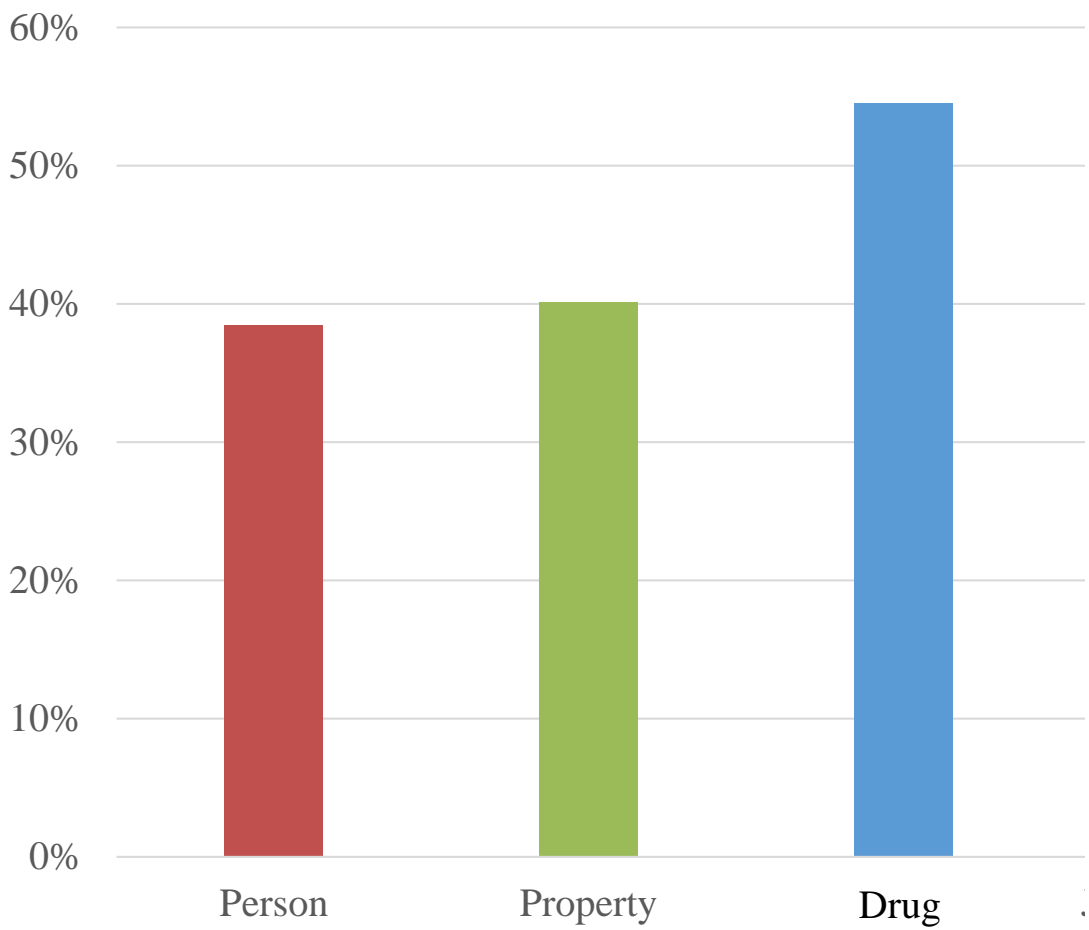
Rearrest Rates for Any Charge, by Present Offense



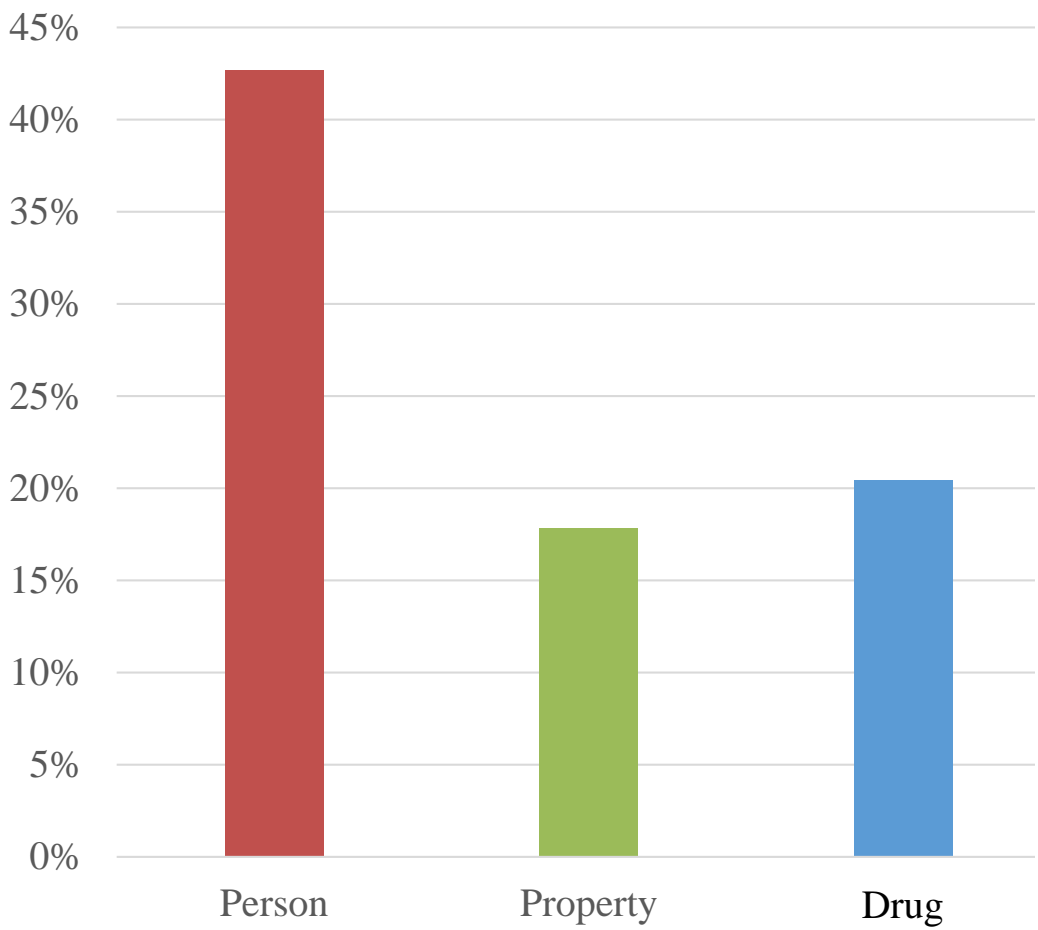
Reconviction Rates for Violent Charge, by Present Offense



Two or More Prior Convictions, by Present Offense



Any Prior Violent Conviction, by Present Offense



Accounting for Selection: Are Prison and Jail Interchangeable (in Recidivism)?

Kiminori Nakamura
University of Maryland

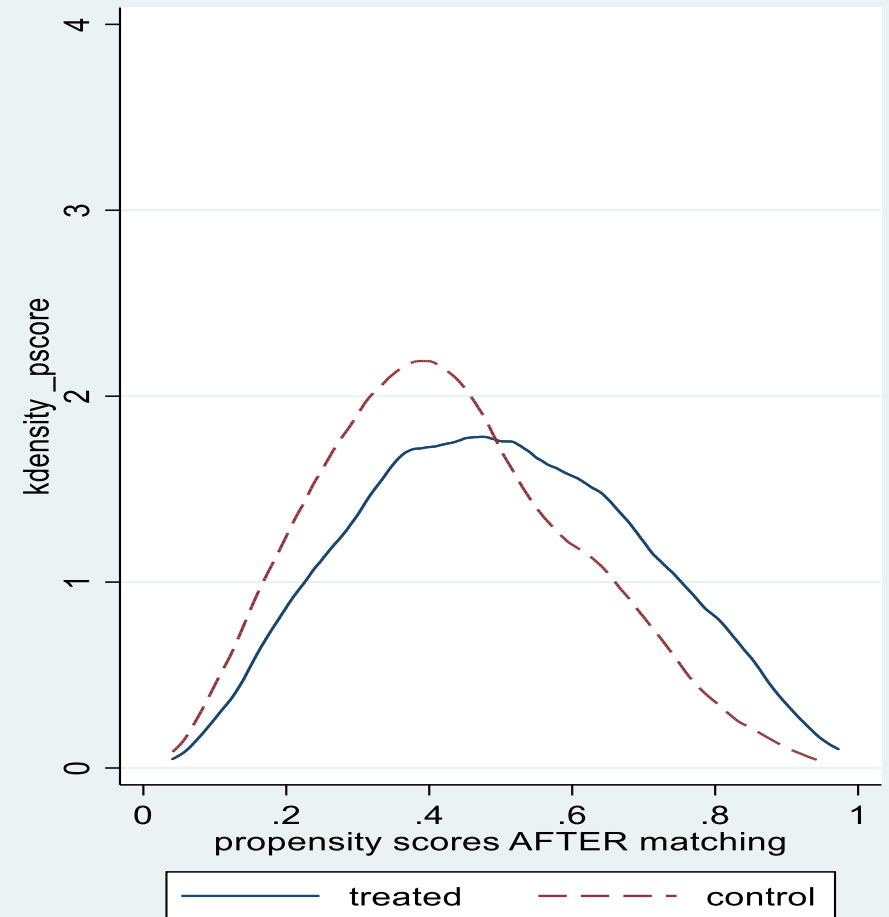
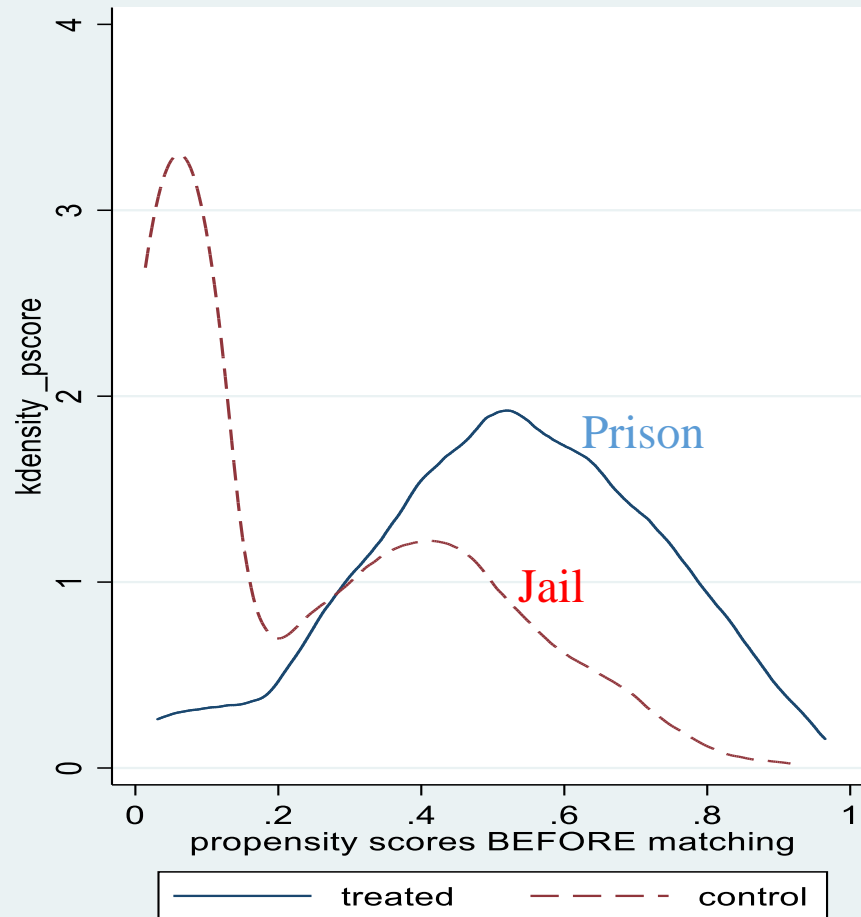
Emily Glazener
University of Maryland

Shifting the Place of Confinement

- Realignment in CA diverted non-serious offenders as well as parole violators from state prisons to county jails
- Justice Reinvestment initiatives in NC, NE, SD moved certain classes of offenders from prison to jail
- In Maryland: reduced sentences as a result of JRA can change prison sentences to jail sentences
- Pros and Cons
 - + Close to home community, visitation, better reentry coordination
 - Fluid environment, not designed for rehabilitative programming
- Use the 2008-2012 cohort sentenced at the Maryland Circuit Court (MSCCSP), linked with criminal history records (CJIS/DPSCS)
- Propensity score matching to account for selection

Are We Comparing Apples to Apples?

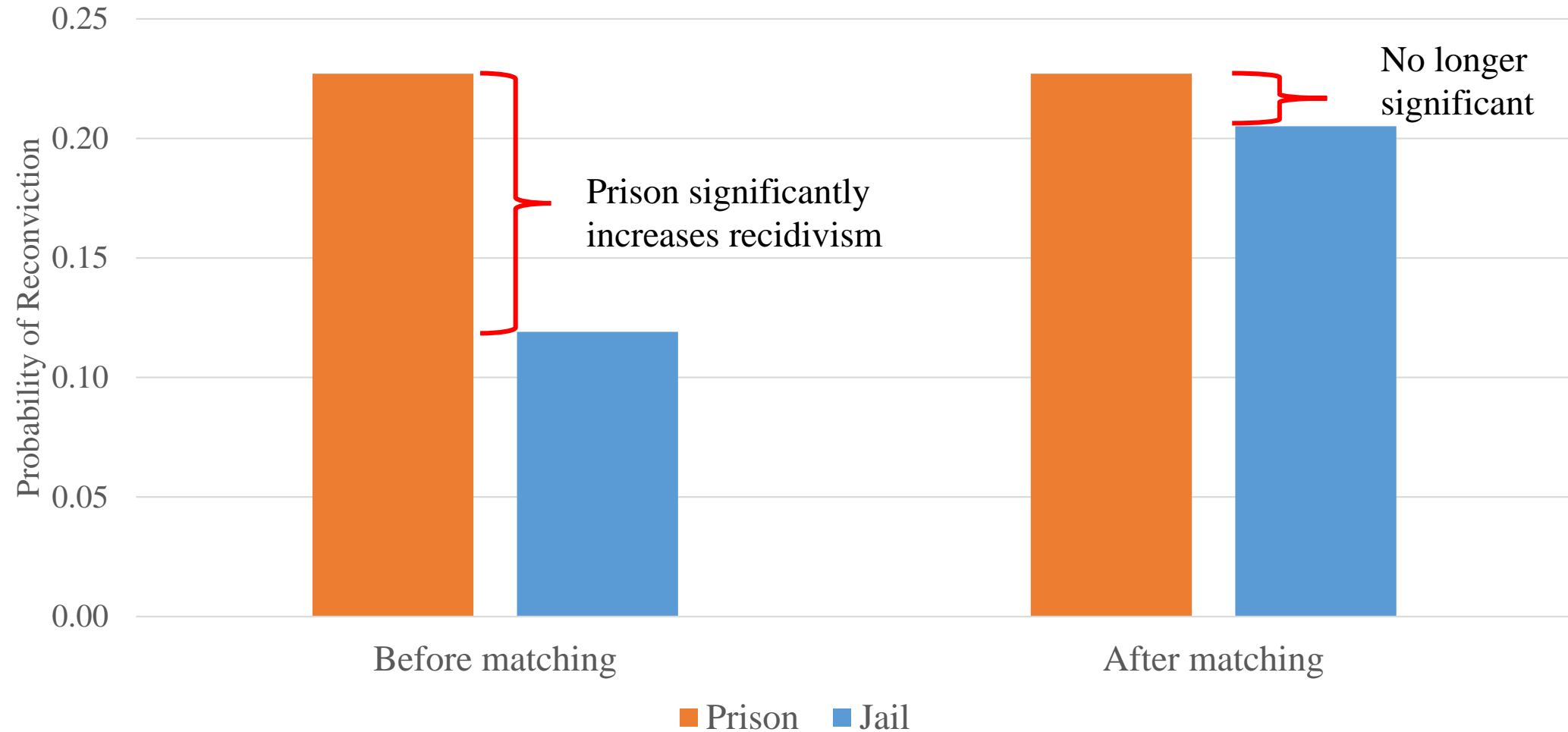
Propensity score =
Predicted Probability of
being Sentenced to Prison



Covariate Balance BEFORE and AFTER Matching

	BEFORE				AFTER			
	Prison	Jail	T-Stat	P-value	Prison	Jail	T-Stat	P-value
Seriousness	3.653	3.314	11.397	0.000	3.653	3.628	0.87	0.382
Offender Score	2.909	2.201	13.943	0.000	2.909	2.946	-0.62	0.533
Prior Arrests	6.373	4.971	10.221	0.000	6.373	6.342	0.18	0.855
Prior Violent Arrests	1.65	1.345	6.499	0.000	1.650	1.709	-1.05	0.295
Prior Weapon Arrests	0.745	0.491	10.822	0.000	.745	.743	0.05	0.961
Prior Convictions	3.377	2.582	11.395	0.000	3.377	3.338	0.46	0.647
Prior Violent Convictions	0.68	0.546	5.978	0.000	.680	.690	-0.40	0.691
Prior Weapon Convictions	0.475	0.288	11.815	0.000	.475	.467	0.38	0.707

Prison-Jail Recidivism Comparison BEFORE and AFTER Matching



Unanticipated Consequences of Expungement Laws

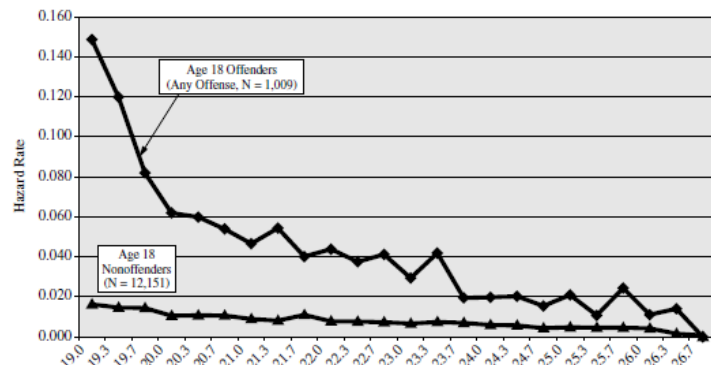
Kiminori Nakamura
University of Maryland

Emily Glazener
University of Maryland

Criminal Records and Recidivism

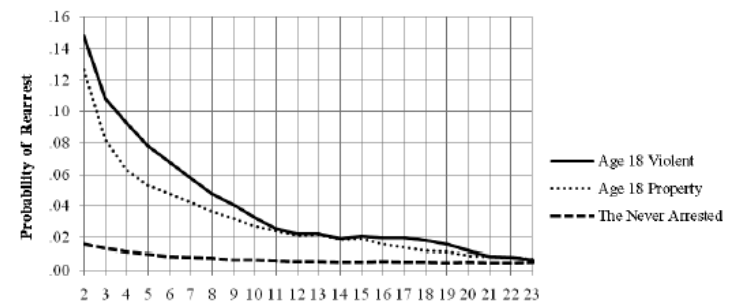
- Collateral consequences of criminal records [Leasure, 2018; Pager, 2003; Uggen et al., 2014]
- A “fact” in criminology: Positive correlation between past & future offending
- But: recidivists recidivate relatively quickly [Maltz, 1984]
- Redemption research: declining risk and a diminishing value over time

FIGURE 4. ARREST HAZARD RATE BY AGE



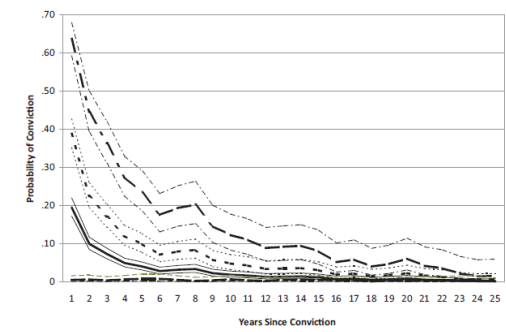
Kurlychek, Brame, & Bushway (2006)

Figure 4. Comparison with the Never Arrested (Age 18 Violent, Property)



Blumstein & Nakamura (2009)

Figure 3. Predicted Hazards of a 26-Year-Old Offender with Different Criminal History Records



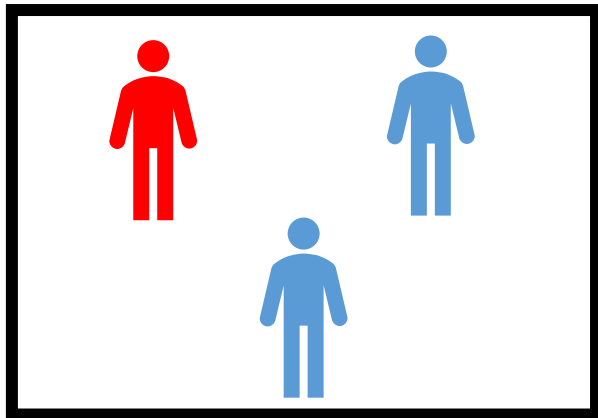
Bushway, Nieuwbeerta, & Blokland (2011)

Changing landscape of Record Clearing

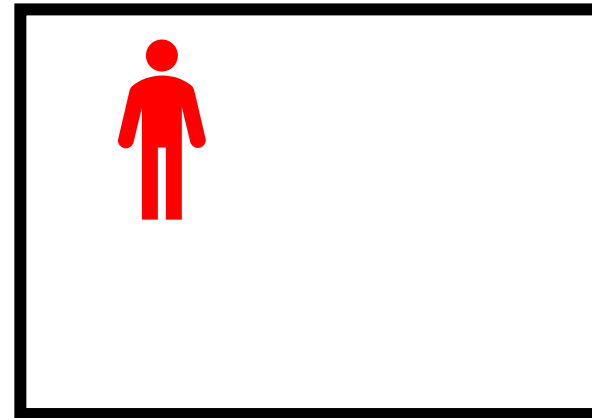
- Clean Slate Act of 2018 in Pennsylvania
 - *Automatic* sealing
 - Summary offenses and many non-violent misdemeanor convictions after 10 years from disposition
 - Non-conviction records without waiting periods
 - Estimated 30 million cases or half of the state court caseload will be sealed
- Justice Reinvestment Act of 2016 in Maryland
 - Expungement of conviction records
 - Over 100 misdemeanors, including drug possession and theft, after 10 years from sentence completion
 - Felonies including theft, drug trafficking, and burglary, after 15 years
- Waiting period = Low recidivism risk

Potential Consequences of Deleting Records

Risk assessment and recidivism research suggests that criminal history predicts recidivism but recent history predicts better than old history –
Expungement systematically removes low risk people



Complete data



Data after expungement

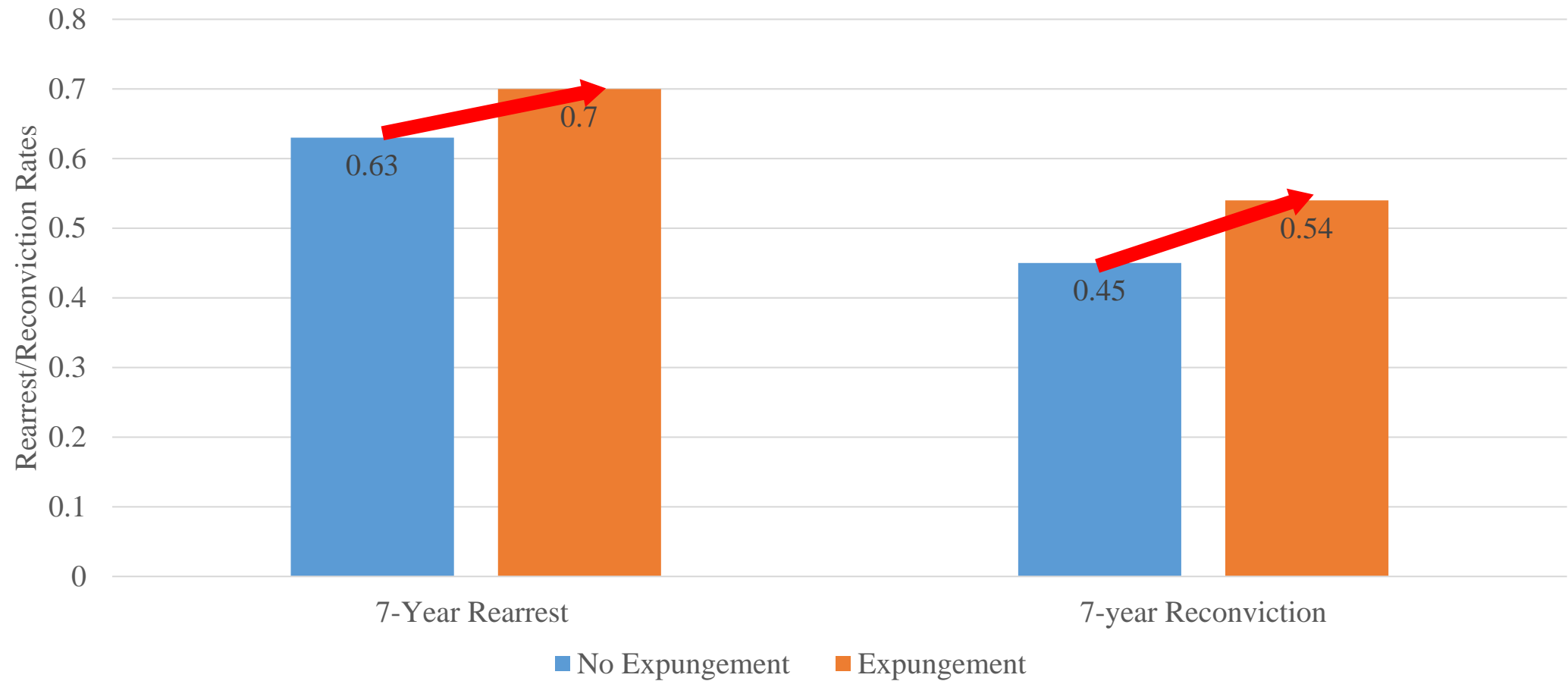
Simulating Expungement Consequences on Recidivism Rate Calculations

- All individuals sentenced to non-incarceration sentences in 2008
- Since the waiting periods to expunge conviction records under JRA (10, 15 years) are longer than the maximum follow-up length possible in the current data, we use 3 years as the length of waiting periods for all expungeable offenses
- Individuals can expunge their eligible sentencing offenses after serving their entire sentence plus 3-year waiting periods reconviction free

Offender Profiles by Expungement and Recidivism Status

	Full Sample Before Expungement (n=3,879)	Non-expungeable (n=2,586)	Expungeable Non-recidivists (n=736)	Expungeable Recidivists (n=480)	Full sample After Expungement (n=3,143)
	Mean (St. Dev.)	Mean (St. Dev.)	Mean (St. Dev.)	Mean (St. Dev.)	Mean (St. Dev.)
Offense Seriousness	3.56 (1.41)	4.04 (1.36)	2.55 (.93)	2.61 (.94)	3.80 (1.39)
Prior	1.76 (1.92)	1.97 (2.01)	1.15 (1.53)	1.61 (1.75)	1.90 (1.97)
White	.26 (.44)	.21 (.41)	.35 (.48)	.35 (.48)	.24 (.43)
Black	.68 (.47)	.74 (.44)	.56 (.50)	.56 (.50)	.70 (.46)
Male	.84 (.37)	.84 (.36)	.81 (.39)	.87 (.34)	.85 (.36)
Age	31.35 (11.36)	31.42 (11.42)	32.68 (11.52)	28.51 (10.16)	31.04 (11.31)

Offenders Sentenced to Probation in 2008 – Expungement Impacts on Recidivism Rate Calculations



Consequences of Expungement on Priors and Sentencing

- What would be the consequences of JRA expungement on prior adult record used for sentencing?
- Use the 2008-2012 cohort sentenced at the Maryland Circuit Court (MSCCSP), linked with criminal history records (CJIS/DPSCS)
- Only 965 out of 31,260 individuals (~3%) would expunge at least one prior conviction after applying the JRA expungement
 - On average, the number of prior convictions fell from 3.71 to 2.02
- Small impact due to long waiting periods for the relatively serious offender population
 - If waiting periods are reduced from 10 and 15 years to 5 and 10 years, the size of the expunged population would more than triple: nearly 11% of the sentencing cohort

Analyzing the Public Safety Impacts of the Justice Reinvestment Act in the State of Maryland

James P. Lynch
University of Maryland

Avinash Bhati
Maxarth, LLC

Mateus Renno Santos
University of South Florida

Justice Reinvestment (JRA) in Maryland

- Reductions in use and length of custodial sentences for persons charged with drug and property offenses.
- Measures to reduce revocations and time to be served upon revocation by persons on supervision.
- Development of drug treatment programs to serve as alternatives to incarceration.
- Re-distribution of funds from institutional corrections to alternatives to incarceration to further reduce incarceration.
- Increases in custodial sentences for a small group of violent crimes.

Research Questions

- Has JRA reduced the use of incarceration in the state of Maryland?
 - Just passing a law does not make it so
 - Need to determine if the law has changed decision-making
- Has the reduced use of incarceration resulting from JRA increased crime in the State?

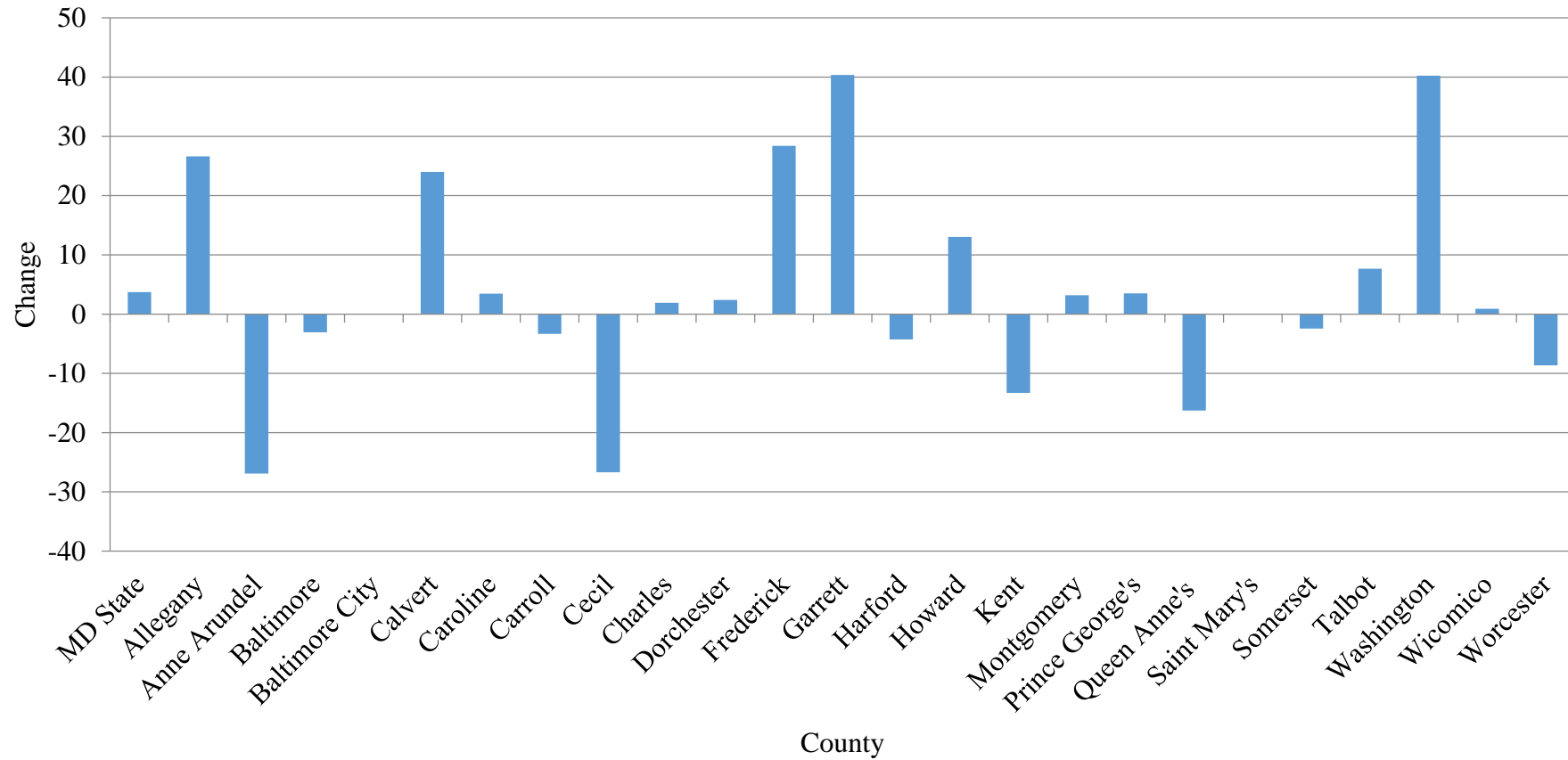
Assessing Compliance with JRA

- JRA reduces the use of incarceration by changing sentencing, supervision and release policies to reduce the prison and jail populations.
- Supervision and release policies are under the control of the DPSCS and were not easily accessible in the form necessary for this analysis, i.e. by month and county.
- We focused on the use of custodial sentences and the length of those sentences imposed by the Circuit and District Courts.
- While there are many more specific policies in JRA, reductions in court sentences of all the policies accounts for a lot of incarcerations.

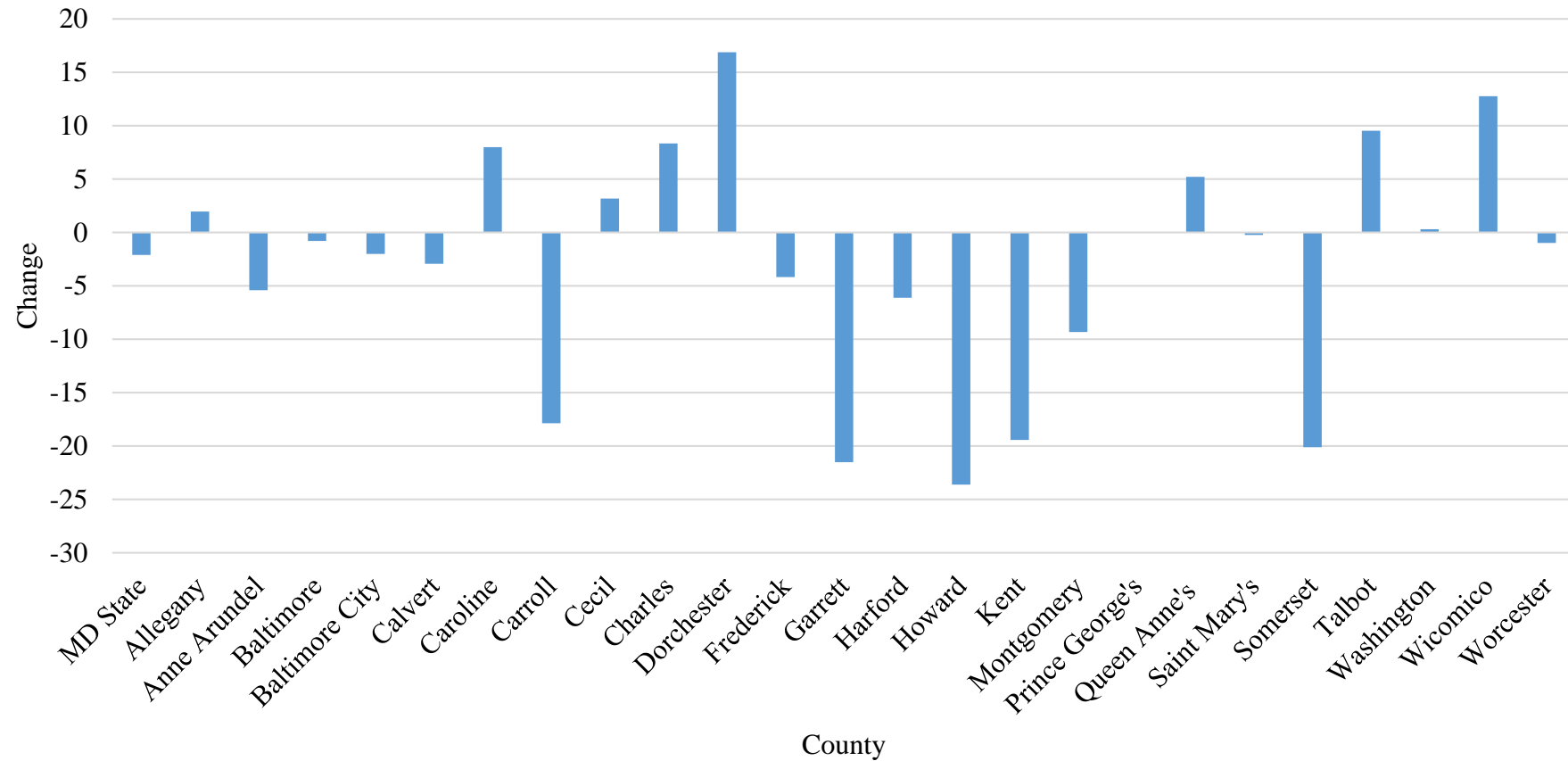
Using CLUE to Monitor Sentencing

- Client Legal Utility Engine (CLUE) scrapes Case Search records maintained by the courts.
- This provides case level data on cases processed in Circuit and District Courts including whether persons received custodial sentences and the length of those sentences.
- We were also able to identify charges, largely theft and drug offenses, where JRA reduced the likelihood of a custody sentence as well as the length of custody sentences.
- If the proportion of custody sentences and the length of sentences declined, this would indicate compliance with JRA.

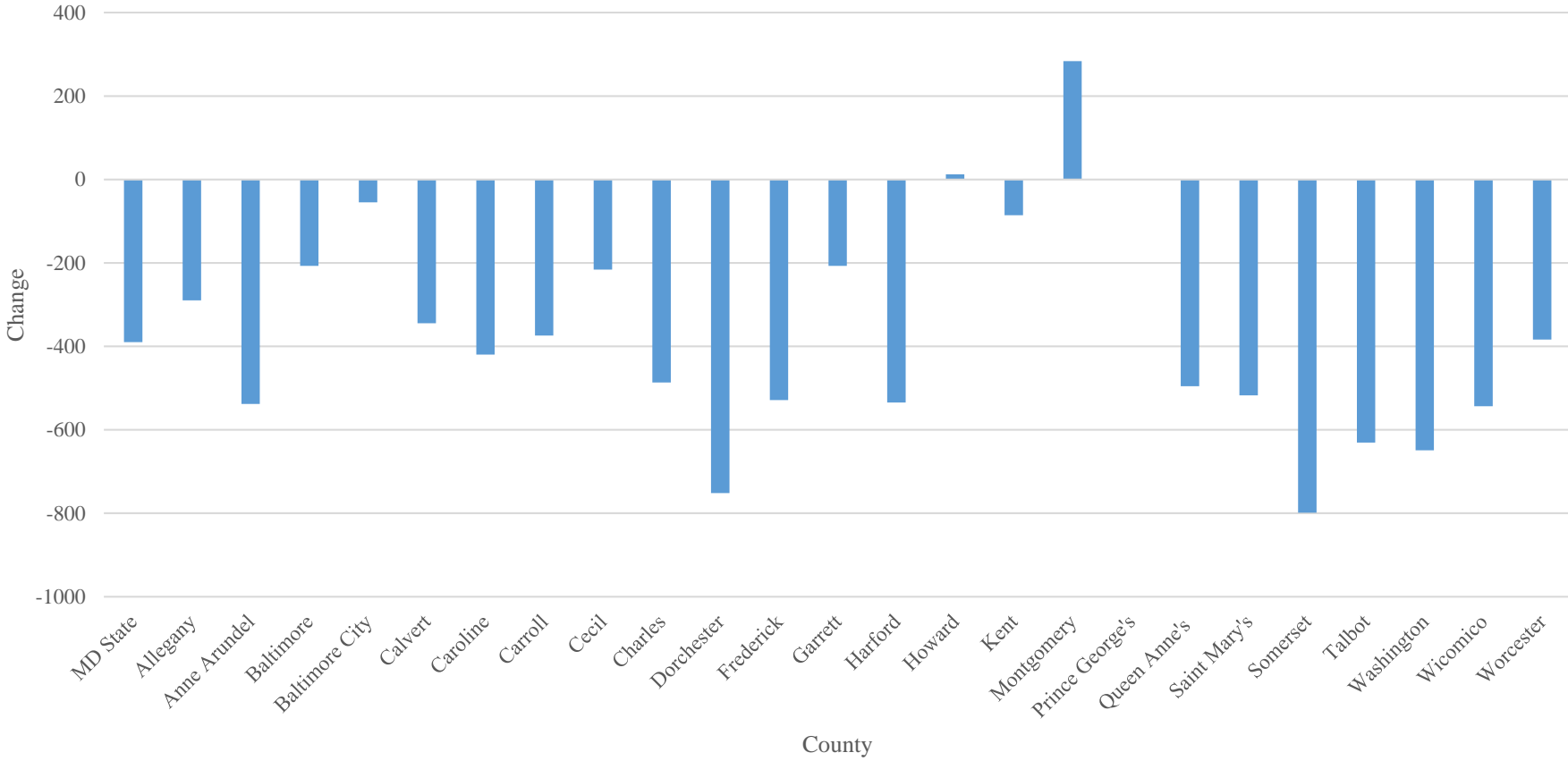
Change in % of JRA Offenses with Custody Sentences Pre/Post JRA (District Court)



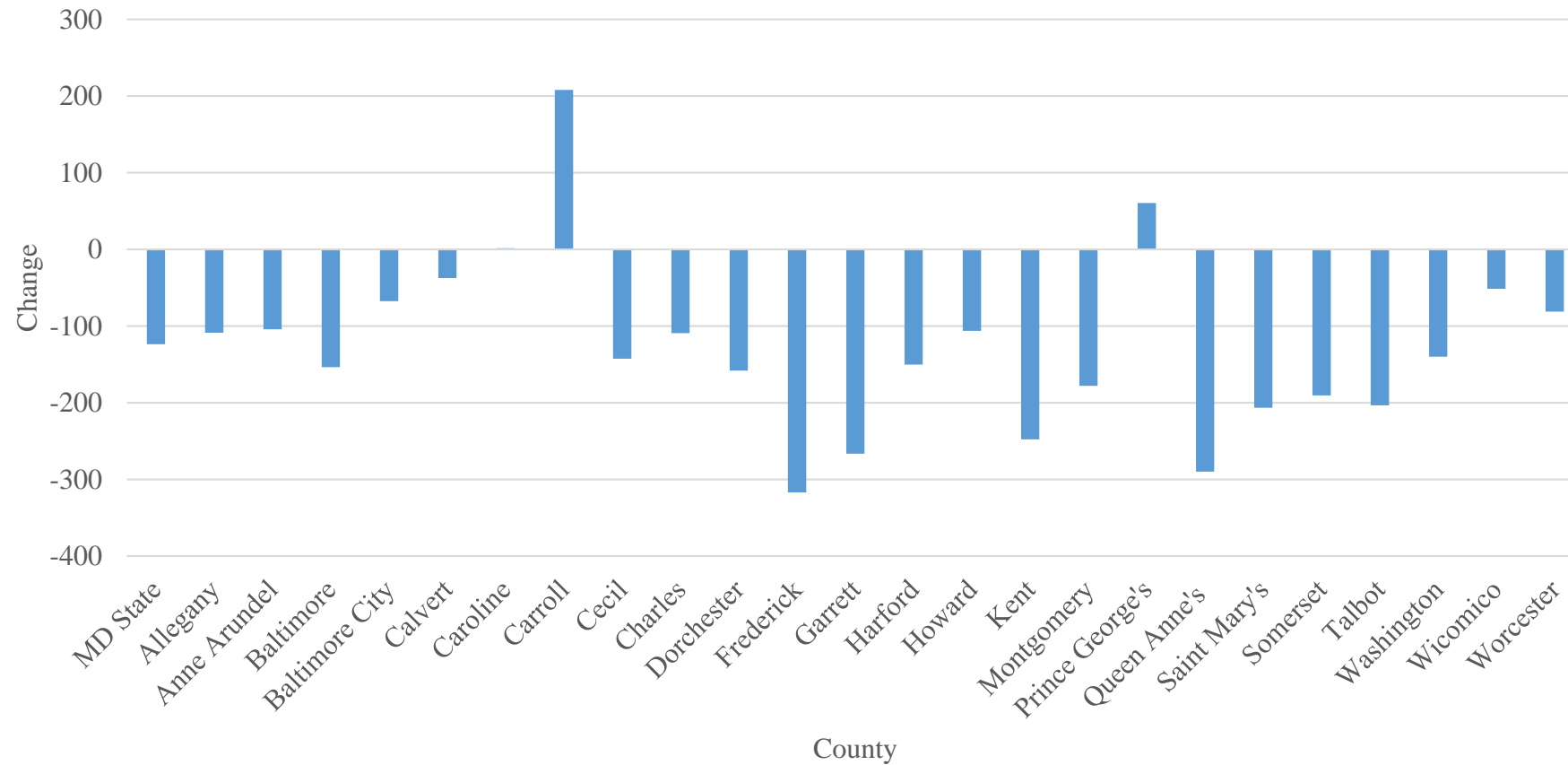
Change in % of JRA Offenses with Custody Sentences Pre/Post JRA (Circuit Court)



Change in Average Term (in days) Imposed for JRA Offenses Pre/Post JRA (Circuit Court)



Change in Average Term Imposed (in days) for JRA Offenses Pre/Post JRA (District Court)



Difference in Difference Model of JRA Compliance

- The difference in difference (or "double difference") estimator is the difference in average outcome in the treatment group before and after treatment minus the difference in average outcome in the control group before and after treatment : it is literally a "difference of differences."
- Method takes account of group and time in assessing the effect the treatment, in this case, JRA. The effect of JRA is what is left after time and group effects are held constant.
- JRA reduced length of custodial sentences in circuit court but not probability of a custody sentence.
- In District Court JRA reduced both probability and length of incarceration.

Table 1: Circuit Courts Difference-in-Difference Models Results

		Baseline		Baseline Model +		Baseline Model +		Baseline Model +	
		Model		County FE		Seasonal FE		County + Seasonal FE	
		Parm	p-val	Parm	p-val	Parm	p-val	Parm	p-val
Conviction Rate									
	JRA	4.62	0.00	4.62	0.00	4.62	0.00	4.62	0.00
	POST	-0.54	0.55	-0.54	0.52	-1.37	0.16	-1.38	0.12
	JRA*POST	-1.31	0.31	-1.30	0.27	-1.31	0.31	-1.30	0.27
	County				FE				FE
	Seasonal						FE		FE
Confinement Rate									
	JRA	6.49	0.00	6.86	0.00	6.48	0.00	6.86	0.00
	POST	3.15	0.08	3.15	0.03	2.97	0.12	3.02	0.05
	JRA*POST	-1.29	0.62	-1.53	0.46	-1.29	0.61	-1.54	0.45
	County				FE				FE
	Seasonal						FE		FE
Confinement Term									
	JRA	-742.82	0.00	-752.29	0.00	-743.20	0.00	-752.85	0.00
	POST	26.58	0.66	24.60	0.66	19.99	0.76	15.49	0.80
	JRA*POST	-402.27	0.00	-395.08	0.00	-402.17	0.00	-394.93	0.00
	County				FE				FE
	Seasonal						FE		FE

Table 2: District Courts Difference-in-Difference Model Results

		Baseline		Baseline Model +		Baseline Model +		Baseline Model +	
		Model		County FE		Seasonal FE		County + Seasonal FE	
		Parm	p-val	Parm	p-val	Parm	p-val	Parm	p-val
Conviction Rate									
	JRA	-2.00	0.00	-2.00	0.00	-2.00	0.00	-2.00	0.00
	POST	-3.54	0.00	-3.54	0.00	-2.70	0.00	-2.70	0.00
	JRA*POST	-0.01	1.00	-0.01	0.99	-0.01	1.00	-0.01	0.99
	County				FE				FE
	Seasonal						FE		FE
Confinement Rate									
	JRA	34.27	0.00	34.29	0.00	34.27	0.00	34.29	0.00
	POST	-1.53	0.44	-1.53	0.38	-2.17	0.29	-2.18	0.23
	JRA*POST	-6.08	0.03	-6.09	0.02	-6.08	0.03	-6.10	0.01
	County				FE				FE
	Seasonal						FE		FE
Confinement Term									
	JRA	21.85	0.21	22.21	0.15	21.64	0.22	22.01	0.15
	POST	-4.19	0.84	-5.06	0.78	-18.77	0.40	-19.40	0.32
	JRA*POST	-121.58	0.00	-120.41	0.00	-121.40	0.00	-120.28	0.00
	County				FE				FE
	Seasonal						FE		FE

De-incarceration and Public Safety

- We see that JRA has resulted in less use of incarceration in sentencing.
- What are the implications for public safety in Maryland?
- Debate about the incarceration-crime link is never ending and extremely nuanced.
 - Research indicates a modest negative effect of incarceration on crime
 - This varies across crimes, sanctions and populations.
- JRA assumes that focusing non-violent offenders will minimize any risk posed by not incarcerating or by releasing offenders.
- If any increase in risk occurs, it will be in non-violent offenses.

Approaching Assessment

- Recidivism of individual offenders
 - Incapacitation effects of JRA
 - How many crimes do persons released by JRA commit when they would have otherwise been in prison?
- Impact on crime rates
 - Both incapacitation and deterrent effects of incarceration.
 - How many crimes do persons released by JRA commit when they would have otherwise been in prison?
 - How many people commit crimes because of the perception that they will be less likely to be incarcerated?

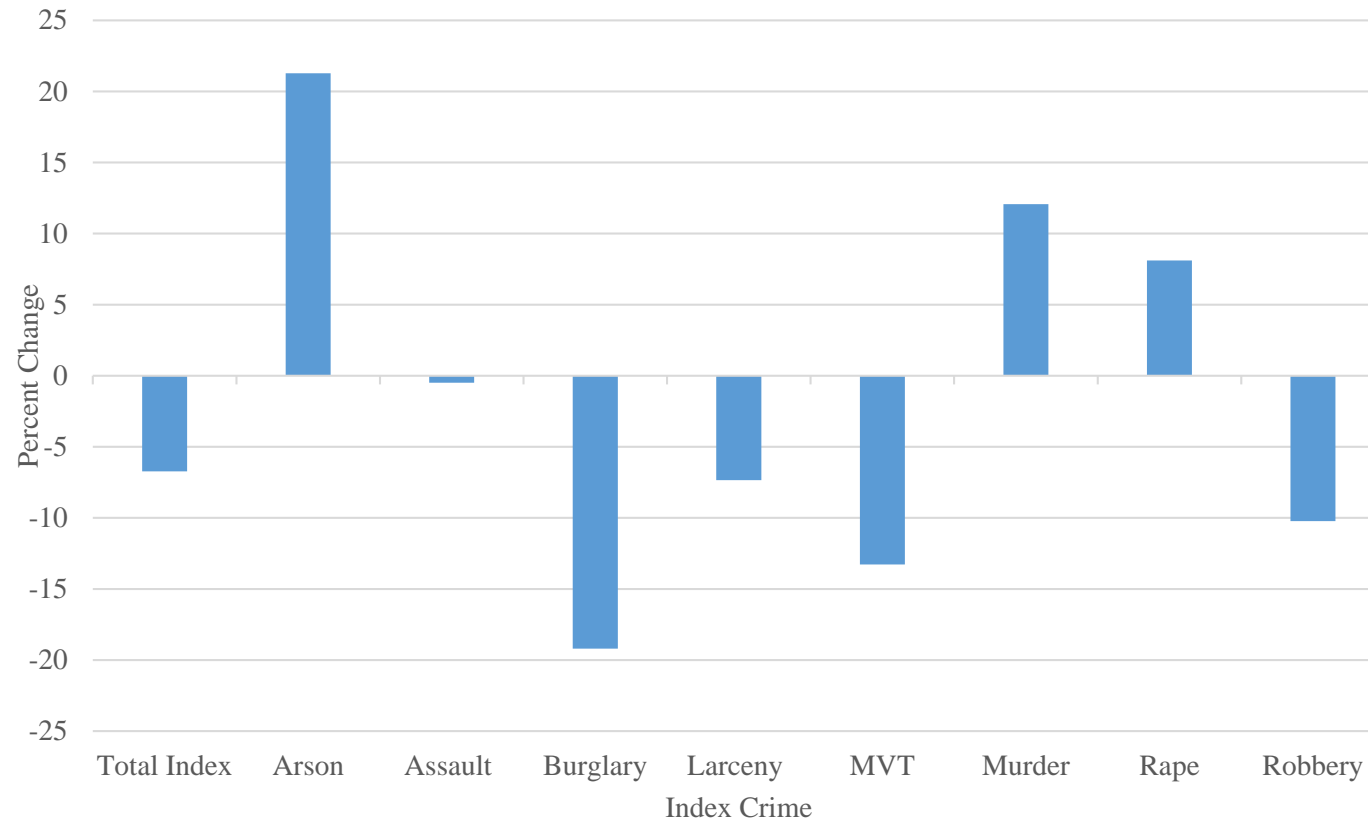
Assessing the Impact on Crime Rates

- Is JRA associated with increases in crime?
 - Pre-Post Comparisons of state and county-level crime
 - Comparisons of crime trends between counties that vary in their implementation of JRA
- Are these changes in crime due to something else?
 - Holding other crime relevant factors constant while comparing crime in jurisdictions with varying implementation of JRA

Crime and Implementation Data

- Crime
 - Monthly jurisdiction-level data on index crimes from FBI's UCR
 - Aggregated to county-level estimates
 - Total as well as person and property crime
- Implementation of JRA using CLUE data as described above
- Socio-demographic data—age, race, employment, income, welfare benefits interpolating months from annual estimates
- Study Period: May 2016-December 2018
 - 15-months prior to and following JRA effective date (October 2017)

Percent Change in Index Crimes for MD Pre/Post JRA by Crime Type (15-mo Pre-Period)



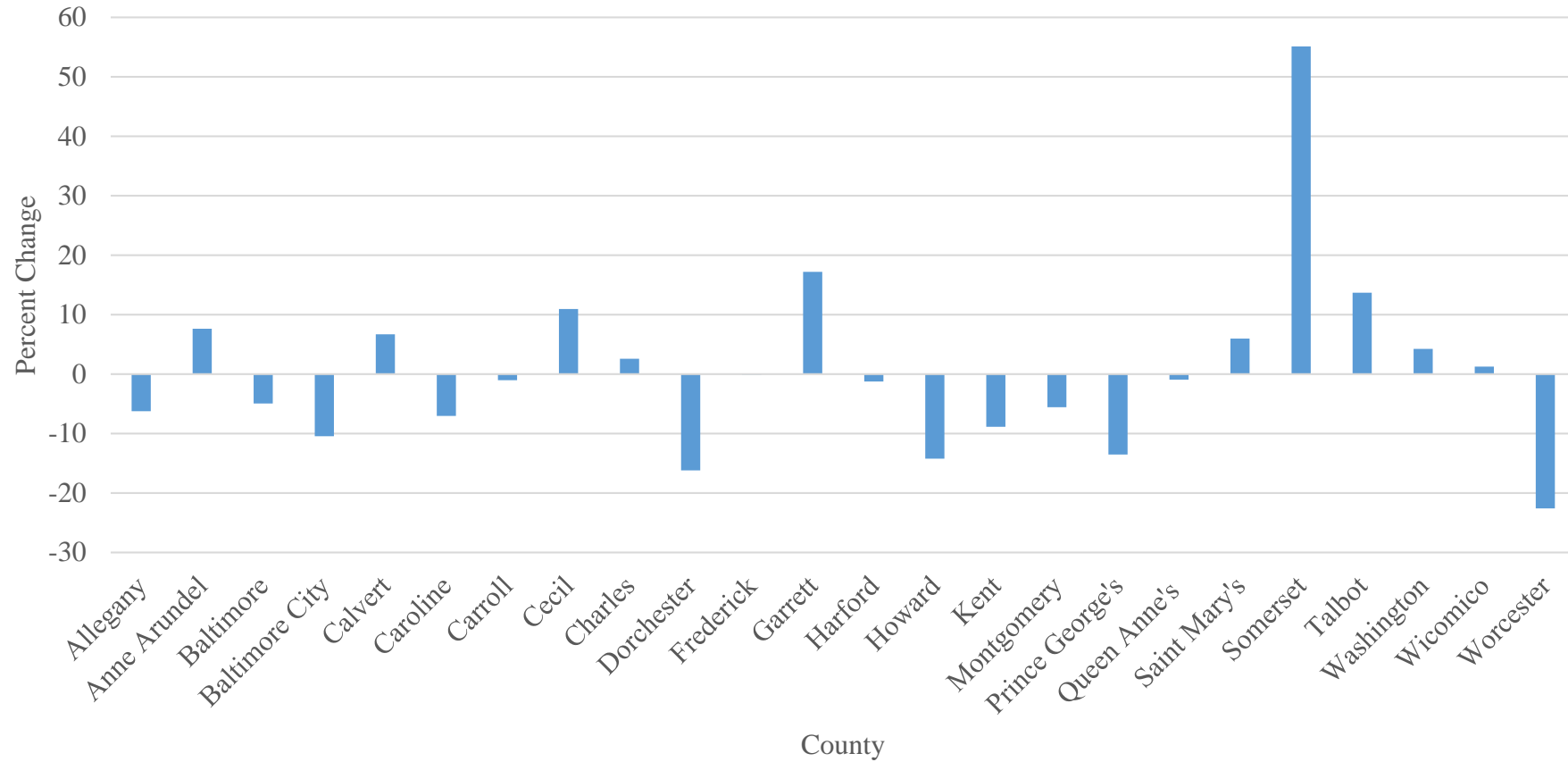
Effects on State

- Number of total index crimes declined from the pre to the post JRA period throughout the state.
- Declines in crime were largest and most consistent for property crimes.
- Violent crimes either did not change or increased after the implementation of JRA.

County Level-Pre/Post Comparisons

- Counties have had different experiences with JRA.
- Examining the implementation of JRA and crime at the county level lets us assess the relationship between JRA and public safety.
- Each county allows us to assess the effects of JRA on public safety over time.

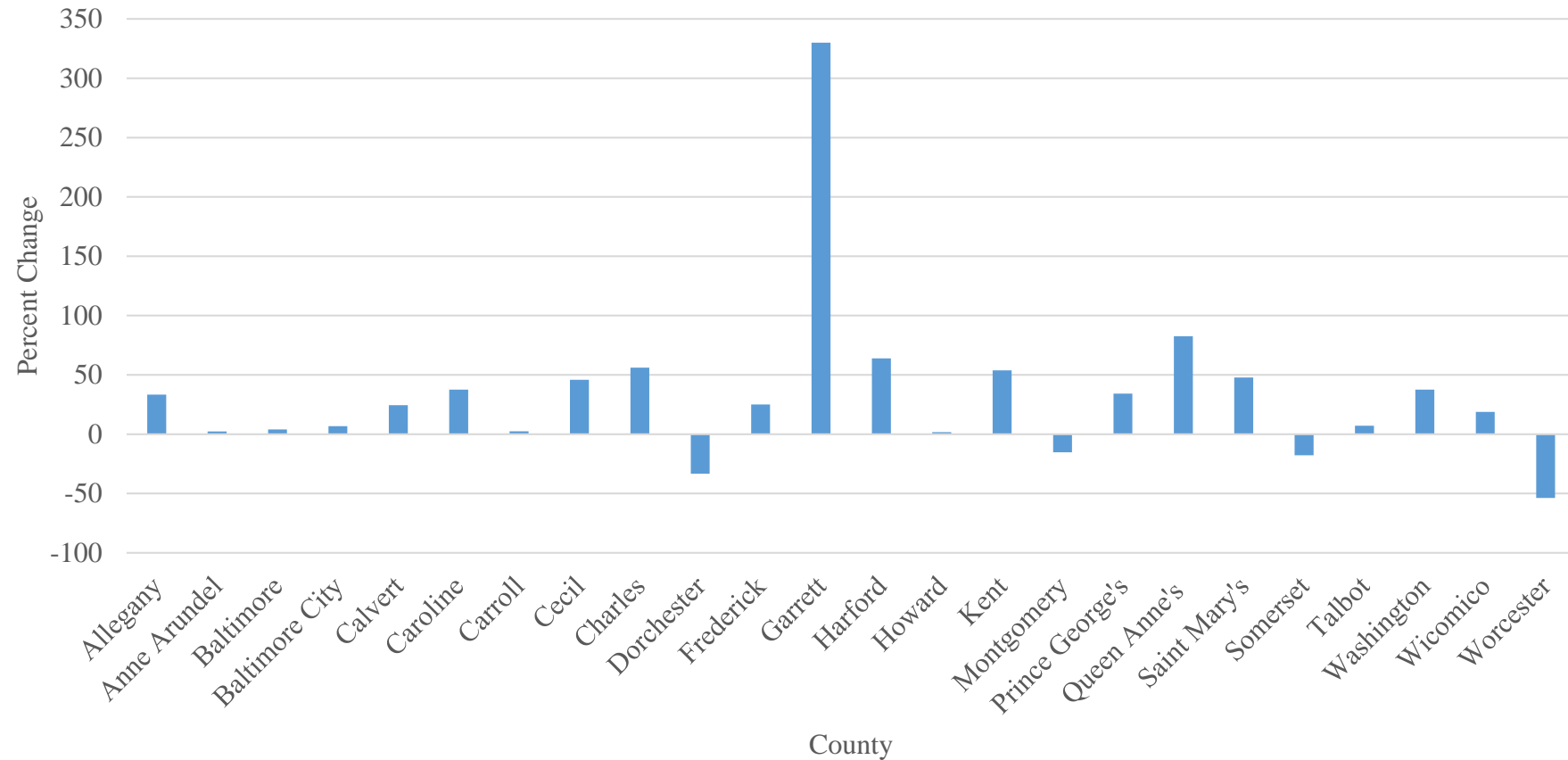
Percent Change in Index Crimes Pre/Post JRA by County



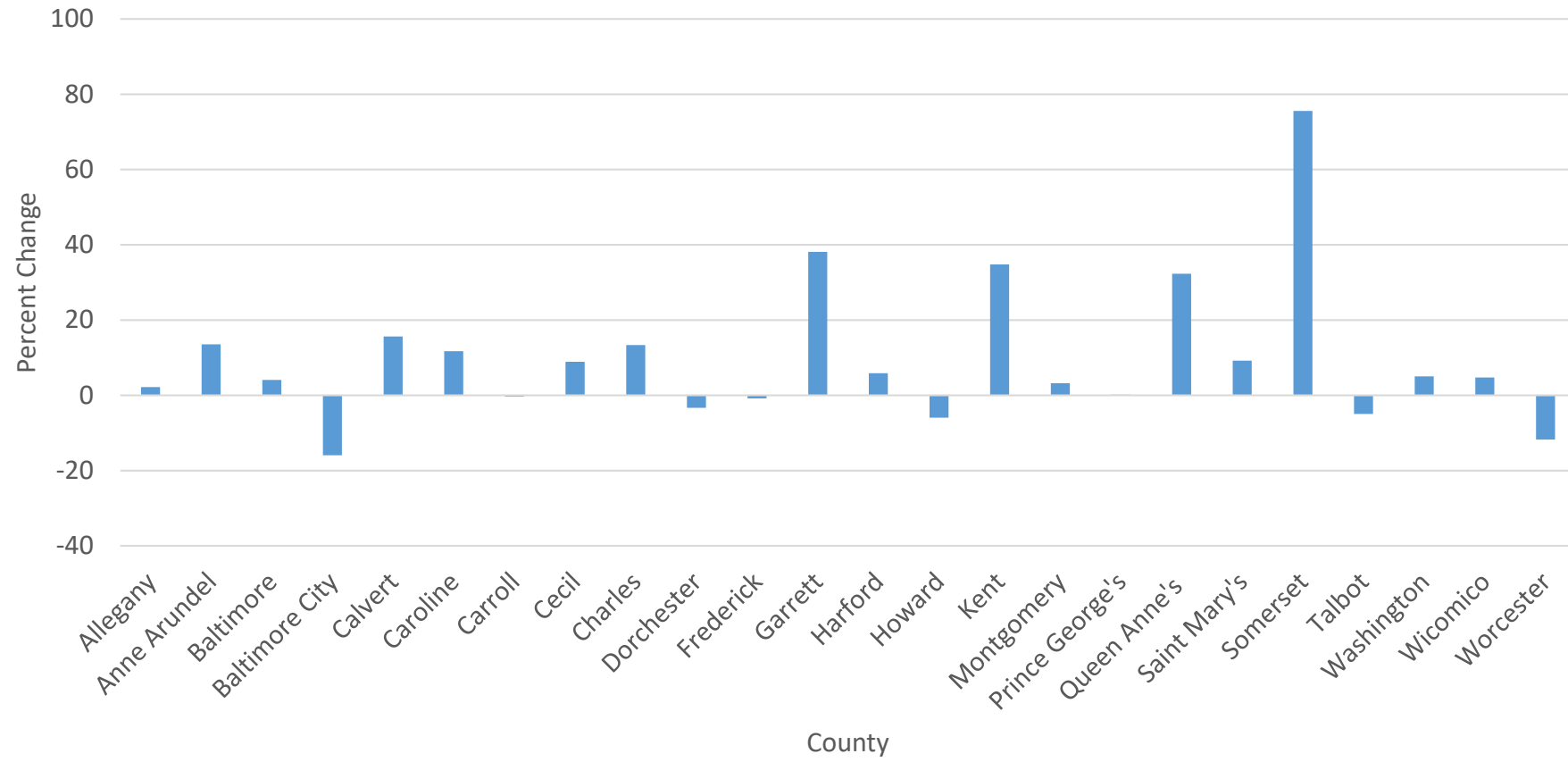
Variation in Change in Crime Across Counties

- Change in the volume of crime before and after JRA varies across counties.
 - 10 counties experienced increases in index crimes and 14 declines
- Property crime declines more consistently across counties than violent crimes.
 - Assault increased in the majority of counties, as did rape but not robbery.
 - Burglary declined in 19 of 24 counties and larceny in 17 counties
- Smaller counties are more likely to experience increases in crime

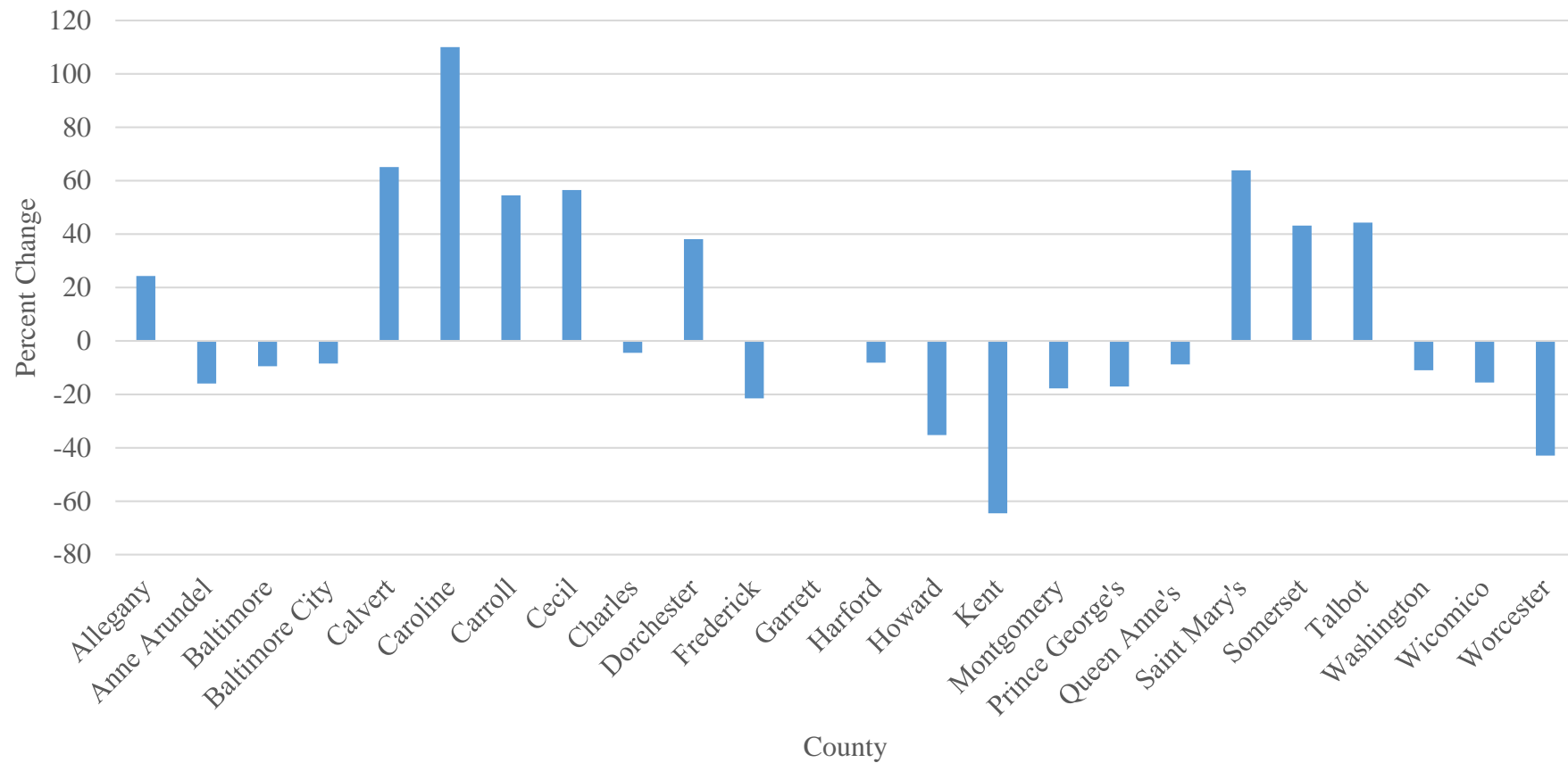
Percent Change in Rape Pre/Post JRA by County



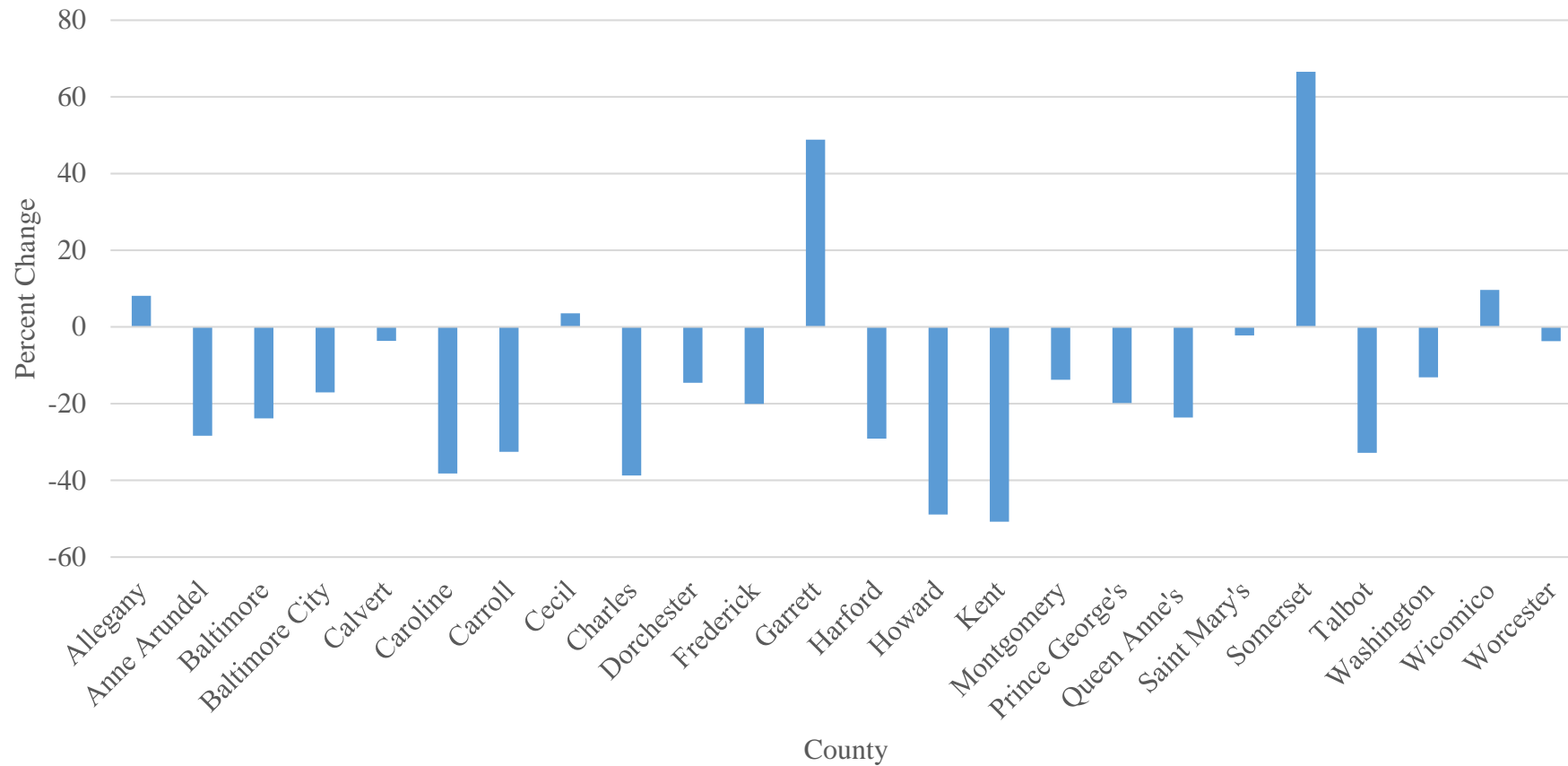
Percent Change in Assault Pre/Post JRA by County



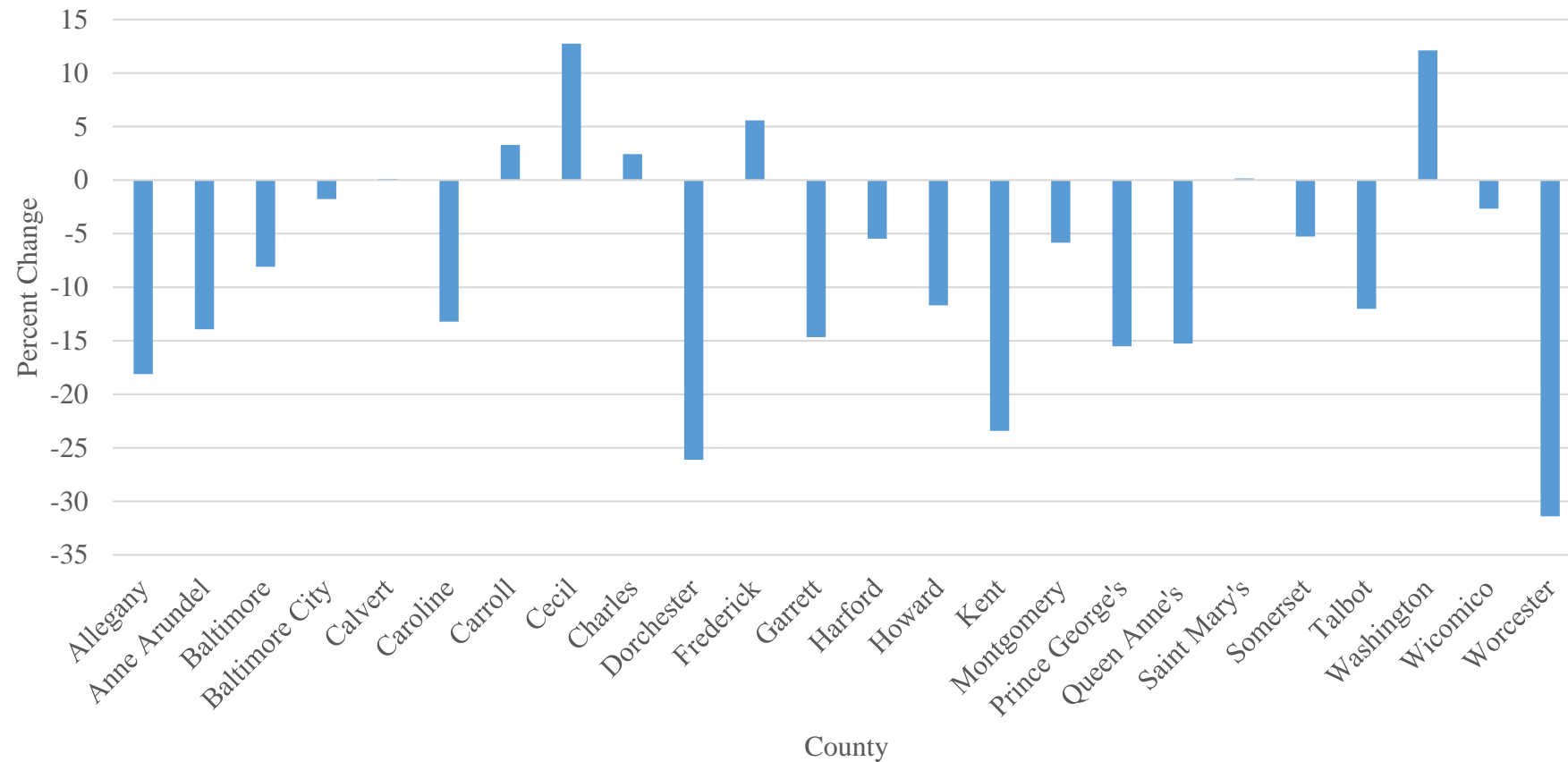
Percent Change in Robbery Pre/Post JRA by County



Percent Change in Burglaries Pre/Post JRA by County



Percent Change in Larcenies Pre/Post JRA by County



Model for Assessing Effects of JRA on Crime: Putting the Pieces Together

- Final model will predict the monthly count of crimes using a pre/post JRA variable, the rate of custodial sentences, and the term imposed while holding constant socio-demographic attributes of the county
- If volume of crime is higher post-JRA, when the rate of custodial sentences and the term of these sentences decline, then this will indicate that JRA increases the risk to public safety in the state of Maryland.
 - Opposite findings or null findings would support the opposite conclusion.

Table 4: Crime Rate Effects of JRA Pre-Post Model Results

	Person Crime Rate		Property Crime Rate	
	Parm	p-val	Parm	p-val
Post-JRA (post Oct 2017)	0.05	0.29	-0.01	0.87
Unemployment rate	0.37	0.01	0.55	0.00
Percent persons below poverty	0.02	0.54	0.04	0.30
Percent Black	-0.04	0.47	0.03	0.68
Percent with high school education	-48.00	0.00	-43.54	0.00
Percent college graduates	- 4.60	0.56	-5.81	0.59
Percent of those in poverty below 18 yrs	-0.03	0.10	-0.05	0.09
SNAP recipients on public assistance	0.00	0.00	0.00	0.58
SNAP recipients not on public assistance	0.00	0.61	0.00	0.74
* Models include county and seasonal fixed effects				

Table 5: Models of Crime Using Pre/Post JRA and Circuit and District Court Sentencing Data

	Models of Crime					
Variables	Person Crime Rates			Property Crime Rates		
	Pre/Post	District Court	Circuit Court	Pre/Post	District Court	Circuit Court
Implementation Variables						
Post JRA	.0468 (.049)	--	--	-.0036 (.069)	--	--
DC-Custody Sentences	--	-.0007 (.0005)	--	--	.000959 (.0007)	--
DC Term	--	.00000095 (.00004)	--	--	-.000729 (.0006)	--
CC-Custody Sentences	--	--	-.00111 (.000749)	--	--	-.001 (.001)
CC-Term	--	--	.000014 (.000024)	--	--	.0004 (.0003)
Socio-demographic variables						
Unemployment Rate	.328 (.141)	.2614 (.141)	.1824 (.1142)	.55 (.19)	.598 (.142)	.46 (.20)
% LT Poverty	.031 (.003)	.02 (.03)	.0214 (.03)	.049 (.0459)	.0355 (.047)	.0388 (.049)
% Black	-.05 (.05)	-.0365 (.0515)	-.0000294 (.043)	.025 (.069)	.0097 (.070)	.062 (.076)
% HS Graduates	-48.30 (11.46)	-45.94 (12.4)	-37.31 (9.6)	-45.93 (15.76)	-41.78 (16.90)	-42.96 (17.69)
% College Graduates	-7.04 (8.34)	-4.058 (6.42)	-4.98 (8.57)	-8.66 (11.42)	-4.63 (11.68)	-13.66 (12.53)
% LT Poverty Under 18 yrs.	-.04 (.02)	-.0302 (0.223)	-.0368 (.02)	-.049 (.029)	-.042 (.0305)	.0423 (.0315)
Persons on SNAP on PA	.00007 (.00003)	.0000823 (.0000308)	.000025 (.000026)	.00002 (.00004)	.0000157 (.000042)	-.0000058 (.000047)
Persons on SNAP not on PA	.00000 (.00000)	.00000 (.0000)	.000000 (.00000)	.00000008 (.000002)	.00000 (.00000)	.000021 (.000025)
R-Squared	.7984	.8126	.7931	.8126	.8161	.8169
N	696	696	630	696	672	630

Findings So Far

- Courts in the state of Maryland have embraced many of the sentencing provisions of JRA, but not perfectly.
- Implementation of JRA is largely not associated with increases in serious crime.

Future Work

- Confirm by reference to external sources of data that the current data on implementation are correct and have been used appropriately.
- Extend the current time series through June 2019 (additional 7 months).
- Examine specific jurisdictions with more fine grained data on crime and JRA implementation.
- Add information on implementation of other components of JRA including changes to supervision and revocation procedures.
- Explore changes in charging patterns and the composition of JRA offenses before and after the implementation of the program.

Future of Data Sharing in the Criminal Justice System in Maryland

James P. Lynch, University of Maryland

Continuing to Foster Evidence-based Policy in the State of Maryland

- There is a growing demand for evidence based policy in the State.
- There is not the same appreciation of the need for a data center devoted to criminal justice in Maryland.
- This is short sighted and a major impediment to evidence-based policy in the state.
 - The “project” model will have an extremely long lead time which makes it useless for informing the myriad of small decisions made every day.
 - They will be expensive
 - Each will take a long time
 - Data cannot be reused.

An Alternative Strategy to a Data Center

- A data center must have a basis in the law and a budget for the routine acquisition, curation and redistribution of data.
- The State Longitudinal Educational Data System is the model that the Criminal Justice System should follow.
- A distant second alternative would be to add criminal justice data to the existing SLEDS system.
- At minimum, the state should have a data sharing advocate to lobby for changes in existing laws to facilitate data sharing by state criminal justice agencies and to monitor and enhance the availability of those data.