

1. The experience of jail causes higher possibility of future criminals.
2. There is an endogeneity issue in this issue. Longer prison time means that defendants' criminals are more severe, so they may be more aggressive or antisocial. Then, they may be easier to be convicted of a second crime because of their personality.
3. Use judge's party as instrumental variable to test the causal relationship between prison time and recidivism.
4. Yes, the parties of judges are independent of the severity of crime.

	Severity.Of.Crime
Republican.Judge	-.014 (.023)
Constant	2*** (.016)
Observations	5000
$R^2$	0.000

Standard errors in parentheses

\* p<0.1, \*\* p<0.05, \*\*\* p<0.01

5. To see whether the instrumental variable is correlated with the x variable.

	Months.In.Jail
Republican.Judge	3.2*** (.37)
Severity.Of.Crime	18*** (.23)
Constant	-19*** (.52)
Observations	5000
$R^2$	0.565

Standard errors in parentheses

\* p<0.1, \*\* p<0.05, \*\*\* p<0.01

6. On average, the Republican judge will sentence the defendant 3.2 more month than the Democrat judge, regardless of severity of crime.

7. Reduced form.

	Recidivates
Republican.Judge	.14*** (.012)
Severity.Of.Crime	.19*** (.0077)
Constant	-.11*** (.018)
Observations	5000
$R^2$	0.128

Standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

8. 0.044

9. IV two stage regression

	Recidivates
Months.In.Jail	.044*** (.0058)
Severity.Of.Crime	-.62*** (.11)
Constant	.75*** (.11)
Observations	5000
$R^2$	-0.944

Standard errors in parentheses

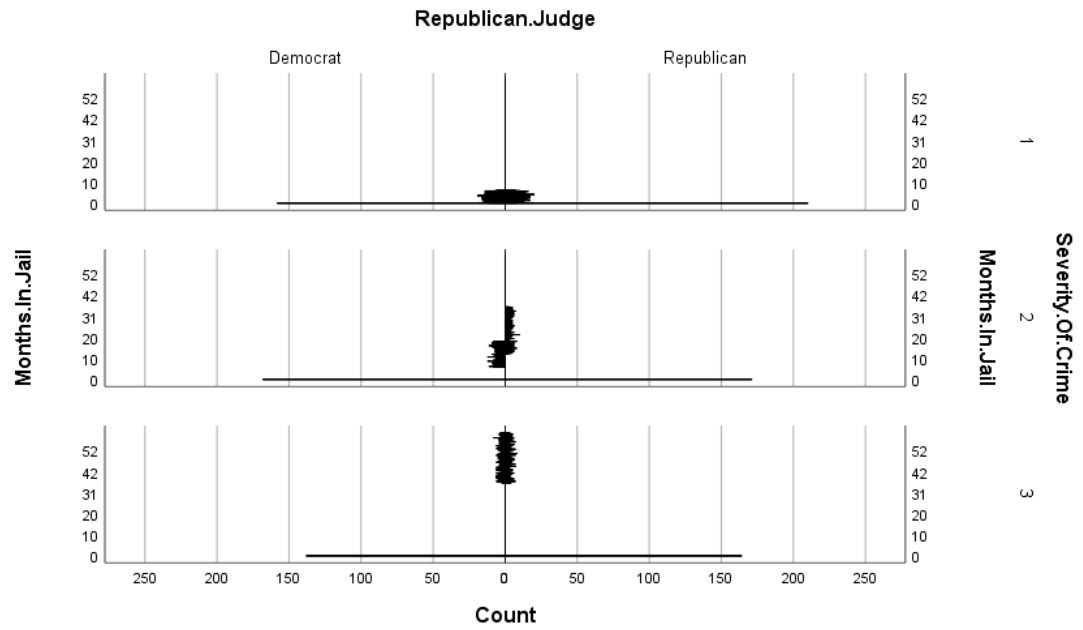
\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

10. F-stat = 164.34.

11. The answers to question #8 and question #9 are same.

12. In the research design above (using randomized judges), the always-takers are the defendants who are always sentenced more time no matter the party of the judge. The never-takers are the defendants who are always sentenced less time no matter the party of the judge. The compliers are the defendants who are sentenced more time only if the party of the judge is republican. The defiers are the defendants who are sentenced less time only if the judge is republican.

13. Based on the figure below, I think this sample follow the monotonicity assumption and there are rare “defiers”.



14. The defendants with moderate severity of criminal are the compliers.

15. Yes, our results support the cycle of crime hypothesis.