**Homework 4 – The Cycle of Crime Write Up**

1. **What implicit claim about causality does Obama's "cycle of crime" theory assert?**

According to the “cycle of crime” theory, harsh sentencing of one-time convicts causes these convicts to become professional criminals (i.e., increases likelihood of recidivism).

**9. and 10.**

**Figure 1: IV regression of months in jail on recidivaites**

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|  |
| Recidivates |
| Months.In.Jail |
| .044\*\*\* |
| (.0058) |
| Observations |
| 5000 |
| *R*2 |
| -0.944 |
| Standard errors in parentheses |
| \* p<0.1, \*\* p<0.05, \*\*\* p<0.01 |

**Notes**: This table contains an IV regression predicting the likelihood of recidivates as a function of months in jail for compliers (defendants whose sentence is increased by having a republican judge). Standard OLS standard errors are reported.

The duration of months in jail of those defendants whose sentence is increased by having a republican judge significantly increases the likelihood of recidivates (by 4.4 percentage).

The F-test on all instruments included in the regression model is significant (*F* (2, 4997) = 164.34, *p* < 0.001), indicating that the instruments are jointly significant in the endogenous variable. The IV regression model fits the data better than the model with no independent variables.

**11. Compare your answer to question #8 (above) to the IV coefficient in #9.**

My IV coefficient in #9 has a value of .0442798 and is significant (p<.001) and is the same as my ratio in #8. This indicates that by seperating out my IV design into stage 1 and 2 I am able to better understand what causes a second sentence by seperating out the compliers in my analysis (i.e., causal effect of prison time on second sentence for those who receive a republican judge). I find that the duration of prison time after a first trial leads to an increase in the likelihood of being convicted again, an effect partly explained by being assigned to a republican judge.

**12. Complete these sentences.**

In the research design above (using randomized judges), the always-takers are the defendants (the accused parties) who are always sentenced for a long time no matter who the judge is. The never-takers are the defendants (the accused parties) who are always sentenced for a short time no matter who the judge is. The compliers are the defendants (the accused parties) who are sentenced for a long time only if they get a republican judge. The defiers are the defendants (the accused parties) who are sentenced for a short time only if they get a republican judge.

**13. Comment on the monotonicity assumption and the possibility of "defiers" in this setting.**

A monotonicity assumption is also known as the no-defiers assumption. This assumption makes sense in a lot of applications. Here, the possibility of defiers means that a defendant will get a short prison time only if he or she gets a republican judge; which given our prior analysis seems unlikely.

**14. In your dataset, what types of defendants are compliers?**

Those defendants whose sentence is increased by having a republican judge.

**15. Does the cycle of crime hypothesis appear to be true for the compliers?**

Yes it does. In #9 I was able to show that the coefficient of monthsinjail on recidivates is .0442798 and significant for the compliers. For these convicts, the severity of the crime actually has a negative impact on a second sentence (beta = -.615, p <.001). Hence, this is a pretty clear indication of the cycle of crime. The cycle of crime hypothesis seems to be true for those who receive a republican judge. More sepcifically, The Cycle of Crime hypothesis appears to be true for compliers, which here is "defendants whose sentence is increased by having a republican judge."