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Abstract

This thesis attempts to show a relationship, if any, between the cost of indigent defense in relation to exonerations. The analysis looks at data that has been compiled from the years 2008 to 2012 and examines a multitude of variables, which include the number of exonerations by state per year, the poverty rate in each individual state, the population in each state by year, the violent crime rate in each state, and the property crime rate in each state per year. The hypothesis was that as the number of exonerations continues to grow, so will the costs of expenditures within the indigent defense spending system. However, the results indicated that there was no statistically significant evidence to suggest that the number of exonerations had an effect on the cost of indigent defense spending in states or the country as a whole.

Effects of Exonerations on Indigent Defense:

Rising costs link to Exonerations

Since the emergence of DNA evidence to the United States court systems in 1986, the number of exonerations has spiked to nearly 850. Many of these exonerations have been defendants who were appointed a public defender to be their lawyer. The growing number of exonerations has led to a great deal of debate. Should the efficiency within the court system be the main priority or, because of the rising costs, should the priority be to get it right the first time around? There are many questions within the court system, but this thesis will analyze the relationship between exonerations and the financial cost disseminated to the state government, as well as to taxpayers, by increasing the amount of indigent defense spending.

Definition of Terms

. Exoneration: Proving that someone is not guilty of a crime or responsible for a problem, bad situation, etc.

DNA evidence: Using a DNA probe for the identification of an individual, as for the matching of genes from a forensic sample with those of criminal suspect.

Indigent defense: defense that is appointed by the local or state government to represent a defendant who does not have the means necessary to hire private defense.

Recidivism: The likelihood of a person to repeat an offense after being released from prison.

Literature Review

A report released by Shafer and Gross of the National Registry of Exonerations states, "since 1989 there have been over 873 individual exonerations" (Shafer and Gross, 2012). This large number of exonerations poses a major problem for governments and taxpayers. John Conroy of the Better Government Association and Rob Warden of the Center on Wrongful Convictions released a report detailing exactly how much exonerations of once believed criminals cost the state and its taxpayers. They found that in the state of Illinois alone, wrongful convictions of men and women for violent crimes cost the taxpayer 214 million dollars because it has imprisoned innocent people over the last 22 years (Conroy and Warden, 2011). They calculated the financial toll by adding the cost of incarceration in jails and prisons, compensations paid to the wrongfully convicted by the state in the wake of the exoneration, and the civil litigation costs (Conroy and Warden, 2011). However, this cost of 214 million dollars to taxpayers is just the beginning. This does not include the cost of civil law suits that are being raised against the state, as well as certain counties. Conroy and Warden's evidence suggests that the total financial cost to taxpayers will surpass 300 million dollars (Conroy and Warden, 2011).

Herberman of the Bureau of Justice Statistics released a report detailing the rise in the cost of indigent defense. They found that in 2012 indigent defense spending was 2.3 billion dollars nationally. Furthermore, he found that from 2008 to 2012, indigent defense expenditures ranged from 2.2 billion to 2.4 billion dollars a year (Herberman, 2014).

They were able to compile this data from the Census Bureau annual survey of state government finances for each fiscal year described above.

Mandery, Sholsberg, West, and Callaghan (2013) compiled research, that indicates states paying out compensation to exonerated people who do not meet a certain threshold of money have a higher recidivism rate. They found that the process of receiving financial compensation for time spent in prison during their wrongful convictions was often very costly and complicated, particularly in civil cases. They must show that there was a constitutional right infringed upon, which is not always easy to do (Mandery, Sholsberg, West, Callaghan, 2013). They go on to research how many states have statutes that offer financial compensations to individuals who have been wrongfully convicted. They found that there are only 27 states and the District of Colombia that have those certain types of exonerations on record. However, even those 27 states offer many burdens and barriers to exonerate to receive financial compensation. The biggest piece of information found in the data is the rate of recidivism by exonerees who do not receive approximately 500 thousand dollars in financial compensation. They found that exonerees who received dollar amounts less than 500 thousand were significantly more likely to become second offenders than those who received 500 thousand or more (Mandery, Sholsberg, West, Callaghan, 2013).

Texas has one of the highest exoneration rates in the United States, and it also has one of the largest justice system expenditures. Ryan Murphy and Brandi Grissom of the Texas Tribune conducted a study of exactly how much money is being spent by the state to refund exonerates. They found that since 1992, the state of Texas has had to pay out nearly 61 million dollars to 89 exonerates (Murphy and Brandi, 2013). Furthermore the

Marshal Project expands more on why the funding process for indigent defense is becoming more and more of a issue: [The depth of the crisis, and the responsibility for dealing with it, varies from state to state, because there is no uniformity in how access to a defender is funded and administered. In Kentucky, for example, the state senate rejected a \$6.2 million budget increase proposed by the Republican governor, Matt Bevin, which would have created 44 needed new positions in the defender's office. Kentucky defenders took, on average, 448 cases apiece in the past year, 54 percent above recommended national standards. Attorneys take on 11 percent more cases than they did a decade ago, and in areas like Louisville, they now take close to double the national standard. In Utah, an estimated 62 percent of all misdemeanor defendants had no access to counsel. Indigent defense is funded entirely at the county level, and in all but two counties, it's provided by contracted attorneys who are not subject to state oversight and are paid a fixed fee per case. A recent study by the Sixth Amendment Center, an advocacy group for the right to adequate defense, concluded that defense attorneys in most of Utah are financially motivated to work their cases as quickly as possible, regardless of the merits or complexity. And in Missouri, where the defender office is funded entirely at the state level, the Democratic governor, Jay Nixon, has repeatedly blocked the passage of state legislation to cap defenders' workload and increase their funding.] (2016). Economic thought would suggest that this high demand for public defenders would create a higher supply of public defenders and resources for them to use. However, this does not seem to be the case in these particular states.

Methodology

I attempted to analyze the effects that multiple independent variables would have on indigent defense spending. I initially took independent variables and tried to find correlations between the variables and the effects that they had on indigent defense spending. Finding these correlations provides a picture of what the relationships are between the independent variables and the dependent variable. One of the key areas we looked at was analyzing the per capita indigent defense spending. Looking at per capita spending on indigent defense provides a picture of the rate at which spending is going.

	Sum of Indigent Defense		Per Capita indigent defense
Year	Spending	Sum of Population	spending
2008	2,023,804	235,769,803	\$8.58
2009	1,973,235	231,592,551	\$8.52
2010	2,105,613	239,386,170	\$8.80
2011	2,054,712	239,842,917	\$8.57
2012	2,055,736	228,159,183	\$9.01

Table 1: Explains the cost of indigent defense spending per capita

As the chart above explains, the cost of indigent defense spending throughout the years from 2008 to 2012 has remained relatively static. This shows that over the years the changes in the amount of exonerations that have happened in the United States have not affected the cost to tax payers on indigent defense. This correlation suggest that exonerations do not have a large effect on the cost of indigent defense. Furthermore, we attempted to show the rate at which exonerations happened over the time period. This is a significant data set because it shows the rate at which exonerations have increased or decreased. By taking many different independent variables to see what the relationship they had to indigent defense spending it gave a better picture of what are factors that effect this type of spending. I took the

independent variables and put them in a regression that took the particular state number and subtracted it from the average. This made the results much more accurate.

Year	Exonerations
2008	39
2009	52
2010	48
2011	29
2012	5
Grand Total	173

Table 2: Shows that the rate of exonerations varied over the years.

This shows that there was a varying number of exonerations throughout the years the amount of distribution that happens between the numbers provides us with enough data to be able to produce a decent statistic on how if any exonerations have on the cost of indigent defense spending.

Regression Equation

Indigent defense spending $_{st}=\beta_1($ Exonerations $_{st}-$ Average Exonerations $_s)+\beta_2$ (Unemployment rate $_{st}-$ Average Unemployment rate $_s)+\beta_3$ (Population $_{st}-$ Average Population $_s)+\beta_4$ (Violent crime rate $_{st}-$ Average Violent Crime rate $_s)+\beta_5$ (Property crime rate $_{st}-$ Average Property crime rate $_s)+\epsilon_{st}$

Regression Explanation

I estimate a general panel regression for the dependent variable measuring the price of indigent defense spending in a year in relation to the explanatory variables within the same year. This regression includes a fixed constant of zero. There are 234 observations in one of the regression that ranges from every state that supplied data on indigent defense spending for the years 2008 to 2012. The second regression holds 187 observations ranging from the same states but only from the years of 2009 to 2012. The length of the data set is relatively short because the Bureau of Justice Statistics only reports from the years 2008 to 2012. The sample is also restricted due to the lack of reporting by particular states. With the relatively small observation size there are limits to the degrees of freedom and could result in imprecise estimates of the coefficients. My results indicate a null result on the effects exonerations have on indigent defense spending. This means that there are no statistically significant results in the area that exonerations increase or decrease the amount of spending that states or the country must spend on the indigent defense spending. In fact, all but one of our independent variables had a null result on the rate of indigent defense spending. The only independent variable that had a statistically significant impact on the cost of indigent defense spending was the

violent crime rate. While the main question I was trying to answer was: "Do exonerations have a effect on the cost of indigent defense spending?" I also looked at other coefficients. The other coefficients were unemployment rate, population, property crime rates, and violent crime rates. I did this because I thought that these coefficients would also have an effect on the indigent defense spending. I thought this because all of these coefficients have an effect on how much money is spent on the criminal justice system. However, the majority of these coefficients also had a null effect on the amount of money going towards indigent defense spending. The only coefficient that showed statistically significant result was the violent crime rate. The two regressions that I ran differ in one main way. The second regression uses last year's exonerations instead of the current years. The reason I did this was to see what monetary resources if any were reallocated in the years following a certain amount of exonerations. The effects that I saw were that the exonerations had a null effect on the amount monetary allocation towards indigent defense spending. This furthered the results that exonerations have a null effect on indigent defense spending. The second regression also had fewer observations because it uses exonerations from the previous year as a independent variable.

Results

What follows is the results that were achieved through the use of a regression analysis. Each of the independent variables were put into the regression to see the relation that they had with the cost of indigent defense spending. To show statistical significance the P-value must be less than or equal to .05 which in the case of exonerations it was not.

an exoneration leads to a \$33 reduction in indigent defense spending. That negative coefficient implies increasing exonerations by 1 lowers the dependent variable by 33.

	Coefficients	Standard Error	t Stat	P-value
Intercept	0	#N/A	#N/A	#N/A
exonerations	-33.35	336.82	-0.09	0.92
Unemployment rate	502.25	309.42	1.62	0.10
Population	-0.0008	0.0004	-0.73	0.46
Violent crime rate	-33.35	16.69	-1.99	0.04
Property crime rate	4.97	3.59	1.38	0.16

Table 3. Regression for the cost of indigent defense spending in relation to the independent variables

	Coefficients	Standard Error	t Stat	P-value
Intercept	0	#N/A	#N/A	#N/A
Unemployment rate	1463.24	424.53	3.44	0.0007
Population	-0.002	0.001	-2.01	0.04
Violent crime rate	-21.72	18.63	-1.16	0.24
Property crime rate	0.10	4.11	0.02	0.97
Last years exonerations	-465.45	352.03	-1.32	0.18

 $R^2=0.328$

Number of Observations = 248

Table 4 . Regression 2 looks at effects of same variables plus last year's exonerations

Conclusion

This thesis showed that the number of exonerations does not have a statistically significant effect on the rate of indigent defense spending. It also showed that the majority of our independent variables had no statistically significant impact on the rate of indigent defense spending. These results can be interpreted in a few different ways. First, is that exonerations have no effect on how much money is being spent for indigent defense. Second, possibly the length of time that we used to analyze the data was not large enough to give a full spectrum of the results. I believe that further research would be useful to determine other factors that might affect the cost of indigent defense spending.

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