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Is Montana's "24/7 Sobriety Program" Deterring Drunk Drivers?

Economics Senior Thesis - Spring 2016

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1. Abstract

Nationally and at the state level policy makers are continually seeking ways to effectively deter drunk drivers and lower the risk and social costs they impose on society. Alcohol related accidents account for nearly \$60 billion in damages in the United States each year. Montana is no exception to this problem. In 2008, Montana was ranked the deadliest state based on per capita driving under the influence (DUI) fatalities. To combat this issue some counties in Montana have introduced the "24/7 Sobriety Program." The main goal of the program is to increase the likelihood and severity of punishment for repeat offenders as well as to address the underlying issue of alcohol dependence and heavy drinking with forced abstinence, education and treatment. According to previous studies on DUI deterrence, increasing the risk of arrest and surety of penalty will increasingly deter individuals from driving drunk. The purpose of this paper is to determine whether Montana's "24/7 Sobriety Program" is a more effective deterrent of drunk driving than previous Montana DUI policies. To answer this guestion a Differences-in-Differences regression analysis is conducted to compare the change in the number of drunk driving arrests in Montana counties using the "24/7" Sobriety Program" with those Montana counties not using the program so as to determine the deterrent effect of the program. Initial fixed-effects regression analyses suggest that the program does not have a statistically significant effect on the total monthly DUI arrests.

1. Introduction

I'd like to kick things off with a joke. "A guy walks into a bar..." Now I know it's not a very original joke. I'm sure you've heard dozens of variations of it. Mine is likely

one you are all too familiar with. A guy walks into a bar. Two hours and eight drinks later he walks out. He gets in his car and drives away. Ten minutes later he hits four teenage girls walking on the side of the road. It's not a funny joke, not a joke at all, but it is the tragic reality.

The first law banning intoxicated driving in the United States was enacted over one hundred years ago. Yet today one life is taken by drunk drivers every 53 minutes (CDC 2015). Drunk driving policy has been a hot topic at the state and national level for decades as legislators and policy makers struggle to find ways to effectively deter drunk drivers. Montana is no exception. After a 2008 statistic listed Montana as the deadliest state for per capita DUI-related fatalities Montana went into over-drive trying to find a way to make its roads safer. The "24/7 Sobriety Program" was the result of these efforts.

My goal in conducting the research that follows is to determine whether the "24/7 Sobriety Program" has lived up to expectations. Determining the deterrent effect of the program for drunk driving has policy relevance nation-wide. If "24/7" is deterring drunk drivers, it is in the best interest of other states to consider implementing the program. If it is not deterring drunk drivers, perhaps it is time for Montana to go back to the drawing board and re-think its current drunk driving policies.

2. Background

Several factors contribute to the persistence of drunk driving in America. Most importantly, U.S. culture has long accepted drinking as a legal, social activity. Illegal drunk driving often occurs following these legal, alcohol related, social activities. The dichotomy between the acceptance of social drinking and the illegal status of drunk

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driving results in confusion and mixed perceptions about the expected penalties of driving drunk (Bertelli et al. 2008).

Kenkel and Koch (2001) similarly suggest that groups of individuals who feel they are less susceptible to detection of drunk driving, whether due to infrequency of committing the crime or because they are uneducated about the risk of punishment, are more likely to misjudge expected penalties and make poor, risky decisions. Also, the many elements contributing to Blood Alcohol Levels (BAC) are difficult to estimate and most drivers do not actually know how intoxicated they are or if they are too impaired to drive (Bertelli et al. 2008). These problems contribute to the fact that many drivers are unaware of the true risk and cost they impose on society, as well as on themselves (Kenkel_b 1993).

Kenkel (1993_b) estimated the monetary value of the risk drunk drivers impose both on society and themselves. He found that the societal cost of drunk driving (given the driver internalizes his or her risk and that passengers in the car also internalize their risk) is \$17.6 billion, approximately four times the cost of penalties paid. The risk the drivers impose on themselves is more like five times the penalty paid. In a similar investigation Levitt and Porter (2001) found the externality of drunk driving to be .15 cents per mile driven. The Pigouvian tax which would ultimately force the driver to internalize this additional risk equates to an \$8,000 fine per offense. Even if the penalty were equal to the overall risk that drunk drivers impose on society there are mixed opinions as to whether these stricter penalties would be enough to deter drunk driving (Sen 2001; Bertelli et al. 2008; Kenkel 1993).

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Gary Becker, in his influential paper "Crime and Punishment: an Economic Approach," (1968) explains the deterrence effect of different laws using a model of expected utility. He found that if people act rationally there should be a negative relationship between the number of offenses and the cost of committing the crime. Given this model it would be reasonable to expect that increasing the probability of arrest and severity of punishment should increasingly deter crime.

Chaloupka et al. (1993) supports Becker's conclusion that increased severity of punishment decreases the number of offenses. Their study only used the most severe minimum penalties for each state. They found that the most effective policies for reducing drunk driving were a high alcohol tax (which is an alcohol control policy rather than a deterrent) and the relatively severe one year administrative license suspension. They also found that the deterrence law that is commonly used and discussed in literature, mandatory jail-term, was totally ineffective as a deterrent. Ultimately, Chaloupka et al. (1993) concluded that most current policies were too weak to have any significant deterrent effect. Sen (2001) similarly concluded that most specific DUI deterrence laws were relatively ineffective and that a general mandatory seat-belt law was more effective at deterring drunk driving related crashes and fatalities.

Another study done by Weinrath and Gartrell (2001) aimed to determine whether longer jail sentences deterred recidivism, or repeat DUI offenses. They found a nonlinear relationship between the severity of punishment (measured by jail sentence length) and rates of recidivism which calls into question "the blanket use of longer sentences to reduce crime."(119) This study indicated that increasing the severity of

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punishment increasingly deters repeat DUI offenses only up until a sentence length of one year. Jail terms longer than one year had no greater effect on rates of recidivism.

Bertelli et al. (2008) points to several reasons why increasing the severity of punishment may not effectively deter drunk drivers. These reasons range from personal perceptions about the risk of arrest and severity of punishment to social acceptance of the legitimacy and goal of the law. Most importantly, they show that an individual's propensity to commit the crime of drunk driving has a great effect on which laws and deterrence efforts effectively deter that individual. This finding highlights the need for dynamic deterrence efforts aimed at different groups of individuals. McArthur and Kraus (1999) similarly argue that the effectiveness of deterrence laws (specifically administrative per se laws) may in part be dependent on peoples social, cultural and economic backgrounds which may account for differing levels of effectiveness across states.

Kenkel and Koch (2001) suggest that the effectiveness of deterrence laws relies on the public's desire to gain information and education about DUI laws and that those at the highest risk for driving drunk (i.e. heavy drinkers) were most informed about drunk driving laws. Much of the rest of the population felt they had little incentive to gain education and information about such laws and were thus more likely to make poor decisions about driving drunk regardless of the potential penalty. This implies that DUI deterrence laws are more effective at deterring high risk heavy drinkers but less effective for lower risk individuals.

The dichotomy in the literature indicates that effective DUI deterrence is not black and white. A one-size-fits-all law is unlikely to be effective at deterring all drunk drivers.

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A growing body of DUI-deterrence literature has been dedicated to the specific issue of "heavy" or "problem" drinking and recidivism and ways that DUI laws can incorporate treatment and therapy to reduce repeat offenses (Kilmer et al. (2013), Weinrath and Gartrell (2001), Taxman and Piquero (1998)). Bertelli et al. (2008), Kenkel (1993) and Chaloupka et al. (1993) emphasize that deterrence efforts and laws can be effective in reducing drunk driving, but the laws must be focused on changing public and personal perceptions of risk.

Taxman and Piquero (1998) suggest that personalized treatments that target an offender's needs and risk-factors could be effective in deterring recidivism especially with heavy drinkers. Their study found that a simple alcohol education class reduced recidivism by 22%. Similarly, the study done by Kilmer et al. (2013) found that prohibiting alcohol consumption in repeat DUI offenders led to a twelve percent reduction in recidivism. Weinrath and Gartrell (2001) also suggested that the availability of alcohol dependence treatment and therapy programs in jail may further deter recidivism. These studies lend further evidence to the effectiveness of DUI programs and laws that target specific, high-risk groups that aim not only to deter crime with punishments but also with rehabilitation and education.

3. Montana DUI Policy

In 2008, Montana was ranked the deadliest state based on per capita DUI related traffic fatalities. According to data from the Montana Department of Transportation (MDOT), in 2008 there were 86 DUI-related fatalities and over 2200 alcohol-related accidents. To combat this problem, Attorney General Tim Fox targeted the issue of recidivism by piloting an experimental "24/7 Sobriety Program" in Lewis and Clark

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county. The program required repeat DUI offenders to submit twice daily breathalyzer tests or wear an alcohol-detecting bracelet to ensure they abstained from drinking (MDOT 2015). Failure to pass or show up to these tests would result in swift, certain penalties including jail time and license suspension. Offenders could also be required to take an alcohol education class or submit to counseling with an alcohol-dependence counselor. The program targeted what Bertelli et al. (2008) calls "frequent sinners" or those with a higher propensity to commit and re-commit the crime. The predominant goal was to increase the likelihood and severity of punishment as well as to address the underlying issue of alcohol dependence and heavy drinking with forced abstinence, education and treatment.

The "24/7 Sobriety Program" addresses two of the problems with deterrence discussed in the literature on drunk driving. First, the program requires total abstinence from alcohol. This eliminates the problem that it is difficult to determine when an individual has surpassed the legal BAC limit and should not drive. By requiring abstinence from alcohol the level of uncertainty about when an individual can drive is eliminated because the answer is always never. It also addresses another uncertainty that has proved to be problematic for DUI deterrence, namely that individuals do not know the risk of being caught, the penalty if caught and the other consequences more generally. With the "24/7 Sobriety Program" once an individual has received one DUI they should, if the program is effectively educating the public, know exactly what the consequence of a second DUI will be. They also know that if they do drink during the period they are on the program they will be caught and swiftly punished. This eliminates any uncertainty about the stringency of the DUI policy and law.

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Montana's "24/7 Sobriety Program" was not a novel experiment. South Dakota initiated an identical program three years earlier in 2005 to combat recidivism and heavy drinking. South Dakota's 2005 pilot program was highly successful and effective and quickly expanded to many counties across the state. Kilmer et al. (2013) found that South Dakota's "24/7 Sobriety Program" reduced the number of repeat DUI arrests by about twelve percent. They concluded that "24/7" was highly effective at reducing the incidence of heavy drinking among a population with a history of problem drinking. The results of this study support the claim that the deterrence effect of DUI programs relies on their ability to influence and change behaviors which relies on increasing the certainty and swiftness of consequences.

Montana's pilot "24/7 Sobriety Program" also showed great success with nearly 100% passage of breathalyzer tests, and the program was expanded. In 2011 "the 24/7 Sobriety Program Act" or House Bill no. 106 was passed by the Montana Legislature allowing county sheriffs to decide whether to enact the program in their counties of jurisdiction or not. Following the bill's passage, 22 counties adopted the program.

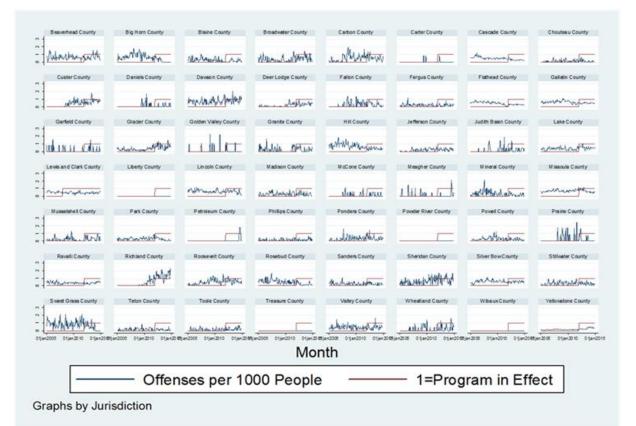
In 2013 there were 400 fewer alcohol-related crashes than in 2008 state-wide. Similarly, alcohol-related crashes that only resulted in property damage or minor injuries saw a decrease between 2008 and 2013. However, since the bill's passage DUI related fatalities in Montana have increased from 86 in 2008 to 106 in 2012 and 98 in 2013. Similarly, DUI arrests have increased from 3659 in 2010 to 4461 in 2014.

Graph 1 below also shows the number of DUI offenses per 1000 people in all 56 Montana counties. The red horizontal line denotes when the Montana Legislature enacted the "24/7 Sobriety Program" act except in Lewis and Clark county where the

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program began in 2008. Because I was unable to obtain exact dates for when each county instituted the program I generalized to January 2012 which is shortly after the act was passed. Some Montana counties in Graph 1 below have still not enacted the program. This fact was included in the regressions and analysis below but for the purpose of illustration in the graph the red line indicating the program was included for all counties as only a small number have yet to adopt the program. Approximately ten of the fifty six county graphs show a clear decline in the total number of offenses after the act was passed and the program instituted. The other county trends are ambiguous with some showing very little change after the institution of the program and some even showing increases in the number of DUI offenses per 1000 people.

Graph 1: Monthly Offenses per 1000 People (Jan 2005-Dec 2014) for all Montana Counties



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Given the findings of Kenkel (1993) and Bertelli et al. (2008) as well as the South Dakota "24/7" case study conducted by Kilmer et al. (2013) the additional risk of arrest and surety of penalty should deter drunk drivers and thus reduce the amount of alcoholrelated accidents even among those at the highest propensity to commit the crime. Given the above statistics and graph it is unclear whether or not the additional penalties of Montana's "24/7 sobriety program" have been effective in deterring drunk driving and whether or not the program has improved upon previously accepted DUI policies in Montana. The purpose of this paper is to determine whether Montana's "24/7 Sobriety Program" is a more effective deterrent of drunk driving than previous Montana DUI policies.

4. Methods

To address the thesis question stated above I conducted a Differences-in-Differences analysis to compare the number of total drunk driving arrests in Montana counties using the "24/7 Sobriety Program" with those Montana counties not using the program so as to determine the deterrent effect of the program. The Kilmer et al. (2013) study does a very similar analysis for counties in South Dakota. Therefore, the South Dakota study served as a reference for this analysis and the statistical model and procedures used in this study mirror the statistical analyses done by Kilmer et al. (2013).

The statistical model used is:

Equation 1: Y_{it}=
$$\alpha \left(\frac{24}{7}\right)_{it} + \beta X_{it} + \gamma_i + \delta_t + \varepsilon_{it}$$

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In equation 1 Y_{it} represents the number of DUI arrests in county *i* and month *t*. The indicator 24/7 signals whether the program was in effect in country *i* and month *t*. The coefficient, α , represents the effect of 24/7. The vector δ_{it} represents fixed effects for each month that are common to all counties. The vector X_{it} includes time-varying county-level control covariates. For this study the control covariates used were county population, average per-capita income, unemployment rate and an indicator for when college was in session.

The offense data came from the Montana Board of Crime Control and specifically the Montana Statistical Analysis Center which serves as the FBI's point of contact for crime reporting in Montana. The data for county population came from the US Census Bureau. Unemployment data came from the US Bureau of Labor Statistics. University websites were referenced for months that classes are in session. Sergeant Lacie Wickum, the director of the "24/7 Sobriety Program" in Montana, provided information on which counties are using the program and when each began using the program.

Table 1 below contains descriptive statistics for the variables included in the regression including mean, standard deviation, count or number of observations and maximum and minimum values.

Variable	Mean	SD	Count	Min	Max
Income per Capita	33590.98	7052.169	6720	19254	62255
College in	.0520833	.2222116	6720	0	1
Session=1					
Offense	7.658929	15.3545	6720	0	135
Unemployment	5.268304	2.468462	6720	1.3	20.5
Population	17630.88	29770.39	6720	470	158217
Female	2.256696	4.941783	6720	0	48
Male	6.235565	12.45864	6720	0	102
Year	2009.5	2.872495	6720	2005	2014
County	28.5	16.16443	6720	1	56
Month	18246.97	1054.434	6720	16437	20058
Program in Effect=1	.2375	.4255828	6720	0	1

Table 1: Descriptive Statistics for all Regression Variables

5. Challenges

Using a Differences-in-Differences analysis helps avoid and minimize a major problem that would be encountered using a basic cross-sectional analysis. This problem is the potential bias caused by unobserved heterogeneity across Montana counties. A separate but equally important issue is controlling for unobserved differences in the trends over time between the treatment and control counties. An example of this could be that counties using the new program are counties that typically have a higher rate of DUI offenses and that is the reason they have chosen to use the new program. It could also be the case that counties using the new program are counties that have had success deterring drunk driving under previous programs as well and thus typically have lower rates of offense. This may be because they are consistently proactive in DUI deterrence efforts and the new program is simply an extension of this practice. The difference in difference analysis is capable of controlling for both of these issues.

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The main unresolved problem I faced in conducting this research was the inaccessibility of repeat DUI arrest data. The "24/7 Sobriety Program" primarily targets repeat offenders. Due to the time-constraint of this project and lack of clearance it was infeasible to obtain data on repeat arrests which would have likely yielded more precise results and eliminated the noise that comes with looking at total DUI offenses. If I had information on the number of repeat offenses my results would be more precise and I would likely see more significant estimates. It may be that the "24/7 Sobriety Program" is effectively deterring repeat offenses but this will not necessarily be picked up in this experiment because there is no distinction made between first-time offender arrests and repeat offender arrests, which as I mentioned before will create noise in the data.

As with all drunk driving studies, a primary concern is the incredibly high frequency of cases of driving under the influence that go undetected. Even with the use of surveys and anonymous self-reporting it would be impossible to truly gauge whether fewer people are driving drunk under the program or not. This raises further questions about measuring the true deterrence effect of the "24/7 Sobriety Program". It could be true that fewer people are driving drunk under the new program but that the additional police officers needed to implement the program are arresting a higher proportion of a smaller pool of drunk drivers. This could create a false negative.

This study will also be unable to distinguish individual characteristics of those participating in the program (including history of alcoholism or risky behavior). This would help determine whether the program is effectively altering perceptions and behaviors of heavy drinkers and frequent sinners even if the simply numeric data on

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the number of repeat DUI arrests indicates that it is not. For the purpose of this study individual-level information will need to be ignored but this is an important dilemma that should not be discounted.

The short period of time since the program was introduced and expanded also creates a problem when measuring deterrence. As Kilmer et al. (2013) points out, as the program expands over time it may be that counties will gain experience and learn ways to better implement the program and the impacts will increase. However, it may also be that as individuals become detached from the program their likelihood of re-offense increases again. This study will not be able to measure the long term effects of the program which is important to determining its overall effectiveness as a deterrent.

Because the program has only truly been in effect state-wide since 2011 it may be difficult to assess the effectiveness of the program even in the short-run. Because the program is so new, many people may not be educated about the program and its goals. As was previously stated, education plays a major role in determining the level of effectiveness of deterrence laws. Similarly, with any new law there is bound to be an adjustment period in which preliminary kinks and problems are corrected. Many Montana counties may very well still be in this transition period so any measure of the deterrence effect of the new program runs the risk of understating the short-run effectiveness of the program.

6. Results

As was previously stated the specific statistical model used is equation 1 where Y_{it} represents the number of DUI arrests in county *i* and month *t*. All fifty six counties in Montana were used and the time period used was January 2005 to December 2014. A value of one for the indicator "24/7" signals that the program was in effect at time *t* and in month i. The coefficient, α , represents the effect of 24/7. The vector $\overline{\delta}$ it represents fixed effects for each month that are common to all counties. The vector Xit includes time-varying county-level control covariates. The control covariates used were county population, an indicator for when college was in session (1 if in session), unemployment rate and average per-capita income.

Stata was used to conduct a fixed effects panel regression. The fixed effects regression was used because it can control for omitted variables within the counties that do not vary over time. This is important in this analysis because the goal is to isolate the effect that the program has on the number of DUI offenses.

Variable	Coefficient (standard error in parentheses)
Program in Effect=1	-1.974 ^{***} (0.345)
Unemployment	-0.367*** (0.067)
Population (in thousands of people)	0. 483 ^{***} (0. 057)
Income (in thousands of dollars)	0. 174 ^{***} (0.025)

College in Session=1	1.091* (0.482)
Constant Observations Adjusted <i>R</i> ²	-3.963** (1.537) 6720 0.017

The first fixed effects regression run utilized monthly dummy variable. The results from this regression can be seen in Table 2 above. Most striking about these results is that the program did have a statistically significant effect on the number of total monthly DUI arrests at the 0.001 confidence interval. These results suggest that, as would be hoped and expected, the new program had a negative effect on the number of total DUI offenses.

The regression results also suggest that unemployment rate, income per capita, and population are significant at the 0.001 confidence interval. Population was positively related to DUI offense. I expected that as population increased in a county there would be more DUI arrests so this makes sense. Income was positively related to DUI arrests. The literature has ambiguous conclusions about the relationship between income and DUI arrest. My intuition was that as income increased people would be less likely to make the risky choice of drunk driving as the cost of a DUI would be greater with the potential of losing one's job. However, it could also be that as income increases people are able to afford to drink at bars and are able to afford to drive.

Lastly, unemployment was negatively related to DUI arrest. My intuition about unemployment followed from my thoughts about income effect. I would expect that as

people lost their jobs, the cost of drunk driving would go down as they would have less to lose. Also, I would think that unemployment may lead to things like depression which can spur instances of heavy drinking. These results suggest the opposite. As with the income effect, it may be that unemployed people cannot afford to go out and drink or cannot afford cars. This would explain the negative relationship between unemployment and DUI offenses.

Variable	Coefficient
Program in Effect=1	-1.952***
	(0.345)
Unemployment	-0.262***
	(0.056)
Population (in thousands of people)	0. 479***
	(0.057)
Income (in thousands of dollars)	0. 182***
	(0. 025)
College in Session=1	0.821
	(0.459)
Year=2006	0.631*
	(0.307)
Year=2007	0.152
	(0.316)
Year=2008	-0.048
	(0.340)
Year=2009	0.570
	(0.343)
Year=2010	-0.262
	(0.366)

Table 3: Fixed Effects Regression using Yearly Dummies

Variable	Coefficient
Year=2011	-1.139**
	(0.405)
Year=2012	0.103
	(0.533)
Year=2013	-0.963
	(0.548)
Year=2014	-1.041
	(0.555)
Constant	-4.898***
	(1.306)
Observations	6720
Adjusted <i>R</i> ²	0.021

A second regression was run using yearly dummy variables to reduce some of the noise from the month to month fluctuations in the first regression. The results from this second fixed effects regression, seen in Table 3, were pretty much identical to the results in Table 2. One interesting thing to note is that the year 2011 was statistically significant on the number of total monthly DUI offenses. This is important because 2011 was the year that the Montana legislature enacted the "24/7 Sobriety Program" and it was thus the year that about half the counties in Montana began using the program. This lends further evidence to the fact that the "24/7 Sobriety Program" is deterring drunk drivers.

Two subsequent fixed effects regressions were run using the yearly dummies to discriminate between the total number of female DUI offenses for a given county and the total number of male DUI offenses. The purpose of these final regressions was to see if the "24/7 Sobriety Program" potentially impacted males and females differently.

The results from these two regressions are listed side by side in Table 4 below for

comparison purposes.

Variable	Female DUI	Male DUI
Program in effect=1	-0.115	-0.428
	(0.137)	(0.297)
Unemployment	-0.015	0.003
	(0.022)	(0.048)
Population (in thousands of people)	-0.004	0.030
	(0. 022)	(0. 049)
Income (in thousands of dollars)	-0. 011	-0.156***
	(0. 010)	(0.021)
College in Session=1	-0.103	0.054
-	(0.183)	(0.395)
Year=2006	0.342**	0.839**
	(0.122)	(0.264)
Year=2007	0.574***	1.465***
	(0.125)	(0.272)
Year=2008	0.664***	1.779^{***}
	(0.135)	(0.292)
Year=2009	0.749***	1.539***
	(0.136)	(0.295)
Year=2010	0.748^{***}	1.325***
	(0.146)	(0.315)
Year=2011	0.532***	1.504***
	(0.161)	(0.349)
Year=2012	0.935***	2.620***
-	(0.212)	(0.459)
Year=2013	0.672**	2.203***
	(0.218)	(0.472)

 Table 4: Fixed Effects Regression for Males and Females with Yearly Dummies

Year=2014	0.631**	2.519***	
	(0.221)	(0.478)	

The regression results in Table 4 are very different from those in Table 2 and 3. Given these results, the program did not have a statistically significant effect on total offenses for men or women. Similarly unemployment and population were not statistically significant for either men or women. Income, however, was statistically significant at the 0.001 level for men but not statistically significant for women. In this regression income was actually negatively related to the number of DUI offenses which also contrasts the previous results in Table 2 and Table 3. Every year was also significant for both men and women at either the 0.001 or 0.01 level. These results also do not align with the results in Table 2 and 3 and I do not know how to justify them. I don't not think they are incredibly important to my thesis question.

7. Conclusion

The success (or failure) of the "24/7 Sobriety Program" in Montana has policy relevance nationwide. National and state governments and policy makers are continually pursuing new laws and programs that effectively deter drunk drivers so as to reduce the negative externality DUI offenders impose on society. Many states including South Dakota and Washington already have programs similar to Montana's "24/7 Sobriety Program" in effect to help reduce the number of repeat DUI offenses and subsequently prevent DUI-related social costs associated with accidents, fatalities and other damages. One study has found "24/7" to be effective in South Dakota but, as has been discussed, the success of any program may depend upon cultural elements and

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individual characteristics so it is important to test the effects of the program in other states to compare the results.

The results from this study indicate that the "24/7 Sobriety Program" is also deterring drunk drivers in Montana. These findings lend further support to the idea that programs aimed at swift and certain penalties for repeat offenders, coupled with counseling and forced abstinence may be effective in other states and perhaps even at the national level. As the literature suggests, DUI deterrence is not one size fits all. Cultural elements play a huge part in the effectiveness of any DUI policy. It appears from these results that the South Dakota pilot is at least generalizable to a state with which it shares a border.

These results are also promising because they show that a program aimed only at repeat offenders can decrease the number of total DUI offenses overall. An important extension of this study would be to specifically look at repeat offenders apart from first-time or total offenders and how the "24/7 Sobriety Program" is specifically deterring these people. This would help determine whether the program is only decreasing the total number of DUI offenses because less people are re-offending or if the program is also deterring first-time DUI offenders.

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