Locked and not loaded: First time offenders and state ignition interlock programs

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ABSTRACT

Alcohol-related fatal crashes are a costly public safety concern. Using vehicular fatality data and geographical variations across the USA, I examine the effectiveness of mandatory Ignition Interlock Programs for first time offenders in preventing fatal alcohol-related accidents. I observe that the program is most effective when it is applied to a broader cross-section of first time offenders. Specifically, states that adopt ignition interlock laws that require participation of first time offenders, with blood alcohol levels of .08 or higher, see fatal accidents involving a drunk driver decrease by 9%. The results provide evidence in support of current and future policy legislation that first time offenders should participate in ignition interlock programs, which will reduce alcohol-related fatal accidents and generate large benefits to society.

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1. Introduction

Accidents involving drunk drivers impose enormous social and economic costs on society. The National Highway Traffic and Safety Administration (NHTSA) reports that in 2012, 10,322 people died in drunk driving crashes and an additional 290,000 individuals were injured. Furthermore, they estimate that drunk driving costs the USA $199 billion every year and 90% of these costs occurred in crashes involving a drunk driver with a blood alcohol concentration (BAC) of .08 or higher (Blincoe et al., 2014). Given the magnitude of these societal and economic costs, government officials are continuously enacting policies to prevent drunk driving and the all too common fatal motor vehicle crashes that follow.

One such policy designed to prevent drunk driving is the ignition interlock program. The ignition interlock device (IID) is designed to prevent vehicle operation when the driver is impaired from alcohol consumption. Drivers are required to provide a breath specimen to the device before it will allow the operator to start the vehicles' engine. Legislation to support the use of the device began in the late 1980s. Improvements made to the device in the early 1990s led to the adoption of the program by counties and states across the country.2 Currently, numerous states have also implemented the program to include mandatory participation by first time drunk driving offenders, a group that the Center for Disease Control (CDC) has found to have driven drunk more than 80 times before being caught.

Previous research has highlighted the effectiveness of the IID technology. In particular, a recent meta-analysis has shown that the risk of recidivism for DWIs can be reduced up to 64 percent (Willis et al., 2004). Other research has highlighted the lack of success of comparable drunk driving preventative policies, such as license suspensions. For instance, studies show that 50–75 percent of convicted drunk drivers whose license has been suspended, continue to drive (Peck et al., 1995; Beck et al., 1999).

This paper advances the literature on drunk driving laws and ignition interlocks in several important ways. To begin, it is the first to apply difference in difference estimation methods to analyze the

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1 The estimated $199 billion costs include societal costs such as “lost quality of life”. Pure economic costs are equal to $59 billion in 2010 for alcohol involved accident. Costs are expressed in 2010 dollars.

2 Second generation IID improvements help prevent falsified tests. New features include: hum tone recognition, filtered air detection, blow abort, and random running tests (Collier, 1994).

http://dx.doi.org/10.1016/j.ire.2015.10.001
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