Journal of Health Economics 36 (2014) 33–46

Contents lists available at ScienceDirect

Journal of Health Economics

journal homepage: www.elsevier.com/locate/econbase

Can technology help to reduce underage drinking? Evidence from the false ID laws with scanner provision☆

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ARTICLE INFO

Article history:
Received 21 March 2013
Received in revised form 4 March 2014
Accepted 12 March 2014
Available online 21 March 2014

JEL classification:
I10
I18

Keywords:
Alcohol consumption
False ID laws with scanner provision
Underage youth
Risky behavior
Minimum legal drinking age

ABSTRACT

Underage drinkers often use false identification to purchase alcohol or gain access into bars. In recent years, several states have introduced laws that provide incentives to retailers and bar owners who use electronic scanners to ensure that the customer is 21 years or older and uses a valid identification to purchase alcohol. This paper is the first to investigate the effects of these laws using confidential data from the National Longitudinal Survey of Youth, 1997 Cohort (NLSY97). Using a difference-in-differences methodology, I find that the false ID laws with scanner provision significantly reduce underage drinking, including up to a 0.22 drink decrease in the average number of drinks consumed by underage youth per day. This effect is observed particularly in the short-run and more pronounced for non-college students and those who are relatively younger. These results are also robust under alternative model specifications. The findings of this paper highlight the importance of false ID laws in reducing alcohol consumption among underage youth.

1. Introduction

Underage drinking statistics in the United States are alarming. Although consuming alcohol under the age of 21 is illegal, people aged 12–20 years drink 11% of all alcohol consumed in the United States, and more than 90% of this alcohol is consumed in the form of binge drinking (Office of Juvenile Justice and Delinquency Prevention, 2005). On average, underage drinkers consume more drinks per drinking occasion than adult drinkers (National Research Council and Institute of Medicine, 2004). Alcohol is also responsible for more than 4700 deaths and 185,000 emergency room visits per year among underage youth.[1] Furthermore, recent research linked alcohol consumption among minors to a long list of adverse social and economic outcomes including future alcohol dependency and abuse (Hingson et al., 2006), poor academic performance (Carrell et al., 2011; Lindo et al., 2013), reduced employment (Renna, 2008), crime (Carpenter and Dobkin, 2010), and risky sexual behavior (Waddell, 2012).

In light of these findings, policy makers have proposed several regulations to reduce the incidence of underage drinking. Among many others, perhaps the most direct form of regulation targeted towards young adults in the United States is imposing a minimum legal drinking age (hereafter, MLDA). Since 1988, it is illegal for youths under age 21 to purchase or consume alcohol in the United States. The punishments for purchasing or consuming alcohol under the MLDA or selling alcohol to a minor varies considerably across states, but include fines, jail time, loss of a liquor license for retailers, and temporary license revocation for underage buyers. Minors who use false identification may also face additional punishment (Bellou and Bhatt, 2013). However, it is clear that the MLDA or associated punishments does not entirely prevent underage drinking. Underage drinkers can access alcohol through a number of sources, including stealing, purchasing alcohol themselves using a false identification, obtaining it from stores that do not check for identification, and asking an older adult to purchase it on their behalf (Century Council, 2003). Furthermore, retailers often disregard age requirements and sell alcohol

☆ This paper uses confidential data provided by Bureau of Labor Statistics (BLS). The views expressed in this paper are those of the author and do not necessarily reflect those of the BLS. The author also acknowledges financial support by the National Institute on Alcohol Abuse and Alcoholism of National Institutes of Health under Award Number R03AA020636. The content of this paper is solely the responsibility of the author and does not necessarily represent the official views of the National Institutes of Health. Dohyung Kim and Jungtaek Lee provided valuable research assistance.

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[1] See, for example, Centers for Disease Control and Prevention (2008) and Center for Behavioral Health Statistics and Quality (2012).

http://dx.doi.org/10.1016/j.jhealeco.2014.03.004
0167-6296/

to minors (Preusser et al., 1994). In an attempt address these problems, recently, several states have introduced laws that provide incentives to retailers and bar owners who use electronic scanners to ensure that the customer is 21 years or older and that the identification is legitimate.[2] These incentives include an affirmative defense in prosecutions for sales to minors if the retailer can show that the scanner was used properly.[3] For instance, Section 7 of New York's ABC law provides retailers with an affirmative defense when properly using an ID scanner during the sale of alcohol to a minor. If a retailer inadvertently sells to a minor who provides a false identification and gets caught, then with the transaction record stored in an ID scanner, the retailer would be able to claim an affirmative defense. Without an ID scanner, the retailer may be found guilty of serving alcohol to a minor and depending on severity of the violation, may be forced to pay fines up to $10,000, may lose its liquor license, and/or face jail time up to one year.[4]

Alcohol compliance checks are the most widely used tool to identify licensed alcohol establishments that sell alcohol to underage youth. During a compliance check, law enforcement officials send underage youth into retail stores or bars to purchase alcohol with their own underage identification. Using an electronic scanner to check whether the customer is 21 years or older appears to be a safe and relatively cheap way of passing a compliance check.[5] However, there are no data on the actual number of retail stores or bars that own and actively use an electronic scanner or the number of citations made for underage sales.[6]

A priori, it is not clear whether the false ID laws with scanner provision (hereafter, FSP laws) would have a meaningful impact on youth access or reduce underage alcohol consumption. For instance, the FSP laws may not affect underage drinking, if teens substitute towards other methods of obtaining alcohol, such as asking an older adult to purchase it on their behalf or obtaining it from retail stores that do not use electronic scanners. It is also possible that only few retailers actually use electronic scanners to avoid selling alcohol to minors. If this is the case, then the FSP laws should not affect youth access to alcohol in a meaningful way. Therefore, quantifying the impact of the FSP laws on underage alcohol consumption would provide valuable insights to policymakers in understanding the direct and indirect effects of these laws and for shaping the future alcohol control policies accordingly.

This paper contributes to the growing list of papers that are concerned with the responsiveness of alcohol consumption among young adults to alternative alcohol control policies. In particular, it is the first paper to investigate the effects of the FSP laws on underage alcohol consumption trends using confidential data from the National Longitudinal Survey of Youth, 1997 Cohort (NLSY97).[7] In order to estimate the impact of this laws on underage alcohol consumption, I exploit the substantial variation in the implementation of these laws across states. My empirical methodology is a diff-and-diff (DD) type approach in which the models are identified using within state variation in timing of policy adoption, controlling for differences across states that were not treated over the same time period. In addition to several individual and state level control variables, my empirical models also control for several state level alcohol control policies that were effective during the same time period that the FSP laws were introduced. These laws include BAC 0.08 law, restrictions on Sunday alcohol sales, vertical ID law, and social hosting law. Even after controlling for a variety of potentially confounding state policies that may affect alcohol consumption directly, the results from the DD type models show that the FSP laws significantly reduce underage drinking, including up to a 0.22 drink decrease in the average number of drinks consumed by underage youth per day. On average, underage individuals consume 0.54 drinks per day. Therefore, the estimated impact of the FSP law on average number of drinks consumed per day by underage youth is considerable and corresponds to an approximately 40 percent decrease from the mean (0.14 standard deviations). This result is also robust under alternative model specifications.

My results also imply that compared with those who are 18–20 year olds, the FSP laws are more effective in reducing alcohol consumption among 13–15 and 16–17 year olds. For these age groups, I find that these laws reduce the average number of drinks consumed per day by up to 0.25 and 0.19 drinks, respectively. Furthermore, alcohol consumption among non-college students is quite responsive to the FSP laws. These results imply that the effect of the FSP laws is strongest for underage individuals who are less likely to have access to a good fake ID (those who are younger than 18) and who are less likely to have easy access to alcohol in their general surroundings (non-college students).

I estimate the effect of the FSP laws on underage males and females separately and find that for males, the FSP law is associated with up to a 0.2 drink decrease in the average number of drinks consumed per day. I also extend the basic DD analysis and find that the impact of the FSP laws is concentrated in the short-run, which implies a learning behavior and shows that underage individuals substitute towards other methods of obtaining alcohol or can easily find alternative retailers that do not use electronic scanners in the long-run.

The rest of this paper is organized as follows. The next section provides a summary of the history of the FSP laws in the United States and discusses the relevant research. Section 3 presents the data and sets out the specifications for alternative empirical models. Section 4 presents the results and discusses the robustness of the main findings. Section 5 interprets the results, provides a discussion of policy implications, and concludes.

2. Background and literature review

Alcohol Policy Information System (APIS) provides the exact date of the introduction of the FSP laws for those states with a FSP law. In 1999, New York became the first state to pass a FSP law. Since then, 10 additional states have passed laws that provide incentives to retailers and bar owners who use electronic scanners to ensure that the customers is 21 years or older. The majority of these

[2] Electronic scanners read birthdate and other information digitally encoded on identification cards and help retailers to determine whether the identification is valid and the buyer is 21 years or older.

[3] Affirmative defense is facts and arguments that, if true, will exonerate a defendant, even if all allegations in the complaint are true.

[4] The highlights of current New York Liquor Law is available at http://www.sla.ny.gov/handbook-for-retail-licenses.

[5] Compared with the potential punishments that a retailer may face for inadvertently selling alcohol to minors, owning an electronic scanner is relatively cheap. An electronic scanner typically costs between $400 and $1300 (www.idscanner.com).

[6] Several recent news from the popular press report that use of the ID scanners is on the rise. For instance, Irvine (2003) reports that ID scanners are gaining popularity with liquor retailers, police officers, and bar owners nationwide as fake IDs get ever-more sophisticated and difficult to spot. In Utah, the current liquor law explicitly requires retailers and bar owner to scan IDs of people who appear younger than 35. Information obtained through the scan is kept for seven days and law enforcement can inspect it in the event of a DUI or accident. In Pennsylvania, a recent proposal to privatize liquor sales by Majority Leader Mike Turzai mandates the use of ID scanners with age verification software and increases the fine for selling to minors to $10,000. The proposal is available online at http://www.pahousegop.com/Display/SiteFiles/109/OtherDocuments/000_LCB_PrivatizationSummary_7_8_11.pdf.

[7] In contrast to the majority of the existing papers in the literature, this paper not only investigates the effectiveness of the FSP laws but also provides some evidence on the enforcement of such laws.