Journal of Health Economics 57 (2018) 191–194

Contents lists available at ScienceDirect

Journal of Health Economics

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

Reply

The impact of the false ID laws on alcohol consumption among young adults: New results from the NLSY97

Barış K. Yörük

Department of Economics, University at Albany, SUNY, 1400 Washington Ave., Albany, NY 12222, United States

ARTICLE INFO

Article history:
Received 10 June 2016
Received in revised form
11 November 2017
Accepted 26 November 2017
Available online 8 December 2017

JEL classification:
I10
I18
I19

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

ABSTRACT

In volume 36 of this journal, using data from the National Longitudinal Study of Youth, 1997 Cohort (NLSY97), Yörük (2014) finds that the false ID laws with scanner provision (FSP laws) significantly reduce underage drinking. In a recent paper, Zheng (2018) argues that analyses based on the NLSY97 data fail falsification exercises and uses data from the Youth Risk Behavior Surveillance System (YRBSS) to estimate the effectiveness of the FSP laws. This paper replies to Zheng (2018) and provides new results from the NLSY97, which show that the FSP laws were effective reducing several indicators of alcohol consumption among minors.

1. Introduction

In Yörük (2014), using data from the National Longitudinal Survey of Youth, 1997 Cohort (NLSY97) and a difference-in-differences (diff-and-diff) type methodology, I find that the false ID laws with scanner provision (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. In a recent paper, Zheng (2018) argues that the findings in Yörük (2014) are sensitive to inclusion of the 1997 wave of the NLSY97 to the sample and a lead term that controls for the time period prior to the policy change to empirical models. She further argues that an analysis based on the Youth Risk Behavior Surveillance System (YRBSS) yields statistically insignificant effects of the FSP laws on underage drinking.

In this paper, I reply to the arguments in Zheng (2018) and provide new estimates of the effectiveness of the FSP laws using data from the NLSY97.

2. Inclusion of the 1997 wave to the sample

Yörük (2014) uses data from the 1998–2005 waves of the NLSY97. The original sample in Yörük (2014) includes those who are 13–20 year old as of the interview date. Zheng (2018) argues that inclusion of the 1997 wave of the NLSY97 changes the original estimates considerably. In particular, she finds that the effects of the FSP laws on binge drinking outcomes mostly disappear when an additional year of data is included to the sample. The NLSY97 is a panel data set that contains a nationally representative sample of 9022 youths who were 12–16 years old as of December 31, 1996. Therefore, the first wave of the NLSY97 (the 1997 wave) contains very young respondents. Table 1 illustrates this fact. Zheng's inclusion of the 1997 wave to the sample introduces 12 year olds that were not in the original sample and almost doubles the number of 13–14 year olds in the sample with relatively little effect on 15–18 year olds and no effect on 19–20 age olds. Table 1 also shows that compared to other age groups, both 12 year olds and 13–14 year olds have very low alcohol consumption rates. For instance, average number of drinks consumed per day for a slightly older age group of 15–16 year olds are almost 6 times greater than that of the 13–14 year olds and 18 times greater than that of the 12 year olds. On the other hand, the differences in alcohol consumption rates across

E-mail address: byoruk@albany.edu

https://doi.org/10.1016/j.jhealeco.2017.11.005
0167-6296/

Table 1
Distribution of alcohol consumption outcomes by the NLSY97 waves and age groups.

	Age of the respondent				
	12	13–14	15–16	17–18	19–20
Consumed alcohol					
1997 wave	0.051	0.129	0.339	0.391	
	[1166]	[3567]	[1703]	[628]	
1998–2005 waves		0.222	0.356	0.470	0.590
		[1802]	[4952]	[14633]	[15554]
Engaged in binge drinking					
1997 wave	0.023	0.052	0.199	0.223	
	[1166]	[3567]	[1701]	[628]	
1998–2005 waves		0.074	0.184	0.276	0.361
		[1800]	[4947]	[14615]	[15517]
No. of days consumed alcohol					
1997 wave	0.211	0.414	1.602	1.751	
	[1166]	[3567]	[1703]	[628]	
1998–2005 waves		0.755	1.586	2.579	3.816
		[1802]	[4952]	[14633]	[15554]
No. of days engaged in binge drinking					
1997 wave	0.086	0.195	0.876	0.967	
	[1166]	[3567]	[1701]	[628]	
1998–2005 waves		0.188	0.696	1.229	1.841
		[1800]	[4947]	[14615]	[15517]
Avg. no. of drinks consumed					
1997 wave	0.018	0.056	0.328	0.337	
	[1164]	[3562]	[1694]	[625]	
1998–2005 waves		0.137	0.315	0.519	0.762
		[1800]	[4921]	[14535]	[15421]

Notes: Sample weighted means are reported. Number of observations is reported in brackets.

Table 2
The effect of the false ID laws on alcohol consumption: new results with the inclusion of the 1997 wave.

	(1)	(2)	(3)	(4)	(5)
Consumed alcohol					
Treat	−0.008	−0.005	−0.005	−0.004	−0.004
	(0.010)	(0.010)	(0.011)	(0.012)	(0.012)
R^2	0.040	0.040	0.045	0.063	0.072
N	40076	40704	44269	47386	49002
Engaged in binge drinking					
Treat	−0.026***	−0.022**	−0.015	−0.016	−0.016
	(0.010)	(0.010)	(0.012)	(0.011)	(0.011)
R^2	0.032	0.032	0.034	0.043	0.048
N	40009	40637	44200	47767	48993
No. of days consumed alcohol					
Treat	−0.198*	−0.179	−0.181*	−0.157	−0.159
	(0.112)	(0.113)	(0.107)	(0.099)	(0.098)
R^2	0.026	0.026	0.030	0.040	0.043
N	40076	40704	44269	47386	49002
No. of days engaged in binge drinking					
Treat	−0.142	−0.122	−0.095	−0.096	−0.092
	(0.087)	(0.089)	(0.088)	(0.084)	(0.083)
R^2	0.020	0.020	0.021	0.025	0.027
N	40009	40637	44200	47767	48933
Avg. no. of drinks consumed					
Treat	−0.093**	−0.086**	−0.077**	−0.071**	−0.069**
	(0.040)	(0.039)	(0.035)	(0.030)	(0.029)
R^2	0.013	0.013	0.015	0.020	0.021
N	39795	40420	43973	47535	48699
Include 18–17 year olds from 97 wave		X			
Include 18–15 year olds from 97 wave			X		
Include 18–13 year olds from 97 wave				X	
Include 97 wave					X

Notes: All regressions include state, month, and year fixed effects. The first column reports the results from the first column of Table 2 of the original paper (Yörük, 2014). The remaining columns report results from a comparable model specification using alternative subsamples from the 1997 wave of the NLSY97. Standard errors, corrected for clustering at the state level, are reported in parentheses.
* The sign * denote statistical significance at the 10% significance levels.
** The sign ** denote statistical significance at the 5% significance levels.
*** The sign *** denote statistical significance at the 1% significance levels.

older age groups are relatively small. For instance, average number of drinks consumed per day for the oldest age group (19–20 year olds) is approximately 2 times greater than the that of the 15–16 year olds. Any alcohol control policy is less likely to have an affect on those who have very low alcohol consumption rates. Therefore, the finding that the effect of the FSP laws disappears when the 1997 wave is included in the sample is not surprising since the inclusion of the 1997 simply increases the number of very young individuals (with very low alcohol prevalence) in the sample that are highly unlikely to be affected by the policy. The new estimation results presented in Table 2 further illustrates this result. The first column of this table reports the most conservative estimates from the simple diff-and-diff model that was originally reported in the first column of Table 2 in Yörük (2014). The remaining columns show that the magnitude of the estimated effect of the FSP laws goes down and its coefficient becomes statistically insignificant as we increase the number of very young respondents in the sample by including alternative age groups from oldest to the youngest from the 1997 wave of the NLSY97. Naturally, the models that contain the full 1997 wave with 12 year olds yield the lowest estimated impact of the FSP laws on alcohol consumption among youth.

I also progressively increase the number of old respondents in the sample. When only 12 year olds were included in the sample, coefficient on the treatment variable goes down considerably. Inclusion of the 12–15 year olds further decreases the estimated effect since the majority of the sample in the 1997 wave consists of 13–15 year olds and alcohol consumption of this group is significantly lower than the comparable age group in the 1998–2005 wave. These additional results are presented in Appendix A.

Zheng (2018) also argues that the fact that the 1997 wave contains relatively young sample should not matter and inclusion of the 1997 sample is important because the main results in Yörük (2014) are largely driven by the effects of the FSP laws on young teens. It is true that Yörük (2014) finds significant effects of the FSP laws on alcohol consumption among 13–15 and 16–17 year olds. However, this does not imply that the same results should hold when a new sample of 12 year olds with very low alcohol prevalence are included in the sample in addition to almost doubling the number of 13–14 year olds. More strikingly, Table 1 shows that even across the same age groups, the respondents of the 1997 are much less likely to consume alcohol. For instance, 13–14 year olds in the 1997 wave on average consume 0.056 drinks per day while the same age group in the 1998–2005 waves consumes on average 0.137 drinks per day (more than double compared with the same age group from the 1997 wave). Therefore, Tables 1 and 2 clearly show that the 1997 wave of the NLSY97 is clearly different than the 1998–2005 waves of the same survey and compared with the other waves, the alcohol prevalence in the 1997 wave is considerably lower.

3. Pre-intervention effect

Zheng (2018) also argues that the findings in Yörük (2014) are sensitive to inclusion of a covariate to empirical models that controls for the time period 2 years prior to the policy change. Table 2 of Yörük (2014) shows that the estimated impact of the FSP laws remain significant after the inclusion of this variable to empirical models. Furthermore, Figs. 2–4 in Yörük (2014) provides a visual inspection of data and show that states that introduced a FSP law did not experience a surge in alcohol consumption rates among young adults just before the adoption of this policy. Another clear evidence that shows that pre-intervention effect is not an issue is the dynamic diff-and-diff analysis presented in Table 8 and Figs.