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**A comment on “College Enrollment and Mandatory FAFSA Applications:
Evidence from Louisiana”**

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Abstract

Christa Denault (2023) examines the effect of a policy implemented in Louisiana that mandates that high school students are required to complete the FAFSA as part of the requirements to graduate high school. In her preferred specification (equation (1)), she used a two-way fixed effects estimation strategy, with a continuous treatment dose to find that the mandate increased FAFSA completion rates by 19 percent and implied an increase in college enrollment of 1 to 2 percentage points. She complements this result with an event study to test for parallel trends, and finally an instrumental variable estimation.

First, we find that the paper is computationally reproducible. We focused on the reproduction of Tables 2 and 3 and Figure 2. Second, we document that the author’s results are largely robust. The author’s treatment variable is the FAFSA completion rate. When we substitute this by the FAFSA submission rate, the author’s results remain qualitatively identical. We also find that the IV results are robust to many alternative specifications. Furthermore, the parallel trends assumption, and no treatment assumption made by the author for the specification in equation (1) (inherent to difference-in-difference estimation) seems robust.

Introduction

Christa Denault (2023) examines the effect of a policy implemented in Louisiana that mandates that high school students are required to complete the FAFSA as part of the requirements to graduate high school. The main data sources used in this paper are the Louisiana Department of Education (LDOE) and the Office of Student Financial Aid. The study uses a difference-in-differences method with continuous treatment dosage to compare changes in college enrollment rates between schools with varying pretreatment FAFSA completion rates. This analysis is supplemented by an instrumental

variable analysis. Implemented in the 2017-2018 school year, the policy aimed to boost college enrollment by mandating FAFSA completion. The data span school years from 2014 to 2019, focusing on high school seniors in Louisiana.

The key findings are significant. FAFSA completion rates increased by 19 percentage points, reaching 72% post-policy. College enrollment rates rose by 1–2 percentage points, especially among lower-income students and schools. There was also an increase in merit-based state financial aid applications. The study suggests that mandatory action is more effective than informational nudges, and that support from counselors is crucial. The paper highlights: "I find significant increases in FAFSA completion rates (19 percentage points), and my estimates imply an increase of 1–2 percentage points in college enrollment. There is suggestive evidence that these effects were more concentrated among lower-income students/schools, and merit-based state financial aid applications also increased" (p. 465).

In the present report prepared for the Institute for Replication (Brodeur et al., 2024), we first computationally reproduce the results and then conduct robustness checks.

Computational Reproduction Summary

To reproduce the study, data and codes were obtained from the original author and linked repository. Authors did not register a pre-analysis plan. Tables 2 and 3 of the main paper were successfully recreated. The study is computationally reproducible from the raw data. Cleaning code and analysis code start from raw data and reproduce the output presented in the paper. The following Table 1 summarises the state of this paper's computational reproducibility:

Table 1: Elements of Computational Replicability

	Fully	Partial	No
Raw data provided	x		
Cleaning code provided	x		
Analysis data provided	x		
Analysis code provided	x		
Reproducible from raw data	x		
Reproducible from analysis data	x		

The link to the replication package can be found here: <https://www.openicpsr.org/openicpsr/project/161021/version/V1/view>. We focused on reproducing Figure 2, and Tables 2 and 3.

Robustness Checks

Table 2 contains results from IV estimation. Columns named “Original Paper” contain the estimates of Deneault (2023), from Table 3 Panel B. Columns named “Comment” contain our robustness checks. Table 2 shows that the author’s IV estimates remain robust to the omission of controls, weights, and school fixed effects. However, omitting school fixed effects and controls reverses the sign of the first stage coefficient.

The second stage coefficient declines in magnitude and loses significance when we fully interact all controls and year fixed effects with each other. This may cast doubt on the first-stage monotonicity of the results (Blandhol et al., 2022). Blandhol et al. (2022) discuss the issue that when covariates are incorporated in TSLS estimation, this endangers the assumption of first-stage monotonicity, necessary for the identification of LATE effects under heterogeneity (Imbens and Angrist, 1994). Namely, if the first stage is not monotonous, the IV estimand may incorporate not only the effect on compliers, but possibly also on negatively weighted always-takers. This may cause bias in the estimand. For the IV estimand to capture the LATE only on compliers, and yield a causal effect, it must be that the difference between the conditional expectation function of the instrument, conditional on covariates, and the best linear approximation (linear projection) of the instrument on covariates must be 0. If this holds, the conditional expectation function of the residuals of a linear projection of the instrument on the covariates, conditional on the covariates, will be deterministically 0. The weight given by the IV estimand to always-takers will then be 0. The IV estimand will then only consider compliers and will yield the LATE effect if all other identification assumptions hold. It can then be given a causal interpretation.

When the difference between the conditional expectation function of the instrument, conditional on covariates, and the best linear approximation (linear projection) of the instrument on covariates is 0, we have a condition called “rich covariates”. Blandhol et al. (2022, p.6) write “Specifications that are saturated in covariates, such as “saturate and weight” (Angrist and Pischke, 2009), have rich covariates. If Z and X are independent, as can be the case in some controlled and natural experiments, then any specification with a constant will have rich covariates. Outside of these two cases, having rich covariates is a parametric assumption. If it fails, then the IV estimand β_{IV} reflects not just compliers, but also negatively weighted always-takers”. This motivates our regression specifications shown in columns (2) and (6) of Table 2.

Nonetheless, overall, we conclude that the results are robust.

Table 2: Instrumental Variable Estimation

Dependent Variable	Percentage Enrolled in College in Fall				Percentage College Enrolled Based on Ninth Grade Cohort			
	Original Paper	Comment	Comment	Comment	Original Paper	Comment	Comment	Comment
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

FAFSA Completion Rate	0.334***	0.122	0.221***	2.000***	0.232***	0.220	0.217**	1.832***
	(0.074)	(0.128)	(0.083)	(0.201)	(0.077)	(0.144)	(0.090)	(0.173)
T statistic	4.514	0.953	2.663	9.950	3.013	1.528	2.411	10.590
P Value	[0.000007]	[0.341]	[0.008]	[0.000000]	[0.003]	[0.127]	[0.016]	[0.000000]
Observations	1,294	1,294	1,294	1,294	1,294	1,294	1,294	1,294
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
School Fixed Effects	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Controls	Yes	Yes	No	No	Yes	Yes	No	No
Controls and Year FE Fully Interacted	No	Yes	No	No	No	Yes	No	No
Weights	Yes	Yes	No	Yes	Yes	Yes	No	Yes
First-Stage F Statistic	51.62***	9.74***	66.08***	80.82***	51.62***	9.74***	66.08***	80.82***
First Stage Coefficient of Instrument	0.421***	0.638**	0.526***	-0.534***	0.421***	0.638**	0.526***	-0.534***

Notes: “Controls and Year FE fully interacted” goes towards the “rich covariates” of Blandhol et al. (2022), trying to provide a flexible first stage model for the linear projection to equal the conditional expectation function. All controls in the paper’s X_{st} vector are interacted with each other and with each value of year fixed effect (2016, 2017, 2018 and 2019). Estimates from the original paper are taken from Table 3. P-values are in square brackets.

Table 3 below concerns itself with the event study (equation (2) of the paper). We replace interactions between the treatment dose (1- Average Completion Rate) and individual year dummies by an interaction between the treatment dose and a “post”-treatment dummy. In columns (1) and (2), the “post”-treatment dummy assumes the value of one in the years 2017, 2018 and 2019 inclusive. In columns (3) and (4), the “post”-treatment dummy assumes the value of one in the years 2016, 2017, 2018 and 2019 inclusive. This robustness check is a placebo test. It serves to test whether policy anticipation effects exist, which would violate the identification assumption. No coefficient shown in Table 3 is statistically significant at the 5% level. This reinforces the paper’s robustness and makes the identification assumption more plausible.

Table 3: Difference-in-Difference with Continuous Treatment Dose

	(1)	(2)	(3)	(4)
(1 – Average Completion Rate) * 1(Year=2017, Year=2018, Year=2019)	0.060*	0.019		
	(0.033)	(0.036)		
T statistic	1.818	0.528		

P Value	[0.069]	[0.598]		
(1 – Average Completion Rate) * 1(Year=2016, Year=2017, Year=2018, Year=2019)			0.032	-0.013
			(0.036)	(0.037)
T statistic			0.889	0.351
P Value			[0.374]	[0.726]
Observations	1,554	1,554	1,554	1,554
School Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Covariates	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses, clustered by school identifier. *** p<0.01, ** p<0.05, * p<0.1. In columns (1) and (3), the dependent variable is Percentage Enrolled in College in Fall. In columns (2) and (4), the dependent variable is Percentage College Enrolled Based on 9th Grade Cohort. 1(•) is the indicator function. These estimates adapt equation (2). P-values are in square brackets.

Table 4 below shows that results in the paper's Table 2 (baseline results) remain robust to replacing FAFSA completion rate with FAFSA submission rate. This suggests that selection bias, based on selecting only individuals with complete FAFSA forms, may not be excessively prevalent.

Table 4: FAFSA Completion Rate Replaced with FAFSA Submission Rate – Table 2 of Original Paper

Dependent Variable	FAF Completion rate				% Enrolled in College			
	Original Paper	Comment	Original Paper	Comment	Original Paper	Comment	Original Paper	Comment
Treatment	0.385***	0.472***	0.421***	0.487***	0.070*	0.095***	0.133**	0.135***
	(0.059)	(0.066)	(0.059)	(0.066)	(0.037)	(0.036)	(0.033)	(0.033)
T statistic	6.525	7.152	7.136	7.379	1.892	2.639	3.694	4.091
P Value	[0.00000]	[0.00000]	[0.00000]	[0.000000]	[0.068]	[0.0084]	[0.0002]	[0.00005]
Controls	No	No	Yes	Yes	No	No	Yes	Yes
Observations	1,294	1,294	1,294	1,294	1,294	1,294	1,294	1,294
R ²	0.799	0.783	0.816	0.794	0.886	0.887	0.909	0.909
Mean(Outcome)	0.625	0.689	0.625	0.689	0.480	0.480	0.480	0.480

Notes: errors are in parenthesis, clustered at the school level. * denotes significance at 0.10; ** at 0.05; and *** at 0.01. The "original paper" columns are taken from table 2 with treatment intensity (1-ave FAFSA completion rate). The "comment" columns are our results using treatment intensity (1- ave FAFSA submission rate). P-values are in square brackets.

Table 5 below shows that results in the paper's Table 3 (OLS and IV results) remain robust to replacing FAFSA completion rate with FAFSA submission rate. Again, results remain consistent with the original paper.

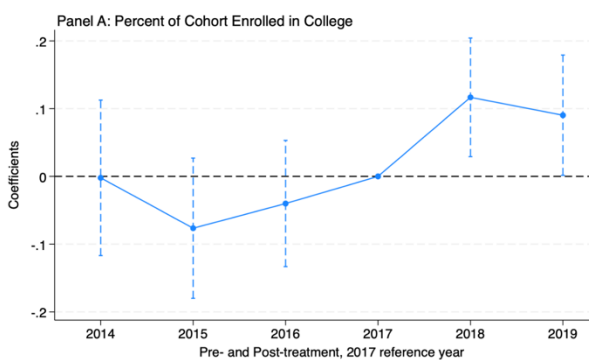
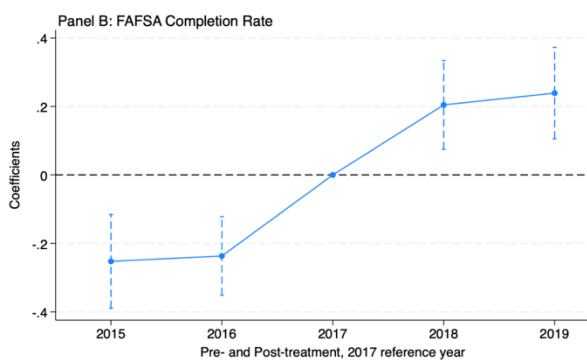
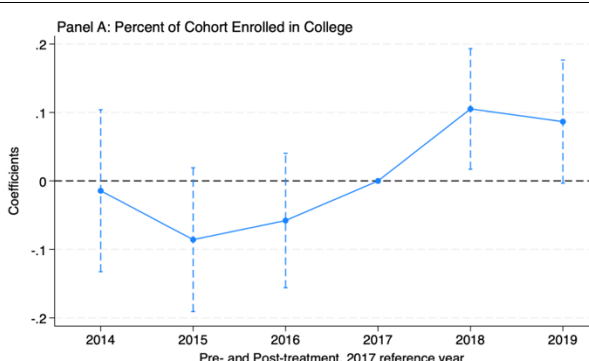
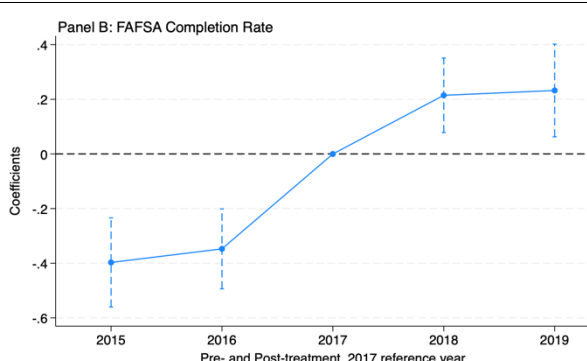
Table5: FAFSA Completion Rate Replaced with FAFSA Submission Rate – Table 3 of Original Paper (OLS and IV results)

Dependent Variable	% enrolled in college (of HS grad)		% Enrolled in College (of ninth grade cohort)	
	Original Paper	Comment	Original Paper	Comment
Panel A. OLS				
FAFSA completion rate/ FAFSA submission rate	0.207***	0.183***	0.180***	0.157***
	(0.028)	(0.027)	(0.026)	(0.025)
T statistic	7.393	6.778	6.923	6.280
P Value	[0.000000000000]	[0.000000000000]	[0.000000000000]	[0.000000000000]
Controls	Yes	Yes	Yes	Yes
Panel B. IV				
FAFSA completion rate/ FAFSA submission rate	0.232***	0.199***	0.334***	0.293***
	(0.077)	(0.067)	(0.074)	(0.064)
T statistic	3.013	2.970	4.514	4.578
P Value	[0.0026]	[0.003]	[0.0000069]	[0.000005]
Controls	Yes	Yes	Yes	Yes
Observations	1,294	1,294	1,294	1,294
Mean(Outcome)	0.571	0.571	0.481	0.481

Notes: errors are in parenthesis, clustered at the school level. * denotes significance at 0.10; ** at 0.05; and *** at 0.01. The “original paper” columns are taken from table 3 with treatment intensity (1-ave FAFSA completion rate). The “comment” columns are our results using treatment intensity (1- ave FAFSA submission rate). P-values are in square brackets.

Next, we conducted a parallel trend test before implementing the treatment. See Figure 1. In the paper, the author employs an event study to test this hypothesis. Here, we intend to conduct an additional joint placebo test prior to the treatment. The null hypothesis posits that the coefficients of the variable of interest for the years prior to the treatment are jointly equal to zero. The results, using treatment intensity defined as (1 - average FAFSA completion rate), indicate that the null hypothesis cannot be rejected for Panel A, but it is rejected for Panel B at the 1% significance level. Furthermore, when using treatment intensity defined as (1 - average FAFSA submission rate), the results show that the null hypothesis is rejected at the 10% significance level for Panel A and the 1% significance level for Panel B. Therefore, it is evident that the assumption of a parallel trend is not fully satisfied, particularly for Panel B. Even though testing each coefficient individually satisfies the condition that the pretreatment effect is zero, the author may consider using a method that better fulfils this parallel trend assumption.

Figure 1: Event Study Joint Significance Test

Original paper	treatment intensity (1-average FAFSA completion rate)
<div>   </div>	
Joint placebo test	
$F(3,258) = 1.10$ Prob > F = 0.3509	$F(2,258) = 10.08$ Prob > P = 0.0001
Comment	treatment intensity (1- average FAFSA submission rate)
<div>   </div>	
Joint Placebo test	
$F(3,258) = 2.16$ Prob > F = 0.0928	$F(2,258) = 14.11$ Prob > F = 0.0000

Conclusion

The computational replicability of Figure 1 and 2, and Table 2 and 3, is impeccable. Results remain largely robust to robustness checks. However, future replication research may go deeper in achieving a “saturate and weight” first-stage equation for the IV results of this paper. This would ensure first-stage monotonicity (Blandhol et al., 2022). Furthermore, future research may try to replicate the “Heterogeneity” subsection of this paper. Replicators may try seemingly unrelated estimation to test whether heterogeneity between different groups of schools is statistically significant. Replicators may try to use another US state as control group; a state which did not mandate FAFSA completion. Replicators may then check whether treatment effects remain consistent.

Finally, an exogeneity issue may arise with the instrumental variable estimation. The author uses treatment intensity of the FAFSA mandate as an instrument. The FAFSA mandate is described as 1 minus the average FAFSA completion rate in years 2015 and 2016 for each school and is multiplied by Post, which takes a value 1 only in the posttreatment periods and is 0 otherwise. This instruments the endogenous variable of school-level FAFSA completion rate. The outcome is college enrolment rate.

The author however acknowledges that exclusion restriction of the instrument she uses is likely violated. The author indeed states: “Given that it is likely the FAFSA mandate increased school involvement in ways that may affect college enrollment but are not directly related to FAFSA completion, these IV estimates are meant to be suggestive evidence of the causal effect of FAFSA completions on college enrollment” (Deneault, p.478). A new exogenous instrument, perhaps of a shift-share nature, may be found.

References

- Angrist, J.D. and Imbens, G.W., 1995. Two-stage least squares estimation of average causal effects in models with variable treatment intensity. *Journal of the American statistical Association*, 90(430), pp.431-442.
- Angrist, J.D. and Pischke, J.S., 2009. *Mostly harmless econometrics: An empiricist's companion*. Princeton university press.
- Blandhol, C., Bonney, J., Mogstad, M., & Torgovitsky, A. (2022). *When is TSLS actually late?* (No. w29709). Cambridge, MA: National Bureau of Economic Research.
- Brodeur et al. (2024). Mass Reproducibility and Replicability: A New Hope, I4R Discussion Paper Series.
- Deneault, C. (2023). College enrollment and mandatory FAFSA applications: Evidence from Louisiana. *American Economic Journal: Economic Policy*, 15(3), 465-494.