

ABORTION RATES, HIGH SCHOOL GRADUATION, AND LABOR FORCE PARTICIPATION

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BACKGROUND

- - until the late 1960's abortions were illegal in all 50 states
 - States began to legalize abortions in late 1960's (Washington, Alaska, New York, and Hawaii)
- *Roe v. Wade* (1973)
- Reasons for legalization of abortions
 - Individualism (Feminist movement)
- Reasons against legalization of abortions
 - Religious beliefs
 - American Conservatism
- Recent closures of abortion clinics (Missouri, Mississippi, Kentucky, and Louisiana)
 - 162 clinics have closed in the United States (2011 – 2016)

MOTIVATION AND RESEARCH QUESTION

- Research Question: Is there a relationship between abortion rates and female high school graduation rates and female labor force participation rates in a state?
- How my research differs
 - Look at lagged abortion rates by 1 year
 - Look directly at how abortion rates impact labor force participation rates

LITERATURE REVIEW

- Negative correlation between legalization of abortion and birth rates
 - Klerman 1999
 - Levine et. al. (1999)
- Negative correlation between birth rates and high school graduation rates
 - Diaz and Fiel (2016)
 - Ferre et. al. (2013)
- Positive correlation between abortion rates and labor force participation
 - Bloom et. al. (2009)

DATA

- 2010-2016 panel data
- Dependent Variables
 - High school graduation rates among females 18-24 (US Census Bureau ACS 1-Year Estimates)
 - Labor force participation rates (Bureau of Labor Statistics)
- Independent Variables
 - Abortion rates among females less than 15 to 19 (Center for Disease Control)
 - Total abortion rates (Center for Disease Control)
- Controls
 - Median income (US Census Bureau ACS 1-Year Estimates)
 - Female unemployment rate (Bureau of Labor Statistics)
 - Race and ethnicity (US Census Bureau ACS 1-Year Estimates)
 - Marital status (US Census Bureau ACS 1-Year Estimates)

SUMMARY STATISTICS HS GRAD

Variable	Obs	Mean	Std. Dev.	Min	Max
HS grad rate	277	87.76	2.823	78.4	96.2
Abortion rate	277	.413	.235	.065	1.52
Perc. non-His. Black	277	11.641	10.687	.265	51.774
Perc. His. Black	277	.583	.614	.042	3.145
Perc. non-His. White	277	70.052	14.886	20.512	94.589
Perc. His. White	277	8.846	8.817	.939	44.394
Perc. Asian	277	4.01	5.492	.717	41.643
Perc. non-His. other	277	4.004	4.822	1.41	28.585
Perc. His. other	277	.864	.799	.08	5.271
Med income	277	77880.339	13741.853	57327	148533

SUMMARY STATISTICS LABOR FORCE

Variable	Obs	Mean	Std. Dev.	Min	Max
Flabor rate	327	58.718	4.477	48	68.9
Total abortion rate	327	1.007	.393	.411	2.765
Perc. non-His. Black	327	10.805	10.762	.265	51.774
Perc. His. Black	327	.549	.598	.042	3.145
Perc. non-His. White	327	70.723	15.559	20.512	94.589
Perc. His. White	327	8.637	8.658	.939	44.394
Perc. Asian	327	4.043	5.906	.717	41.643
Perc. non-His. other	327	4.364	5.261	1.41	28.6
Perc. His. other	327	.882	.829	.08	5.271
Perc. married	327	47.451	4.322	22.8	56.6
Perc. widowed	327	9.111	1.259	5.4	12.8
Perc. divorced	327	12.598	1.455	9.4	16
Perc. separated	327	2.121	.694	.7	4.1
Perc. never married	327	28.719	4.401	20.7	56.9
Fem. Unem.	327	6.278	1.958	2.3	12.7
Med income	327	78355.761	14163.93	57327	157430

METHODOLOGY

$$\text{HS Grad} = \alpha + \beta_1 \text{abortion} + \beta_2 \text{race/ethnicity} + \beta_3 \text{med-income} + \varepsilon_i$$

$$\text{Fem. labor rate} = \alpha + \beta_1 \text{abortion} + \beta_2 \text{race/ethnicity} + \beta_3 \text{marital} + \beta_4 \text{income} + \beta_5 \text{funem} + \varepsilon_i$$

- Lagged abortion rates (1 year)
- OLS and Fixed Effect

HS GRAD RESULTS

	(Model 1)	(Model 2)
	HS Grad	HS Grad
Lagged abortion rate	-1.083* (-1.668)	-.342 (-.255)
Med income	0*** (6.812)	0* (-1.878)
Perc. His. White	-.207*** (-7.98)	.381 (.345)
Perc. non-His. Black	-.089*** (-7.211)	.466 (1.095)
Perc. His. Black	.394 (1.329)	3.495 (.956)
Perc. Asian	.048 (.988)	-1.259 (-1.386)
Perc. His. other	1.688*** (3.137)	3.53 (1.005)
Perc. non-His. other	-.319*** (-6.058)	2.932 (.871)
Constant	85.209*** (113.106)	73.446*** (5.176)
Observations	241	241
R-squared	.536	.88

t-values are in parentheses

*** $p < .01$, ** $p < .05$, * $p < .1$

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LABOR PARTICIPATION RATE RESULTS

	(Model 1)	(Model 2)
	Flabor rate	Flabor rate
Lagged abortion rate	-0.0000267* (-1.696)	0.0000458 (1.223)
Perc. His. White	-.017 (-.391)	.462 (.534)
Perc. non-His. Black	-.098** (-2.584)	-1.327*** (-3.982)
Perc. His. Black	-.189 (-.32)	.86 (.264)
Perc. Asian	-.008 (-.097)	-.503 (-.659)
Perc. His. other	-1.758** (-2.043)	-.423 (-.159)
Perc. non-His. other	.067 (1.007)	-1.841 (-.734)
Perc. widowed	-.935*** (-5.206)	-.358 (-1.355)
Perc. divorced	-1.078*** (-7.413)	-.069 (-.332)
Perc. separated	-2.25*** (-4.542)	-1.007** (-2.153)
Perc. never married	.024 (.244)	-.118 (-.7)
Fem. unem	.271** (2.296)	.053 (.483)
Med income	0** (2.281)	0 (-1.285)
Constant	80.403*** (18.606)	105.963*** (9.203)
Observations	281	281
R-squared	.656	.963

t-values are in parentheses
 *** $p < .01$, ** $p < .05$, * $p < .1$

DISCUSSION

- Higher abortion rates are correlated with lower high school graduation rates
 - Emotional toll on students might lead to more drop outs
- Abortion rates do not have a significant correlation with labor force participation rates
- Limitations
 - Small number of observations
- Future research
 - Observe abortion rates by race and ethnicity
 - Analyze abortion rates and college graduation rates