Same-Sex Marriage Reduces Depression: Evidence From Global Investigation

Chunjin Chen

University of Science and Technology of China (USTC),

Hefei, China

Supervisor : Prof. Jiashun Huang

2023.01.24

Introduction

- **Depression** is a common chronic mental health disease, especially for gender minorities. The core issue is whether same-sex marriage should be legalized.

- As estimated 33 countries **legalize same-sex marriage**, which is a typical policy of anti-bias against homosexuality. Little is known about the global impacts of the policy to the common mental health disease.

Figure 1| Same-sex Marriage Legalization Framework around the World

Results: Same-Sex Marriage Reduces Depression

Table 1| Effects of SSML on Depression

Variables	Depression (1)	Depression (2)	Depression (3)	Depression (4)
SSML	-0.0515** (-2.05)	-0.0538** (-2.07)	-0.0514** (-2.04)	-0.0536** (-2.06)
GDP	-0.0113*** (-3.02)	-0.00875 (-1.49)	-0.0113*** (-2.99)	-0.00867 (-1.41)
ODA	-0.00251* (-1.77)	-0.00217 (-1.48)	-0.00261* (-1.83)	-0.00227 (-1.52)
HE	-0.00355 (-0.26)	-0.00243 (-0.17)	-0.00335 (-0.24)	-0.00220 (-0.15)
SR	0.0343*** (3.33)	0.0362*** (3.33)	0.0342*** (3.33)	0.0361*** (3.27)
Constant	1.606*** (11.55)	1.532*** (7.85)	1.618*** (11.67)	1.540*** (7.72)
Observations	2152	2152	2152	2152
Number of Countries	135	135	135	135
R-squared	0.186	0.209	0.186	0.209
Country FE	NO	NO	YES	YES
Year FE	NO	YES	NO	YES

Table 2| Moderating effect

Variables	Depression (1)	Depression (2)	Depression (3)
SSML	-0.052** (-1.99)	-0.239*** (-2.62)	-0.012 (-0.49)
DR	-0.002 (-1.16)	-0.002 (-1.17)	
DR*SSML	0.157*** (2.75)		
C_DR			-0.002 (-1.17)
C_DR*SSML		-0.004 (-1.42)	0.027** (2.14)
Constant	1.581*** (7.89)	1.586*** (7.91)	1.572*** (7.78)
Control Variables	YES	YES	YES
Observations	2152	2152	2152
Number of Countries	135	135	135
R-squared	0.991	0.991	0.991
Country FE	YES	YES	YES
Year FE	YES	YES	YES

Results: Same-Sex Marriage Reduces Depression
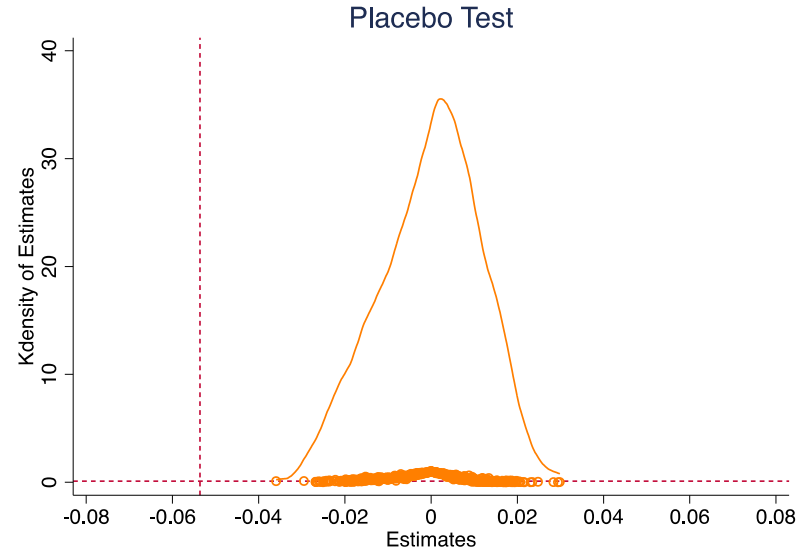

Figure 2| Parallel trend test

Figure 3| Placebo Test

Results: Same-Sex Marriage Reduces Depression

- Referring to the method proposed by Andrew Goodman-Bacon, we conduct the goodman-bacon decomposition to correct the traditional difference-in-difference (DID) and enhance the robustness of the results.

- The above results suggest that the baseline results using difference-in-difference (DID) is plausible and the coefficient of estimate is significantly negative.
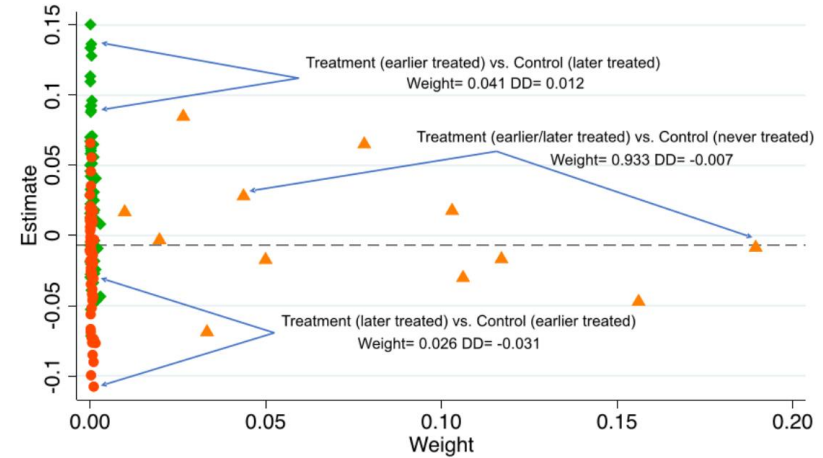

Figure 4| Goodman-bacon decomposition
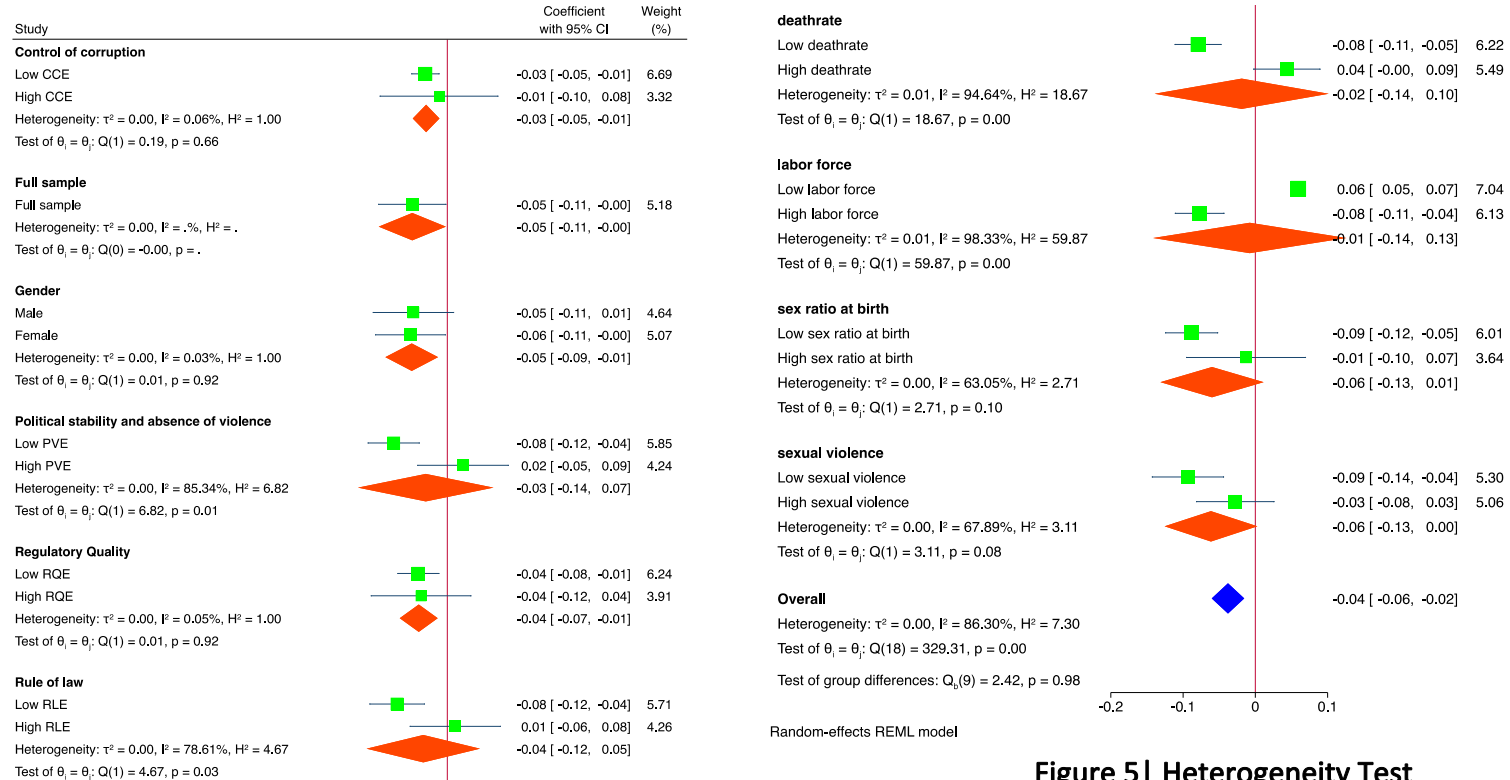
Results: Same-Sex Marriage Reduces Depression

Figure 5| Heterogeneity Test