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LEGALIZING LOVE

Understanding the Effect of Legalizing Gay -Marriage on Adoption Rates in the United States

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THIS PAPER ANALYZES HOW THE STATE-LEVEL LEGALIZATIONS AND NATIONAL LEGALIZATION OF GAY MARRIAGE AFFECTED THE NUMBER OF CHILDREN ADOPTED IN THE UNITED STATES—BOTH ON AVERAGE AND IN EACH OF THE FIVE AGE GROUPS. TO THIS END, THIS PAPER USES A DIFFERENCE REGRESSION USING DATA FROM THE KIDS COUNT DATA CENTER, WHICH DETAILS THE NUMBER OF CHILDREN IN EACH OF FIVE AGE GROUPS ADOPTED EACH YEAR FROM 2000 TO 2017. THIS REGRESSIVE ANALYSIS FOUND A 9.1% INCREASE IN THE NUMBER OF TOTAL ADOPTIONS AFTER THE 2016 NATIONAL LEGALIZATION OF GAY MARRIAGE. HOWEVER, THE ANALYSIS ALSO FOUND THAT A STATE'S LEGALIZATION WAS CORRELATED WITH AN 8% DECREASE IN ADOPTIONS IN THAT STATE, CREATING A COMPLEXITY IN THE RESULTS THAT UNDERLINES THE NEED FOR FURTHER RESEARCH. HOWEVER, THE DIFFERENCE IN EFFECT BETWEEN STATE-LEVEL AND NATIONAL LEGALIZATIONS MAY IMPLY THAT THE BARRIERS TO GAY COUPLES ADOPTING IN THE UNITED STATES MAY BE MORE CULTURAL THAN EXPLICITLY LEGAL.

INTRODUCTION

In the United States, around 100,000 domestic children are in foster care waiting to be adopted during any given year. As such, the United States desperately needs willing and able adoptive parents ("Foster Care in the U.S. - Number of Children Waiting for Adoption").

However, the laws governing the adoption process in the United States present a myriad of barriers for individuals wanting to adopt children, particularly for unmarried couples. According to federal statutes, individuals, or couples may legally adopt children. However, a child can only be adopted by a singular legal entity. Individual people and married couples are legally recognized as one entity, but domestic partnerships are not.

If a person in a domestic partnership applies to adopt a child as an individual, the adoption agency's home study of this individual's home must confirm their single status. If the potential adoptive parent is discovered to be living with a long-time partner, their eligibility may be jeopardized ("Do I Have to be Married to Adopt a Child?").

Furthermore, many adoptions in the United States are brokered by private adoption agencies, with little regulation on what kind of requirements they can set for their adoptions. Despite federal laws not explicitly requiring marriage, the agency American Adoptions requires couples to have been married two years or more, and many other agencies require couples to have been married even longer (American Adoptions, Inc.).

With this background information in mind, this brief examines adoption data from 2000 to 2017 in order to assess how the legalization of same-sex marriage—on a state and national level—increased adoption rates in the United States. The first section of this brief will describe the empirical strategy used to explore the correlation between same-sex marriage legalization and adoption rates, while the discussion section will analyze the findings and their significance. Finally, the concluding section will suggest an explanation for these findings and highlight the weaknesses of this analysis.

EMPIRICAL STRATEGY

This paper utilizes adoption data from the Kids Count Data Center, sponsored by the Annie E. Casey Foundation. This data set, which has 540 observations, reveals the number of children that were adopted in each state and nationally from 2000 to 2017. Unfortunately, this data set only provides raw numbers on how many children were adopted each year—not the percentage of children of those awaiting adoption that were taken in by a new family. This nuance limits the results of the regression for reasons discussed later in the paper.

The data also indicate what age group the adopted children fell into, starting with those under one year old. Naturally, the pool of children that were adopted each year were all unique, but by national averages, the age breakdown is as shown in Table 1.

Age Group (years)	Avg. # of Children Adopted	% of Total Adoptees (Avg.)
Under 1	1188	2.25%
1 - 5	27424.94	52.06%
6 - 10	14940.5	28.28%
11 - 15	7678.833	14.53%
16 - 20	1591.056	3.01%
Total	52836.28	100.13%

TABLE 1: AVERAGE PERCENT OF CHILDEN ADOPTED IN THE UNITED STATES EACH YEAR BY AGE GROUP FROM 2000 TO 2017.

For this analysis, the raw numbers of adopted children were converted into a logarithmic dependent variable in order to analyze how gay marriage changed adoption rates in the form of a percent change.

The regression model for this paper also utilized variables that were generated by hand to indicate same-sex marriage legalization based on the year that each state had legalized it. Observations that were taken from a state before that state's legalization of gay marriage were labeled with a "0", and observations from after a state's legalization were labeled with a "1". Another variable was also generated by hand to indicate national legalization, which labeled all observations from after 2015 with a "1" to show that gay marriage had been legalized nationally at the time of the adoptions in question. Table 2 displays the year of legalization for each state.

Alabama	2015	Maine	2013	Oregon	2015
Alaska	2015	Maryland	2012	Pennsylvania	2014
Arizona	2014	Massachusetts	2014	Rhode Island	2013
Arkansas	2015	Michigan	2015	South Carolina	2014
California	2013	Minnesota	2013	South Dakota	2015
Colorado	2014	Mississippi	2014	Tennessee	2015
Connecticut	2008	Missouri	2015	Texas	2015
Delaware	2013	Montana	2014	Utah	2015
D.C.	2010	Nebraska	2015	Vermont	2009
Florida	2015	Nevada	2015	Virginia	2015
Georgia	2015	New Hampshire	2010	Georgia	2015
Hawaii	2014	New Jersey	2013	Washington	2012
Idaho	2014	New York	2011	West Virginia	2012
Illinois	2014	North Carolina	2014	Wisconsin	2015
Indianna	2015	North Dakota	2015	Wyoming	2014
Iowa	2009	Ohio	2015		
Kansas	2015	Oklahoma	2015	Nationwide	2015

TABLE 2: YEAR SAME-SEX MARRIAGE BECAME LEGAL IN EACH STATE (ALPHABETICAL)
SOURCE: GEORGETOWN LAW LIBRARY

Thus, for this analysis, the log of the adoption numbers was regressed upon a binary variable indicating state legalization of gay marriage, a binary variable indicating national legalization, and a binary variable indicating early legalization. The model also controlled for state and year. This regression was performed separately for every age group, as well as for the aggregate adoption data. This model is intended to control for any differences in adoption numbers that may arise from demographic differences between individual states, such as population. It is also intended to control for the passing of time to try to isolate the effect of the policy change.

RESULTS

Performing a regression analysis on these data yields several interesting conclusions. The most interesting finding is that the national legalization of same-sex marriage increased aggregate adoption rates by about 9.1% (Coefficient = 0.0907). This finding is statistically significant at the 10% level. This coefficient indicates that when gay marriage was legalized, even states that had already legalized gay marriage experienced a statistically significant increase in adoptions.

Interestingly, the coefficient on "StateLegal" was -0.0793, implying that a state's legalization of gay marriage decreased aggregate adoption rates in that state by about 8%. This is also statistically significant at the 10% level, but it is certainly an unexpected correlation. It is hard to say why this decrease occurred or if it is even causal. One potential explanation for this counterintuitive result is that the "StateLegal" variable may not be well specified, therefore violating the first assumption of time series regressions. However, given the high adjusted R-squared values discussed later in this paper—which indicate that the model fits the data very well—it seems likely that there is some other cause. Alternatively, there could be correlation between the independent variables and the errors, which would violate the fourth assumption of time series regressions.

Nevertheless, the coefficients on the "NationwideLegal" and "StateLegal" variables for each age group are displayed in Table 3. The statistically significant negative coefficients on "StateLegal" versus the statistically significant positive coefficients on "NationwideLegal" could be interpreted to indicate that states' legalizations of gay marriage had less of a positive impact on adoption rates than the national legalization. One possible explanation for this disparity could be the social stigma against homosexual couples as parents. It is possible that if a person is against gay marriage, their state governor or

Age Group**	"NationwideLegal"	"StateLegal"
Total	.091* — 9.1% increase	.079* — 7.9% decrease
Under 1	-.064 — 6.0% decrease	.107 — 1.1% increase
1 - 5	.062 — 6.2% increase	.0412 — 4.1% increase
6 - 10	.175* — 17.5% increase	-.219* — 21.9% decrease
11 - 15	.0469 — 4.7% increase	-.254* — 25.4% decrease
16 - 20	.132 — 13.2% increase	.123 — 12.3% increase

*Statistically significant at the 10% level
**Age in years

TABLE 3: COEFFICIENTS ON "NATIONWIDELEGAL" AND "STATELEGAL" FOR EVERY AGE GROUP

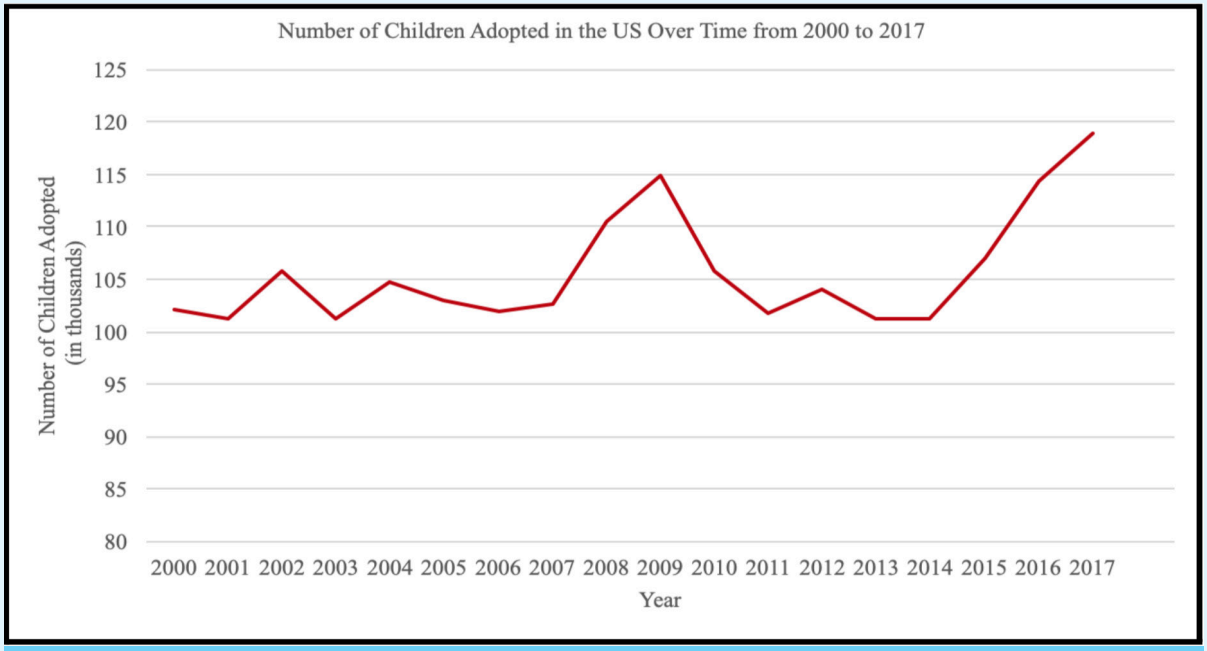
state supreme court legalizing gay marriage would not be enough to make them reevaluate their homophobic views. However, the federal Supreme Court's decision may have been more influential. It was heavily publicized, therefore placing the rights of same-sex couples in the political spotlight in an unprecedented way. Giving the LGBT community the visibility that they had systematically been denied may have hindered their critics' practice of sweeping them under the rug as sociological or biological anomalies. Moreover, the positive, inclusive slogans like "Love is love" could have helped to humanize the LGBT community to its critics.

Ultimately, by whatever avenue, the 2015 Supreme Court decision forced Americans to recognize and respect same-sex couples more than ever before, and it is possible that this shift in social attitudes towards gay couples may have led more adoption agencies to accept gay couples as adoptive parents. This would create the uptick in adoption rates after the national legalization that was not seen after state-level legalizations. Graph 1 provides evidence to support this explanation, illustrating the average number of children adopted in the United States over time.

Since 2015, 2016, and 2017 all saw increasing levels of adoptions, this graph hints that the social normalization prompted by the legalization of gay marriage may have sparked an upward trend in adoption rates that may not yet be over. Unfortunately, adoption data have a lag in availability, so numbers for recent years are unknown. However, assuming recent data follow the same pattern, one possible explanation for this upward trend is that the adoption-related effects of legalizing gay marriage may not have taken full effect yet.

This inference is supported by the fact that the 2015 court decision did not instantly legalize adoption by gay couples in all states. Some states recognized gay couples' right to adopt in 2015, but some states didn't recognize that right until they were mandated to by a 2017 Supreme Court ruling ("V.L. v. E.L.").

That was not the end of the story, however, as even today not all adoption agencies recognize homosexual married couples' eligibility to adopt. As of January 2022, eleven states have legislation explicitly establishing a legal right for religiously affiliated adoption agencies to discriminate against homosexual couples ("Foster and Adoption Laws," 2022). These circumstances illustrate that the extent of homosexual couples' eligibility to adopt in the United



GRAPH 1: NUMBER OF KIDS ADOPTED IN THE US OVER TIME FROM 2000 TO 2017

States has been expanding—and likely will continue to.

Thus, while the legalization of gay marriage made adoption for gay couples considerably easier overall, there were certainly still more barriers in some states at that time. Over time, as more and more of these statutes break down, an upward trend in adoption rates like the one illustrated in Graph 1 may become even more concretely apparent. However, this explanation is just a conjecture. This data trend is too recent for this analysis to convincingly suggest a causal relationship.

However, while many of the findings from the regression potentially tie into this greater, significant social trend, not all of the conclusions carry a practical significance. The analysis found that the coefficient on "EarlyLegalize" was -.4816 for aggregate adoption data. The coefficient was similarly negative across all age groups, indicating that states that legalized gay marriage earlier had lower adoption rates. This coefficient was statistically significant from zero at the 1% level.

Despite this statistical significance, this finding may not have any causal significance, as it could be due to other factors. The group of states that legalized gay marriage early could be smaller states overall, thus having fewer kids up for adoption. Alternatively, these could be states where adoption is less common on the whole. This variable simply compares one group of states to the other, and thus does not actually illuminate the effects of early legalization of gay marriage. In order to make this coefficient more accurate, subsequent regressions should attempt to control for these variables.

Nevertheless, despite the unfortunate omission of some important control variables, overall, the model used in the regression fits the data well. The regression on the aggregate adoption rates had an R-squared value of .945 and an adjusted R-squared of .941. The five age groups had an average R-squared of .862 and an average adjusted R-squared of .853. The individual values are displayed in Table 4.

Age Group (Years)	Under 1	1-5	6-10	11-15	16-20
R-squared	.7482	.9454	.9426	.9070	.7835
Adj. R-sq.	.7316	.9421	.9200	.9013	.7700

TABLE 4: R-SQUARED AND ADJUSTED R-SQUARED VALUES FOR EACH REGRESSION (BY AGE GROUP)

As illustrated in Table 4, the only regressions with adjusted R-squared values less than .90 are those for the under one and 16-20 age groups. These might be outliers simply because there are fewer children adopted in these age groups overall. This amplifies the effect of any changes or any exceptional adoption years, making it harder for any regression to fit the data well.

These relatively small adoption numbers likely also explain the disparities in the standard error values. The standard errors for all of the coefficients in every regression are under. 1 except for those for the regression for the same two outlier age groups. These low standard errors indicate that this model fits the data relatively well. The regressions on children under one and above sixteen had slightly higher standard errors likely due to the same reasons as the lower R-squared values.

Overall though, the high adjusted R-squared values indicate that the independent variables included in this regression—state, year, and the coefficients relating to same-sex marriage legalization—explain the variation in adoption rates well.

CONCLUSION AND LIMITATIONS

Overall, this data analysis provides some evidence supporting the hypothesis that the legalization of same-sex marriage increased adoption rates. However, the results from this analysis hint that this increase may not yet be fully realized.

The fact that state legalization of same-sex marriage did not significantly increase adoption rates implies that the barriers to same-sex adoption extend beyond the legal ones discussed in the introduction of this paper. In fact, this result implies that the biggest barriers to same-sex adoption may be rooted in social stigma.

This explanation is supported by the fact that national legalization increased adoption rates. It is possible that national legalization shifted public opinion significantly—considerably more than any one state's legalization did — thus increasing adoption rates. This conclusion is further strengthened by the upward trend in adoption rates since 2015. As Americans become more and more comfortable with same-sex couples, more and more adoption agencies

are allowing gay adoptive parents, thus allowing homosexual couples to fill the United States' need for adoptive parents.

However, this is simply one possible explanation. These results may have been produced by a coalescence of other factors. Overall, the only thing this analysis concretely indicates is that more investigation into this topic is needed.

There are also a few weaknesses to this analysis that must be pointed out. Firstly, in order to perform this regression with yearly adoption data, the dates on which gay marriage was legalized in each state had to be rounded to the nearest full year. Unfortunately, this may have blurred the results, given that many legalizations—such as the national legalization in June of 2015—happened mid-year. If the adoption data were categorized by month, this analysis would have yielded more reliable conclusions.

Additionally, since the data are so recent, it is difficult to determine whether the upward trend in adoptions since circa 2015 is significant, or if it is just a spike—like the increase in adoptions in 2008 and 2009. Only time and further investigation will tell if this more recent increase constitutes a trend or not.

Furthermore, as referenced in the introduction, the format of the data is somewhat limiting. The data are presented in the number of children adopted per year, rather than a percentage of children adopted out of the pool of adoptable children. Because the number of children up for adoption varies year to year, in an ideal world this regression should be performed with data on yearly adoption rates. These rates should remain relatively constant over time barring any significant social, political, or economic change.

Overall, while the results from this analysis are not conclusive, they certainly highlight the need for more investigative research into how the growing American acceptance of gay marriage may affect adoption rates in the United States. Ultimately, further research could highlight an additional, hidden benefit in eroding our nation's heteronormative cultural standards. Through taking a stand for sexual equality, we may have the power to increase the number of children who are able to grow up with a permanent sense of belonging in generous, loving families.

"Through taking a stand for sexual equality, we may have the power to increase the number of children who are able to grow up with a permanent sense of belonging within generous, loving families."

REFERENCES

"A Brief History of Civil Rights in the United States: A Timeline of the Legalization of Same-Sex Marriage in the U.S." Guides. Accessed December 10, 2020. https://guides.ll.georgetown.edu/c.php?g=592919&p=4182201.

American Adoptions, Inc. "Requirements to Adopt." American Adoptions - Adoption Requirements in the U.S. Accessed December 10, 2020. https://www.americanadoptions.com/adopt/requirements_to_adopt.

"Do I Have To Be Married To Adopt A Child?" Adoption Network. Accessed December 10, 2020. https://adoptionnetwork.com/do-i-have-to-be-married-to-adopt-a-child.

16, Oct. "Foster Care in the U.S. - Number of Children Waiting for Adoption" Statista. October 16, 2020. Accessed December 12, 2020. https://www.statista.com/statistics/255375/number-of-children-waiting-to-be-adopted-in-the-united-states/.

"Foster and Adoption Laws." Movement Advancement Project. Accessed January 7, 2022. https://www.lgbtmap.org/equality-maps/foster_and_adoption_laws.

"V.L. v. E.L." SCOTUSblog. Accessed December 10, 2020. https://www.scotusblog.com/case-files/cases/v-l-v-e-l/.

"Who May Adopt, Be Adopted, or Place a Child for Adoption?" January 2020. Accessed December 10, 2020. https://www.childwelfare.gov/pubPDFs/parties.pdf.

LIST OF ARTWORK