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ABSTRACT

Migration and *Loving*[*]

This paper explores the relationship between anti-miscegenation laws, interracial marriage and black males' geographical distribution in the U.S. during and after the Great Migration. The U.S. Supreme Court decision in the case of *Loving v. Virginia* in 1967, which forced the last 16 Southern states to strike down their anti-miscegenation laws, creates a unique opportunity to explore the impact of an exogenous change in a state's laws regulating interracial marriages. Analyzing the U.S. Census data, I find that anti-miscegenation laws in an individual's state of birth affect the sorting of inter- and intraracially married black males into destination states differentially.

JEL Classification: J12, J15

Keywords: interracial marriage, migration, anti-miscegenation laws

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THE LAND OF HOPE
Yes, we are going to the north!
I don't care to what state
Just so I cross the Dixon line,
From this southern land of hate,
Lynched and burned and shot and hiring,
And not a word is said.
No law whatever the [sic] protect
It's just a "nigger" dead.
Go on dear brother you'll ne'er [sic] regret;
Just trust in God; pray for the best.
And at the end you're sure to find
"happiness will be there."[1]

From the early twentieth century to the 1970s, the United States witnessed a massive migration of southern-born black Americans to the West and to the North in search of better lives.[2] This mass emigration of blacks from the Southern states, also known as the "Great Migration," resulted in a drastic change in the geographical distribution of the black population (Fligstein [1981], Marks [1989], Goodwin [1990], Lemann [1991], Trotter [1991] and Tolnay, Crowden and Adelman [2002]). In the first decade of the twentieth century, 89.7 percent of blacks lived in the South, while only 4.4 percent lived in the Northeast, and 5.6 percent lived in the Midwest. However, by the 1970s only 53 percent of blacks lived in the South, while 19.2, 20.2, and 7.5 percent lived in the Northeast, Midwest and West respectively. While it has documented that the post-1970 period was marked by reverse migration of blacks, geographical distribution of blacks in the 2000 Census is similar to that in the 1970 Census. As of the 2000 Census enumeration, 54.8 percent of blacks lived in the South, while 17.6, 18.8 and 8.9 percent lived in the Northeast, Midwest, and West respectively (U.S. Census Bureau [2002], Tolnay [2003]).

The literature on the Great Migration of blacks focuses both on economic and social

[1] By William Crosse.

[2] There are various definitions of the "South." In this study I use the definition of the Southern region used by the United States Census Bureau, which includes Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia and the District of Columbia.

forces. Previous literature considers racial violence and inequality, which were promoted by the Jim Crow laws in effect from 1877 until the mid-1970s in the Southern and the Border states, and deteriorating economic conditions in the South among the most important push factors that drove migrants to leave their places of origin (for instance see Fligstein [1981], Grossman [1989], Marks [1989], Goodwin [1990], Lemann [1991], Trotter [1991], and Tolnay and Beck [1992]).

Traces of racial segregation can be found much earlier even in the domain of intimate relationships between blacks and whites. The anti-miscegenation laws banning interracial relationships between blacks and whites were enforced as early as 1662 (Newbeck [2004] and Wallenstein [2004]). In nine states and in the District of Columbia black/white interracial marriage has never been illegal. Forty-one states outlawed black/white interracial marriage at some point in U.S. history (Browning [1951] and Newbeck [2004]). Table 1 shows a list of states categorized by the year of their ban of anti-miscegenation laws. Virginia was the first to ban interracial marriages, but its anti-miscegenation laws had been effective for 305 years. Eleven of these 41 states repealed their anti-miscegenation laws in the nineteenth century, and with the lead of California in 1948, another 14 repealed their laws before 1967.[3] Maryland was the last state that voluntarily revoked its anti-miscegenation statutes in 1967. However, 16 Southern states were forced to do so by the U.S. Supreme Court ruling in the case of *Loving v. Virginia*, 388 U.S. 1 (1967).[4] On June 12, 1967, Chief Justice Warren delivered the opinion of the Court:

> This case presents a constitutional question never addressed by this Court: whether

[3]Fryer (2007) classifies Kansas, New Mexico and Washington in the Never illegal group, because these states repealed the laws before the 1900s and before their statehood. Here they are classified in the Nineteenth-century legalized group, because regardless of statehood, they repealed these laws before the 1900s.

[4]The *Loving* state group does not entirely correspond to the definition used by the United States Census Bureau of the Southern region. The *Loving* states also include Missouri and exclude Maryland and the District of Columbia. Nevertheless, I loosely label the *Loving* states as the Southern states.

> a statutory scheme adopted by the State of Virginia to prevent marriages between persons solely on the basis of racial classifications violates the Equal Protection and Due Process Clauses of the Fourteenth Amendment. ... In June 1958, two residents of Virginia, Mildred Jeter, a Negro woman, and Richard Loving, a white man, were married in the District of Columbia pursuant to its laws. Shortly after their marriage, the Lovings returned to Virginia and established their marital abode in Caroline County. ... On January 6, 1959, the Lovings pleaded guilty to the charge and were sentenced to one year in jail; however, the trial judge suspended the sentence for a period of 25 years on the condition that the Lovings leave the State and not return to Virginia together for 25 years. ... Marriage is one of the "basic civil rights of man," fundamental to our very existence and survival. ... The Fourteenth Amendment requires that the freedom of choice to marry not be restricted by invidious racial discriminations. Under our Constitution, the freedom to marry, or not marry, a person of another race resides with the individual and cannot be infringed by the State. These convictions must be reversed. It is so ordered.[5]

The U.S. map in Figure 1 shows these four main state groups: 9 "Never illegal" states, 11 states in the "Nineteenth-century legalized" group, 14 states in the "1948-1967 Legalized" group and the "*Loving*" group of 16 states that had to remove the ban on black/white interracial marriage after the U.S. Supreme Court ruling in 1967. A way to describe the migration patterns of blacks during the Great Migration by using this classification is to state that blacks left the *Loving* States and migrated to non-*Loving* States, which are 1948-1967 legalized, Nineteenth-century legalized, and Never illegal state groups.

Fryer (2007) provides a detailed review of interracial marriage trends during the twentieth

[5]FindLaw: *Loving v. Virginia*, 388 U.S. 1 (1967) `http://laws.findlaw.com/us/388/1.html`.

century and evaluates the explanatory power of current theories of family formation. He finds that during and after the Great Migration, black male/white female interracial marriage rates (IMRs hereafter) differed remarkably among states that never had any anti-miscegenation laws, states that voluntarily repealed their anti-miscegenation laws either before or during the nineteenth century, and states that were forced to strike down their statutes by the U.S. Supreme Court. While Fryer (2007) briefly reports different IMRs in different state groups, the current study investigates possible causes of unequal IMRs among state groups by focusing on the relationship between black/white interracial marriages, state of birth and ban of anti-miscegenation laws on married black male migrants' destination selection in the U.S.

The ban of anti-miscegenation laws by the U.S. Supreme Court in 1967 creates a unique opportunity to explore the impact of an exogenous change in a state's laws regulating the marriages to investigate whether black males who have white spouses sorted themselves into the *Loving* and non-*Loving* states differently than those who have black spouses and whether the anti-miscegenation laws in their state of birth and being in the marriage market after the U.S. Supreme Court decision in the case of *Loving v. Virginia* affected this sorting.

The harmony of relationships between races in a society like the U.S. depends on the level and quality of interaction between different racial groups. Interracial marriages constitute the most intimate type of interactions between races. Fryer (2007) shows that IMRs in the U.S. are related to individual education, anti-miscegenation laws, regions and states of residence, and military statuses of individuals. This study contributes to the very limited body of research on the role of statutes in the migration patterns of blacks by focusing on the inter- and intraracially married black males during and after the Great Migration.[6]

This analysis is important at least for two reasons. First, studying the possible effect

[6]Intraracial marriages refer to those between two individuals of the same race.

of statutes on migration patterns helps us understand the influence of factors other than economic incentives on the locational choices of married blacks during and after the Great Migration. Second, analyzing the impact of the U.S. Supreme Court repeal of statutes banning interracial marriages on the geographical distribution of married blacks may help us to understand the future of same-sex couples in the U.S.

My calculations based on 5 percent samples of Integrated Public Use Microdata Series (IPUMS) from the 1980, 1990 and 2000 U.S. Census data sets reveal that black male IMRs are highest in the non-*Loving* states (1948-1967 Legalized, Nineteenth-century legalized and Never illegal states), and lowest in the *Loving* states. Black males who were born in the *Loving* states and married to white wives are less likely to reside in the *Loving* states than those black males who were born in the *Loving* states and married to black wives. However, for *Loving*-born black males who entered the marriage market after the anti-miscegenation laws were struck down in 1967, the percentage increase in the predicted probability of residing in *Loving* states for those with white spouses is larger than for those with black spouses. The estimations based on the 1990 and 2000 U.S. Census data also confirm these results. Because the U.S. Supreme Court decision in the case of *Loving v. Virginia* did not legally affect non-*Loving*-born black males, I use the changes in the probability of residing in the *Loving* states for non-*Loving*-born black males to control for generation-specific trends in migration. The results show that statutes banning black/white interracial marriages had an impact on the sorting of married black males into different state categories.

1 Data

I use 5 percent samples of the Integrated Public Use Microdata Series (IPUMS) based on the 1980, 1990 and 2000 U.S. Census data sets (Ruggles et al. [2004]). The IPUMS Census

data provide sufficient information to identify married couples currently living in the same household and to match each married individual with his/her spouse's race.

The samples are restricted to all married U.S.-born black males aged 18-60.[7] I exclude black males with spouses of other races (Native Americans, Alaskan Natives, Asians, Pacific Islanders and others) because there is a small number of black males in this category and interracial marriages between blacks and non-whites were not prohibited in almost all of the states.[8] Black females are also excluded from the analysis, as few interracially married black females yield large standard errors and insignificant estimates.[9] Maryland is excluded from the sample because categorizing it as a non-*Loving* state would be problematic, because while Maryland voluntarily repealed its anti-miscegenation law, it did so in 1967 right before U.S. Supreme Court forced their ban.[10] The census person weights were used in all of the statistical calculations when appropriate, but unweighted estimates are similar.

Table 2 displays sample sizes by state group of birth and state group of residence (*Loving* v. non-*Loving*). In each census data sample the majority of married black males, roughly 70 to 80 percent, were born in the *Loving* states. Interestingly, the percentage of married black males who were born in the *Loving* states decreased from 79 percent in 1980 to 70 percent in 2000. When individuals are categorized by their state group of residence, a strong net emigration from the *Loving* states becomes apparent. The percentage of *Loving*-born black males (79, 76, and 70 percent in the 1980, 1990 and 2000 Census samples respectively) is much larger than the percentage of black males residing in the *Loving* states in each corresponding census enumeration (55, 62 and, 64 percent in the 1980, 1990 and 2000 Census samples respectively).

[7]The main results are not affected when the samples are restricted to all married U.S.-born black males aged 18-51.

[8]Only Louisiana and Maryland had laws banning marriages between blacks and Native Americans.

[9]Only 0.77 percent of the married black females had white husbands and 0.21 percent of the married black females had husbands of other races.

[10]The results do not change when Maryland is included in the sample.

The last row of Table 2 shows that the total number of married black males has decreased from the 1980 to 1990 Census and increased from the 1990 to 2000 Census. After examining the census data sets carefully, I find that the total number of black males (married and non-married) increased over the time. The total number of black males is 265,059, 274,569, and 300,759 in the 1980, 1990 and 2000 Censuses respectively. The variation in the sample sizes in this study is clearly attributable to the fluctuations in the number of married black males in the total sample of black males, which may be due to changing attitudes towards marriage and higher incarceration rates of black males (see Charles and Ming (2006)).

The black male/white female interracial marriage rate (hereafter IMR) for black males is the percentage of black males with white spouses in the total number of married black males.[11] Table 3 presents black male IMRs by state group of birth and state group of residence in each census year. The last row of Table 3 shows that in the U.S., the black male/white female IMR has increased over the course of 3 decades: 3.3, 5.3, and 7.7 percent in 1980, 1990 and 2000 respectively. While the black male IMR has increased over this period, an interesting picture emerges when individuals are categorized by their state group of residence. The black male IMR among the residents of the *Loving* states has never reached the levels seen among the residents of the non-*Loving* states. While the black male IMRs are 5.6, 8.6 and 12.2 percent in 1980, 1990 and 2000 Census data sets respectively in the non-*Loving* states, the black male IMRs are only 1.4, 2.7 and 4.9 percent for corresponding census years in the *Loving* states.

A comparison of the upper and lower panels of Table 3 reveals that the black male IMRs are larger in every corresponding cell when individuals are categorized by their state group of birth rather than their state group of residence. Among married black males who were born in the *Loving* states the IMRs are 2.3, 3.6 and 5.5 percent in the 1980, 1990 and 2000

[11] Here I focus on heterosexual marriages.

Census data sets respectively, while among those married black males who are residing in the *Loving* states as of the 1980, 1990 and 2000 Census enumerations, the IMRs are 1.4, 2.7, and 4.9 percent. Interestingly, the IMRs for black males who were born in the non-*Loving* states are also larger than the IMRs for black males who are residing in the non-*Loving* states with the exception of the 2000 Census data.[12]

Tables 2 and 3 reveal that there is a net emigration of married black males from the *Loving* states, and the black males who are not residents of the state group in which they were born have different IMRs than those who are the residents of their state group of birth. Therefore, interracially married black males are sorted differently into these two state groups (*Loving* v. non-*Loving*) than are those with black wives, and state group of birth matters in this differential sorting.

2 Estimation Strategy

To investigate the effects of the U.S. Supreme court ban of anti-miscegenation laws in 1967 on the sorting of married black males, I calculate the probability of residing in the *Loving* states by spousal race for those black males who were 18 years of age or younger in 1967, who thus were more likely to marry after 1967 and were not legally affected by anti-miscegenation laws, and then compare these differences with corresponding differences for black males who were 19 years of age or older in 1967.

I use the 1980 Census data to substantiate the claim that the majority of individuals marry after they turn 18. The 1980 Census data is the only data set that contains detailed information that allows one to calculate the year of first marriage. Table 4 reports the fraction of all first marriages that occurred after 1967 by age groups and spousal race. The

[12]In the 2000 Census data, IMRs for those who were born in the non-*Loving* states is similar to that for those who are residing in the non-*Loving* states.

last column of Table 4 shows that regardless of the race of the spouse, almost all black males (98.4 percent) who were 18 years of age or younger in 1967, i.e. those who were 31 years of age or younger as of the 1980 Census enumeration, married after 1967.

Given that almost all black males married after they turned 18 years old, a typical black male who was 18 or younger in 1967 experienced a marriage market free of the anti-miscegenation laws. A black male who was 18 or younger in 1967 is 31, 41 and 51 or younger (younger group hereafter) as of the 1980, 1990 and 2000 Census enumerations respectively. Therefore, if the anti-miscegenation laws affected the destination choices of married black males with white and black spouses differentially, the impact of the repeal of these laws should be smaller for individuals who were 18 or younger in 1967 than those black males who were 19 and older (older group hereafter) in 1967, the year the anti-miscegenation laws of the 16 *Loving* states were struck down.

A comparison between the inter- and intraracially married younger and older generation of black males generates a "double-difference" estimator:[13]

$$D^2_{Loving-born} = (P^{younger}_{W,L} - P^{older}_{W,L}) - (P^{younger}_{B,L} - P^{older}_{B,L}), \quad (1)$$

where $P^g_{r,L}$ is the probability of residing in the *Loving* states for married *Loving*-born black males of generation g (younger or older) with a spouse of race r (white or black).

The estimator in equation (1) assumes that if it weren't for the U.S. Supreme court decision in the case of *Loving v. Virginia*, the differences in the probability of residing in the *Loving* states for those younger and older generations of *Loving*-born black males would have been similar across spousal races. Because the U.S. Supreme Court decision in the case of *Loving v. Virginia* did not legally affect non-*Loving*-born black males, I use the changes in the probability of residing in the *Loving* states for non-*Loving*-born black males to control

[13]In this context, intraracial marriages refer to those between a black male and a black female.

for generation-specific trends in migration. The "triple-difference" estimator is

$$D^3 \;=\; D^2_{Loving-born} - D^2_{non-Loving-born}, \tag{2}$$

where $D^2_{non-Loving-born}$ is the double-difference estimator for those non-*Loving*-born black males calculated similarly to equation (1). Differences in the probability of residing in the *Loving* states for those non-*Loving*-born younger and older generations of black males with white spouses (relative to those non-*Loving*-born black males with black spouses) are assumed to reflect intergenerational differences in the migration behavior. I investigate the relationship between the *Loving v. Virginia* case and married black males' locational choices by estimating the intergenerational changes in the likelihood of residing in the *Loving* states for *Loving*-born black males with white spouses (relative to those *Loving*-born black males with black spouses) and then compare the relative changes experienced by non-*Loving*-born black males.

The double-difference estimates are calculated by focusing on the *Loving*-born black males in the following regression framework:

$$Loving_i \;=\; \alpha_0 + \alpha_1 Y_i + \alpha_2 W_i + \alpha_3 Y_i W_i + \epsilon_i, \tag{3}$$

where $Loving_i$ is an indicator variable that takes on a value of one for individual i if the state group of residence is one of the *Loving* states.[14] Y is an indicator variable for the younger generation, W is an indicator variable identifying the presence of a white spouse, and ϵ_i is a random error term. In this setup, α_3 measures the double-difference estimate $D^2_{Loving-born}$.

[14]While the state group of residence in the year of the census enumeration is identified as the migration destination, some black males may have moved to another state within their state group of birth, moved out of their state group of birth and returned, or moved after collection of the census data. Complete information on an individual's migration history would be ideal, but using the state of residence as the destination should not invalidate the results.

The triple-difference estimate is calculated as follows by adding non-*Loving*-born black males to the sample:

$$Loving_i = \beta_0 + \beta_1 Y_i + \beta_2 W_i + \beta_3 L_i + \beta_4 Y_i W_i + \beta_5 Y_i L_i + \beta_6 W_i L_i + \beta_7 Y_i W_i L_i + \epsilon_i, \qquad (4)$$

where L is an indicator variable for those who were born in one of the *Loving* states and β_7 yields the triple-difference estimate in equation (2). I also estimate an extended specification, in which I include additional variables to control for observed characteristics in equations (3) and (4).

2.1 Results and Discussion

Table 5 reports estimates from a linear probability model (LPM) for the basic specification, which does not control for additional observed characteristics. The top, middle and bottom panels of the table show changes in the percentage of married black males residing in the *Loving* states across older and younger generations by spousal race in the 1980, 1990 and 2000 samples respectively.

The top panel of Table 5 indicates that the percentage of *Loving*-born black males residing in the *Loving* states across younger and older generations increased more for those who are married to white women relative to those *Loving*-born black males married to black women in the 1980 sample. Twenty-seven point eight and 62.2 percent of older-generation *Loving*-born black males with white and blacks spouses, respectively, were residing in the *Loving* states in the 1980 Census. For the younger generation of *Loving*-born black males, the percentage residing in the *Loving* states with white and black spouses is much higher at 49.1 and 79.6 percent respectively. This finding is consistent with the historical fact that migration out of the Southern states slowed down or even reversed after the 1970s. The double-difference

estimate for *Loving*-born black males in the fourth row reveals that the percentage of those residing in the *Loving* states married to white women has increased 3.9 percentage points more across generations compared to those *Loving*-born black males married to black women.

While the percentage of *Loving*-born black males residing in the *Loving* states across generations increased more for those with white spouses, a different picture emerges when we look at non-*Loving*-born black males. For those non-*Loving*-born black males with white spouses, the percentage residing in the *Loving* states has increased by 3.2 (5.9 percent for the older generation and 9.1 percent for the younger generation) and for those non-*Loving*-born black males with black spouses, the percentage residing in the *Loving* states has increased by 4.1 (8.7 percent for the older generation and 12.8 percent for the younger generation).[15] Contrary to what we observed for the *Loving*-born black males, the double-difference estimate for non-*Loving*-born black males is negative (-0.9 percentage points) yet statistically insignificant. The fifth row, which shows the triple-difference estimate, yields a larger estimate that implies the 0.9 percentage point decrease in the proportion of non-*Loving*-born blacks males residing in the *Loving* states is attributable to intergenerational changes in the attitude towards migration.[16]

To test the robustness of the above results I focus on more recent census data sets. The middle and bottom panels of Table 5 present analogous calculations using the 1990 and 2000 U.S. Census data sets. The younger generation consists of those who were 18 or younger as of 1967, who were thus 41 and 51 years of age or younger as of the 1990 and 2000 Census

[15] Alternatively, one could estimate the percentage of non-*Loving*-born residing in the non-*Loving* states (instead residing in the *Loving* states) to measure any intergenerational changes in the tastes and trends for migration. However, the double- and triple-difference estimates would be identical because the probability of residing in the *Loving* states and the probability of residing in the non-*Loving* states by definition add up to unity.

[16] In other words, the double-difference estimate for non-*Loving*-born black males implies that across generations, the proportion of *Loving*-born blacks males with white spouses residing in their state group of birth (non-*Loving* states) increased by 0.9 percentage points compared to those non-*Loving*-born black males with black spouses.

enumerations respectively.[17]

The middle panel shows that the double-difference estimate for *Loving*-born black males is positive, yet statistically insignificant. In other words, the percentage of *Loving*-born black males with white or black spouses residing in the *Loving* states across generations increased similarly (19.4 and 17.2 percentage points for those with white and black spouses respectively). A negative and highly statistically significant double-difference estimate for non-*Loving*-born black males tells a different story. For non-*Loving*-born black males with white spouses the increase in percentage residing in the *Loving* states across generations is 3.1 percentage points short of the increase in the percentage of non-*Loving*-born black males with black spouses (2.8 and 5.9 percentage points increase for those with white and blacks spouses respectively). As a result, the triple-difference estimate calculated using the 1990 Census data, which is presented in row 10, is very similar to the one calculated using the 1980 Census Data.

Using the 2000 Census data, the bottom panel of the Table 5 presents a very similar picture to the top panel. Double-difference estimates for *Loving*-born black males imply that across generations the probability of residing in the *Loving* states for those with white spouses increased 8.1 percentage points more than for those *Loving*-born black males with black spouses. Row 15 shows that the triple-difference estimate is also similar to the ones calculated from the 1980 and 1990 Census data sets.

So far I have focused on a linear probability model without accounting for other observable controls that may affect the likelihood of residing in the *Loving* states. For instance, if highly educated *Loving*-born black males are more likely to emigrate to the non-*Loving* states (to attend higher-education institutions or for better job opportunities) and are more likely to intermarry due to their higher educational attainment, then excluding the years of

[17]The older generation of married black males are those who are older than 41 and 51 as of the 1990 and 2000 Census enumerations respectively.

education may yield biased estimates. It is also well documented that economic incentives have a large explanatory power in migration decision. Localities with smaller differences between the economic well being of blacks and whites may attract disproportionately more black immigrants compared to the other states and these smaller differences may positively affect the perception of blacks in the marriage markets.[18] To address these issues, I include education and the ratio of black male/white male unemployment rates by state of residence in equations (3) and (4).

I also control for destination state characteristics such as group size, which is the ratio of the total number of blacks to the total population by state. Group size in the state of residence may be correlated with the extent of interactions between different racial groups. For instance, on average, the group size is smaller in the non-*Loving* states, which may facilitate interactions between blacks and other races and may in turn increase their interracial marriage probability. Another destination state characteristic I control for is the black female/black male sex ratio, which is defined as the ratio of the total number of black females to the total number of black males by state. Sex ratio in the state of residence may also affect the interracial marriage probabilities of black males. For instance, in a state with a lower sex ratio, black males may be more likely to intermarry due to limited availability of the black females. Ratio of black male/white male unemployment rates, group size and sex ratio are calculated by using the 1970, 1980, 1990 and 2000 IPUMS Census data sets.[19]

[18]Therefore, blacks in these states may be more likely to intermarry compared to those blacks who reside in states where there are big discrepancies in the labor market performances of blacks and whites.

[19]Unlike the common practice of calculating unemployment rates using the Current Population Survey (CPS), the census data is preferred because the CPS data generates unreliable unemployment rates due to very small cell sizes for black males when grouped by their states of residence. Table A1 shows the ratio of black male/white male unemployment rates, group size and sex ratio by states in 1970, 1980, 1990, and 2000. On average, the black male unemployment rate is more than twice as much as that of white males, and the unemployment ratio has been increasing since 1970s. At the national level, the group size and black female/black male sex ratio have also been increasing. The increase in the sex ratio may be due to high incarceration rates of black males that may limit their availability (Charles and Ming [2006]). The ratio of black male/white male unemployment rate, and the sex ratio are very similar in the *Loving* and non-*Loving* states. However, the group size in the *Loving* states is almost always twice as large as the group size in the

I calculate double- and triple-difference estimates that control for the observable variables: education, ratio of black/white male unemployment rates, group size and black female/black male sex ratio. I include these variables hoping to account for factors other than the U.S. Supreme Court decision in the case of *Loving v. Virginia* that may have affected the likelihood of residing in the *Loving* states for black males.

A drawback to using the least-squares model when the dependent variable is an indicator variable is that in a LPM the predicted values are not constrained between 0 and 1. To deal with this issue, I also use a probit model to calculate double- and triple-difference estimates of probability of residing in the *Loving* states. Specifically, I calculate the predicted probabilities of residing in the *Loving* states for black males after estimating a probit model.

Table 6 presents the estimates for probability of residing in the *Loving* states as of the 1980, 1990 and 2000 Census enumerations using a LPM as well as a probit model for the basic specification and for the extended specification, which also controls for education, ratio of black/white unemployment rates, group size and sex ratio. Variations in these three variables arise from state of residence and they are calculated as the 1970 and 1980 Census data averages for the 1980 sample; 1970, 1980 and 1990 averages for the 1990 sample; and 1970, 1980, 1990 and 2000 averages for the 2000 sample. To check the robustness of the results, I repeated the estimation exercise by including these variables calculated using each of the 1970, 1980, 1990, and 2000 Census data sets in all samples. The results are very similar to those reported in Table 6.[20]

For comparison purposes, rows (1)-(6) of the left panel reproduce the double- and triple-difference estimates from Table 5 for the basic specification using the 1980, 1990 and 2000 samples. The double- and triple-difference estimates of the predicted probability of residing in the *Loving* states using a probit model for the basic specification span rows (1) through (6)

non-*Loving* states.

[20]The results are available upon request from the author at deniz_gevrek@yahoo.com.

of the right panel of Table 6. A comparison between the left and right panels reveals that the LPM and probit model generate similar estimates for the basic specification. The double- and triple-difference estimates for the extended specification are presented in rows (7)-(12). I find that controlling for education, ratio of unemployment rates, group size and sex ratio, the estimates in the LPM are not affected, while in the extended specification the probit estimates get somewhat larger. The probit model in the extended specification generates a predicted probability gap of residing in the *Loving* states between *Loving*-born black males with white and black wives that is approximately 5, 4, and 10 percentage points larger for the "unaffected" younger generation than for the "partially affected" older generation in the 1980, 1990 and 2000 samples, respectively.

To avoid possible selectivity issues that may arise from mortality and duration of marriages, the older generation of married black males is restricted to individuals at most 60 years of age. To ensure the robustness of the results, I repeat the estimation exercise further restricting the older generation of married black males to individuals at most 51 years of age whenever the data permit. This robustness check is not viable for the 2000 Census sample because restricting the sample to the black males aged 18-51 would wipe out the older generation in the 2000 sample. Tables A2 and A3 correspond to the estimates in Tables 5 and 6 respectively for the 1980 and 1990 samples when the samples are restricted to married U.S.-born black males aged 18-51. The double- and triple-difference estimates in Tables A2 and A3 are slightly larger than those of in Tables 5 and 6 are not affected by exclusion of those who are older than 51 years of age.

Thus far I have focused on differential migration behavior of married black males by comparing the predicted probability of residing in the *Loving* states for those of younger and older generations. The definition of the younger generation includes those who were 18 or younger as of 1967 and varies from census to census. For instance, those who were aged from

18 to 31, from 18 to 41, and from 18 to 51 in the 1980, 1990, and 2000 samples, respectively, are considered to belong to the younger generation. Similarly, the definition of the older generation also varies and includes those who were aged 32 to 60, 42 to 60, and 52 to 60 in the 1980, 1990 and 2000 data sets, respectively. A comparison of the predicted probability of residing in the *Loving* states for those black males in different age groups may be an issue if migration behavior is a function of age.

To avoid this problem, I test the robustness of the results by comparing the likelihood of residing in the *Loving* states for those younger and older generations of black males in the same age group who are drawn from different census data sets. More specifically, I calculate the predicted probability of residing in the *Loving* states for those who are aged 32 to 51 as of the 1980 and 2000 Census enumerations. Individuals who fall into this age interval are considered of younger generation as of the 2000 Census enumeration and of older generation as of the 1980 Census enumeration. Similarly, I also focus on the samples of black males who are aged 32 to 41 as of the 1980 and 1990 Census enumerations. Individuals who fall into this age interval are considered of younger generation as of the 1990 Census enumeration and of older generation as of the 1980 Census enumeration.

The upper panel of Table 7 presents the estimates for the basic and extended specifications calculated based on the sample of black males aged 32-51 drawn from the 1980 and 2000 Census samples, while the lower panel presents estimates calculated based on the sample of black males aged 32-41 drawn from the 1980 and 1990 Census samples.[21] The estimates in Table 7 are highly significant and slightly larger than those of in Table 6. The top panel of Table 7 shows that the gap in the predicted probability of residing in the *Loving* states for

[21]For the extended specification variations in the ratio of black/white unemployment rate, group size and sex ratio arise from state of residence, and they are calculated as the 1970 and 1980 Census data averages for the older generation drawn from the 1980 sample; the 1970, 1980 and 1990 averages are used for the younger generation from the 1990 sample; and the 1970, 1980, 1990 and 2000 averages are used for the younger generation from the 2000 sample.

those *Loving*-born black males with white and black spouses is 11 to 13 percentage points larger for the younger generation of black males compared to the older generation of black males, while the triple-difference estimates vary between 14 and 15 percentage points. The bottom panel of Table 7 shows that the double- and triple-difference estimates vary between 5 to 9 and 8 to 12 percentage points respectively.

This analysis shows that compared to the younger generation, older-generation *Loving*-born black males with white spouses are much less likely to reside in the *Loving* states than those *Loving*-born black males with black wives. The percentage increase in the probability of residing in the *Loving* states for those with white supposes is significantly larger than that for those with black spouses. To put it differently, for the *Loving*-born black males who were likely to be in the marriage market when the anti-miscegenation laws were no longer in effect, the gap between the predicted probability of residing in the *Loving* states for those with black and white spouses is smaller. Results are robust to the consideration of more recent samples from the census data sets.

When interpreting the results, a caveat is necessary about the direction of causation between having a white wife and a black male's choice of destination state. The census data do not allow determination of whether a black male married before or after his migration, which prevents determination of whether a black male married in his birth state or in the destination state.

Several scenarios may have led to the final distribution of black males in the destination states. First, prior to 1967 black males who were born in the *Loving* states could choose to relocate to the non-*Loving* states to marry their existing white girlfriends. Second, black males who were born in the *Loving* states could choose to relocate to the non-*Loving* states even in the post-1967 period because interracial marriage could be perceived as more of a taboo in the *Loving* states even after these laws were struck down. These differences

in perception seem plausible, because the non-*Loving* states either did not have any anti-miscegenation laws or voluntarily repealed those laws, while the *Loving* states were forced to strike down their anti-miscegenation laws by the U.S. Supreme Court. The results show that the older black males with white spouses who were born in the *Loving* states are less likely to reside in the *Loving* states as of the 1980, 1990 and 2000 Census enumerations. Due to data limitations this study does not make strong suggestions about the direction of causation. However, despite potential limitations, the results are of interest in their own right, and underline the relationship between the statutes that once aimed to regulate interracial marriages and the geographical distribution of these interracial couples in the U.S. that deserves broader study to understand how laws banning same-sex marriages would impact the locational sorting of same-sex couples.

It is also possible that unobserved individual characteristics may be correlated with race of a spouse and the decision to stay in the state group of birth. For instance, if more adventurous and open-minded black males are less likely to stay in the *Loving* states and more likely to marry white females, then the predicted probability of residing in the *Loving* states for younger and older black males with white spouses is downward biased. Nonetheless, I do not expect this effect to be different across generations; therefore, a bias of this kind is not likely to affect the results.

Selection may be an issue if black/white marriages are more fragile among the couples currently residing in the *Loving* states. If the interracial marriages are more delicate among the residents of the *Loving* states, I expect the estimates for predicted probability of residing in the *Loving* states for black males with white spouses to be downward biased. However, the double-difference estimates are not affected as long as the impact is similar across generations. Also, I expect to face a more severe selectivity for older black males related to mortality. To tackle the mortality issue I limited the sample to black males aged 18-60, and to ensure the

robustness of my results I further limited the sample to those black males aged 18-51 when appropriate.[22]

3 Conclusion

The emigration of Southern-born blacks during the Great Migration affected the lives of millions of blacks and drastically changed the distribution of the black population in the U.S. Unsatisfied with economic, social and political inequality in the South, blacks joined in one of the biggest migration waves in U.S. history. Racial inequality between blacks and whites pervaded even the most intimate of interactions, marriage.

Anti-miscegenation laws remained effective in 16 southern states until the U.S. Supreme Court decision in *Loving v. Virginia* in 1967 forced their ban. The U.S. Supreme Court decision in 1967 provides a unique opportunity to study the impact of an exogenous change in a state's laws regulating marriages to understand whether black males who have white spouses sorted themselves into the *Loving* and non-*Loving* states differently than those who have black spouses and whether the statutes in their state of birth and presence in the marriage market after the U.S. Supreme Court decision in the case of *Loving v. Virginia* affected this sorting.

Individuals are categorized in two state groups in terms of birth and residence: the *Loving* and non-*Loving*. The *Loving* states include those 16 states that were forced to repeal their anti-miscegenation statutes in 1967. Non-*Loving* states include 9 states and the District of Columbia, all of which never had such laws, 11 states that voluntarily repealed them in the nineteenth century, and 14 states that voluntarily repealed them in the 1948-1967 period.

I calculate the probability of residing in the *Loving* states by spousal race for those

[22]According to National Health Statistics Reports [Arias, E. (2000)], life expectancy at birth is 63 for black males in the 1980s.

younger black males who were more likely to marry after 1967 and were less likely to be legally affected by anti-miscegenation laws, and compare these with corresponding differences for older black males who were more likely to be affected by these laws. In line with the historical fact that emigration from Southern states slowed down and even reversed after the 1970s, I find that within each spousal race group the younger generation of black males is more likely to reside in the *Loving* states compared to the older generation of black males. Interestingly, among the *Loving*-born black males the percentage increase in the predicted probability of residing in the *Loving* states across generations is much larger for those with white spouses compared to those with black spouses. I use the changes in the predicted probability of residing in the *Loving* states for non-*Loving*-born black males, who were not legally affected by these laws, to account for generation-specific trends in migration. The results shows that the non-*Loving*-born black males do not have migration patterns that are similar to those *Loving*-born black males.

While the percentage increase in the predicted probability of residing in the *Loving* states across generations for those *Loving*-born black males with white spouses is larger than that of for those with black spouses, the probability of residing in the *Loving* states for interracially married black males has not reached the levels of those with black spouses. The repeal of anti-miscegenation laws affected the geographical distribution of married black males differentially by spousal race, but I find that unless society is ready to change, the government cannot fully offset the negative impact of past bans and punishments.

The results are robust to consideration of more recent 1990 and 2000 census data sets. This study quantifies a relationship between statutes banning black/white interracial marriages and the sorting of U.S.-born black males into different state groups. In evaluating the contributions of this study, it is important to keep in mind the limitations of using the census data in migration research. Ideally a longitudinal data set with the complete migration,

dating and marriage history of individuals would be preferred. Another limitation arising from the use of the census data is that the inability to determine the order of migration and marriage decision may cause reverse causality. Again, I avoid making bold claims about the direction of causation between marriage and migration; however, I use multiple census data sets to allow comparison of the differential sorting of younger and older generations to alleviate these concerns.

Regardless of its potential shortcomings, this study shows that anti-miscegenation laws and state of birth affected the locational choices of inter- and intraracially married black males during and after the Great Migration. The results presented here only explain a small part of the history of anti-miscegenation laws, the Great Migration, and interracial relations.

While laws banning interracial marriage became history after Alabama repealed the anti-miscegenation law remaining in its constitution in 2000 (with 41 percent opposition from its residents), laws banning marriages between same-sex couples are being heavily debated in the U.S. The federal government of the U.S. does not recognize marriages between same-sex couples. In Massachusetts, Connecticut, Iowa, Vermont, and New Hampshire same-sex marriage is legal, while in California same-sex marriages were only granted from June until November of 2008. New York and the District of Columbia do not grant but do recognize same-sex marriages from other states or foreign countries. A few states grant rights to same-sex couples similar to marriage and some grant limited or enumerated rights to same-sex couples. However, the majority of them have statutes and/or constitutions banning same-sex marriages and unions. While the legal battle for same-sex marriage may not be identical to that for interracial marriage, studying the relationship between the anti-miscegenation laws and the geographical distribution of interracial couples may help us to understand and predict the future of same-sex marriages and civil unions in the U.S.

Future work might involve examination of the variation in punishment for the crime of

interracial marriage prior to 1967, and it will expand our limited knowledge on the delicate history of black/white interracial relationships.

Table 1
States Grouped by Their Ban of Anti-Miscegenation Laws

Loving states	1948-1967 Legalized	19*th*-Century legalized	Never illegal
Alabama	California (1948)	Illinois	Alaska
Arkansas	Oregon (1951)	Iowa	Connecticut
Delaware	Montana (1952)	Kansas	D.C.
Florida	N. Dakota (1955)	Maine	Hawaii
Georgia	Colorado (1957)	Massachusetts	Minnesota
Kentucky	S. Dakota (1957)	Michigan	New Hampshire
Louisiana	Idaho (1959)	New Mexico	New Jersey
Mississippi	Indiana (1959)	Ohio	New York
Missouri	Nevada (1959)	Pennsylvania	Vermont
N. Carolina	Arizona (1962)	Rhode Island	Wisconsin
Oklahoma	Nebraska (1963)	Washington	
S. Carolina	Utah (1963)		
Tennessee	Wyoming (1965)		
Texas	Maryland (1967)		
Virginia			
West Virginia			

Source: Browning (1951) "Anti-Miscegenation Laws in the United States" and Newbeck (2004)"Virginia Hasn't Always Been for Lovers: Interracial Marriage Bans and the Case of Richard and Mildred Loving" are the main sources. The years of voluntary repeal of anti-miscegenation laws are given in parentheses for the 1948-1968 Legalized states. Fryer (2007) classifies Kansas, New Mexico and Washington in the Never illegal group since these states repealed these laws before the 1900s and before statehood. Here I classify them in the Nineteenth-century legalized group because regardless of statehood, they repealed these laws before the 1900s.

Table 2.—Sample Sizes, 1980, 1990, and 2000 Census

	1980	1990	2000
By State of Residence			
Loving states	70,953	66,027	74,927
	[54.5]	[61.5]	[63.8]
Non-*Loving* states	59,248	41,320	42,474
	[45.5]	[38.5]	[36.2]
By State of Birth			
Loving states	103,176	81,990	81,801
	[79.2]	[76.4]	[69.7]
Non-*Loving* states	27,025	25,357	35,600
	[20.8]	[23.6]	[30.3]
Total	130,201	107,347	117,401

Five-percent IPUMS samples of the 1980, 1990 and 2000 U.S. Census data sets are used. Percentages are given in brackets. The samples are restricted to all U.S.-born married black males aged 18-60 married to either black or white women. Those who were born in or are residents of Maryland are excluded from the sample.

Table 3.—Interracial Marriage Rates

	1980	1990	2000
By State of Residence			
Loving states	1.4	2.7	4.9
Non-*Loving* states	5.6	8.6	12.2
By State of Birth			
Loving states	2.3	3.6	5.5
Non-*Loving* states	7.1	9.8	12.3
Overall	3.3	5.3	7.7

Source: The IMRs are calculated by using the five-percent IPUMS samples of the 1980, 1990 and 2000 U.S. Census data sets. The samples are restricted to all U.S.-born married black males aged 18-60 married to either black or white women. Those who were born in or are residents of Maryland are excluded from the sample. The census person weights were used in all of the statistical calculations when appropriate. Black/white interracial marriage rate for black males is the ratio of black males married to white females to the ratio of black married males married to either black or white females.

Table 4.—Fraction of All First Marriages That Occurred after 1967 by Generation and Spousal Race for Black Males

	All ages ($15 \leq age_{1967} \leq 60$)	Older ($age_{1967} > 18$)	Younger ($age_{1967} \leq 18$)
All	50.6	26.4	98.4
	[109,360]	[72,703]	[36,657]
Black wife	49.6	25.6	98.4
	[106,449]	[71,372]	[35,077]
White wife	80.1	57.1	99.4
	[2,911]	[1,331]	[1,580]

Source: Five-percent IPUMS, the 1980 U.S. Census data. The sample is restricted to all U.S.-born black males aged 15-60 in their first marriages, who are married to either black or white females. Sample sizes for each cell are reported in brackets.

Table 5.–Percentage of Black Males Residing in the *Loving* States

	Loving born		Non-*Loving* Born	
	White wife	Black wife	White wife	Black wife
1980 Census				
(1) Older	27.8	62.2	5.9	8.7
$(31 < age_{1980} \leq 60)$				
(2) Younger	49.1	79.6	9.1	12.8
$(18 \leq age_{1980} \leq 31)$				
(3) Younger (2)−Older (1)	21.3	17.4	3.2	4.1
(4) White wife (3)−Black wife (3)	3.9		-0.9	
	(2.1)		(1.3)	
(5) *Loving* (4)−Non-*Loving* (4)	4.8			
	(2.4)			
1990 Census				
(6) Older	35.9	64.5	8.8	11.8
$(41 < age_{1990} \leq 60)$				
(7) Younger	55.3	81.7	11.6	17.7
$(18 \leq age_{1990} \leq 41)$				
(8) Younger (7)−Older (6)	19.4	17.2	2.8	5.9
(9) White wife (8)−Black wife (8)	2.1		-3.1	
	(2.1)		(1.4)	
(10) *Loving* (9)−Non-*Loving* (9)	5.2			
	(2.5)			
2000 Census				
(11) Older	41.3	69.4	9.6	15.4
$(51 < age_{2000} \leq 60)$				
(12) Younger	65.8	85.9	16.9	21.5
$(18 \leq age_{2000} \leq 51)$				
(13) Younger (12)−Older (11)	24.5	16.4	7.3	6.1
(14) White wife (13)−Black wife (13)	8.1		1.2	
	(2.3)		(1.8)	
(15) *Loving* (14)−Non-*Loving* (14)	6.9			
	(2.9)			

Standard errors are given in parentheses, and all numbers were rounded independently. The census person weights were used in estimations, but unweighted estimates are similar.

Table 6.–Effect of Change in Anti-Miscegenation Laws: Percentage of Black Males Residing in the *Loving* States, with Successively More Detailed Controls (Ages 18-60)

	LPM		Probit	
	Loving born	Non-*Loving* born	*Loving* born	Non-*Loving* born
	White wife− Black wife	White wife− Black wife	White wife− Black wife	White wife− Black wife
Basic Specification				
1980 Census				
(1)Younger − Older	3.9	-0.9	3.9	-0.9
	(2.1)	(1.3)	(2.0)	(1.1)
(2)*Loving* − Non-*Loving*	4.8		4.8	
	(2.4)		(2.3)	
1990 Census				
(3)Younger − Older	2.1	-3.1	2.2	-3.1
	(2.1)	(1.4)	(2.0)	(1.2)
(4)*Loving* − Non-*Loving*	5.2		5.3	
	(2.5)		(2.4)	
2000 Census				
Basic Specification				
(5)Younger − Older	8.1	1.2	8.1	1.2
	(2.3)	(1.8)	(2.3)	(1.5)
(6)*Loving* − Non-*Loving*	6.9		6.9	
	(2.9)		(2.7)	
Extended Specification				
1980 Census				
(7)Younger − Older	3.9	-1.4	4.8	-0.8
	(1.9)	(1.2)	(2.1)	(1.7)
(8)*Loving* − Non-*Loving*	5.3		5.6	
	(2.3)		(2.7)	
1990 Census				
(9)Younger − Older	2.7	-3.1	3.6	-2.9
	(1.8)	(1.5)	(2.1)	(1.3)
(10)*Loving* − Non-*Loving*	5.8		6.5	
	(2.4)		(2.5)	
2000 Census				
(11)Younger − Older	8.9	4.5	10.1	4.9
	(1.9)	(1.9)	(2.4)	(1.2)
(12)*Loving* − Non-*Loving*	4.5		5.2	
	(2.7)		(2.7)	

Standard errors are given in parentheses, and all numbers were rounded independently. The census person weights were used in estimations, but unweighted estimates are similar.

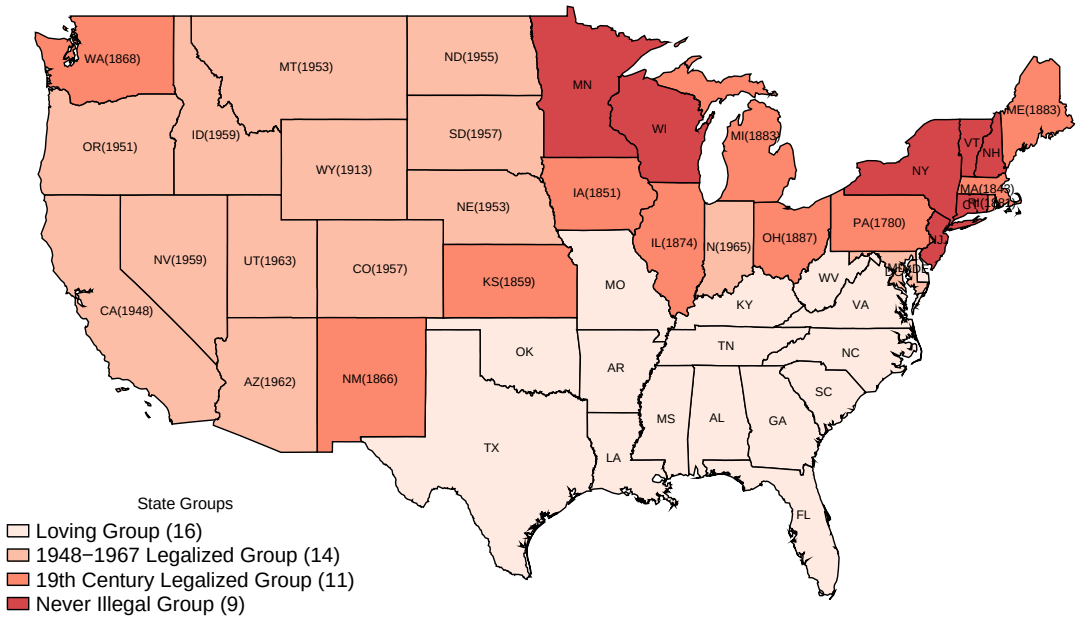
Table 7.–Effect of Change in Anti-Miscegenation Laws: Percentage of Black Males Residing in the *Loving* States; Comparing Same Age Groups, With Successively More Detailed Controls

	1980 v. 2000 Census			
	LPM		Probit	
	Loving born	Non-*Loving* born	*Loving* born	Non-*Loving* born
	White wife− Black wife	White wife− Black wife	White wife− Black wife	White wife− Black wife
Basic Specification				
(1) Younger in 2000−Older in 1980	11.1	-2.4	11.1	-2.4
$(31 < age \leq 51)$	(1.7)	(1.2)	(1.6)	(1.0)
(2) *Loving*−Non-*Loving*	13.6		13.6	
	(2.1)		(2.0)	
Extended Specification				
(3) Younger in 2000−Older in 1980	10.6	-3.5	12.8	-1.9
$(31 < age \leq 51)$	(1.5)	(1.3)	(1.8)	(1.2)
(4) *Loving*−Non-*Loving*	14.1		14.7	
	(2.0)		(2.1)	

	1980 v. 1990 Census			
	LPM		Probit	
	Loving born	Non-*Loving* born	*Loving* born	Non-*Loving* born
	White wife− Black wife	White wife− Black wife	White wife− Black wife	White wife− Black wife
Basic Specification				
(5) Younger in 1990−Older in 1980	5.0	-2.6	5.0	-2.6
$(31 < age \leq 41)$	(2.4)	(1.6)	(2.4)	(1.4)
(6) *Loving*−Non-*Loving*	7.6		7.6	
	(2.9)		(2.9)	
Extended Specification				
(7) Younger in 1990−Older in 1980	5.9	-2.8	9.4	-2.3
$(31 < age \leq 41)$	(2.2)	(1.6)	(2.5)	(1.6)
(8) *Loving*−Non-*Loving*	8.7		11.8	
	(2.8)		(3.0)	

Standard errors are given in parentheses, and all numbers were rounded independently. The census person weights were used in estimations, but unweighted estimates are similar.

Figure 1: States Grouped by the Time of the Repeal of Anti-Miscegenation Laws



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Appendix

Table A1: Ratio of Black Male/White Male Unemployment Rates, Group Size, Sex Ratio

	Ratio of unemployment rates				Group size				Sex ratio			
	1970	1980	1990	2000	1970	1980	1990	2000	1970	1980	1990	2000
Alabama	1.86	2.21	2.84	2.88	23.6	23.3	22.8	23.6	1.26	1.28	1.29	1.33
Alaska	0.93	0.99	1.13	1.58	2.6	2.8	3.5	3.3	0.80	0.88	0.98	0.97
Arizona	1.02	2.12	1.71	1.98	2.5	2.4	2.5	2.7	1.28	1.03	1.01	0.98
Arkansas	2.36	2.08	2.64	2.87	15.8	14.1	13.6	13.8	1.19	1.26	1.32	1.32
California	1.82	2.05	2.26	2.26	6.1	7.0	6.7	6.0	1.19	1.16	1.15	1.19
Colorado	1.50	2.07	1.87	2.32	2.5	3.1	3.5	3.3	1.15	1.02	1.06	0.99
Connecticut	1.30	2.64	2.84	2.84	5.2	6.0	7.3	7.9	1.17	1.26	1.21	1.30
District of Columbia	2.12	3.54	5.50	6.43	66.8	68.6	64.3	57.7	1.24	1.29	1.31	1.33
Delaware	2.45	2.31	2.39	2.91	12.7	14.3	15.0	17.0	1.23	1.23	1.29	1.25
Florida	1.80	2.04	2.44	2.37	12.4	11.5	11.4	12.3	1.22	1.26	1.26	1.24
Georgia	1.72	2.24	2.69	3.18	23.0	24.3	24.4	26.2	1.29	1.30	1.30	1.28
Hawaii	3.36	0.77	0.39	0.95	0.6	1.2	1.7	1.5	0.81	0.67	0.66	0.65
Idaho	1.53	0.69	0.21	1.13	0.3	0.2	0.3	0.3	1.29	0.70	0.86	0.69
Illinois	2.41	2.62	3.83	3.78	11.2	13.1	13.5	13.5	1.24	1.28	1.29	1.30
Indiana	2.30	2.40	3.31	3.37	6.1	6.8	7.0	7.6	1.18	1.23	1.27	1.24
Iowa	2.42	2.04	2.91	3.73	1.0	1.2	1.4	1.7	1.18	1.13	1.08	0.95
Kansas	2.62	3.11	3.17	2.89	4.2	4.5	4.8	5.0	1.20	1.18	1.18	1.14
Kentucky	1.69	1.58	1.80	2.34	6.6	6.3	6.3	6.4	1.25	1.30	1.26	1.29
Louisiana	2.28	2.42	3.08	3.39	27.4	26.9	27.7	29.2	1.25	1.27	1.29	1.29
Maine	11.97	0.27	0.79	1.84	0.2	0.2	0.3	0.4	1.50	0.58	0.69	0.80
Maryland	2.29	2.69	3.02	3.18	15.9	21.1	23.4	26.0	1.21	1.23	1.23	1.29
Massachusetts	2.11	1.81	2.30	2.66	2.6	3.4	4.4	4.7	1.30	1.24	1.15	1.19
Michigan	1.88	2.49	3.11	3.06	10.4	11.7	12.6	12.7	1.15	1.23	1.29	1.26
Minnesota	1.93	1.33	2.45	3.36	0.8	1.0	1.7	2.8	1.13	0.98	0.91	1.08
Mississippi	2.38	2.59	3.14	3.27	32.3	31.7	31.9	33.2	1.24	1.25	1.30	1.29
Missouri	2.51	2.43	3.04	3.21	9.0	9.5	9.7	9.9	1.29	1.26	1.33	1.32
Montana	1.53	1.44	1.17	1.60	0.3	0.2	0.3	0.2	1.17	0.47	0.69	0.74
Nebraska	4.12	3.03	4.71	2.25	2.4	2.6	3.2	3.4	1.29	1.17	1.18	1.17
Nevada	0.71	1.60	2.02	2.02	4.8	5.3	5.6	6.0	1.11	1.06	0.97	1.06
New Hampshire	2.38	0.35	0.68	2.12	0.2	0.4	0.5	0.6	1.00	0.79	0.69	0.73
New Jersey	2.41	2.34	2.79	2.87	9.3	11.2	12.0	12.2	1.27	1.31	1.26	1.31
New Mexico	2.57	1.84	1.75	1.68	1.7	1.5	1.7	1.7	0.93	0.94	0.93	0.98
New York	1.56	2.00	2.44	2.57	10.6	12.6	14.5	14.4	1.35	1.36	1.34	1.35
North Carolina	2.66	2.41	2.75	2.99	19.8	20.4	20.0	19.6	1.20	1.25	1.28	1.28
North Dakota	1.71	0.64	1.52	0.86	0.3	0.3	0.4	0.4	0.83	0.76	0.58	0.62
Ohio	2.70	2.18	2.76	2.92	8.3	9.2	9.7	10.2	1.20	1.25	1.29	1.28
Oklahoma	2.94	2.42	2.29	2.67	5.8	5.9	6.2	6.4	1.27	1.23	1.21	1.20
Oregon	3.05	1.69	2.18	2.19	1.0	1.2	1.3	1.4	1.09	0.95	0.98	0.98
Pennsylvania	2.29	2.33	2.92	3.14	7.8	8.2	8.3	8.6	1.28	1.31	1.30	1.34
Rhode Island	0.60	2.02	2.27	2.40	2.1	2.5	3.2	3.7	1.15	1.28	1.10	1.11
South Carolina	2.62	2.46	2.77	3.33	27.5	27.9	27.2	27.1	1.23	1.26	1.30	1.28
South Dakota	9.49	0.74	2.94	2.07	0.2	0.2	0.4	0.5	0.67	0.66	0.73	0.71
Tennessee	2.50	1.99	2.51	2.73	14.1	14.4	14.2	14.5	1.25	1.29	1.31	1.29
Texas	1.85	2.26	2.43	2.25	11.2	11.0	11.0	10.5	1.20	1.20	1.22	1.25
Utah	1.43	0.66	1.73	1.38	0.6	0.6	0.6	0.7	1.00	0.80	0.72	0.83
Vermont	8.84	0.85	1.23	1.84	0.2	0.2	0.4	0.4	0.67	0.86	1.00	0.68
Virginia	2.46	2.44	2.50	2.83	16.8	17.4	17.3	17.8	1.20	1.20	1.23	1.25
Washington	2.04	1.49	2.07	1.50	1.7	2.2	2.6	2.8	0.91	0.97	0.94	0.93
West Virginia	1.04	1.64	2.10	2.07	3.6	3.1	2.8	2.6	1.19	1.27	1.23	1.15
Wisconsin	3.18	2.19	4.16	4.02	2.3	3.2	4.1	4.5	1.17	1.27	1.27	1.31
Wyoming	0.00	1.19	1.88	.	0.6	0.5	0.5	0.5	2.00	0.82	0.74	0.63
Total	2.13	2.27	2.72	2.88	15.5	16.0	16.1	16.4	1.23	1.24	1.26	1.26
Non Loving States	2.07	2.24	2.82	2.87	8.8	10.0	10.4	10.3	1.21	1.23	1.23	1.24
Loving States	2.16	2.28	2.67	2.88	19.2	19.3	19.2	19.8	1.23	1.25	1.27	1.27

Source: One-percent IPUMS sample of the 1970, five-percent IPUMS samples of the 1980, 1990 and 2000 U.S. Census data sets. Relative unemployment rates were calculated for black and white males who are 16 years old and older. The census person weights were used in all statistical calculations.

Table A2.–Percentage of Black Males Residing in the *Loving* States

	Loving born			Non-*Loving* Born		
	White wife	Black wife		White wife	Black wife	
1980 Census						
(1) Older	28.3	63.3		6.4	9.2	
$(31 < age_{1980} \leq 51)$						
(2) Younger	49.1	79.6		9.1	12.8	
$(18 \leq age_{1980} \leq 31)$						
(3) Younger (2)−Older (1)	20.8	16.3		2.7	3.6	
(4) White wife (3)−Black wife (3)		4.5			-0.9	
		(2.1)			(1.3)	
(5) *Loving* (4)−Non-*Loving* (4)			5.4			
			(2.5)			
1990 Census						
(6) Older	37.6	67.2		9.6	12.8	
$(41 < age_{1990} \leq 51)$						
(7) Younger	55.3	81.7		11.6	17.7	
$(18 \leq age_{1990} \leq 41)$						
(8) Younger (7)−Older (6)	17.7	14.5		2.0	4.9	
(9) White wife (8)−Black wife (8)		3.2			-2.9	
		(2.4)			(1.7)	
(10) *Loving* (9)−Non-*Loving* (9)			6.0			
			(2.9)			

Standard errors are given in parentheses, and all numbers were rounded independently. The census person weights were used in estimations, but unweighted estimates are similar.

Table A3.–Effect of Change in Anti-Miscegenation Laws: Percentage of Black Males Residing in the *Loving* States, With Successively More Detailed Controls (Ages 18-51)

	LPM		Probit	
	Loving born	Non-*Loving* born	*Loving* born	Non-*Loving* born
	White wife− Black wife	White wife− Black wife	White wife− Black wife	White wife− Black wife
Basic Specification				
1980 Census				
(1)Younger − Older	4.5	-0.9	4.5	-0.9
	(2.1)	(1.3)	(2.1)	(1.2)
(2)*Loving* − Non-*Loving*	5.4		5.4	
	(2.5)		(2.4)	
1990 Census				
(3)Younger − Older	3.2	-2.9	3.2	-2.9
	(2.4)	(1.7)	(2.3)	(1.4)
(4)*Loving* − Non-*Loving*	6.0		6.0	
	(2.9)		(2.7)	
Extended Specification				
1980 Census				
(5)Younger − Older	4.9	-1.0	6.2	-0.8
	(1.9)	(1.3)	(2.1)	(1.8)
(6)*Loving* − Non-*Loving*	6.0		6.9	
	(2.3)		(2.8)	
1990 Census Extended Specification				
(7)Younger − Older	3.0	-3.5	4.1	-3.2
	(2.1)	(1.7)	(2.5)	(2.2)
(8)*Loving* − Non-*Loving*	6.6		7.4	
	(2.7)		(3.0)	

Standard errors are given in parentheses, and all numbers were rounded independently. The census person weights were used in estimations, but unweighted estimates are similar.