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DISPARITIES IN ACCESS TO CONTRACEPTION IN THE UNITED STATES: AN
INTERSECTIONAL ANALYSIS

by

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PROFESSOR ÜSKÜP

PROFESSOR ROSE

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1. Introduction

Over the past decades, researchers have determined that access to contraception has a positive impact on both the women who directly benefit from access, their children and future generations (Adams, 2013; Bailey, 2013; Finlay, 2018). Access to contraception increases women's economic empowerment and the health of their children, leading to healthier and more economically mobile adults, by raising the maternal age at first birth, improving child spacing, and decreasing the number of children born to a single mother (Bailey 2012; Finlay, 2018; Miller, 2011). The health and economic benefits acquired by the mother then transfer to her children, meaning that contraception empowers not only the direct recipient of the contraception, but the future generations of the recipients as well (Haas, 2011; Johnson, 2011; O'Brien, 2018; Roberts, 2012). Increasing access to contraception is remarkably cost effective – investments in family planning result in net government savings of 13.6 billion dollars in 2010, or a return of \$7.09 for every dollar spent (Frost, 2014). Thus, access to contraceptive services offers a cost effective method through which to reduce the immense inequality in the U.S.

Considering the intergenerational benefits of contraception in conjunction with the high levels of inequality within the U.S. raises the question: what are the possibilities of increasing access to contraceptive services to serve as an equalizing force? This article argues that increases in access to contraception can help to decrease wealth inequality and can serve as a useful tool in the theoretical toolbox of policymakers. I analyze the current patterns in contraceptive use (or lack thereof) to determine who specifically lacks access to contraceptive services, to implement targeted plans and policies to ensure equal access in the future.

a. History of Birth Control

Racial and class inequalities in the U.S. have always shaped women's access to birth control (Bailey, 2013; Roberts, 1997). Thus, it is likely that racial and socioeconomic factors still affect who has access to contraception and who does not. Modern advances in science have enabled people to preventing pregnancy and the spread of STIs, granting women greater autonomy over their bodies, and expanding the possibilities for safe sex. However, given the social, political and economic context in which birth control is distributed, not everyone benefitted or benefits from these advances equally. Rather, advances in reproductive medicine have been used to control and oppressed marginalized communities (Roberts, 1999). Here, I lay out the history of birth control access, as it will inevitably have an impact on the current levels of access.

Reproductive control in the United States can be traced back to chattel slavery, when white slavemasters forced Black women to bear children for profit (Roberts, 1999). From that point on, the control of Black women's reproduction has been central to both racial oppression and reproductive liberty (ibid.). Any conversation around reproductive health must include the voices of Black women and other similarly affected marginalized groups.

The history of birth control in the United States is one of the state controlling population and the bodies of women. The Comstock Laws are the first institutional instance of the state regulating reproduction - Congress outlawed all reproduction control practices, including arguments for and the mention of birth control in legislation known as the Comstock Law, citing information about birth control as "obscene" (Bailey, 2013, Roberts, 1997). Critchlow argues that the first backlash to contraception and abortion, which led to the Comstock laws, was a response to the greater independence that the industrial revolution brought to many women (Critchlow, 1996). Women were working in factories, earning their own wages, becoming

educated, and making their way into the male-dominated political and social debates, which challenged traditional gender roles (ibid.). Wealthy women were still able get abortions, by paying doctors exorbitant amounts of money to pretend to treat them for a different medical problem, or by travelling outside of the country. Abortion, or at least a relatively safe abortion, was out of the question for middle or lower class women, and most women of color.

Eventually, the call for access to birth control grew, that call developed into a movement, led by socialist Margaret Sanger (Gordon, 2002). Parts of the movement originated as a feminist vision of voluntary motherhood, to free women from compulsory and unrestricted childbearing, but evolved into a population control method concerned with the ethnic makeup of the country rather than women's self-determination (Critchlow, 1996; Roberts, 1999). In the early era of the fight for birth control, activists framed the issue of access to contraception as a means to improve women's health and the conditions of working class families, and eventually birth control was deemed medically legitimate by the U.S. Second Court of Appeals in 1936, when they struck down portions of the federal Comstock law. The same year, 61% of respondents to a Gallup Poll favored the birth control movement, and by 1938, 62% of adults wanted a government agency to distribute information about birth control to married people (ibid.).

The increasing interest in and access to birth control is bound up with racist and ableist eugenics programs (Carey, 2012; Roberts, 1997). Eugenics promoted "racial progress" for the Caucasian race, and "preventing the birth of defectives," which included discouraging or preventing (through sterilization) people of color, people with disabilities, and poor folks from procreating (Carey, 2012). Eugenics assumed that social characteristics are inherited and deviant behavior was biologically determined, and the state could control the deviant or less favorable populations through encouraging "high quality" people from reproducing with each other, and

prohibiting those “unfit” from producing (Roberts, 1990). In the early 1900s, scholars warned the public that American society was threatened by racial mixture, and the country would decline if everyone was allowed to procreate without government intervention (ibid.). Sanger was deeply involved in the eugenics movement – the Eugenics Publishing House in New York published her book, “Woman and the New Race,” for example, and she is quoted as saying that the “campaign for birth control is not merely of eugenic value but is practically identical to the final aims of eugenics” (Carey, 2012; Roberts, 1999).

In the 1960s, when oral contraceptives were becoming more widely available, following the repeal of Comstock Laws, family planning measures benefitted from bipartisan support (Bailey, 2013, 1). President Lyndon B. Johnson, a Democrat, began publicly funding family planning under the 1964 Economic opportunity act as part of his war on poverty (ibid.). Similarly, President Nixon, a staunch Republican, supported family planning programs as a means to grow the economy by increasing opportunities for women and children (ibid.). Nixon even supported the first legislation authorizing a national family planning program, again, as a tool for economic growth. The strategy to grow the economy through boosting the economic status of women and children is in line with economic formulations of family size and children’s human capital investment (ibid.). Increasing access to family planning resulted in increased wages, labor force participation, and household income of offspring whose mothers had access to contraception. However, these policies view family planning as a solution to poverty, without addressing the political, social, economic and racist forces that created that poverty (Roberts, 1999).

With legalization of abortion with *Roe v. Wade* in 1973, and the burgeoning feminist movement, a second anti-abortion campaign arose, again in response to women’s growing

freedoms (Gordon, 2012). Prior to the decriminalization of abortion, 80% of the deaths caused by illegal abortions involved Black and Puerto Rican women (Davis, 2013). Despite difficulties providing other health services, 35% of all Puerto Rican women of childbearing age had been surgically sterilized. In 1970, 20% of all married Black women and about 20% of all Chicana women had been permanently sterilized (ibid.). In 1972 alone, the federal government funded between 100,000 and 200,000 sterilizations, mostly on Black women and women of color (ibid.). At the time doctors were quoted saying that sterilization was the best way to reduce the undesirable population growth of the poor (Roberts, 1999). Women were often coerced into receiving Norplant, a long term implanted contraceptive – they would either be forced to get the implant to receive government benefits, or get a financial bonus upon implantation (Roberts, 1999). Even as recently as 2017, a judge offered reduced sentences to defendants who agree to be sterilized or use birth control, resulting in 32 women receiving the implant Nexplanon, and 38 men signing up for vasectomies (Hawkins, 2017). These numbers are emblematic of deeply institutionalized racism seeking to control the population of Black and Brown folks by violating their bodies. With unintended pregnancies concentrated among low-income women and women of color, understanding the incredibly racist history of birth control access is central to determining how to best create equal access and ensure that women can take advantage of that access of their own volition, free from any government coercion (Gold, 2014; Roberts, 1999).

Family planning, meaning contraceptive services, however, remains a controversial issue. In 2010 and 2011, Republicans have supported proposals to cut family planning funding, despite studies showing that publicly funded family planning resulted in a net government savings of \$7.09 for every public dollar spent (Frost, 2014). The debate surrounding family planning has moved from economic growth to women's reproductive rights. The future

discussions of reproductive rights must occur in tandem with the condemnation of forced sterilization, and the understanding that equality and social justice requires both equal access to safe, user-controlled contraceptives, and the end to the use of birth control as a means of population control (Davis, 2013; Roberts, 2000).

3. Literature Review

a. Social & Economic Impacts of Access to Contraceptive Services

There is a significant body of research that suggests that access to birth control has a positive impact on the social and economic status of the women who access it and their children (Bailey, 2012; Bailey, 2013; Finlay, 2018; Miller, 2011). Increased contraceptive access and use leads to increases women's decision-making power over timing and number of children (Finlay, 2018). The maternal age at first birth, spacing between births, and number of children born can then affect women's labor force participation, educational attainment and decision-making power (Bailey, 2013; Finlay 2018). For instance, the introduction of the birth control Pill accounts for between a third and half of the total hourly wage gains that women made between the 1960s and 1990s (Bailey, 2012). Delays in motherhood lead to substantial increases in career earnings, educational attainment (Finlay, 2018; Miller, 2011). The number of children a woman has can also impact her economic position, in that decreases in numbers of children have results in increased labor force participation of the mother (Bailey, 2013; Finlay, 2018). A number of other factors could also contribute to this correlation, such as options for childcare. Given the racist history of birth control within the United States, we must approach arguments that include a reduced population with the utmost caution. Additionally, access to birth control predicts the offspring's labor force participation, wage earnings, and household income (Bailey, 2013). All

of these findings suggest that increased access to contraception is a gateway for women to break free from poverty, and improve the welfare of her children.

Family planning policies appear to positively impact women's economic empowerment. Reducing the cost of contraception has increased contraceptive use, which led to a delay in first birth and an increase in women's economic empowerment through increased educational attainment, labor force participation, and wages (Finlay, 2018). There are many instances of family planning policies having a positive impact on women's reproductive health and their subsequent economic empowerment. Medicaid family planning waiver in CA reduced the number of nulliparous women reporting current pregnancy and increased the number of routine checkups, potentially leading to healthier mothers and infants (Adams, 2013). Similarly, increasing the proportion of low-income pregnant women eligible for Medicaid improved the mobility outcomes of their children in adulthood, implying that health is a determinant of intergenerational economic mobility (O'Brien, 2018).

There are several mechanisms that might translate increased access to contraception into women's economic empowerment and, potentially, economic equality (Bailey, 2013; Finlay, 2018). The first mechanism is maternal age at first birth (Finlay, 2018). When women give birth at older ages, they can spend more time in school and potentially complete college (Bailey, 2013; Finlay, 2018). Higher levels of educational attainment can increase the mother's economic status, labor force participation, and wages (Finlay, 2018). These increases then transfer to her potential children in the form of resources or creating a healthier uterine environment and better birth outcomes (Johnson, 2011).

Spacing of birth between children born to one mother can similarly effect both the mother and children (Finlay, 2018; Frost, 2014). Optimal birth spacing can lead to better health

outcomes for children, and many studies have shown, good health in childhood leads to long run improvement in educational attainment and wages (Haas, 2006; Miller, 2011; O'Brien, 2018, Oreopoulos, 2008; Smith, 2009).

The number of children born to one mother also affects the economic standing of both the mother and the children. Bailey (2013) refers to this mechanism as the “family size channel,” in which a lower number of children leads to an increase in parental time and the amount of material resources available to each child. When a parent has more children, they have less time and fewer resources to designate to each child than if there were fewer children. If each child has more resources and parental time, it is possible that they will have more economic mobility. However, as previously noted, one must be careful when advocating for the promotion of the family size channel as a means to achieve economic empowerment or equality. This paper does not aim to discourage women from bearing the number of children they desire, but rather wish to expose the gaps in contraceptive access that may prevent some women from exercising their right to self-determination with regard to their reproductive health and family planning.

Bailey also discusses the cohort size channel, similar to the family size channel, but involving public resources rather than family based resources. In this channel, smaller cohorts increases the amount of public resources available per child, and decreases competition for limited resources (Bailey, 2013). In a similar vein, when children have more resources, it is more likely that they will be economically mobile. In both channels, smaller numbers of children means that each child has more resources than if there were more children, whether those resources are parental care, attention from teachers, or food and healthcare. These resources then assist the child in becoming upwardly mobile, through mechanisms such as increased educational attainment, increased health outcomes, or access to more social services.

4. Methodology

I draw from the Continuity and Change in Contraceptive Use study from the Guttmacher Institute, conducted in the U.S. between 2012 and 2014. The Guttmacher Institute collected this longitudinal data from a nationally representative probability sample of more than 4,000 women aged 18-39 at the baseline. Women completed four online surveys, one every six months, between 2012 and 2014. If women did not have internet access in their home, internet access was provided for them at no cost. I use wave 2 of this survey, which had 3,207 respondents.

To determine the potential equalizing power of access to contraception, I examine which populations currently lack access to their preferred method of contraception, and for whom it is important to avoid pregnancy. There are several reasons that a woman might not have access to their preferred method of contraception, such as being uninsured, limits on contraceptive method coverage from insurance, not having a primary care location, and living in a rural area. Due to the historical precedent of medical institutions only providing women of color with long-term, implanted contraception, which consequently placed their health and reproduction solely in the hands of the medical industry (Roberts, 1999), I include both women that do not have any access to contraception, but also women who do not have access to their preferred method of contraception, in the hopes of centering women's autonomy and reproductive freedom. I first determine the relationship between race/ethnicity and access to birth control. Given historic racial inequalities within the United States, I expect that race will have the most important impact on access to birth control (Egede, 2006). Following race, I expect poverty rate will also have a significant impact on access to birth control due to the economic inequality and high prices of health care (Zimmerman, 2016). I run four models to determine what effects access to

birth control. Model 1 determines the effect of race and poverty rate on access to birth control. Model 2 accounts for race, poverty rate and metro status, to ascertain if location effects access. Model 3 accounts for race, poverty rate, metro status and age, because younger women may benefit more from increased access than their older counterparts. Model 4 accounts for race, poverty rate, metro status, age and controls for marital status, which may affect who is trying to get pregnant at the time of the survey.

To determine who lacks access to contraception, I use responses from three different survey questions to construct a dependent variable (Access) to measure access to contraception. Questions 32 and 32a of the survey ask respondents if they would use a different method, or any method (respectively), if they did not have to worry about cost and could use any type of contraceptive method (Jones, 2013). I combine the dichotomized variables of women who responded yes to either question 32 or 32a to create a variable that measures women who do not have access to either their ideal form of birth control or birth control generally (Ideal). To control for women trying to get pregnant, I recode the variable measuring how important it is to avoid pregnancy (Avoid). Each respondent was asked to rank how important it was for the to avoid pregnancy on a scale of 1 to 6, 1 being not at all important, 6 being very important to avoid pregnancy. I code responses of 1 and 2 as 0, or not important to avoid pregnancy, and responses of 3 and up as important to avoid pregnancy. I combine the variable measuring access (Ideal) with the variable measuring need to avoid pregnancy (Avoid) to construct the dependent variable (Access). This variable represents women who have access to their ideal method of contraception with a “1” and women who do not have access to their ideal method of contraception and for whom it is important to avoid pregnancy with a “0”.

Independent variables are dichotomized variables for race (White, Black, Hispanic¹, and other, with Mixed race omitted for collinearity). Poverty Rate is a continuous rate measured as a percentage of the federal poverty level, adjusted for household size. Metropolitan Statistical Area (MSA) status is a dichotomized variable measuring who lives within an MSA, which is an area with a relatively dense population at it's core and close economic ties throughout the area. This statistic captures the urban/rural divide that might be present in contraception access. Age is a control variable, but it is also important to know the age of women who lack access as it is more important for younger women to delay motherhood than older women. Marital Status is included as dichotomized variables for Married, Divorced, Separated, and Never Married, with Widowed omitted for collinearity. These variables are included as marital status could impact whether or not a respondent is trying to get pregnant.

The regression is as follows

$$\begin{aligned}
 (\textit{Access}) = & \beta + \beta_1(\textit{White}) + \beta_2(\textit{Black}) + \beta_3(\textit{Hispanic}) + \beta_4 (\textit{Other}) + \beta_5(\textit{Poverty rate}) + \\
 & \beta_6(\textit{Metro Status}) + \beta_7(\textit{Age}) + \beta_8(\textit{Married}) + \beta_9(\textit{Divorced}) + \beta_{10}(\textit{Separated}) + \beta_{11}(\textit{Never} \\
 & \textit{Married}) + \beta_{12}(\textit{Living With Partner})
 \end{aligned}$$

Access is the predicted likelihood that a given woman will lack access to birth control. White, Black, Hispanic and Other are the dichotomized variables for race. Poverty rate is the percent of the federal poverty level of the respondent's household, adjusted for household size. Metro is the dichotomized variable for the respondent living within a Metropolitan Statistical

¹ This article uses the term "Hispanic" as opposed to "Latinx" or "Latina" to maintain continuity with the survey data.

Area. Age is the respondent’s age at the time of the survey, and Married, Divorced, Separated, Never Married, and Living With Partner are the dichotomized variables for marital status.

In addition to the OLS models, I also conduct a logit regression, which models binary probability, to confirm the results of the OLS model.

5. Results

The group of respondents is representative of the overall U.S. population at the time of the survey. About 65.51%, 2,101 of respondents were white, 8.92%, or 286 were black, 3.93%, or 126 were other, 17.40%, or 558 were Hispanic, and 4.24%, or 136 of respondents were mixed race, or reported being two or more races (Table 1). Almost half (46.30%, or 1,485) of respondents were married at the time of the interview, with 31.93%, or 1,024 never having been married and 17.43%, or 559 currently living with a partner (Table 2). The rest of respondents were divorced, separated, or widowed. Most respondents lived in a metropolitan statistical area, meaning that the area in which they lived is relatively close to a metropolitan center that has economic ties to the surrounding area (Table 3). Only 11.82%, or 379 of respondents lived outside an MSA, or in a very rural area.

Table 1. Race and Ethnicity Demographics

Race	Frequency	Percentage
<i>White</i>	2,101	65.51%
<i>Black</i>	286	8.92%
<i>Hispanic</i>	558	17.40%
<i>Mixed</i>	136	4.24%
<i>Other</i>	126	3.93%
<i>Total</i>	3,207	100.00%

Table 2. Marital Status Demographics

Marital Status	Frequency	Percentage
<i>Married</i>	1,485	46.30%
<i>Widowed</i>	4	.21%
<i>Divorced</i>	98	3.06%
<i>Separated</i>	37	1.15%
<i>Never Married</i>	1,024	31.93%
<i>Living with Partner</i>	559	17.43%
<i>Total</i>	3,207	100.00%

<i>MSA Status</i>	Frequency	Percentage
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Figure 1. Age Distribution of Respondents

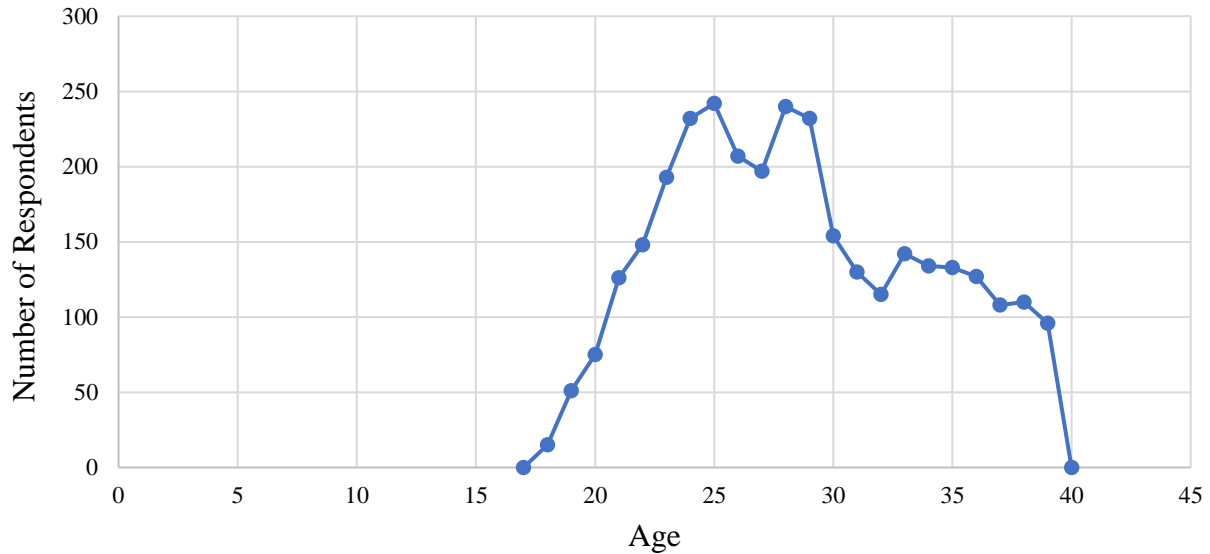


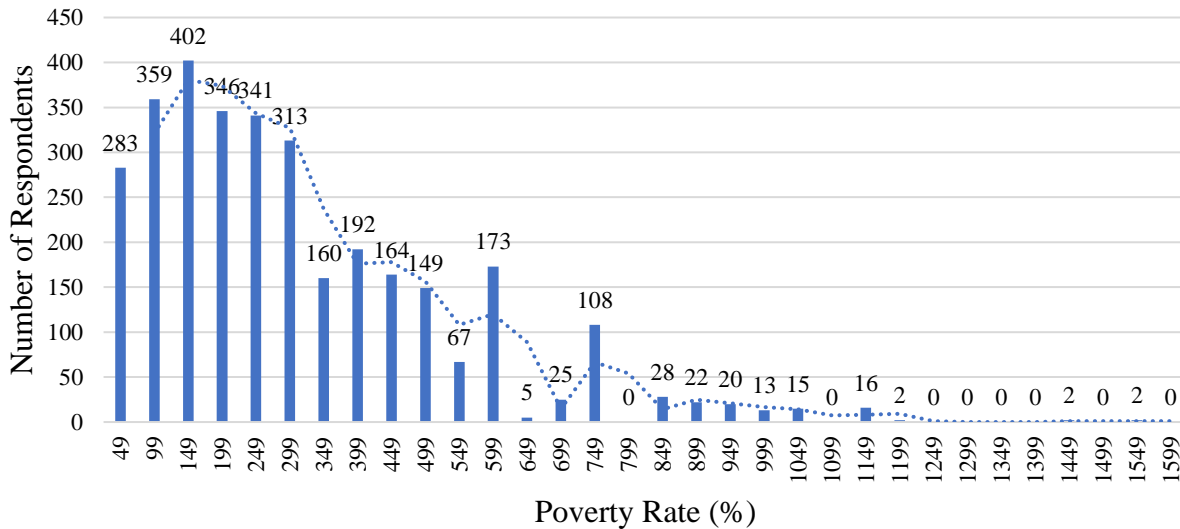
Table 3. MSA Status Demographics

The respondents ranged in age from 18 to 39. The mean and median age of respondents was 28, with the middle 50% of respondents between the ages of 24 and 33. In 2014, the CDC reported that the median age of mothers at first birth was 26.3 (Figure 1).

To measure the economic status of respondents, I used the poverty rate measure, which is the percentage of the federal poverty rate for each respondent, adjusted for household size. For example, in the last year of the survey, a household of 1 has a poverty level of \$11,670, meaning that for a single person household would need to have an annual income of under \$11,670 to qualify as impoverished. A 4-person household has a poverty threshold of \$23,850, with an 8-person household having a poverty threshold of \$40,090 (2014 Poverty Guidelines). Respondents averaged 234% of the federal poverty rate, meaning the annual household income was more than double the poverty threshold for the number of household members (Figure 2).

The middle 50% of respondents fell between 118% and 408% of the poverty rate for their size household. Poverty rates ranged from 13%, meaning the annual household income was 13% of the federal poverty rate for a household of that size, to 1532%, meaning the annual household income has 1532% of the federal poverty rate for that size household.

Figure 2. Poverty Rate Distribution



Respondents rated how important it was for them to avoid becoming pregnant at the time of the interview on a scale of 1 to 6, 1 being not at all important to avoid pregnancy, 6 being very important to avoid pregnancy. Out of 3,024 observations, 539, or about 18% reported that it was either not at all important or not important for them to avoid pregnancy (Table 5). Nearly 50% of respondents reported that it was very important for them to avoid pregnancy. For the purposes of creating a dummy variable, respondents who gave an answer of 3 or higher, or for whom it was at least somewhat important that they avoid pregnancy, were coded as a 1 in the recoded variable, with respondents who replied with a 1 or 2 were coded as a 0, meaning it was not important for them to avoid pregnancy.

Table 5. Pregnancy Avoidance Demographics

Importance	Percentage
<i>1 (Not at all important)</i>	13.53
2	4.30
3	7.77
4	11.18
5	14.42
<i>6 (Very important)</i>	48.81
<i>Total</i>	100.00

Interviewers asked respondents if they would either use a method of birth control or use a different method of birth control if cost was not a barrier. Certain birth control methods are more expensive than others, and insurance companies can limit the type of methods availability depending on the plan the respondent has. Almost 20% of respondents reported that they would switch methods if possible, and nearly 15% of respondents reported that they would use a method if they could afford it. Reasons for this lack of access can vary, some respondents could not afford any method, while some respondents had issues with their insurance coverage, or could only afford a method that they did not prefer. Of the respondents who did not have access to their preferred method of birth control, almost 17% reported that it was important for them to avoid pregnancy, or 13.3% of the total respondents. Of the 426 respondents for whom it was important to avoid pregnancy and who did not have access to their preferred method of birth control, 259 (60% of the group without ideal access and who needed to avoid pregnancy), were white, 42 (10%) were black, 95 (22%) Hispanic, 12 (almost 3%) were mixed race, with the remainder of the group being a race or ethnicity not listed (other).

I regressed Access (the variable measuring who has access to their ideal form of birth control and who does not, controlling for respondents who are trying to get pregnant) on dichotomized variables for race (white, Black, Hispanic, and other) and Metro Status and continuous variables for Age and Poverty Rate.

6. Discussion

There is a significant population of women, over 13%, who need birth control to prevent pregnancy but do not have proper access. Almost 15% of women responded that they would use a method if cost was not an issue, though this percentage does not into account women who might be trying to get pregnant, or for whom pregnancy is not a currently a concern.

White women are the least likely to lack access to birth control, and are 4.9 percentage points less likely to have access to contraception than the base case person with no race (table 6, model 4). However, these results are not statistically significant. Black women have a slightly higher likelihood of lacking access to their preferred form of contraception, at 5.4 percentage points less likely to have access than the base case, though again, it is not statistically significant. Hispanic women are 8.4 percentage points less likely to have access to birth control, even when controlling for age, poverty rate, education and metro status. This number is statistically significant at the 1% level. This high rate reflects the disproportionate number of Hispanic women that make up the population of women who lack access and need to prevent pregnancy described in the first paragraph of this section.

Notably, Hispanic women were disproportionately represented in the group that lacked access to birth control, making up 22% of the group that lacked access and needed to avoid pregnancy, but only 17% of the overall respondents. With this group of nationally representative

respondents, this 5% difference is remarkable, especially while controlling for age, poverty race, education, and metro status. According to the National Latina Institute for Reproductive health, major barriers to Latina access to contraception is lack of insurance, prohibitive cost of contraception, and healthcare providers not speaking their native language or not being able to provide culturally competent services (National Latina Institute for Reproductive Health).

Table 6: Regression of Access to Contraception

	Model 1	Model 2	Model 3	Model 4
White	-0.041 (1.37)	-0.042 (1.41)	-0.045 (1.50)	-0.049 (1.64)
Black	-0.052 (1.47)	-0.051 (1.45)	-0.054 (1.54)	-0.054 (1.52)
Hispanic	-0.074 (2.29)*	-0.072 (2.22)*	-0.080 (2.46)*	-0.084 (2.57)**
Other	-0.061 (1.46)	-0.061 (1.45)	-0.068 (1.62)	-0.072 (1.72)
Poverty Rate	0.000 (3.88)**	0.000 (4.04)**	0.000 (3.31)**	0.000 (3.24)**
Metro		-0.028 (1.50)	-0.030 (1.59)	-0.028 (1.51)
Age			0.004 (3.68)**	0.003 (2.80)**
Married				0.035 (0.63)
Widowed				0.157 (0.88)
Divorced				0.020 (0.30)
Never married				0.017 (0.30)
Living with partner				0.007 (0.12)
_cons	0.883 (29.49)**	0.907 (26.79)**	0.797 (17.72)**	0.709 (10.86)**
R ²	0.01	0.01	0.01	0.01
N	3,207	3,207	3,207	3,207

* $p < 0.05$; ** $p < 0.01$

Age is significant at the 1% level. For each year increase in age, a given woman is .44 percentage points more likely to have access to birth control, or that the younger a woman is, the more likely she is to lack access to birth control. While small, it is very significant, and ultimately tells us that younger women are more likely to need access to birth control and not receive it. It is important for everyone to have access to the reproductive healthcare they need, but with regard to reproductive healthcare, access is especially important for young women as it can delay maternal age at first birth and subsequently economically empowering women and their children. As described in the previous pages, access to contraception has been shown to delay maternal age at first birth, allowing women to continue their education and increase their earning power. This economic empowerment for the mother then translates into healthier babies, who have more resources as they grow up, ensuring that they have relatively higher levels of educational attainment and earnings. Thus, since younger women are more likely to lack access to contraception while they need to avoid pregnancy, expanding access to contraception could plausibly reduce the number of young women in need of contraception, thereby making them older at age of first birth. As explained above, when a woman is older at the age of first birth, she is more likely to attain a higher level of education as well as increase her earning ability, increasing the economic status of not only herself, but her children as well.

Poverty also has a small effect, potentially smaller than expected, though it is statistically significant. Poverty rate has a coefficient of $-.0001$, meaning that for each percentage point decrease in poverty rate, a woman is .01% more likely to lack access to birth control. In other words, poorer women lack access more than wealthier women. The low level of this effect could possibly be a result of impoverished women obtaining access to contraception through Medicaid.

Future research could examine the access women using Medicaid have to contraception, and the possible gaps in access for women who do not qualify for Medicaid and cannot afford insurance with quality coverage of contraception.

The logit regression confirms that the Hispanic, Poverty Rate and Age variables are all significant at similar levels to OLS regression.

7. Conclusion/policy and strategy proposal

There is considerable room for growth when it comes to access to contraception among U.S. women. While it is certainly not a cure all, expanding access has the potential to raise the age at first birth of many women, and subsequently improve the economic standing of her and her children. Expanding access to contraceptive services can increase labor force participation and wages (Bailey, 2013; Finlay, 2018; Miller, 2011). These increases can then help to boost the economy and would result in a net government savings of \$7.09 for every dollar spent (Frost, 2014). With the government savings from increasing access to contraception, the government could work to increase educational opportunities for women who have previously lacked access to quality education at both the secondary and higher education level. The government could additionally increase child care options so that women can reap the full benefits of delayed motherhood and maintain their labor force participation rates. Empowering the women that currently lack access to contraception by providing them that access has positive implications for both growing the economy and potentially increasing levels of equality within the United States.

The current levels of inequality within the U.S. prohibit those without socio-economic privilege from claiming their right to self-determination not only put a strain on the national economy, but threaten the freedom that America prides itself on (Roberts, 1999). The levels of wealth inequality have increased significantly in last half century, with scholars finding a myriad

of different potential causes. One analyst found that in the past several decades, the American economy has essentially served the rich as a reverse Robin Hood, funneling wealth from the bottom 99% to the top 1% (Ingraham, 2018). In theory, this inequality is good for the 1% and bad for others, but studies now show that wealth inequality depresses economic growth as average people's purchasing power declines, increases criminal behavior, and can lead to a lower level of democracy and breakdown of social cohesion (Ingraham 2018; Thorbecke & Charumilind, 2002). The OECD recently found that rising inequality in the U.S. between 1990 and 2010 decreased GDP per capita by 5%, so even the richest people are not earning as much as they potentially could (Balestra & Tonkin, 2018). The same study found that undermining education opportunities for children from poor socio-economic backgrounds drives inequality by lower social mobility and hampering skills development (ibid.). Current levels of inequality threaten the economy and democracy of the country, and inhibit the freedom and self-determination of citizens.

Increasing access to contraceptive services can decrease the high levels of inequality in the United States, serve as an economic boon, and promote women's reproductive freedom. By expanding access to contraception for young women and Hispanic women, the government or other programs could help to lower the maternal age at first birth and improve birth spacing, leading to higher labor force participation among mothers, higher wages, and healthier babies, which grow into healthier, more economically mobile adults (Haas, 2011; Johnson, 2011; O'Brien, 2018; Roberts, 2012). The Republican Party has instead attacked family planning programs and sought to reduce access to contraception, especially for low income women and women of color (Goldstein, 2019; Hassdedt, 2019). The Trump administration attempted to implement a domestic Title X gag rule, which prohibits abortion referrals, and requires clinics

that receive Title X funding to perform abortions in physically and financially separate entities, which could lead to clinics closing or reducing hours and staff, which would all limit access to contraception (Khazan, 2019). The administration also announced a rule that would allow employers and insurers to opt out of the Affordable Care Act requirement that contraceptives be covered by insurance on religious or moral grounds (Goldstein, 2019). Both of these were blocked by judges before they were implemented and took effect, but the case remains that the government is attempting to limit women's reproductive freedom, specifically low-income women and women of color (Goldstein, 2019; Hassdelt, 2019).

To counter these attempts and to secure women's right to self-determination and reproductive freedom, it is thus of the utmost importance that other government or non-government entities, or future administrations expand access to contraceptive services. In order to ensure that expanding access to contraceptive services truly does increase economic mobility, equality, and freedom, all aspects of implementation must be sensitive to the racist history of contraception. Programs should focus on ensuring they provide consensual, quality, fact based, culturally sensitive family planning services to women who need it, and safeguard their patients' bodily autonomy and right to choose. With anti-racist and consensual implementation, expansion of contraceptive and family planning services can improve women and child health, decrease government spending, and contribute to the long-term struggle for economic and racial equality in the United States.

Appendix A:

The following are the original questions of the survey, shown in the order that they appear in the survey.

[DISPLAY]

First we would like to know a few things about any romantic relationships you are currently involved in.

[SP]

1. What is your current marital status?
 - 1- Married
 - 2- Not married but living together with a partner
 - 3- Separated from my spouse
 - 4- Never been married
 - 5- Widowed
 - 6- Divorced

[IF Q14=A, B, C, E, F or REFUSED (if Q14 ne D)]

[6-POINT SCALE]

16. How important is it to you to AVOID becoming pregnant now?

Not at all important to avoid pregnancy

Very important to avoid pregnancy

6

1 2 3 4 5 6

[SP, ASK OF ALL WHO USED A HORMONAL METHOD (1-6 ON #23) AND/OR A COITAL DEPENDENT METHOD (1-5 ON #26)]

32. If you did not have to worry about cost and could use any type of contraceptive method available, would you want to use a different method?

- 1- Yes
- 2- No
- 3- Unsure

[SP, ASK OF ALL WHO HAD SEX IN LAST 30 DAYS BUT NOT USING A METHOD (Q23=7 OR SKIP, AND Q24a=1, AND Q26=6 OR SKIP)]

32A. If you did not have to worry about cost and could use any type of contraceptive method available, would you want to use a method?

- 1- Yes
- 2- No
- 3- Unsure

Appendix B:

The following is the Stata do-file used to conduct the analysis of this article:

```
tab RACETH, gen (dum)
rename dum1 White
label variable White "race=white"
rename dum2 Black
label variable Black "race=black"
rename dum3 Other
label variable Other "race=other"
rename dum4 Hispanic
label variable Hispanic "race=hispanic"
rename dum5 Mixed
label variable Mixed "race=mixed"

tab MARSTAT, gen (dum)
rename dum1 Married
label variable Married "marstat=married"
rename dum2 Widowed
label variable Widowed "marstat=widowed"
rename dum3 Divorced
label variable Divorced "marstat=divorced"
rename dum4 Separated
label variable Separated "marstat=separated"
rename dum5 Nevermarried
label variable Nevermarried "marstat=nevermarried"
rename dum6 Livingwithpartner
label variable Livingwithpartner "marstat=livingwithpartner"

tab MSA, gen (dum)
rename dum1 NonMetro
label variable NonMetro "MSA=nonmetro"
rename dum2 Metro
label variable Metro "MSA=Metro"

gen avoidr = .
replace avoid=0 if AVOID==1
replace avoid=0 if AVOID==2
replace avoid=1 if AVOID==3
replace avoid=1 if AVOID==4
replace avoid=1 if AVOID==5
replace avoid=1 if AVOID==6
label variable avoidr "important to avoid pregnancy"

gen idealbcr = .
```

```

replace idealbcr=1 if IDEALBC==1
replace idealbcr=0 if IDEALBC==0
replace idealbcr=0 if IDEALBC==3
label variable idealbcr "would take or change bc if cost not problem"

gen avoididealbc = .
replace avoididealbc=0 if idealbcr==1 & avoidr==1
replace avoididealbc=1 if avoididealbc==.
label variable avoididealbc "important to avoid preg and not taking ideal BC"

gen avoididealwhite = .
replace avoididealwhite=1 if avoididealbc==1 & White==1
replace avoididealwhite=0 if avoididealwhite==.
label variable avoididealwhite "white, important to avoid preg and not taking ideal BC"

gen avoididealblack = .
replace avoididealblack=1 if avoididealbc==1 & Black==1
replace avoididealblack=0 if avoididealblack==.
label variable avoididealblack "black, important to avoid preg and not taking ideal BC"

gen avoididealhisp = .
replace avoididealhisp=1 if avoididealbc==1 & Hispanic==1
replace avoididealhisp=0 if avoididealhisp==.
label variable avoididealhisp "hisp, important to avoid preg and not taking ideal BC"

gen avoididealmixed = .
replace avoididealmixed=1 if avoididealbc==1 & Mixed==1
replace avoididealmixed=0 if avoididealmixed==.
label variable avoididealmixed "Mixed, important to avoid preg and not taking ideal BC"

gen avoididealother = .
replace avoididealother=1 if avoididealbc==1 & Other==1
replace avoididealother=0 if avoididealother==.
label variable avoididealother "other, important to avoid preg and not taking ideal BC"

tab White
tab Black
tab Other
tab Hispanic
tab Mixed
tab MARSTAT
tab Metro
sum AGE, detail
graph hbox AGE
sum POVRATE, detail,
graph hbox POVRATE

```

tab AVOID
tab Q32
tab Q32A
tab IDEAL
tab avoididealwhite
tab avoididealblack
tab avoididealhisp
tab avoididealmixed

reg avoididealbc White Black Hispanic Other POVRATE
outreg using datatable.doc, replace
reg avoididealbc White Black Hispanic Other POVRATE Metro
outreg using datatable.doc, merge
reg avoididealbc White Black Hispanic Other POVRATE Metro AGE
outreg using datatable.doc, merge
reg avoididealbc White Black Hispanic Other POVRATE Metro AGE Married Widowed
Divorced Separated Nevermarried Livingwithpartner
outreg using datatable.doc, merge

logit avoididealbc White Black Hispanic Other POVRATE Metro AGE Married Widowed
Divorced Separated Nevermarried Livingwithpartner

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