# *Subsidizing Interest Rates to Bridge the Racial Wealth Gap*

Gabe Royal

*There is a large, persistent, and worsening wealth gap between Black and White households in the United States. Black families' median and mean wealth is less than 15 percent that of White families (Bhutta et al. 2020). New research shows current monetary policies designed to aid in the economic recovery from the COVID-19 recession will likely exacerbate this wealth gap (Bartscher et al. 2021, 33). This paper proposes issuing a government-subsidized two percent mortgage interest rate reduction for prospective Black homebuyers to provide a financial incentive for Black households to build wealth and to promote integrative behavior among neighborhoods.*

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**Gabe Royal** is a second-year PhD student in the Public Budgeting and Finance field of study. He majored in U.S. History and American Politics at the United States Military Academy and is still serving active-duty in the Army since commissioning in 2012. He focuses his studies on cryptocurrencies, decentralized finance, and wealth inequality. In his free time, Gabe enjoys watching sports and traveling with his family.

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# INTRODUCTION

A debate over equality vs. equity-based public policies has arisen in current affairs. In The Color of Law, Richard Rothstein provides evidence that racial segregation was not just an unsanctioned "de facto" state of affairs in America, but a deliberate and purposeful "de jure" system of discrimination sanctioned by laws. He argues that given a historical understanding of unconstitutional segregation and de jure discrimination against Black America, "'Let bygones be bygones' is not a legitimate approach if we wish to call ourselves a constitutional democracy" (Rothstein 2018, xii). In his view, a history of de jure segregation problems requires active, de jure answers. Nevertheless, the idea of reparations has several negative connotations. How do you place a dollar value on the second- and third-order effects of centuries of unpaid labor? How could the government possibly fund cash handouts to Black America? Would there be a cutoff for Black Americans who are already financially well off?

Under existing conditions, equal treatment will not help bridge the wealth gap (Aliprantis et al. 2018). The deleterious second and third-order effects of barring African Americans from owning homes and building equity in certain real estate markets for centuries still manifest today. Because of wealth's compounding effects, existing conditions matter. Assuming equal treatment, someone in a poor financial state (e.g., bad credit, low savings for down payment) faces harsher financial terms (usually in the form of higher interest rates) than someone in good financial standing when applying for or receiving a business loan or mortgage. Thus, the natural operation of credit markets inevitably depresses African Americans' ability to accumulate wealth (Chiteji 2010). Further, new research shows that current accommodative monetary policies will widen the racial wealth gap (Bartscher et al. 2021). Households which already hold interest-rate sensitive assets, like equities and real estate, benefit disproportionately from accommodative policies aimed at increasing liquidity in the system and spurring macroeconomic growth following a recessionary event. Monetary policy instruments like quantitative easing and federal funds rate reductions also exacerbate pre-existing wealth gaps.

Rothstein (2018) prefers the term "remedies" over "reparations," but the implication remains: public policy should go beyond equal treatment to address historic inequity. The federal government subsidizes farming and sets price floors in certain agricultural markets. Specific to housing, governments at various levels have set price ceilings (e.g., rent control). This paper proposes and analyzes what a government subsidy in the form of an interest rate reduction for Black Americans might look like. Both microeconomic theory and related research offer support for the idea that a government subsidy in the form of an interest rate reduction might incentivize Black Americans to buy homes, start businesses, and potentially decrease the racial wealth gap. However, the implementation of such a policy could be difficult and come at a significant cost to the government. The efficacy of such a subsidy in achieving equity goals should be compared to the potential efficacy and relative cost of other programs, such as unrestricted cash grants. More empirical research is needed that addresses this policy proposal more specifically. Because of the amount of research in the field and the complexity of the issue, this paper will focus only on African Americans and home ownership. This is not to ignore other marginalized minority groups and the issues they face.

## BACKGROUND AND RELEVANT RESEARCH ON THE RACIAL WEALTH GAP

Wealth is the sum of the total market value of a person's assets of worth subtracted by all their debts. It is the measure of what someone truly owns. Owning assets that appreciate or hold/store value in an inflationary environment is absolutely critical to socioeconomic mobility. There is a large, persistent, and worsening wealth gap between Black and White households in the United States (Survey of Consumer Finances 2019). Economists, pundits, policymakers, and academics differ on what can or should be done about the racial wealth gap, but the facts are clear:

**Table 1**. Wealth Gap Increase Between 2016-2019 Surveys of Consumer Finances

| | SCF 2016 | | SCF 2019 | | |
|---|---|---|---|---|---|
| | White | Black | White | Gap Increase | Black |
| Median wealth | $163,000 | $16,000 | $188,200 | $17,100 | $24,100 |
| Mean Wealth | $ 901,000 | $140,000 | $983,400 | $79,900 | $142,500 |

*Source*: Table prepared by author; Surveys of Consumer Finances

- Black families' median and mean wealth is less than 15 percent that of White families (Bhutta et al. 2020)[1]
- Black households hold more debt, less home equity, less real estate, less stocks, and less savings/checking (Kent and Ricketts 2021; Bhutta et al. 2020)
- Black households possess a higher concentration of low-average-return assets in their portfolios than Whites
- Far fewer Black households report receiving an inheritance than Whites, and the average value of those do are five times smaller than that of their White counterparts
- White people are three-times as likely to be business owners than Black people

## WEALTH AND INCOME GAPS

Most early studies hypothesized that the income gap could explain the racial wealth gap (Blau and Graham 1990; Altonji and Doraszelski 2005; Barsky et al. 2002). Indeed, White families

[1] The difference at the median was even starker than at the mean. Much of the SCF data is in "Black and Hispanic" but the scope of this paper is limited to the Black/White wealth gap. This is not to ignore other racial/ethnic wealth gaps (or the overall wealth gap regardless of race), but to focus on addressing historic inequality specific to African Americans.

receive about twice the income of Black families averaged across multiple studies since the 1960s (Aliprantis and Carroll 2019). But a two-times disparity in income fails to explain a five- to ten-times disparity in wealth. Further, high- and middle-income White families are much wealthier than Black families with the same income. And even as income disparities decrease over time, the wealth gap persists (Aliprantis et al. 2018).

New studies show that the compounding effects of wealth are the hardest to address in the racial wealth gap (Aliprantis et al. 2018). The clichéd saying “it takes money to make money,” would appear to be right. The labor income gap can account for the racial wealth gap, but it would take over 200 years, all else remaining equal, for Black mean wealth be 90 percent of White mean wealth (Aliprantis et al. 2018, 3). Simply put, because of how wealth accumulation works in our economic system, initial conditions and the existing wealth gap matter.

Income-focused public policy efforts have a great deal of political salience today. Some believe central bankers should be responsible for bridging financial racial gaps. In the 116th Congress, Democrats introduced a bill (Federal Reserve Racial and Economic Equity Act 2020) to add new mandates for the Federal Reserve, namely:

1) To add demographic reporting requirements;
2) To amend the outlined mission in the Federal Reserve Act to include a “duty to minimize and eliminate racial disparities” (Federal Reserve Racial and Economic Equity Act 2020).

Alternative fiscal policy measures have been proposed as well. Reducing Black unemployment, universal basic income proposals, and raising the minimum wage are all examples of hotly debated topics for today’s Congress. President Joe Biden’s American Jobs Plan and massive infrastructure law specifically address minority unemployment and income disparities, as well.

However, much of the political dialogue is centered on addressing income disparities to fix the racial wealth gap. Proposals for reparations reference unrestricted cash transfers to African Americans. Such proposals are politically unpopular and incredibly expensive (Hadavi 2020). These are income-centered solutions for a wealth accumulation problem. Even if America achieves a perfectly level playing field and its leadership ensures public policies center on equality, White Americans began the race for socioeconomic mobility with Black America forcibly held back from the start. After chattel slavery, false starts during Reconstruction like the Freedman’s Savings Bank, the 1921 Tulsa Massacre of “Black Wall Street,” structurally limiting Black access to the GI bill for veterans returning from war, prejudicial de facto segregation like bank redlining (McIntosh et al. 2020), and blatant de jure segregation (Rothstein 2018), new policies must address pre-existing wealth disparities.

## WHY FOCUS ON HOUSING? MIRRORING THE WEALTH GAP

In a study of overall wealth in America, The Brookings Institution determined that “nonfinancial assets” – the vast majority of which is made up of real estate – accounts for 28 percent of household assets in the United States (McIntosh et al. 2020). However, holding/owning real estate is more common among lower- and middle-class Americans than financial assets like stocks and bonds (Sawhill and Pulliam 2019). Further, real estate ownership and business ownership have income-generating potential and are generally a faster way for the lower- and middle-classes to build wealth than owning financial assets like stocks and bonds (which appreciate slower, on average) (Goodman and Mayer 2018). As Black people are over-represented in poverty compared to the overall U.S. population and have the lowest median household income by race and/or Hispanic origin (Creamer 2020), they are less able to accumulate the income and financial assets that would decrease the racial wealth gap.

Several studies show that the racial wealth gap closely mirrors a racial housing gap. Misra (2015) found that equal home ownership rates would reduce the wealth gap between Black and White families by 31 percent, and that if Black families got the same investment returns that White families do from homes currently owned, wealth inequality would be cut by 16 percent. Goodman and Mayer (2018) explored close correlations between the increasing wealth gap and falling home ownership rates for Black households every decade for the last 30 years. Amadeo and Potters (2021) explained why home equity is such an effective and reliable way to build wealth and how the U.S. government has not only made it easier for Whites to purchase homes, but also protected those investments through favorable tax policies for homeowners. Focusing on real estate equity might be a good place to start but promoting home ownership alone – without considering issues of segregation – may not fix the racial wealth gap. As such, the forthcoming literature review and policy proposal address both these issues.

## SEGREGATION MATTERS: HOUSING APPRECIATION IN SEGREGATED NEGIHBORHOODS

These pre-existing wealth disparities are unavoidably connected to the issue of segregation. Black people in segregated neighborhoods are more likely to go to prison (Semuels 2020), drop out of school (Sparks 2017), foreclose on a home (Ireland 2010), or work in lower-paying portions of the labor market (Banks 2019). Segregation is a sensitive and complex issue. Much of segregation can be explained by the de facto and de jure "top-down" segregation (e.g., Black Codes, Jim Crow) passed down from botched, 19th century Reconstruction policies. But segregation is cyclical, hard to break, and self-reinforcing for natural reasons as well. For example, poor and low-income families with bad credit receive higher interest rates – regardless of color (Brennan 2020) – and cheaper homes are more commonly available in segregated minority communities (Semuels 2020). Finally, there are both economic and psychological cost barriers to integrating communities. In Why Are All the Black Kids Sitting Together in the Cafeteria? psychologist Beverly Daniel Tatum (2017) explores why children of color tend to "self-segregate" at a young age. She argues that "connecting with peers who are having a similar experience as your own serves as a buffer, as a protective force" (Jaschik: Tatum Interview 2017) against the racism and institutional injustices they see in the world.

One of the advantages to real estate and housing equity as a wealth asset is that as it accumulates equity it can serve as a store of value and a hedge against inflationary forces. But several studies throughout the 1990s showed that minority households saw lower returns to housing investments than White households (Oliver and Shapiro 1995) and that residential segregation was correlated with highly concentrated levels of poverty and "social dislocations" (Flippen 2004, 1524) in minority neighborhoods (Jargowsky 1997; Massey and Denton 1993). Flippen's research was an attempt to identify "the mechanisms through which neighborhood racial compensation affects minority housing appreciation" (Flippen 2004, 1524) while controlling for race-independent socioeconomic conditions that happen to be highly correlated with race, similar to Munnell et al. (1996). Flippen outlined two mechanisms through which a neighborhood's minority makeup might affect housing appreciation and hypothesized that both would be significant in their influence: taste-based discrimination (i.e., Whites' preference for homogenized neighborhoods) and "other conditions that affect the utility and desirability of neighborhoods" (e.g., school quality, crime) (Flippen 2004, 1524).

Consistent with previous studies, Flippen found that the mean and median Black households experienced drastically lower rates of home value appreciation across three time periods (pre-1970, 1970-1980, and 1980-1990 census data). Most importantly, she found "clear evidence" (Flippen 2004, 1544) to support that high levels of neighborhood minority concentration negatively impacted housing appreciation even when controlling for socioeconomic and housing characteristics. Controlling for these same characteristics eliminated the "negative effects of integrated neighborhoods relative to all-white neighborhoods" but "highly segregated minority neighborhoods continue to experience lower price growth even net of these nonracial factors" (Flippen 2004, 1544). Her research pointed to the value of living in an integrated or all-White neighborhood when it comes to wealth accumulation.

But evidence supports that people may still choose to segregate. Tiebout (1956) saw different local governments and neighborhoods as choice sets of various amenities and public goods available to customers, or the residents choosing where to live. He developed a local government model based on economic principles where economic man was a "consumer-voter" who "voted with their feet" (Tiebout 1956, 419). The act of moving or failing to move replaced the usual market test of willingness to buy a good and revealed the consumer-voter's demand for public goods. Tiebout's theory of local expenditures was instrumental in shaping the thinking of those who studied segregation from an economic perspective thereafter.

Under sorting equilibrium (Bayer and Timmins 2005) assumptions, the demographic compositions of neighborhoods will not change without large alterations in real amenities. Others like Schelling (1971) challenged models of studying segregation solely on "practical," economic factors and posited that racial compensation is itself a "natural" amenity for human beings. Such disequilibrium models of segregation are mostly theoretical and downplay the roles of moving costs and real amenities in favor of examining endogenous responses to changing the racial compositions of neighborhoods (Caetano and Maheshri 2019). Caetano and Maheshri (2019) sought to unify the equilibrium and disequilibrium models by developing methods to measure endogenous responses to racial convergence, moving costs, and the utility of real amenities. They found that homeowners of all races were more likely to move into neighborhoods with a greater share of residents of their own race. But elements of non-discriminatory sorting (both moving costs and local amenities) were more important in explaining patterns of segregation (Caetano and Maheshri 2019, 32).

## DISCRIMINATORY PRACTICES

President Gerald Ford signed the Home Mortgage Disclosure Act (HMDA) into law in 1975, then requiring financial institutions to report and maintain records on loan information for mortgages, including information about the racial makeup of borrowers. Much of the initial data that came out of the HMDA painted a dire picture: minorities were more than twice as likely than Whites to be denied a mortgage. Early studies concluded that being a minority increased the probability of being rejected for a loan (Black et al. 1978; King 1980; Schafer and Ladd 1981). Mortgage companies and lending institutions countered that this interpretation was misleading because HMDA data did not include financial information about the applicants. They argued that credit histories, debt, loan-to-value ratios and other factors were responsible for the disparity, not racial taste-based discrimination. Some studies that attempted to test for statistical discrimination – race as an effective signal for default probability – yielded mixed results (Berkovec et al. 1994).

Using an additional survey to lending institutions, Munnell et al. (1996) created an expanded HMDA register in the Boston metropolitan area that specified additional financial information that are relevant to lending decisions. At the time of the study, about 15 percent of the Boston metropolitan statistical area population was minority, and its neighborhoods were highly segregated. The Boston Federal Reserve Bank augmented the 1990 HMDA reports with 38 additional variables about debt, income, savings, and other personal details that spoke to probability of default, costs of default, loan characteristics, and personal characteristics of borrowers regardless of race. The authors then ran a multivariate regression while controlling for grouped variables and isolating race as the operative variable in the table. Munnell et al. (1996) found that while race accounted for substantially less mortgage denials when controlling for race-independent factors like loan-to-value ratios and weaker credit histories, the coefficient on race remained statistically significant across several estimation models and robust to the inclusion of other variables. Perhaps more importantly, they found that the discrimination was "pervasive," meaning that it was not isolated to "only a few lenders active in the minority market" (Munnell et al. 1996, 41).

## RACE AND SUBPRIME MORTGAGES

Two historical events add important context to an excellent study about the effects of subprime mortgage lending during the 2000s titled "Race, Ethnicity and Subprime Home Loan Pricing" (Bocian et al. 2008). First, laws required lenders to report new details specific to the costs of subprime mortgages. Second, the collapse of the world economy and the onset of the "Great Recession" was officially declared in December of 2007 – just 8 months after Bocian et al. (2008) first published their study. In this sense, these authors should be applauded for being ahead of the times in conducting an analysis of subprime mortgage lending practices. Defaults on these high-risk mortgages set off a ripple effect which started the collapse of several mortgage corporations and a few major international banks.

Bocian et al. (2008, 113) used new HMDA data and a "proprietary database of securitized subprime loans" to control for legitimate and objective risk factors relevant to lenders. Not only did the authors find that people of color were more likely to receive loans with a higher APR than Whites when controlling for race-independent factors, but they also found that African American borrowers were much more likely to receive loans with prepayment penalties. Such loans with prepayment penalties locked borrowers into paying high interest rates even if they had the ability to "pay down" the principal balance on their loans. Their findings offer support for a pattern of lending practices known as “reverse red-lining,” where communities of color are targeted for high-priced mortgages irrespective of borrower risk (Gano 2018, 1126).

A few years later as the world recovered from the Great Recession, Bocian et al. (2011) set out to analyze how the housing crisis affected Americans across racial and ethnic lines. Expanding on their previous research, Bocian et al. (2011) found that loan type, race, and ethnicity were still intricately linked. As expected, subprime, adjustable rate, high penalty fee, and high interest rate mortgages were most likely to default. Finally, Black borrowers were twice as likely to default during the housing crisis. Minority borrowers targeted with subprime mortgages and disproportionately high interest rates were then hit hardest by the recession and faced the most arduous recovery. Black borrowers were twice as likely to default on a wealth-building asset they were already paying more interest on due to predatory lending.

## WHY ACCOMMODATIVE MONETARY POLICY EXACERBATES THE PROBLEM

Bartscher et al. (2021) addressed how central banks may or may not be equipped to address racial gaps in employment, wages, and wealth. While accommodative policy (i.e., lower interest rates designed to spur economic growth) lowers unemployment and increases income for marginal workers – often low-income and minority households – monetary policy also affects asset prices that help people build wealth. Black households hold less of the wealth-building financial assets that typically benefit from price appreciation under periods of accommodative monetary policy (e.g., low interest rates, quantitative easing) than White households. Since “the median Black household has no stock holdings, nor owns a house… any effect that monetary policy has on the price of such assets bypasses the majority of Black households” (Bartscher et al. 2021, 2). Bartscher et al. (2021) set out to determine how income and employment gains during periods of accommodative monetary policy compared to wealth gains by asset holders.

Bartscher et al. (2021) found that accommodative monetary policy had a more positive impact on wages and employment for Black households than White. However, accommodative policy also greatly increased home values and investment security portfolios. Pre-existing wealth gaps were exacerbated by periods of accommodative monetary policy. The positive impacts on asset values were orders of magnitude greater than those for wages and unemployment. Gains in income and employment for Black Americans paled in comparison to the widening racial wealth gap.

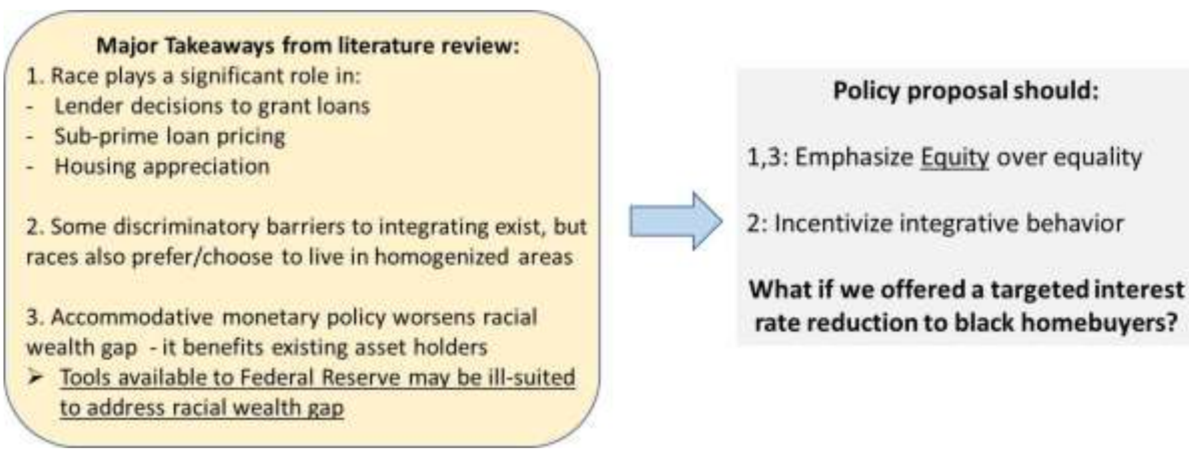
## SUMMARY

Three studies, Munnell et al. (1996) and Bocian et al. (2007; 2011) showed that race was a significant determinant in lender final decisions to grant loans and the types of loans they decide to give. Flippen (2004) found that homes in segregated neighborhoods with a high concentration of people of color appreciate much slower than those in mixed or homogenously White areas. Black people are both less likely to receive a loan and more likely to receive loans with adverse financial structures. And if they do own a home, their homes likely appreciate slower if located in a concentrated minority neighborhood.

Explaining why people segregate is a complex mix of factors including legitimate, "rational," economic factors of public choice theory like moving costs, the utility of public goods, or race-independent social desirability factors like crime rates. There are also psychosocial elements to consider like humans' natural proclivity to feel comfortable in groups of people that look like them from a young age (Tatum 2017). Racial taste-based discrimination does exist in some instances and has its own reinforcing effect on existing segregation handed down over time (Flippen 2004).

Finally, while Bartscher et al. (2021), were heavily focused on macroeconomic conditions, their findings are significant to this proposal for several reasons. First, they are consistent with hypotheses that income and employment-based solutions may not be the best solutions to address the racial wealth gap with any kind of efficacy in the short term. Second, expansionary fiscal and monetary policies we tend to see in the wake of recessions exacerbate the racial wealth gap. So, the tools at the disposal at the Federal Reserve may be ill-suited to address racial issues. When the median Black family neither owns a home nor any stock holdings, monetary policies which positively impact such asset prices effectively bypass most Black households. This supports the hypothesis that addressing the "starting point" of existing wealth is critical for formulating effective and equitable public policy.

**Figure 1**: Flowchart of Literature Review and Policy Proposals




*Source*: Prepared by author; Summary of readings in references

## A NOTE ON MICROECONOMIC THEORY AND INTEREST RATES

Theory on substitution and wealth effects support the idea that interest rate reductions allow for both more consumption and more borrowing (commensurate with each borrowers' unique preferences). However, according to microeconomic theory of intertemporal consumption, borrowers will definitely curtail their borrowing as interest rates rise. Ascertaining borrower preferences (or the shapes of their indifference curves) can be difficult because behavioral economics teaches us that consumers are not perfectly rational nor fully aware of what their true preferences are when asked in survey form. From behavioral economics, we know some people are present-biased and have self-control problems they are unaware of. Thus, natural experiments are best in measuring people's true market preferences as opposed to what they intend or hope to do.

Microeconomic theory has implications for the political popularity of this proposal as well. The rational consumer choice model seeks to understand how government programs might encourage people to do certain things by offering them incentives, subsidies, or grants. There are two basic kinds of grant structures: unrestricted grants of cash, and restricted grants that must be spent on a specified good or activity (Cordes 2021). Microeconomic theory supports that unless the value of these grants is unusually large, there is very little difference in terms of consumer behavior changes in purchasing more of a particular good between the two kinds of grants (e.g., there is little difference between $300 in food stamps or $300 in cash in incentivizing the purchase of food over other goods). But studies show that government programs giving money to the poor for specific goods (e.g., food stamps) are often more politically popular than simply respecting the consumer sovereignty of the recipient with an unrestricted cash grant (De Janvry, Fargeix, and Sadoulet 1991; Epple and Romano 1996). If the program outlined in this research proposal is successful, it could be more popular across the political spectrum than simply giving away "free" money or assets in the form of reparations.

## RESEARCH QUESTIONS

1) How does a targeted interest rate reduction impact home sales to Black Americans?
   - How many Black Americans take advantage of this program?
   - How much will this program cost the government?
2) What effect do interest rate reductions have on Black Americans purchasing homes in mixed or predominantly White neighborhoods?
   - Does this kind of program encourage integrative moving patterns?
3) How does income compare to interest rates as the key determinant in the likelihood of Black borrowers purchasing a home?
   - Do interest rate reductions incentivize Black borrowers to consume/save more? Or invest in higher valued real estate?
   - Which is more effective/dominant: wealth or income-centric policies?

The first question speaks to the overall efficacy of the program in boosting wealth among Black Americans. We want to know how many Black Americans are buying houses as a result of the treatment (lower interest rate) that otherwise would not be purchasing a home. This can also serve as a measure of how much the subsidy will cost the government, on average.

The second question examines the program's impact on the racial makeup of the treated communities. Ideally, public policy would not only increase levels of Black wealth but also promote integrative behavior by incentivizing Black people to purchase in mixed or predominantly White neighborhoods, or incentivizing Whites to purchase in mixed or predominantly Black neighborhoods. Tracking where Black homebuyers were purchasing new homes and whether neighborhoods looked more or less integrated as a result of the treatment is key in understanding how strong preferences are for remaining in homogenous, racially segregated neighborhoods.

Finally, we want to know if changing interest rates is actually more effective in incentivizing wealth building than simply boosting Black income. By comparing income levels among new borrowers, we can see if a lack of savings, fear of taking on debt, or higher monthly mortgage payments is more dominant in determining whether prospective Black borrowers will decide to purchase a new home. Further, examining whether Black Americans are more likely to buy more expensive homes as a result of the policy than buying similarly priced homes and saving more can give researchers and policymakers an idea of their preferences for investing in wealth building or consumption.

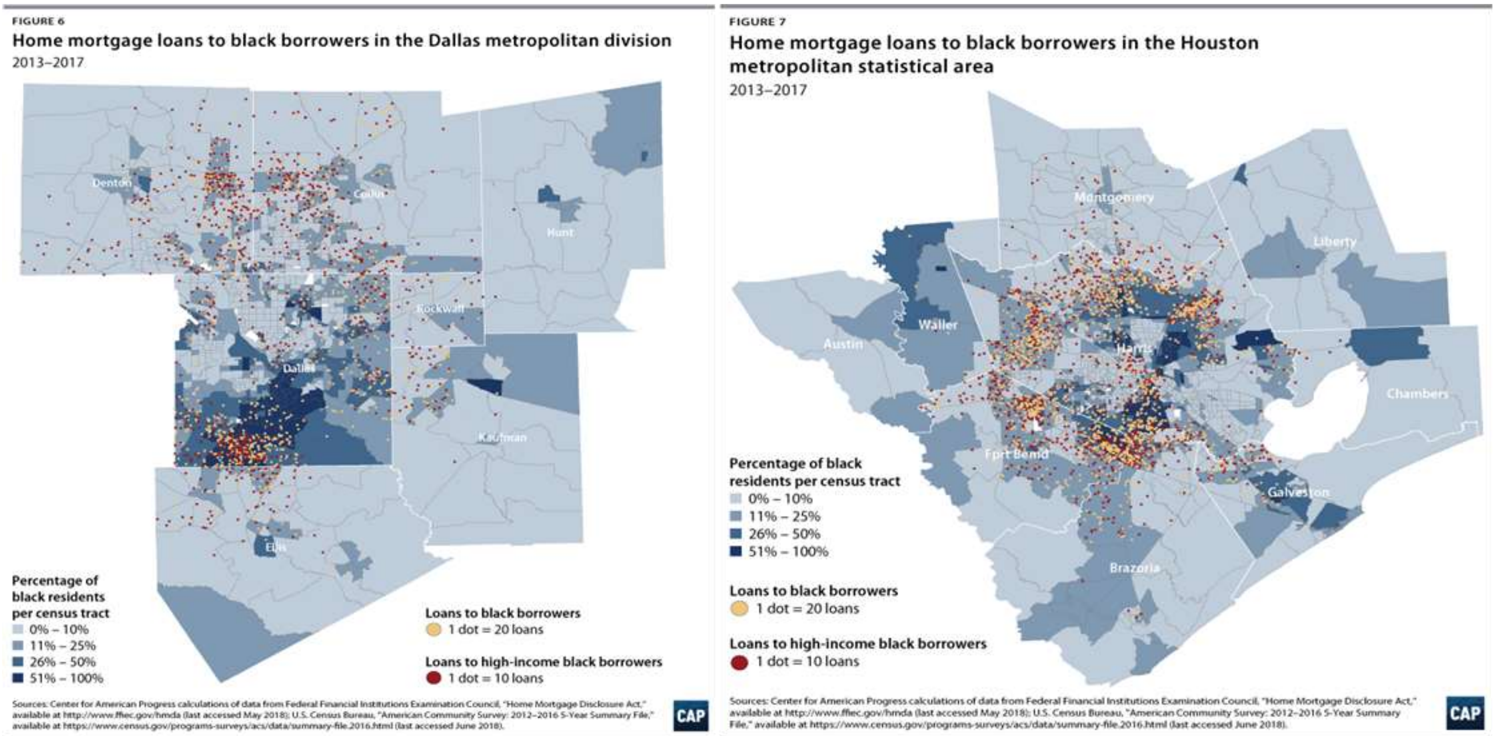
## PROGRAM DESIGN

*NOTE: What follows is a trial program proposal. It is entirely hypothetical. Data in tables are fabricated and only serve to demonstrate how results of the program could be analyzed to determine the efficacy of the treatment effect in a practical way.

This is a trial program that allows researchers to study its potential for broader application through a difference in differences design between two cities with like characteristics from the same state of the country. One city acts as the comparison group, while the other receives a treatment in the form of a trial program where the government offers to subsidize up to two percent of the interest rate for any mortgage for new Black homebuyers. However, to account for history, this paper proposes taking several observations before and after the treatment in the fashion of an interrupted time series.

The process for selecting two appropriately similar cities should begin with a brief exploratory case study of the cities within a single state that can act as treatment and comparison groups. They should have similarly sized urban, suburban and rural populations, similar percent Black population distribution, and similar socioeconomic makeups across their populations. Assume we have conducted our exploratory case study research and selected two cities that would make for a good fit: Dallas (treatment) and Houston (comparison).

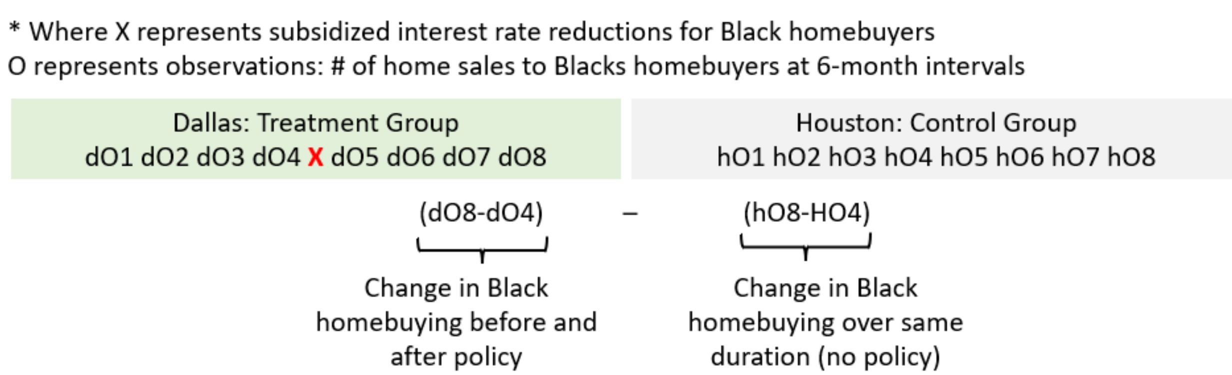
**Figure 2**: Home Mortgage Loans to Black Borrowers in Houston and Dallas from 2013-2017




*Source*: Center for American Progress' Summaries of HMDA Data

Following the model outlined by the Center for American Progress (Zonta 2019) in their study of "Racial Disparities in Home Appreciation," I would break down HMDA data by census tract, code each tract by percentage of Black residents, and determine how many new mortgage loans were issued to Black borrowers per tract in each city in four, six-month intervals prior to treatment. Dallas would receive the treatment where Black residents were offered a two percent interest rate reduction to buy a home in Dallas. Four more observations of new home purchases would be made at 6-month intervals after the treatment for both cities.

**Figure 3**: Theoretical Research Design by Two Treatment Groups




*Source*: Prepared by the author

I hypothesize that Dallas will see increasing percentages of Black borrowers purchasing homes when compared to Houston after the treatment (observations 5-8).

## DATA SOURCES

HMDA data already requires lenders to report the ethnicity, race, gender, and gross income of mortgage applicants and borrowers (Bureau of Consumer Financial Protection 2015, 8). Those included demographics allow us to address Research Questions 1 (blue color, below) and 3 (green color). Current residence is disclosed on mortgage applications and allows us to address Research Question 2 (tan color). As mentioned by Flippen (2004), mixed race/ethnicity households in HMDA data are rare. However, (depending on who registers as primary borrower) a small number of cases will be defined as Black or non-Black in my data set that are in fact mixed. Census data will be used to break down tracts into six categories of percent Black population (0-10%, 10-20%, 20-30%, 30-40%, 40-50%, 51%+). The percent Black population of both the borrower's previous and new place of residences will be tracked to address Question 2 (for all new home purchases regardless of race to track neighborhood migration patterns across races). Income can be further broken down into similar brackets to see which economic class of Black Americans takes most advantage of the program. Similarly, interest rates received can be compared between treatment and comparison groups for borrowers of similar income brackets to measure how meaningful interest rate reductions are relative to income (Research Question 3).

**Table 2**. Example of data collection method and organization of HMDA/census data

| Obeservation | Black? Y/N | Previous neighborhood (% black population) | New home neighborhood (% black population) | Int rate | Income | Savings (assets reported) | Previous homeowner? (Y/N) | New home sale price |
|---|---|---|---|---|---|---|---|---|
| Household 1 | Y | 51+% | 11-20% | 4% | $75000 | $55000 | N | $300,000 |
| Household 2 | N | 30-40% | 20-30% | 4.5% | $80000 | $30000 | N | $500,000 |
| Household 3 | N | 0-10% | 0-10% | 3.75% | $110000 | $25000 | Y | $450,000 |
| Household 4 | N | 20-30% | 30-40% | 3.65% | $56000 | $45000 | Y | $275,000 |
| Household 5 | Y | 51+% | 20-30% | 4% | $65000 | $24000 | N | $310,000 |

*Source*: Table prepared by the author; Theoretical HMDA/census data

## HOW THE TREATMENT WORKS

As mentioned in the microeconomic theory section, such an interest rate could incentivize more consumption or more borrowing (for a better home). The applicants would apply for a loan as normal and receive an amortization plan for their mortgage payments based on the best interest rate offered to them by lenders. Lenders would then give the borrower an amortization plan based off a two percent interest rate reduction.

**Table 3**. First Month Mortgage Payment Example Breakdown

| Typical First Month Payment | Home Price | Down Payment | DP % | Length | Rate | Insurance | Property Tax | HOA | Principal | Interest | Payment Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ 500,000 | $ 100,000 | 20% | 30 yrs | 4% | $ 100 | $ 400 | $ 50 | $ 575 | $ 1,334 | $ 2,459 |
| **With Subsidy First Month Payment** | **Home Price** | **Down Payment** | **DP %** | **Length** | **Rate** | **Insurance** | **Property Tax** | **HOA** | **Principal** | **Interest** | **Payment Total** |
| | $ 500,000 | $ 100,000 | 20% | 30 yrs | 2% | $ 100 | $ 400 | $ 50 | $ 811 | $ 667 | $ 2,028 |
| | | | | | | | Difference to buyer: | | $ 236.00 | $667.00 | |

*Source*: Table prepared by the author; Theoretical mortgage payment data

Buyers would pay according to the two percent interest rate reduction amortization plan. In the example above, the buyer would pay a higher amount ($236 more) in principal than in the four percent rate amortization plan. As part of the agreement to accept the government subsidy of the interest payment, program participants would slightly overpay principal, thus reducing interest costs to the government over the life of the loan. This also acts as a forcing function to increase home equity building on the front end of the loan. However, they would pay significantly less in interest at cost to the government ($667 less), resulting in an 18 percent reduction in monthly payment.

Note the progressive nature of the policy. Amortization plans typically have buyers paying more interest upfront and scaling back interest payments throughout the length of the loan. Lower-income borrowers with lower savings and perhaps bad credit may see higher interest rates. As interest rates get higher, the more the interest burden is shifted from the borrower to the government, and the more borrowers can put their money into building home equity upfront rather than paying a lending company interest.

## CONCLUSION

This study would do no overt harm to the participants, but it is critical to consider political viewpoints and attitudes about using large amounts of taxpayer dollars to help only one subset of people in one city – even if for the purposes of potentially applying elements of the program on a broader scale. Historically, non-Black Hispanic, Latinx, Asian-American and other minority groups have also been discriminated against. Issues of colorism can arise easily. However, through the right messaging and political willpower, I believe such a study is possible and necessary before expanding the program on a wider scale.

A systematic review of studies dealing with segregation and discrimination in real estate and the distributive effect of changing monetary policies shows the complexity and variety of factors influencing a worsening racial wealth gap in America. Developing one politically and financially feasible, catch all solution to the problem is impossible. But it is clear that closing the racial wealth gap starts with boosting both future income and existing levels of wealth. Black Americans have started the race from a different starting line. Further, evidence supports that the very expansionary monetary policies of low interest rates and quantitative easing the Federal Reserve is implementing today to jumpstart an economic recovery out of the COVID-19 recession will worsen the racial wealth gap (Bartscher et al. 2021).

Home ownership through the structured debt of a mortgage is one of the greatest tools lower- and middle-class Americans have to build wealth. It offers a hedge against inflation and an asset to pass down, building generational wealth. But it is critical to note that homes in highly concentrated minority neighborhoods do not appreciate nearly as well as homes in mixed race and White-homogenous neighborhoods (Flippen 2004). This proposal effectively functions as a targeted change in monetary policy (i.e., interest rates) for historically disenfranchised Black Americans.

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