### **Answers**

<u>Note</u>: Medians calculated in Q1, Q2 and Q3 are weighted until specified. I chose to calculate weighted medians to see trends at a population level. Nonetheless, I will be putting unweighted median trends to visualise the difference.

### Q1:

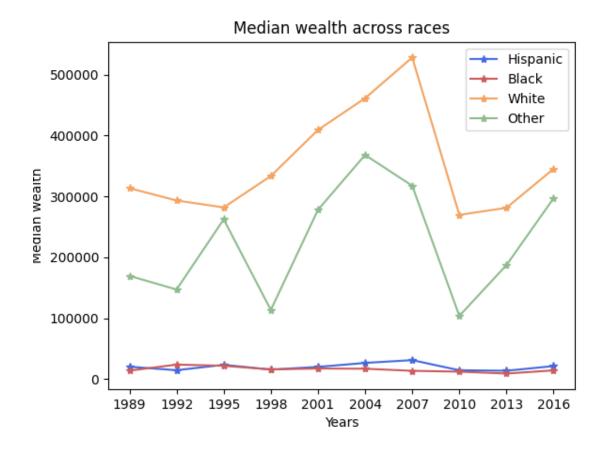
### Race

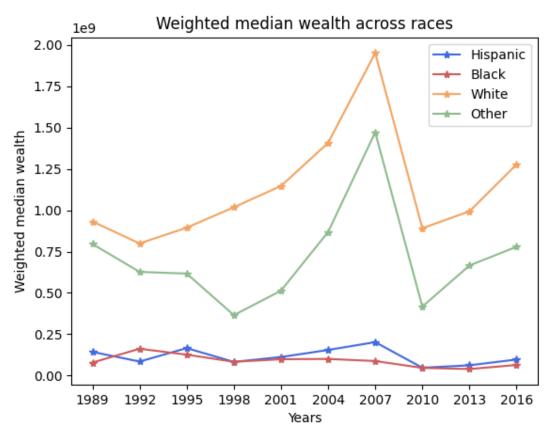
Median wealth (or the wealth of a household at the middle of a distribution) for the last 30 years has been the highest for whites and the least for blacks and Hispanics. There is a consistent median wealth hierarchy according to race throughout the time period considered. Generally, the difference in the median wealth between Hispanics/blacks, and other races is higher than the difference between whites and other races.

The median wealth for whites and others has far exceeded the median wealth for blacks and Hispanics during booms and recessions. During 1998-2007 wealth rose by 91% for whites, by 143% for Hispanics and by 5% for blacks. In 2007-10, while it fell by 55.7% for whites, it fell more for Hispanics by 77% and least for blacks by 48%. Median wealth among whites rose the highest and fell way lesser than it did for Hispanics who saw the most decline and blacks who only saw a fall in both periods. The recovery rate in wealth during 2010-2016 for whites was 43%, for Hispanics 104% and for blacks 37%.

Therefore, during booms while whites benefitted, Hispanics benefitted and recovered the most, and blacks saw the least growth, recovery rate and fall. Meanwhile the median wealth for blacks has mostly had a downward trend throughout, remaining mostly unaffected by booms and recessions. Before 1998, Hispanics and blacks have been more or less same in terms of median wealth hierarchy. But post 1998, Hispanics have seen a weak wealth dominance by being either equal to or above

blacks in median wealth status.

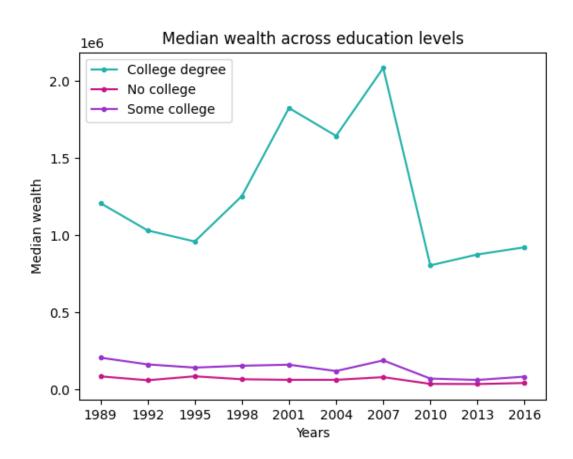


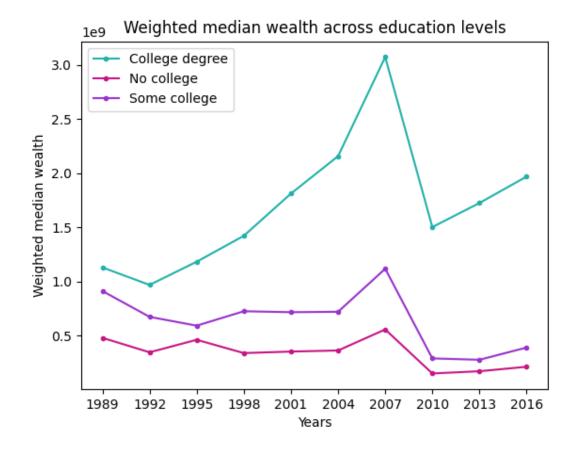


## **Education**

It is clear from the graph that people with college degrees have consistently acquired more wealth than people with some college or no college experience. While the difference in the median wealth between people with no college degree and those who with some college experience is not very large, the difference in median wealth of people with a college degree and those with some college experience is much larger. This gap between people with college degrees and others has starkly grown since 1992. This means that there is a large incentive for people to go from having some college experience to getting a college degree.

During 1992 - 2007, people with a college degree benefitted the most, with the highest rate of rise in median wealth, followed by people with some college experience. In fact from 1998-2004 and 2010-2016, college degree holders saw their median wealth rise by 51% and 31% respectively while the other two groups hardly saw any change in their median wealth.



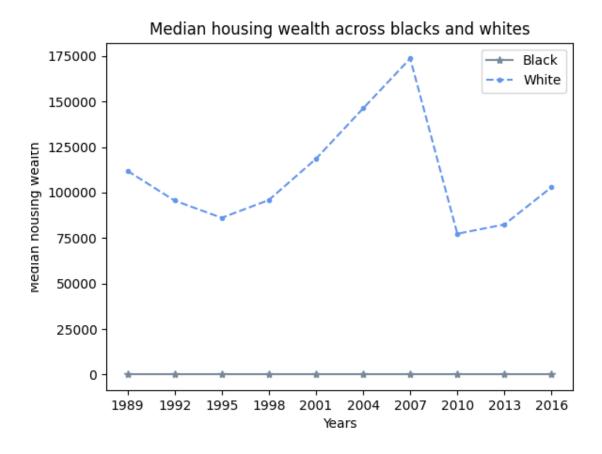


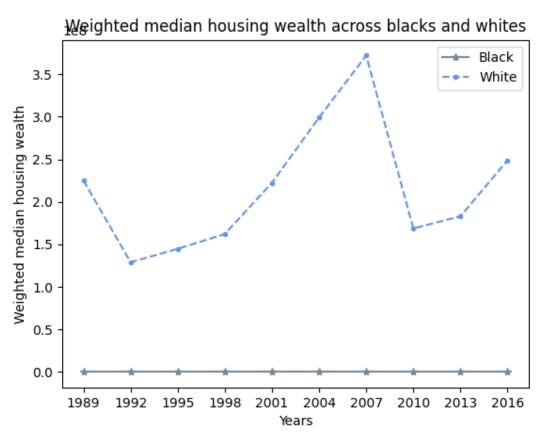
## Q2:

For more than 50% of black people, housing wealth is 0 which is why median housing wealth for black people comes to be 0 for all the given years. This indicates that most of the black people are not homeowners and therefore don't have much household wealth collectively as a race.

For whites, the housing wealth trend is similar to their wealth trend (as seen above in Q1). This indicates that most of the wealth for white people can be attributed to their housing wealth. Since 1992, the median housing wealth saw an upward trend till 2007, which drastically fell post the Great Recession of 2007-09 and has since been

recovering from 2010.





### Q3:

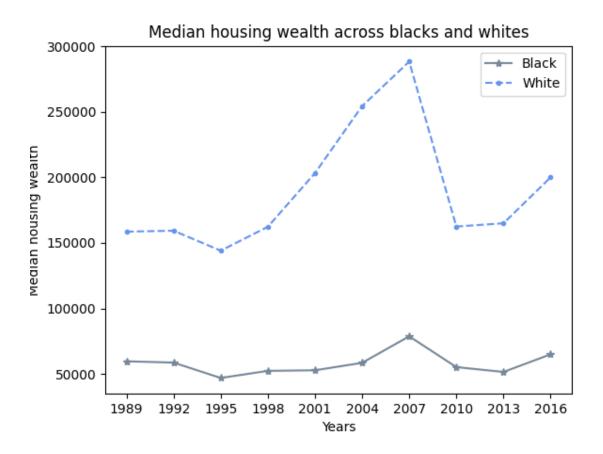
Note: I chose to calculate median wealth to assess the trends in this question.

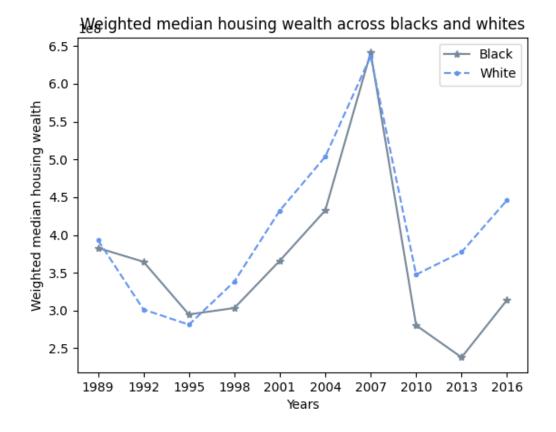
## **Housing Wealth**

We can see a general trend of household wealth falling from 1989-95 and then rising rapidly to reach its peak in 2007 for both racial groups. Post the Great Recession, we can see a drastic fall with wealth reaching 1989 levels for whites and hitting an unprecedented low in 2013 for blacks.

From 1989-95, median household wealth for whites fell by 28.5% and for blacks by 23%, both converging to approximately the same level. From 1995-2007, wealth for whites exceeded blacks' as they rose by 78% and 117% respectively. Following the Great Recession, their wealth fell by 45.4% and 56.3% respectively, where median wealth for whites exceeded that for blacks and the gap became wider than ever.

This means that homeownership among blacks exceeded that of whites before 1995. But from 1995 – 2007, homeownership among whites slightly dominated that of blacks. After 1995, more blacks became homeowners and it ultimately converged with the white homeownership by 2007. The Great Recession hit black homeownership more severely than white homeownership possibly because black homeownership was more debt-based that its white counterpart. The household wealth gap was the widest in 2013, as black people seem to have been hit for longer (2007-13) while white homeownership started recovering post 2010.



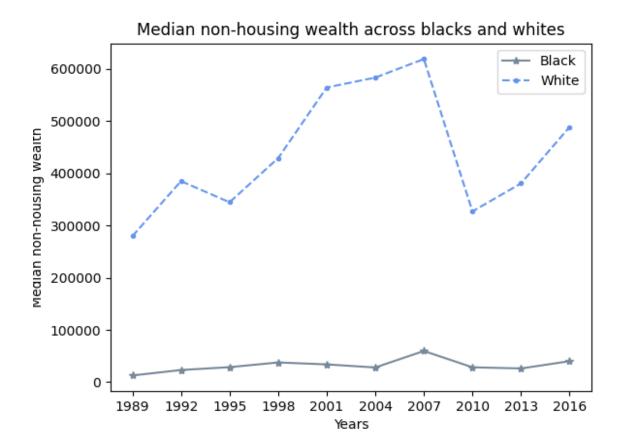


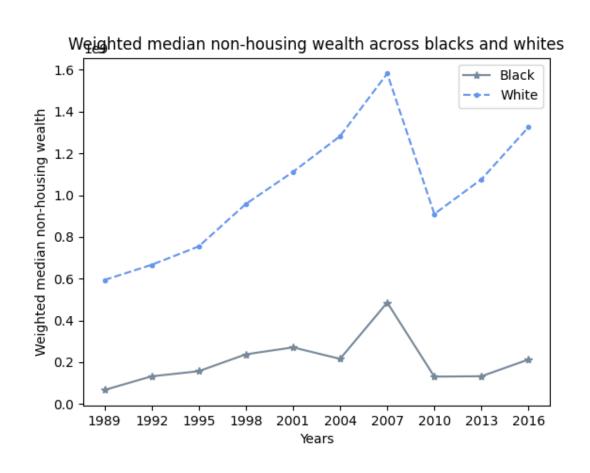
## Non-Housing Wealth

The median non-housing wealth for whites has far exceeded the median wealth for blacks throughout. The trend seen here is similar to what we saw in Q1.

During 1998-2004, wealth for whites rose by 48% and fell for blacks by 36.2%. From 2004-07, the wealth for blacks rose by 124% and for whites by 26%. While wealth for blacks fell and for whites rose before 2004. Just when blacks had started to make a drastic progress during 2004-07, progressing better than whites, the Great Recession hit them bad. The blacks lost 73% of their wealth during 2007-2010 as opposed to whites who lost 45%.

In conclusion, I have noticed that in terms of house acquisition and its value growth, blacks are acquiring more through debt while whites have more equity-based household assets. But without asset wealth such as non-household wealth, blacks are economically farther behind whites and the wealth gap is wider than ever in both scenarios in favour of whites.





		(Base Period)			
		2007	2010	2013	2016
Median housing	Absolute				
wealth: White	change (\$)	288345.74	-125862.41	-123369	-88345.74
	Proportional				
	change (%)		-44%	-43%	-31%
Median housing	Absolute				
wealth: Black	change (\$)	78745.02	-23478.58	-27189.785	-13745.02
	Proportional				
	change (%)		-30%	-35%	-17%

<sup>\*</sup>The medians calculated here are unweighted to accommodate for absolute wealth.

The largest lost in median housing wealth has been among whites during 2007-2010 both in absolute and proportional terms.

#### Q4:

Wealth allows individuals to change jobs, pursue an education, start their own business and get support during emergencies. Wealth provides a chance to not just consume like income does, but it offers an opportunity to grow.

## a) Education debt

Houses are extremely valuable assets that grow in value over time and get passed down as a wealth source for future generations. As we observed in Q2 that more than 50% of the blacks were not homeowners and therefore had no asset wealth. If an individual from this group wants to study, they would have to take a loan and a more expensive one due to no/low collateral than their white counterparts. Rising student debt can be passed down to future generations and would hinder their financial growth for many years to come. I would extend a similar hypothesis to Hispanics.

#### Data needed:

- Percentage of education loans acquired by blacks/Hispanics vs whites with a sub-classification into level of loans (sub-prime, etc)
- Percentage of equity-owned assets within each community.
- Percentage return on education in terms of income and equity acquired for each community.

### b) Disparity in ancestral wealth

Blacks/Hispanics started with a wealth gap more than 50 years ago. Most of their ancestors weren't as economically equipped as their white counterparts who had wealth and assets (as seen in Q2 above) to pass down to the future generations and even if they did segregation made that value grow lesser. For example, due to historical segregation of neighbourhoods for blacks/Hispanics, a person from their community owning a similar sized house as their white counterpart would've seen it grow to a lower value because of the housing rates that prevail in these neighbourhoods. Wealth only compounds and grows in value over time. This also serves as an example of intergenerational wealth accumulation.

#### Data needed:

- Age, size and value of houses for each community.
- Age of other equity investments for each community.

## c) Neighbourhood characteristics

Blacks and Hispanics have a history of neighbourhood segregation. Because of their low-income status since their inception, these are characterized by worse access to healthcare, lower quality schools, higher crime rate, etc than their white counterparts. These, too, can hinder their educational, recreational, social and nutritional development from a young age. This may count as a lesser quality human resource when compared to their white counterpart. It can lead to lower income opportunities and can get passed down to generations to create an intergenerational poverty trap.

#### Data needed:

- Percentage of black/Hispanics population living in historically segregated neighbourhoods.
- Average educational attainment levels, access to healthcare, crime rate and average income level in these neighbourhoods.

# d) Discrimination

### Mortgage Discrimination

I would like to explore the possibility of mortgage discrimination where blacks/Hispanics are discriminated on the basis of their past family background/ race and are given riskier and more expensive (sub-prime) loans that goes against their upliftment.

### Data needed:

- Types of loans given among same income families within each community (to control racial bias)
- Types of loans given within each community and its % thereof.
- Types of loans given to communities with the same collateral value to give.
- Time taken to pay off loans for same income people within each community.

### Criminal Discrimination

Blacks might be more likely to get convicted of minor offenses which can hinder their future job, education and social prospects.

### Data needed:

- Racial characteristics of people convicted for minor offenses.
- Rate of exoneration within each community for minor offenses.
- Recidivism rate within each community for minor offenses.
- Amount spent in legal fees by exonerated people for minor offenses within each community.
- Education attainment levels among convicted and exonerated population within each of these communities.