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**From American dream to American nightmare: The struggle for economic dominance and the perpetration of violent hate crimes against the Black community in the United States**

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## **From American dream to American nightmare**

### **The struggle for economic dominance and the perpetration of violent hate crimes against the Black community in the United States**

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## Table of contents

Introduction .....	3
Hate crimes as symptom of prejudice .....	5
Literature Review .....	6
<i>Hate Crimes</i> .....	6
<i>Economy and Prejudice</i> .....	8
Theories .....	10
<i>Social dominance theory</i> .....	10
<i>Realistic conflict theory</i> .....	11
Socio-economic status as a predictor of prejudice .....	13
Hypothesis .....	13
Research Design .....	14
<i>Independent variable</i> .....	14
<i>Dependent Variable</i> .....	16
<i>Controls</i> .....	18
<i>Model</i> .....	22
Results .....	23
Conclusion.....	27
Bibliography.....	30
Appendix .....	36

## **Introduction**

Trayvon Martin, James Bird, and Ahmaud Arbery are only few of the hundreds of names that each year make the headlines as the latest victims of racially motivated violence in the United States. While these quintessential manifestations of explicit racism have shaken public opinion and polarised American society on the matter of white supremacy (Cramer, 2020), many more receive little to no attention. Across the span of four years, racially motivated violent hate crimes toward Black people have almost doubled, going from 890 cases in 2016 to the 1605 of 2020 (Uniform Crime Report, 2020).

Due to the troubled history of the United States on the racial front, intergroup relations between ethnic groups, and, more specifically, between the white and the Black community, have always been tense. The history of hate crimes dates back to the 18<sup>th</sup> century, when African Americans became the target of lynchings and other violent crimes perpetrated by white Americans aiming to assert white dominance (Petrosino, 1999). The perpetration of these extrajudicial punishments increased exponentially after the emancipation of African American people from slavery, in a killing spree that lasted until the 1960s. The issue persists today, notwithstanding the attempts of the government to mitigate the problem of hate crimes through legislation and reports (Cheng, Ickes & Kenworthy, 2013).

Besides the massive political impact they yield, hate crimes involve a great deal of psychological consequences as well, both for the victims and the larger groups they represent. Perpetration of hate crimes against a member of a group causes anxiety and fear throughout the rest of the group, even without direct victimisation (Herek, Cogan & Gillis, 2002; Witten & Eyler, 1999). This type of consequence led several scholars to compare hate crimes to terrorism, bringing as an example the Ku Klux Klan, which uses hate crimes against the out-group to build a reign of terror (Mills, Freilich & Chermak, 2015). Such a similarity is rooted in the

communicative nature of both crimes, as they aim to psychologically impact a larger audience than the immediate target (Krueger & Malečková, 2003).

Scholarship on hate crimes has focused predominantly on such consequences and on the possible predictors of victimisation, encompassing many factors such as racial prevalence, exacerbating events, and wealth (Disha, Cavendish and King, 2011; Green, Strolovitch & Wong, 1998; Quillian, 1995). Within the field of economy, much literature has focused on the relationship between trends in the economy and hate crimes count. Many of these studies found that, as resources become scarcer, groups will compete more fiercely for them, resulting in a higher frequency of hate crimes perpetration (Quillian, 1995, 1996; Olzak, 1992; Tolnay & Beck, 1993; Hovland & Sears, 1940; Medoff, 1999). While the influence of the economy on prejudice and hate crimes has been proven time again, little attention has been given to how relative economic status between groups acts as a predictor of racially motivated violence. While competition for scarce resources is undoubtedly one of the causes of intergroup conflict, it does not consider the social stratification of society and how the latter leads to the conception of privilege as a value to protect. The seemingly important nature of economic considerations as a predictor of prejudice calls for a deeper understanding of such causes, with a focus on relative economic group status, which appears to be understudied.

This research focuses on white dominance and how threats to such dominance translate into violent hate crimes. More specifically, this thesis will take into consideration the racially motivated violent crimes directed at the Black community in the US, and how threats to white people's economic supremacy prompts some individuals in the white community to develop strong hostile sentiments toward the Black community, ultimately resulting in violence. This paper's argument builds on theories of social dominance and racial threat (Sidanius & Pratto, 2004; Blalock, 1967), hypothesising that, as the Black community achieves relative gains over the white one, racially motivated violent crimes will become more frequent. This is because the

dominant group, in this case the white community, is expected to act in a way as to maintain the status quo and the current economic stratification in society. According to this perspective, perpetrating violent crimes against the Black community is way to assert dominance over Black citizens.

To test this argument, I will conduct an overtime state-specific quantitative analysis between the years 2008 and 2019, examining the ratio between Black and white income per state by year and how it relates to the amount of violent hate crimes against the Black community perpetrated each year in each state. Since several factors may act as confounders in this relationship, this study will also control for Black-to-white population ratio in the state, state wealth, past affiliation to the Confederacy, ratio between Black and white employment rates, and ratio between Black and white bachelor's degree graduation rates. The model I will use is a multilevel linear model, which solves the issue of clustered observations by grouping the data by year. The results of this analysis seem to be subject to a reversal paradox. The relationship between the variables appears to be negative in a simple model but becomes positive when accounting for the control variables. This means that, when including potential confounds, an improve in Black relative economic status leads to an increase in racially motivated violence against the Black community. However, the relationship is not statistically significant. Besides the main predictor, all the controls except for employment ratio have a statistically significant effect on the main relationship.

### **Hate crimes as symptom of prejudice**

In his seminal work, Allport (1954) defines prejudice as “an avertive or hostile attitude toward a person who belongs to a group, simply because he belongs to that group, and is therefore presumed to have the objectionable qualities ascribed to the group” (p. 7). The definition refers

to both the everyday experience of judging individuals prior to knowing them, and to one's unwarranted opinion of a group as a whole.

Within this definition, he lays out a hierarchy of the possible manifestations of prejudice in interpersonal relations that goes from mildest to most violent actions. The steps are: antilocution, avoidance, discrimination, physical attack, and extermination. As denoted in Allport's (1954) scale, racially motivated physical attacks are the second-highest expression of prejudice, right after genocide, making violent hate crimes an indicator of extremely strong prejudice against an ethnic out-group. Olmstead-Rose (1991) defines hate violence as "an altercation against a person or persons motivated, in part or in whole, by a hatred of the group the person is a part of, or thought to be a part of" (p. 439).

In order to conceptualise violent hate crimes, I will use the definition that the Uniform Crime Report (2020) used when compiling the hate crime statistics that will also be used in this research. They define hate crimes as "criminal offenses that were motivated, in whole or in part, by the offender's bias against the victim's race/ethnicity/ancestry, gender, gender identity, religion, disability, or sexual orientation, and were committed against persons, property, or society" (p. 1). While this definition encompasses multiple stratifications of society, the stratification that will be considered in this research is the one relative to race/ethnicity/ancestry.

## **Literature Review**

### **Hate Crimes**

The literature that empirically examines hate crimes is broad. A large part of this literature focuses on the potential causes leading to hate crime perpetration. In a classic work, Levin and McDevitt (1993) argue that hate-based violent actions stem from resentment of citizens not only against other groups, but also for their group's status in society and the government that, in their mind, allows minorities to steal wealth, jobs, and other commodities from hardworking

American citizens. The authors identify three types of hate crime perpetrators: those who do it “for the thrill of it”, those who react to personal threats, and those who make of ridding the world of minorities their mission. Thrill-seeking perpetrators, which constitute two thirds of the total (Gerstenfeld, 2017), commit such atrocities due to need to conform with the group. Gerstenfeld (2017) explains such behaviour by bringing the experiments conducted by Milgram (1974) and Zimbardo et al. (1971) as proof. She argues that these studies show that people are willing to go as far as inflict harm on others if it is considered socially desirable. Similarly, many hate crime perpetrators do not commit such violence due to their own prejudice, but due to a desire to conform to their group.

Among the trends identified by the literature on hate crimes, it seems that, following events that contribute to build a stigma or a stereotype around a certain group, hate crimes toward that group will tend to increase significantly. For instance, Herek (1999) examines the creation of a prejudice toward homosexuals based on the AIDS epidemic that broke out in the 1980s, corroborating the theory with data showing a sharp increase in homophobic hate crimes moved by the epidemic (Herek, 1989). Similar trends can be found in the literature on racially motivated violence. After 9/11, there was a surge in hate crimes toward Arab and Muslim people. This was because the association between them and terrorism caused an increase in islamophobia (Rubenstein, 2004; Disha, Cavendish and King, 2011). Similarly, the Covid-19 pandemic brought around a sharp increase in violence against Asian Americans due to a faulty attribution of blame for the virus (Tessler, Choi & Kao, 2020; Gover, Harper & Langton, 2020). It is notable that such events, while they lead to a greater victimisation of one group, they also correlate with a decrease in victimisation of other groups (Disha, Cavendish & King, 2011), corroborating Levin and McDevitt’s (1993) theory that, to perpetrators, out-groups are interchangeable.



More causes of bias motivated violence can be found in mechanisms of intergroup conflict. In the instance of hate crimes motivated by the victim's sexuality, heterosexism, or the belief that heterosexual behaviours, identities, relationships are inherently superior to non-heterosexual ones, plays a fundamental role in the victimisation of gays and lesbians (Herek, 1990; Willis, 2004, Gerstenfeld, 2017). The same can be observed for hate crimes against transgender, transsexual, and cross-dressing people, as they are seen as threatening the hierarchy among genders (Witten & Eyler, 1999). In the field of racial prejudice, evidence has been found for conflict over resources among groups and for linkage to social and economic threats to the dominance of the majority (Disha, Cavendish & King, 2011; Green, Strolovitch & Wong, 1998; Lynch, 2006; Zhang, Zhang & Benton, 2022). In the following section, the link between the economy and hate crimes will be examined more closely.

### **Economy and Prejudice**

The literature on economy and intergroup conflict mainly concerns itself with how the general trends of the economy and the availability of resources affect hostile sentiments between groups. For instance, Blalock (1967) speculates on the connection between trends in the economy and intergroup relations between Black and white people, arguing that better economic conditions lead to better relations between the groups. Conversely, Levin and McDevitt (1993) claim that Americans tend to develop hostile intergroup sentiments in times of economic recession due to their tendency to engage in “zero-sum economic thinking” (p. 54). In times of economic recession, resources become scarcer, catalysing a stronger hostility toward other groups.

Much empirical research has focused on the topic of economic trends as a predictor of prejudice and hate crimes. Two main strands can be found in the literature concerning this topic. Part of the literature argues that poor economic conditions create an environment prone to

prejudice formation against the minority group. The theoretical explanation behind this hypothesis is that scarcity of resources generates competition among groups over those resources, which, in turn, generates hostility toward the out-group, as scarcity promotes zero-sum thinking and us-versus-them rhetoric (Quillian, 1995, 1996; Olzak, 1992; Tolnay & Beck, 1993). Furthermore, studies that investigate the externalisation of prejudice in the form of violence against minority groups depending on economic trends, find that, in instances of recession, there is an increase in hate crimes against the minority (Hovland & Sears, 1940; Medoff, 1999).

Another strand of literature argues instead that wealthier areas are the ones that provide most incentives for prejudice formation against the minority. This derives from the idea that wealth leads a community to have greater intragroup trust and stronger social and political cohesion. This type of bond ensures that those considered outsiders are singled out and become the receiving end of hostile prejudices (Green, Strolovitch & Wong, 1998; Green, Glaser & Rich, 1998). Empirical support for such theory was found by a study conducted by Lyons (2007), who found that wealthier places have a higher frequency of hate crime perpetration. It is worth noting, though, that in this case the economic environment can be seen as a mere confounder of the relationship between the composition of an area's population and the frequency of hate crimes.

The literature on the ties between the economy and prejudice focused mainly on the relationship between the general trends in the economy and prejudice toward minorities using competition over scarce resources as a foundation. Hence, research done on prejudice and hate crimes has mostly focused on how a shrinking of the total availability of resources could lead to an increase or decrease in hostile sentiments and actions against minorities. While the connection between economic trends and prejudice has been proven time and again, there is a lack of literature on relative gains or losses in economic status as a predictor of prejudice and,

more specifically, hate motivated violence. This constitutes an important gap: modern society is organised in hierarchies, which concur in constituting the foundation of society itself (Sidanius & Pratto, 2004). Not accounting for the stratification of society when researching societal issues such as prejudice and hate crimes means excluding one of the building blocks of society as we know it and partially forgetting the context that the research takes place in. Given the results obtained by the studies that have been reviewed, I intend to investigate the relationship between relative economic status and hate crimes using a framework of dominance and hierarchy, rather than one of scarcity.

### **Theories**

As mentioned previously, economic matters appear to influence significantly prejudice and hate crimes. In this paper, I argue that the relative economic status between the white and the Black community matters as well when it comes to understanding racial intergroup conflict. More specifically, I expect white individuals to become more violent as the Black community rises in status in the economic hierarchy. This argument is rooted in social dominance theory, which focuses on the distribution of resources across levels of the social hierarchy. Furthermore, the research will employ three other theories, which are realistic conflict theory, and its two sub theories, which are racial threat theory and power-differential theory. The former focuses on the availability of resources and the competition that stems from scarcity, while the latter two are specific to the American case and focus on the racial composition of neighbourhoods.

#### **Social dominance theory**

Social dominance theory posits that any society is organized through group-based social hierarchies, where a small number of socially dominant groups is at the top and a few socially subordinate groups are at the bottom (Sidanius & Pratto, 2004). The factor that differences the

two types of groups is the kind of social value they own. Dominant groups possess a disproportionately large share of positive social value, which comprises “all those material and symbolic things for which people strive for” (p. 31). Some examples may be great wealth, branded clothing, or spacious homes. On the contrary, subordinate social groups own a large share of negative social value, examples of which may be long prison sentences, low-paying jobs, and poor food.

The authors distinguish three stratification systems, which are age, in which the older part of the population dominates the younger one, gender, where men socially dominate women, and an arbitrary-set system. This last system comprises all the social stratifications that have been socially constructed by humans throughout history, such as ethnicity, social class, religion, or race, and differ from society in society. The arbitrary-set system, unlike the other two, is associated with an extremely high degree of violence, brutality, and oppression. Suffice it to think about the reasons behind atrocities like genocide, which is almost always ethnicity based. The authors posit that the nature of arbitrary-set system makes it so that social hierarchy fosters discrimination and oppression, and that the latter, in turn, allows the existing social hierarchies to continue existing.

### **Realistic conflict theory**

Realistic conflict theory helps to explain how the relative status of a group can explain hostility from and against said group. Realistic group conflict theory posits that when social groups find themselves competing for scarce resources, they will develop competitive attitudes, which, in turn, lead to prejudice toward the other groups (Sherif et al., 1961). Sherif et al. (1961) find that groups that compete for resources develop both in-group cohesion and out-group hostility, which only fades when the groups find shared goals to achieve through cooperation. This effect is exacerbated when resources are unevenly distributed among the groups, as this generates a

difference in status, which results in the creation of a social hierarchy. Within realistic conflict theory, there are two theories specific to the American case: racial threat theory and power-differential theory.

Racial threat theory, also known as power-threat theory, was formulated by Blalock (1967) specifically to try to explain white-Black relations in the US. It posits that “the rising number of immigrants will threaten long-time residents’ political power and economic status, and thus will generate political hostility in heavily immigrant areas” (Hopkins, 2010, p. 40). Blalock (1967) argues that, as the share of Black population in a community increases, and the available resources shrink, white people will feel threatened by the competition created by the growing Black population, thus leading to a surge in prejudice toward the Black community.

Power-differential theory, like racial threat theory, aims to explain the relationship between the share of minority inhabitants in an area and the strength of the discrimination against them. However, it posits that, the higher the share of minority people, the lower the level of discrimination against them (Green, Strolovitch & Wong, 1998). This is because, when they have strength in numbers, the majority group will not fear retaliation by the minority after perpetrating acts of discrimination. Conversely, as the minority group grows, it increases in likelihood and in capacity of retaliation, thus leading the majority to abstain from perpetrating any violent act toward them for fear of retaliation (Levine & Campbell, 1972).

An interesting finding is provided by Disha, Cavendish and King (2011). While the authors do find that a larger share of minority population, in this case Arab, correlates with a higher victimisation, which would be in line with racial threat, they also find that the smaller the share of Arab population, the higher the likelihood of victimisation for each Arab individual, which is evidence for power-differential.

## **Socio-economic status as a predictor of prejudice**

The literature on economic status alone is quite scarce, as most works focus on socio-economic status (SES). Baker (2014) defines SES as “a measure of one’s combined economic and social status” (p. 2210). This means that I will start from a definition of socio-economic status and its indicators and then proceed to disentangle the economic from the social.

Thaning and Hällsten (2020), drawing from social dominance theory, define SES as “an individual’s position within a hierarchical social structure, which can be measured through different stratification variables” (p. 533). Baker (2014) mentions three main indicators for SES, which are education, income, and employment. Among the three measurements, this research will focus on income. This is because, arguably, income is the one that is most characteristic of purely economic status, as it is a measurement of wealth. Education and employment, while they do influence income, have also severe implications for a person’s social status.

Furthermore, income is the measure that best reflects Sidanius and Pratto’s (2004) concept of positive social value on an economic level, as is it a good indicator of wealth and wealth gap between the dominant group, white people, and the subordinate group, Black people. Therefore, a definition of economic status derived from Thaning and Hällsten’s (2020) is: an individual’s position within a hierarchical social structure measured through the amount of wealth they hold relative to others.

## **Hypothesis**

My main hypothesis is that, as the Black community rises in economic status, racially motivated white on Black violence will become more frequent. As Sidanius and Pratto (2004) posited, when subordinate groups challenge the dominant groups’ status over the share of limited resources, there will be heightened feelings of antagonism between the two groups, and the dominant group is likely to take action to maintain the status quo. Furthermore, the authors

argue that arbitrary-set systems are the ones that most produce prejudice and antagonism, and that are most likely to lead to violence being perpetrated.

In the context of this research, the arbitrary-set system under examination is race, the limited resource involved is wealth, and the type of violence considered is racially motivated hate crimes perpetrated by white people against Black people. Following Sidanius and Pratto's (2004) theory, I hypothesise that, as the Black community threatens the economic dominance of white people, the level of hate crimes perpetrated by white people on Black people will increase.

H1: As the Black community's relative economic status improves, the frequency of white on Black racially motivated violent hate crimes increases.

### **Research Design**

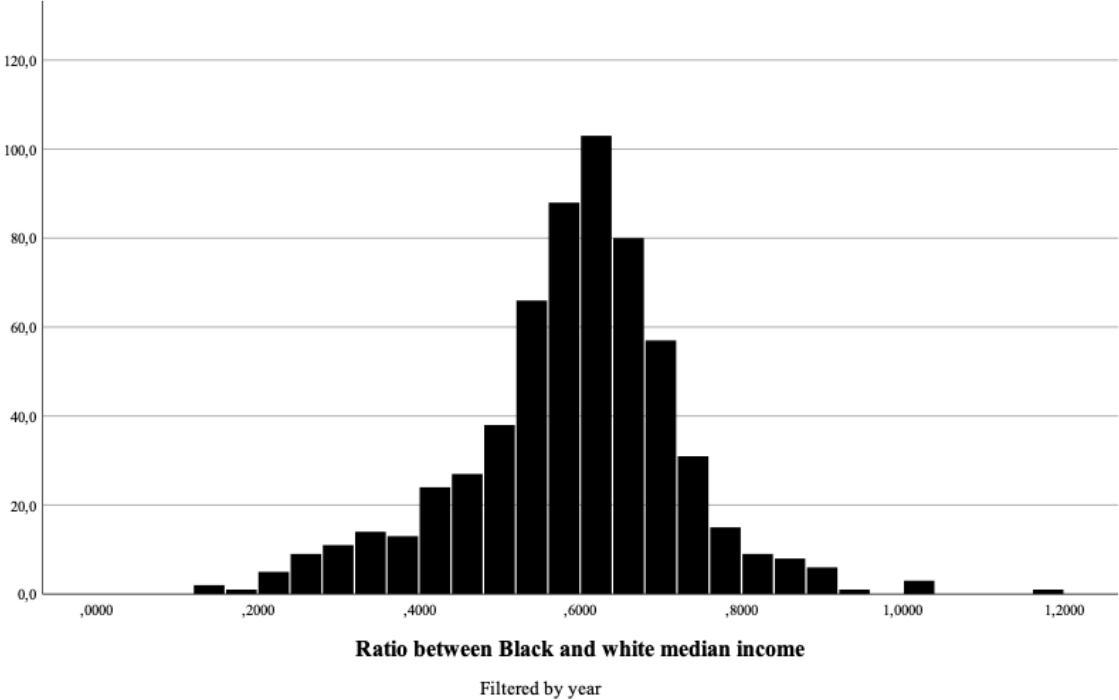
The concepts comprised in the study are operationalised through variables retrieved from various datasets. To create an organic dataset, all the adjusted datasets that are hereby described have been merged. Once merged, the intersection of the time periods the datasets span results to be 12 years, from 2008 to 2019.

#### **Independent variable**

The first dataset this study will make use of is IPUMS's data on income, divided by state, race, and year. IPUMS is a branch of the University of Minnesota whose purpose is to aggregate worldwide data on social and economic matters. Today, IPUMS is working with hundreds on national agencies, and has harmonised survey data from over 1.4 billion people in 100 countries. The width of the dataset allows to presume a representative sample of individuals and external validity of the data.

The relative economic status of the Black community compared to the white one can be operationalised using income in one of two ways: either through ratio between median incomes or through difference between median income (Blalock, 1967). This choice would involve a mathematical difference in the instance of an examination of over time changes in the variable.

**Figure 1. Histogram of the ratio between Black and white median income filtered by year.**



For example, if at time 1, the resources of two groups are respectively 100 and 50, and at time 2 they are 130 and 70, and one wanted to find out whether the status of group 2 has improved or worsened, the decision to use the ratio or the difference would be fundamental. This is because, using the ratio, it seems that group 2 has gained ground ( $\frac{100}{50} > \frac{130}{70}$ ), while using the difference it appears to be the opposite ( $100 - 50 < 130 - 70$ ). However, that is not the case for this study and, as such, the two measurements yield the same validity. This being considered, the relative economic status of the Black community will be calculated as a ratio between the median income of the Black community and the median income of the white community, calculated per state, per year.



## **Dependent Variable**

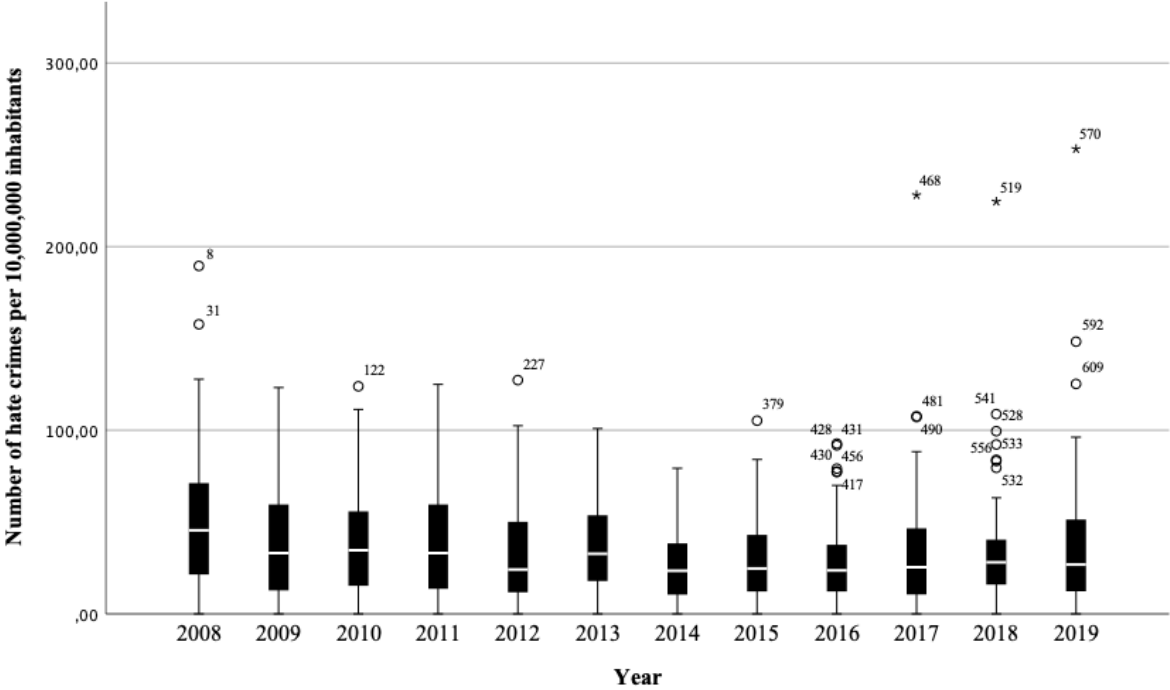
The second dataset that will be employed is FBI Uniform Crime Reporting Program's (UCR) dataset on reported hate crimes. The dataset only includes those crimes that have been ascertained to be imputable to prejudice on the perpetrator's part. The agency gathers data from city, county, college or university, state, tribal, and federal agencies, and aggregates the data in a single dataset, to provide a precise overview of the phenomenon of hate crimes. The dataset spans biases of race, ethnicity, religion, sexual orientation, gender, and disability. The data spans 20 years, from 1991 to 2020. Finding accurate data on hate crimes poses a challenge, as not all hate crimes are reported and not all crimes that are reported are certain to be hate crimes or not. For the purpose of tackling the latter issue, the UCR dataset only includes instances of crime that the authorities considers moved by prejudice.

To operationalise hate crimes, this study will use the count of the white on Black racially motivated reported hate crimes each year in each state, as reported in the UCR's dataset. To filter out the cases that do not concern the topic of this research, only crimes perpetrated by a white individual with a clear anti-Black or African American motive have been counted. Once the cases have been filtered according to race and bias, it is important to notice that the dataset contains all crimes perpetrated with a bias motive. This also includes crimes such as bribery, prostitution, gun and drug law violations, counterfeiting, and false pretences. Since this research focuses on violent hate crimes, further selection of the cases was carried out. To do so, Allport's (1954) work is used once again. Allport (1954) considers to be part of the 'physical violence' category crimes pertaining to intimidation, threats of violence, destruction or vandalism of property, and physical violence against the person. Following these directions, the data will be filtered by type of crime, so that only aggravated assault, simple assault, murder and nonnegligent manslaughter, negligent manslaughter, rape, fondling, sexual assault with an

object, arson, kidnapping and abduction, intimidation, robbery, burglary or breaking and entering, and destruction or damage or vandalism of property remain.

Finally, one can suppose that the total population of a state may influence the number of hate crimes, as with a larger population come more potential victims and perpetrators. To address this matter, this study will follow in Cheng, Ickes and Kenworthy’s (2013) footsteps. The authors, instead of using the raw number of hate crimes, use number of hate crimes per 10 million people. This serves two purposes. Firstly, the adjusted measure reflects state size, solving the issue of the influence of population on crime count. Secondly, the hate crime rate

**Figure 2. Boxplot of hate crime count per 10 million inhabitants by year.**



would be an incredibly small number, making it hard to interpret. Multiplying by 10,000,000 would provide more readable and understandable numbers to work with but would not overestimate the chance of finding a significant relationship (Cheng, Ickes & Kenworthy, 2013). Due to these reasons, data about the total population of the states from 2008 to 2021 was retrieved from the Kaiser Family Foundation website, which groups the data gathered by the ACS and the CPS in one dataset. Subsequently, a new variable was computed by dividing the raw number of hate crimes by the total population and multiplying it by 10,000,000.

## Controls

***Racial Population Ratio.*** The decision to control for the Black share of population in a state stems from the previously discussed theories, and from a body of literature investigating the phenomenon. There are two main arguments that arise. According to racial threat theory, the higher the share of Black people in a community, the higher the discrimination toward them, and thus the higher the likelihood of racially motivated crimes toward Black people. This effect was tested by Lynch (2006), who carries out research on the relationship between racial segregation and hate crimes. She finds that, as the proportion of white people in a city grows larger, the levels of segregation and hate crimes decrease. An opposite explanation is grounded in power-differential theory. Power-differential theory argues that the higher the size of a minority group in the population, the less likely is the majority to perpetrate crimes against them, due to the fact that they will feel less secure doing so, because of fear of retaliation on the minority's part.

The data sources that will be employed are the American Community Survey (ACS) and the Current Population Survey (CPS)<sup>1</sup>. Both are part of the US Census Bureau, and every year they gather nationwide data on social, economic, housing, and demographic indicators. The surveys encompass 3.5 million household a year circa and can be considered a representative sample of American society. In order to gather all the data on state demographics, this study obtained ACS and CPS aggregated data from the Kaiser Family Foundation, which is a non-profit organisation that focuses on providing updated demographic, social, and economic data in the US.

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<sup>1</sup> All data from 2008 to 2021 is retrieved from the ACS, except the data for the year 2020. Due to the pandemic, the ACS did not take place; therefore, data from the CPS was used.

**Table 1. Descriptive statistics**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Range</b>	<b>Minimum</b>	<b>Maximum</b>
Number of hate crimes per 10,000,000 inhabitants	493	38,304	34,261	253,24	0	253,24
Ratio between Black and white median income	493	0,599	0,115	0,889	0,146	1,036
Ratio between the percentage of Black citizens and white citizens in state	493	0,223	0,248	1,698	0,011	1,709
Dummy for confederate states	493	0,27	0,443	1	0	1
Natural logarithm of state GDP	493	26,279	0,925	4,391	24,352	28,744
Difference between Black and white bachelor's degree graduation rates	493	-0,068	0,029	0,239	-0,229	0,009
Employment ratio between Black and white people	493	0,927	0,095	0,667	0,581	1,248

The website offers a dataset for each year, starting from 2008 to 2021. The datasets from each year were merged into one, combining all the cases together. In the merged dataset, variables indicating the percentage of respectively Black and white population over the whole state population were inserted, alongside with year and state. The population variables were used to compute a new ratio variable for the population, which consisted in dividing the Black share of the population by the white one.

***State wealth.*** The decision to include state wealth as a control derives from realistic conflict theory, which posits that resource scarcity results in fiercer intergroup competition and conflict (Sherif et al., 1961). As mentioned beforehand, many studies find a relationship

between trends in economy and prejudice or hate crimes against minorities (Quillian, 1995, 1996; Olzak, 1992; Tolnay & Beck, 1993; Hovland & Sears, 1940; Medoff, 1999); it is therefore instrumental to the analysis' accuracy to include state wealth as a control of perpetration of violent hate crimes. Furthermore, the wealth of a state can be expected to have an influence on wage incomes of the residents, thus being a potential confounder of income ratio.

The data on state wealth is collected by the US Bureau of Economic Analysis. The agency tracks various economic indicators in the United States and divides the data by location and span of time. This study will use the dataset on annual GDP per state, which includes data from 1997 to 2021. The data shows the GDP for each state in millions of dollars. Due to the magnitude of the values for the GDP, the regression coefficients may result too small to allow for an easy read. To fix this, the regression will include the natural logarithm of the GDP, which provides smaller values and thus a higher readability.

*Confederacy membership.* Former affiliation with the Confederacy<sup>2</sup> is thought to influence racial hate crimes due to historical reasons. Berg (2011) retraces the history of lynching in the US, which dates back to the 18<sup>th</sup> century. In the context of slavery, lynchings involving slaves were extremely gruesome and much more frequent than those of the citizens, as slaves were considered inherently inferior. After the end of the Civil War, white Southerners perpetuated a culture of violence against Black people by attempting to paint Southern states as the victims of the federal government and never have to make amends for their violent colonial past (Larrabee, 2022). Due to this failure in addressing the horrors of the Reconstruction, there has been a proliferation of neo-Confederacy groups that are still active today (Larrabee, 2022). Nowadays, society still shows the legacy of slavery, as certain groups of white people still see

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<sup>2</sup> Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia.

themselves as needing to uphold a racial hierarchy by any means necessary (Berg, 2011). Whether a state belonged to the Confederacy or not is operationalised as a dummy variable, with 'Not a former member' as the baseline value.

***Relative employment status.*** the ratio between the percentage of employed Black people and the one of employed white people will be included as a control variable for two main reasons. Firstly, Baker (2014) considers is one of the three predictors of SES, alongside with income and education. While this study employs income as its main predictor, employment can be expected to influence income and status of an individual in society. Secondly, according to Sidanius and Pratto (2004), employment can be considered a positive social value, which concurs in the determination of a group's position in the social hierarchy. The moment a subordinate group threatens the dominant group's status, one can expect the dominant group to be more likely to retaliate through violent means. This relationship was tested by D'Alessio, Stolzenberg and Eitle (2002), who find that competition for employment has a significant effect on white-on-Black violence.

The data for employment was retrieved from the US Bureau of Labor Statistics. the Bureau measures many economic indicators, such as labour market activity, working conditions, and productivity within the US, and aggregates the data in public datasets. From their website, the data on employment rates by race and state for each year from 1995 to 2020 was selected and a new variable was computed by dividing the percentage of employed Black people divided by the percentage of employed white people.

***Difference in educational attainment.*** Educational attainment will be included as a control variable for similar reasons as employment. It is both a potential predictor of income and of social status, which, in turn, may help explaining violent hate crimes (Baker, 2014; Sidanius & Pratto, 2004).

The data on educational attainment will be retrieved from the IPUMS USA website, which aggregates annual data from the ACS from 1980 to 2021. The data reports the maximum stage of education attained by the respondent and spans from 2008 to 2019, including more than 30 million observations. The data was filtered by race, in order to only keep observations relative to white or Black people. Subsequently, a new variable was computed, representing the ratio between the share of Black people and the share of white people who achieved a bachelor's degree, computed by state and year.

It is worth noticing that this measure may not be extremely accurate. In fact, IPUMS provides survey data, which does not include the whole population. While the sampling was carried out randomly, and the number of observations can let presume that the sample is representative, the measurement does not have maximum accuracy.

## **Model**

The data presents a multilevel structure, as the state observations are clustered within years. This means that the assumption of independence of OLS regression is not respected, as errors are not independent of one another, which may lead to biased standard errors and significance tests. In order to fix this problem, a multilevel (or mixed) model can be used (Steenbergen & Jones, 2002). Multilevel models allow for the aggregation of the data according to a set variable, which will be the year for this analysis. This generates a regression line for each year, whose coefficients and intercepts are free to vary or remain fixed (Field, 2018). Given the complexity of the model, this study plans on keeping the predictors' coefficients fixed, and allowing the intercept to vary. This will fit the data along different lines with the same slope, but different origin. Mixed models work under the same assumptions of OLS regressions (see Appendix), with the exception of independence of observations.

## Results

The fixed coefficients displayed in Table 1 represent the slope of the regression lines that fit the data by year. The relative economic status of the Black community appears to have a negative effect on the number of hate crimes perpetrated in a state. Model 1, which was computed solely with the main predictor, indicates that, as the ratio between Black and white income increases by 1, the number of hate crimes decreases by 16,262. This is not in line with the hypothesis of this study. In fact, I hypothesised that hate crimes would increase as a result of an improvement in the Black community's relative economic status. Instead, the results seem to point to the fact that, as the Black community gains ground compared to the white community, fewer hate crimes are perpetrated by the latter. Considering the range of the predictor, which is 1,0331, and of the dependent variable, which is 253,24, the relationship is very weak. In fact, considering the two observations that differ the most in terms of income ratio, they are expected to differ by 16,8 in hate crimes count, which represents about 6,6% of the total range of the variable. The relationship between the variables is not statistically significant. Furthermore, the relationship between relative economic status and violent hate crimes presents a variance in intercept of 2384,784 across years, which represents the number of hate crimes per 10 million people by which years differ from each other. The intercept is not statistically significant.

There are many factors that can concur to the lack of a significant relationship between the main variables. Firstly, it is important to notice that the data that was employed tells a lot on how society is, but not on how people perceive it. It may be the case, for example, that even though Black people start threatening white people's status, white people may not be completely aware of it, especially if they are uninformed or are not involved in activities that entail checking statistics. An important factor in the perpetration of hate crimes, in fact, may be how people perceive the societal situation, which, in turn, may be influenced by other factors,



such as mass media, party cues, or interpersonal relationships. Therefore, a more accurate explanation of hate crime count could be provided by these elements. Secondly, there are many

**Table 1. Estimates of fixed coefficients and covariance parameters for racial violent hate crimes per 10 million people, by year**

	Model 1	Model 2
Ratio between Black and white median income	-16,262 (11,822)	20,589 (15,462)
Ratio between Black and white population in the state		-22,064* (8,627)
Confederacy membership		-21,275*** (3,637)
Natural logarithm of state GDP		1,337* (0,608)
Difference between Black and white bachelor's degree graduation rates		-439,231*** (71,997)
Ratio between Black and white employment rates		-30,352 (16,606)
Random coefficients		
Residuals	1149,579*** (75,032)	922,907*** (59,834)
Intercept	2384,784 (1386,185)	26,136 (21,105)
-2LL	4918,97542	4737,32594
AIC	4922,97542	4741,32594
BIC	4931,37237	4749,70247
N	493	493

*Note: mixed linear regression coefficients with standard errors in brackets.*

\*\*\*p < 0,001, \*\*p < 0,01, \*p < 0,5.

measures of economic status, and income is only one of them. For example, one may choose to use total wealth or net worth instead, in order to account for inheritance as well. It is possible that, changing the type of operationalisation of the predictor, the results will change as well.

Model 2 shows the model computed with the controls. The addition of the control variables seems to invert the relationship between the relative economic status of the Black community and hate crime count. At parity of racial population ratio, confederacy membership, GDP, racial employment ratio, and racial graduation ratio, an increase by 1 unit in the ratio between median Black and white income results in an increase of 20,589 in violent hate crimes. In other words, two observations that score the same values on the controls, but that differ by 1 in income ratio, are expected to differ by 20,589 in hate crimes per 10 million inhabitants. This is in accordance with the main hypothesis, as there appears to be a positive relationship between the relative economic status of the Black community and the number of hate crimes in a state. The sudden inversion in direction and intensity of the relationship between the main variables may be explained by a reversal paradox. More specifically, suppression is a type of reversal paradox that aims to explain stark changes in relationships between continuous variables when accounting for potential confounders (Tu, Gunnell & Gilthorpe, 2008). For example, while the relationship between income ratio and hate crimes is overall negative, it may be the case that, at each level of ratio between Black and white people, the predictor positively influences hate crimes. A similar reasoning can be done for Confederacy membership, this time using Simpson's paradox (Tu, Gunnell & Gilthorpe, 2008). Applied to this case, the paradox posits that, while the overall relationship between income ratio and hate crimes is overall negative, splitting the data between former member and non-members of the Confederacy reveals that, within these two groups, the two main variables have a positive relationship.

The model shows that, after adding the controls, the relationship between relative economic status and violent hate crimes presents a variance in intercept of 26,136 across years. The coefficient of Model 2 is drastically lower than the one of Model 1. This may be due to the fact that the addition of the controls allows the model to account more effectively for the variance across the years. Once again, the intercept is not statistically significant.

In addition to the predictor, there are a few control variables that seem to have an interesting effect on the main relationship. Confederacy membership presents an unexpected effect on hate crimes. States that were part of the Confederacy, at a parity of all other indicators, appear to have on average 21,275 less racially motivated violent hate crimes than non-Confederate states. Considering the history of Confederate states, that were the most common scenarios for lynchings and hate crimes toward Black people (Petrosino, 1999), they were expected to present more hate crimes than other states. Furthermore, the relationship is significant at a 99,9% confidence interval. An explanation to this phenomenon could lie in the history of the Confederacy itself. It may be the case that, due to past tensions, Black people that live in Southern states are less likely to report these crimes, either because they fear retaliation by the perpetrator, or because they do not have faith in the judicial system. This would lead to a significantly lower number of registered hate crimes in the UCR's database, thus explaining the obtained result.

A second control that shows an interesting relationship is relative status in educational attainment. The influence of this variable is peculiar both in direction and magnitude. The hate crime count was expected to increase as the gap between the percentages of Black and white people graduating with a bachelor's degree closes. On the contrary, the relationship has a negative direction, meaning that, as the difference between Black and white graduation rates increases by one, there are, on average, 439,231 less hate crimes, at a parity of all other indicators. Furthermore, educational attainment seems to have a very strong effect. Considering the range of the variable, which is 0,2385, the lowest and highest observations in terms of educational attainment are expected to differ by 104,76 hate crimes per 10 million people, which accounts for more than 41% of the dependent variable's range. Additionally, the relationship is statistically significant at a 99,9% confidence interval. This effect is hard to explain, especially because previous studies have obtained results in line with this study's

expectations (for example, Zhang, Zhang & Benton, 2022). It may be the case that, in the case of educational attainment, the absolute status of the white community matters more than their relative one. In fact, studies have found that a lower level of educational attainment leads to a lower tolerance of ethnic diversity (Keel, Wickes & Benier, 2022; Forrest & Dunn, 2010). Perhaps, when measuring white hostility toward Black people, it matters more how educated white people are, rather than how educated Black people are relatively to white people.

Finally, employment rate appears to influence the main relationship negatively. Keeping all the other coefficients constant, at an increase by 1 in the ratio between Black and white employment rates corresponds a decrease of 30,352 in hate crimes. This goes against the expectations, as a shrinking of the employment gap between Black and white people was hypothesised to lead to a higher number of hate crimes toward Black people. Furthermore, the relationship is not significant. There may be a few reasons for this. Firstly, there is the matter of the distribution of low- and high-paying jobs across the population, which is not accounted for by employment rates. If most white people have high-paying jobs, while most Black people have low-paying jobs, an increase in the Black employment status will not affect white people's sentiments toward the Black community, as Black people are not threatening white jobs (Malhotra, Margalit & Mo, 2013). Secondly, there is the chance that hostility toward Black people has more to do with culture than with employment. Studies have found that cultural threats positively influenced opposition to immigration more strongly compared to economic threats (Malhotra, Margalit & Mo, 2013; Sniderman, Hagendoorn & Prior, 2004).

## **Conclusion**

This study sought to find an answer to the question: how does relative economic status between the white and the Black community influence the perpetration of white on Black violent hate crimes? To do so, it employed a measure of relative median income, and the count of violent

hate crimes per 10 million inhabitants that took place throughout the year in each state, plus a series of control variables that accounted for potential confounders. The data spanned 12 years, from 2008 to 2019. The study employed a multilevel, or mixed, linear regression model, which allowed to group the data by year. The two models computed, one with and one without the controls, point toward opposite results. The simple model indicates a negative relationship between income ratio and perpetration of hate crimes, which is not in accordance with the hypothesis. However, when accounting for control variables, the relationship became positive, thus confirming the hypothesis. These peculiar results are likely due to one or more of the controls causing a reversal paradox effect. The relationship does not appear to be significant in any model.

Given the results obtained by this study, there are several suggestions for further research that may be worth exploring. Within the specific context of white-Black relations in the US, it would be interesting to examine types of status that differ from the economic one. Drawing from Sidanius and Pratto's (2004) concept of positive social value, there seems to be several elements that distinguish subordinate from dominant groups in many aspects of society, and diving into them would give a fuller picture of what exacerbates interracial hatred. Within the broader context of racial relations in the US, one may suppose that what causes prejudice and violence between white and Black people may not be the same as what causes violence toward Asians or Arabs. As such, it would be interesting to discover whether the relationship between other ethnic groups is influenced by the same factors or not.

Finally, the troubled relationship between the white and the Black community is, if not the most, one of the most salient examples of intergroup conflict that is specific to the US. Much like the US, other countries are expected to have very central cleavages and conflicts within their societies as well. The same theories could thus be applied to other contexts and intergroup

conflicts in different realities, in order to verify whether there is a common pattern to salient conflicts across nations.

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## Appendix

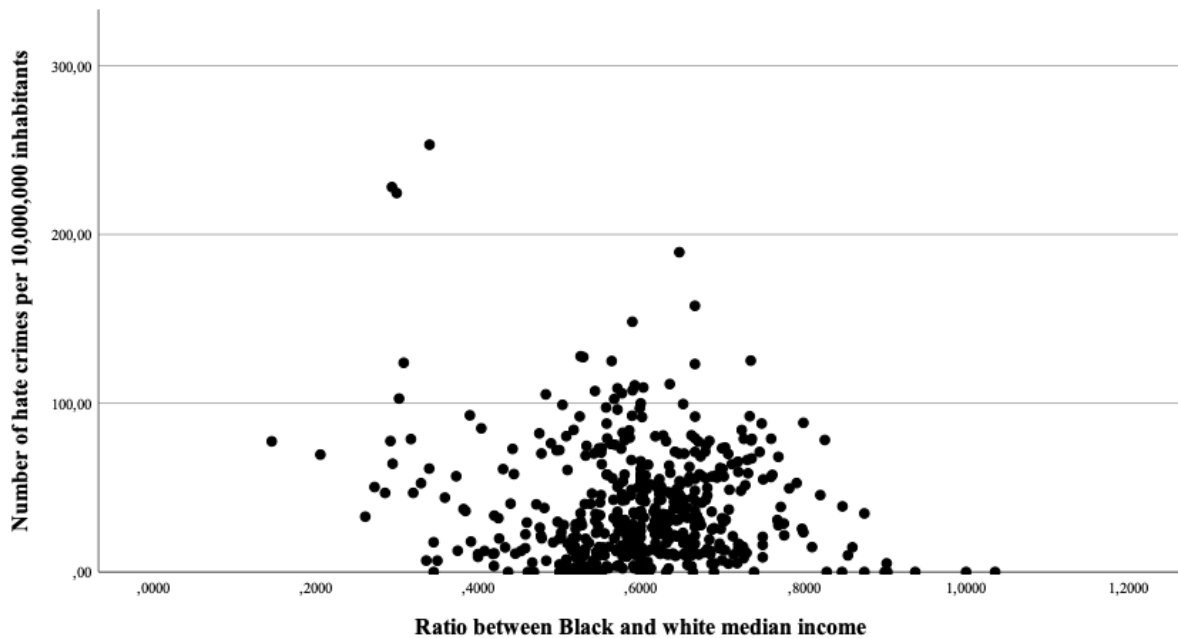
**Table 3. Collinearity statistics**

	Model 1	Model 2
Ratio between Black and white median income	1,000	1,626
Confederacy membership		1,450
Ratio between the percentage of Black citizens and white citizens in state		2,477
Natural logarithm of state GDP		1,058
Difference between percentage of Black people with a bachelor's degree and percentage of white people with a bachelor's degree		2,348
Employment ratio between Black and white people		1,618

*Note: Mixed linear regression predictors' VIF coefficients.*

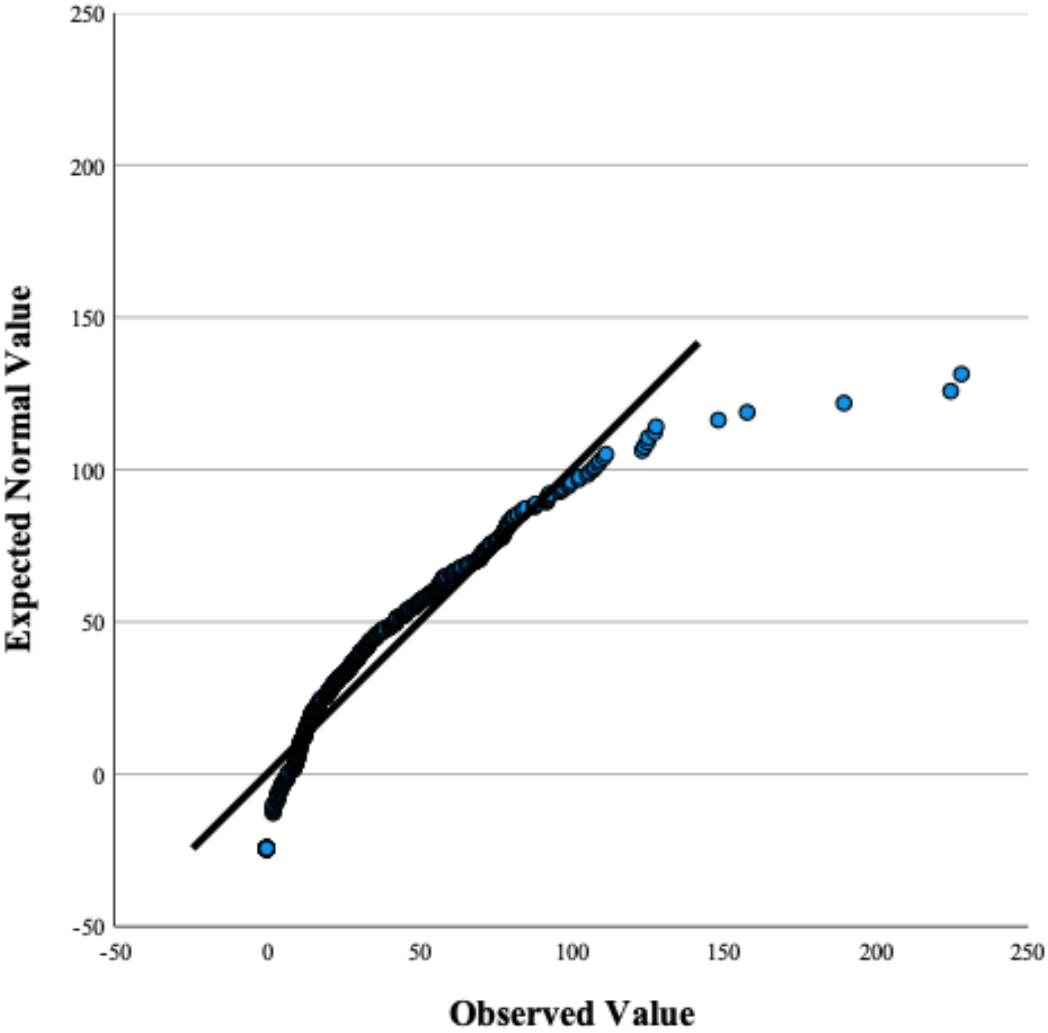
All VIF coefficients are under 5, denoting a very low collinearity between predictors.

**Figure 1. Scatterplot of ratio between white and Black median income by total violent hate crime count.**



The graph does not reveal any non-linear shape, meaning that the assumption of linearity is verified.

Figure 2. Q-Q Plot of violent hate crimes per 10 million people



The distribution, except for a few observations, follows the 45° line, meaning that normality is respected.

**Figure 3. Scatterplot of standardized predicted values by standardized residuals for hate crimes per 10 million people.**

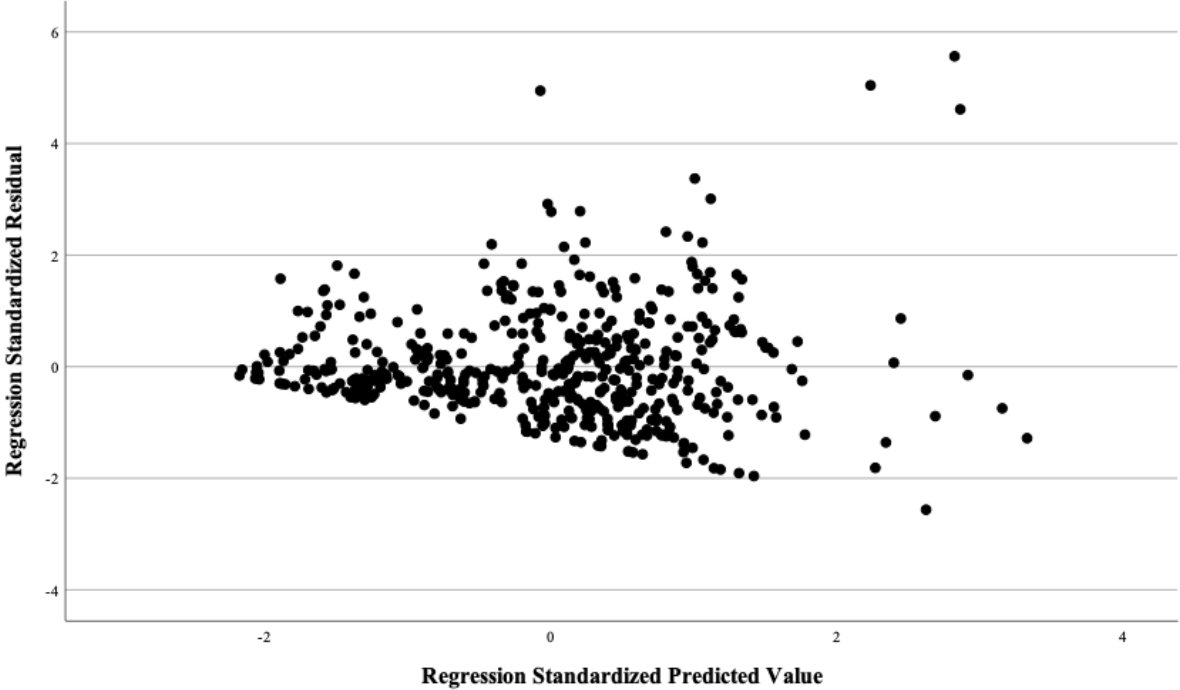


Figure 3 shows data with a funnel-shaped distribution. This indicates that the data is heteroskedastic. Heteroskedasticity is a frequent phenomenon in time-series data, as the variance of the data tends to change over time due to various factors, such as specific events or over-time trends (Harrison & McCabe, 1975). While in OLS regressions heteroskedasticity constitutes a problem, this study employs a mixed model that groups the data by year. Through the creation of a regression line per year group, this kind of model accounts for the over-time differences, thus solving the issues that longitudinal data present. Figures 4 to 16 show that data per year presents little to no indications of heteroskedasticity.

**Figure 4-16. Scatterplot of standardized predicted values by standardized residuals for hate crimes per 10 million people, plotted by year.**

