Racial Redistricting: Assessing the Role of Majority-Minority Districts in Ensuring Minority Representation.

Wilmink, Valentijn

Racial Redistricting: Assessing the Role of Majority-Minority Districts in Ensuring Minority Representation.

Abstract. Minority representation is a hot topic in U.S. politics. This paper will explore the effects of racial redistricting on minority representation by focusing on the Black and Hispanic minority in the United States. Using quantitative analysis, this paper will use nationwide data on electoral districts and their representatives in the House of Representatives to test four hypotheses. It will underline the importance of majority-minority districts to ensure equal representation for minority groups.

Introduction. The Declaration of Independence, penned in 1776, famously proclaimed that "all men are created equal." Thirteen years later, the nascent democracy's constitution commenced with the resonant phrase "We the people." Nonetheless, since 1789, these words have been a subject of ongoing debate—do they truly reflect equal treatment for all individuals in the United States? Over the course of the twentieth century, it became increasingly evident that the United States grappled with substantial challenges concerning the equitable treatment of specific social groups. Figures such as Martin Luther King Jr. and Malcolm X drew attention to the unequal civil rights experienced by minorities. Notably, a significant disparity arose in the representation of Blacks and other minorities within the United States legislatures.

In response to these concerns, the U.S. Government enacted the Voting Rights Act of 1965. This legislation prohibits discriminatory practices that undermine the voting power of minority

groups, including actions such as concentrating them within a single district or dispersing them across multiple districts during the redistricting process.

Redistricting refers to the process of redrawing the geographical boundaries of electoral districts, which takes place every decade in the United States (Altman et al., 2014). Given the single-member district system, where each district elects only one representative, strategically manipulating boundaries to encompass a sufficient number of supporters can significantly influence election outcomes. Therefore, the impact of redistricting on determining representation is of paramount importance.

Redistricting practices vary across the United States, as states hold responsibility for redistricting within their respective territories. For example, redistricting decisions can be made by state legislatures, independent redistricting commissions, governors, or a combination thereof. These newly proposed boundary plans can be subject to legal challenges. If redistricting plans are found to be discriminatory, a court may mandate revisions to ensure fair representation of minority voters (Voting Rights Act, 1965).

These issues remain highly relevant, as recent developments in the United States highlight the significance of comprehending the effects of packing and dividing racial and ethnic groups on their representation. In 2021, Republican Governor DeSantis of Florida opted to divide a district where a significant number of black constituents were concentrated and redistributed them among four predominantly white districts. This move aimed to increase the electoral prospects of Republican candidates but resulted in limited representation for black constituents (The Guardian, 2022).

However, the determination of whether a proposed redistricting plan is discriminatory and whether clustering a minority is advantageous or detrimental to minority representation has long been a subject of debate. This thesis focuses on examining majority-minority districts, which are districts where a single minority group comprises the majority. Scholars have engaged in ongoing discussions on this topic over the years. Therefore, the objective of this thesis is to conduct a quantitative analysis to address the following research question: *To what extent does the establishment of majority-minority districts contribute to increased representation for minorities?*

While previous studies have explored the impact of majority-minority districts on minority representation, this thesis aims to test several key theories through a statistical analysis of the Black and Hispanic minority populations in the United States. By utilizing data on electoral districts and election outcomes for the House of Representatives from 1972 to 2014, four models will be developed to assess the effects of redistricting and majority-minority districts on minority representation. This study distinguishes itself by employing a substantial dataset and incorporating "change" variables. These variables are calculated to capture fluctuations in the number of majority-minority districts, the number of representatives from specific minority groups, and the number of Democratic representatives compared to the previous Congressional cycle.

This thesis contends that majority-minority districts are crucial for achieving descriptive representation. Black and Hispanic representatives in the House of Representatives rely heavily on a significant proportion of their respective minority populations within their districts, with most being elected through majority-minority districts.

The thesis will begin by reviewing prominent theories on redistricting and minority representation, and will propose several hypotheses. Subsequently, the methods and data utilized in the study will be described, including an explanation of the models and variables employed. The

third section will present the analyses conducted, outlining the research methodology and incorporating the obtained results. Following this, the results will be comprehensively discussed and interpreted. Finally, the thesis will conclude by summarizing the main findings and their implications.

Theoretical Framework

Since 1967, all members of the U.S. House of Representatives have been elected in Single Member Districts. While voting systems may vary, the majority of states employ a plurality rule First-Past-The-Post voting system. Consequently, the candidate who secures the highest number of votes wins the election, while other voters, regardless of their share, do not receive representation from their preferred candidate. The purpose of establishing districts in the United States for the House of Representatives is to ensure equal representation for every citizen. Accordingly, the number of representatives allocated to each state is determined by the state's population. States are responsible for redistricting, which involves redrawing electoral districts within their respective territories, approximately every ten years, to maintain balance in the number of citizens per district due to demographic shifts (Altman et al., 2014). The federal government reassigns the number of districts per state, while states are entrusted with redrawing the electoral boundaries.

However, redistricting can also be employed as a mechanism to secure electoral advantages for political entities. The act of redrawing boundaries with the intention of partisan gain is known as gerrymandering and has been a part of American political culture for several decades (Gilligan & Matsusaka, 1999; Bernstein & Duchin, 2017). Gerrymandering, including incumbent gerrymandering, which involves redistricting to benefit sitting representatives, can undermine the

voting power of minorities and other groups. In fact, some scholars argue that racial gerrymandering may even aim to intentionally limit the voting power of specific minorities through the manipulation of electoral district boundaries (Bernstein & Duchin, 2017).

The United States of America has a long history of marginalizing minorities within the electoral system. Certain racial and ethnic groups faced significant challenges in registering to vote (voter suppression), and dividing these groups across different electoral districts made it difficult for them to elect a representative from their minority (Cascio & Washington, 2014). To address these issues, the U.S. government enacted the Voting Rights Act (VRA) in 1965, with the objective of upholding the Fifteenth Amendment, Section Two, which prohibits the denial or restriction of voting rights based on race or color.

> No voting qualification or prerequisite to voting, or standard, practice, or procedure shall be imposed or applied by any State or political subdivision to deny or abridge the right of any citizen of the United States to vote on account of race or color.
> (Voting Rights Act, 1965, Sec. 2)

This legislation empowers federal intervention to facilitate voter registration and participation for Blacks and other minorities (Grofman & Davidson, 1992). Notably, Section Two of the VRA not only safeguards the individual right to vote but also prohibits election-related practices and procedures that are demonstrated to have a racially discriminatory impact, as stated by the U.S. Department of Justice (2021). This interpretation ensures that redistricting plans can be rejected if they result in the curtailment of minority voting power. Thus, since 1965, institutional efforts have

been made to enhance minority representation and minimize limitations on their political influence.

In conclusion, redistricting cannot be utilized to curtail voting rights based on race or ethnicity. However, it can be employed to enhance representation for specific social groups. The introduction of the Voting Rights Act (VRA) and concurrent initiatives like Affirmative Action sparked significant discussions on this matter. Affirmative Action encompasses a range of policies and practices aimed at promoting equality for underrepresented groups.

Descriptive and Substantive Representation. And why does it matter?

Within the realm of representation, it is crucial to examine what constitutes "better representation" and the various types of representation. Mansbridge (1999) contends that having individuals from minority groups in positions of power is significant as it fosters legitimacy among constituents from those minority groups, providing them with a sense of being represented. This notion is referred to as "descriptive representation," a concept coined by Griffiths and Wollheim (1960, p. 190) and further developed by Pitkin ([1967] 1972, chap. 4).

> *In "descriptive" representation, representatives are in their own persons and lives in some sense typical of the larger class of persons whom they represent. Black legislators represent Black constituents, women legislators represent women constituents, and so on.* (Mansbridge, 1999, p. 629)

Descriptive representation offers significant advantages, particularly in terms of potentially yielding improved policy outcomes for minority groups. Mansbridge (1999) posits that when

representatives share the same identity and experiences as their constituents, it enhances their ability to effectively advocate for the substantive interests of the minority group they represent. This form of representation is known as substantive representation, which goes beyond shared characteristics to encompass active engagement in addressing the concerns and issues faced by the represented group. Mansbridge (1999) argues that while descriptive representation is crucial for promoting diversity and equality, substantive representation is essential for achieving genuine political empowerment for historically marginalized social groups.

However, Young (1997) presents a counterargument, stating that having a relation of identity or similarity with constituents does not inherently guarantee effective representation in terms of actions taken. Moreover, early empirical research on Black representation in the U.S. Congress concluded that simply increasing descriptive representation of African Americans did not necessarily result in greater representation of their tangible interests (Swain, 1993).

Nevertheless, more recent studies have found a correlation between descriptive representation and substantive representation. Additionally, some research suggests that the election of Black representatives can even be beneficial for the interests of Hispanic constituents (Wallace, 2014).

In summary, descriptive representation is indeed significant. It contributes to the establishment of legitimacy and holds the potential for promoting more substantive representation, although the relationship between descriptive representation and substantive outcomes is complex and subject to further examination.

Trade-Off between Descriptive and Substantive Representation

In recent decades, numerous strategies have been devised to either empower or constrain minorities within the electoral system. During the 1990 redistricting round, the Republican party advocated for the creation of more majority-minority districts, which are electoral districts where a specific minority group forms the majority of the population. Republicans believed that these majority-minority districts would result in increased representation of minorities, while also yielding more favorable outcomes for the Republican party at the state level (Washington, 2012). The assumption underlying this strategy was based on a trade-off between descriptive and substantive representation. Many scholars and politicians shared the belief that minority groups were more inclined towards supporting the Democratic party. Therefore, by concentrating the minority population within a single district, Republicans anticipated a decreased likelihood of winning that particular district, but an increased chance of success in the surrounding districts. However, this perspective has faced criticism, as other scholars contend that descriptive representation leads to substantive representation (Lublin, 1997; Washington, 2012).

Two primary theories have emerged regarding how the demographic composition of electoral districts influences minority representation. Both theories assert that the creation of majority-minority districts increases the probability of electing a minority candidate.

However, these theories diverge on their implications for substantive representation, leading to a contentious debate in both academic and political spheres over the years. Many scholars have believed that the creation of majority-minority districts introduces a trade-off between descriptive and substantive representation of minority groups, potentially resulting in a more conservative legislature (Cameron et al., 1996; Washington, 2012). The underlying mechanism is often referred to as "simple math." When a majority-minority district is established,

the percentage of minority voters in the surrounding districts decreases. As a result, the likelihood of electing a minority representative diminishes in those districts, while it increases in the newly formed majority-minority district. This phenomenon can be explained as follows: While having a greater number of individuals from a specific ethnic or racial minority in office may enhance their descriptive representation, it can simultaneously lead to reduced support for legislation sponsored by the minority at the state level. Representatives from neighboring districts may not represent substantial numbers of minorities and may lack the motivation to advocate for policies aligned with the interests of the minority community (Cameron et al., 1996). This mechanism is pivotal in understanding the motivations behind the creation of majority-minority districts and highlights the potential link between partisan interests and their establishment.

Nevertheless, alternative perspectives challenge the trade-off argument. Washington (2012) conducted a study on the aftermath of the 1990 redistricting round, which saw the creation of numerous majority-minority districts with the expectation of benefiting the Republican party. However, Washington's findings reveal no significant shift towards more Republican House delegations or state delegations that voted more conservatively. As such, Washington (2012) explicitly rejects the trade-off argument.

Examining state delegations, Shotts (2003) presents contrasting findings. Shotts' research demonstrates that an increase in the number of majority-minority districts leads to a rise in the number of Democrats and overall representatives who align themselves to the left of the congressional median (i.e., more liberal). This perspective contradicts the earlier theory, suggesting the opposite outcome. The establishment of majority-minority districts aims to enhance the election of representatives from specific minority groups, ensuring better representation of their interests, which might otherwise be overlooked or underrepresented. When representatives

from these minority groups are elected, their concerns, perspectives, and priorities gain a stronger voice in the political process. Without their election, the interests of these minority groups may not receive adequate representation.

These theories primarily revolve around partisan incentives in the context of minority representation. While the focus is on the racial/ethnic identification of representatives rather than partisan incentives, some scholars argue that minority interests are often better represented by Democratic delegations (Shotts, 2001; Shotts, 2002; Swain, 2006).

Thus, despite ongoing debates among scholars regarding the impact of redistricting on minority representation, there seems to be agreement that racial redistricting is beneficial for achieving descriptive representation of minorities. The underlying theory posits that when the majority of the population within a single-member district belongs to a specific minority, the likelihood of electing a representative from that minority is high. This leads to the formulation of the first hypothesis:

H1: An increase in the percentage of a minority within a single-member district leads to an increased likelihood of electing a representative from that minority into office.

Furthermore, according to this theory, majority-minority districts play a crucial role in electing members of minority groups. Consequently, the second expectation is that these districts are more likely to elect representatives from the minority.

H2: Majority-minority districts are more likely to elect a representative from the minority into office compared to non-majority-minority districts.

The testing of the first two sub-hypotheses focuses on the effect at the district level. However, this thesis also aims to examine the widely accepted theory that the creation of majority-minority districts leads to increased descriptive representation at a more aggregated level. Building

upon the critique presented by Washington (2012), the third hypothesis explores the impact of majority-minority districts at the state level.

H3: The presence of a higher number of majority-minority districts within a state is associated with an increased representation of minority politicians in the state-level House of Representatives.

Furthermore, considering the notion held by certain politicians and scholars that the establishment of majority-minority districts has a partisan impact, this thesis seeks to examine whether the available data supports such a claim. This leads to the formulation of the following hypothesis:

H4: A greater number of majority-minority districts leads to an increased likelihood of Democratic candidates being elected into the state-level House of Representatives.

Methodology & Data

The dataset utilized in this research was constructed by Foster-Molina (2017) and encompasses information on every Congressional district from 1972 to 2014. Each case represents an elected representative for the House of Representatives from a specific Congressional District. This dataset offers comprehensive data pertaining to the demographics of electoral districts, encompassing information on racial and ethnic compositions. Furthermore, it provides detailed insights into the elected representatives, including their identities, political party affiliations, and membership status within the Congressional Black Caucus or Congressional Hispanic Caucus. Additionally, the dataset includes supplementary characteristics of the districts, such as regional categorizations, average income levels, and election round specifics.

To test the four hypotheses, four models will be developed. The first two models will employ the dataset in its original form, while the subsequent two models will utilize the same data but transformed to the state level.

Identity

This paper focuses on two major minority groups within the United States: Blacks and Hispanics. The dataset used in the analysis incorporates demographic information obtained from the Census Bureau (Foster-Molina, 2017). Evaluating membership in minority groups can be approached in various ways. This section aims to discuss the concept of identity and how membership in a minority group can be classified.

The Census Bureau employs one of the most commonly used methods to measure ethnic identity in the United States. Respondents are first asked whether they identify as Hispanic. Subsequently, they are asked about their race, selecting one or more races with which they identify. The options provided include White, Black or African American, Asian American, American Indian or Alaska Native, and Native Hawaiian or other Pacific Islander (Noe-Bustamante et al., 2017).

It is important to note that respondents can identify as Hispanic and as multiple races. The Census Bureau collects data on ethnicity and race based on self-identification. Furthermore, they differentiate between race and identity, necessitating a distinction between the first and second question in their questionnaire.

The Census Bureau defines race as a social construct and does not attempt to establish biological, anthropological, or genetic definitions (U.S. Census Bureau, 2023a). However, it is plausible that most respondents define their race based on biological, anthropological, and genetic criteria. For instance, research conducted by the PEW Research Center indicates that Latino respondents often

define their race based on skin color. Moreover, skin color serves as an important dimension of their identity, which can influence their daily lives. According to the Yadon-Ostfeld 10-point skin color scale, 80% of Latino respondents categorized their own skin color within the first four categories, denoting lighter skin tones (Noe-Bustamante et al., 2021). The report argues that within the Hispanic community, skin color and heritage can significantly impact daily life, highlighting a significant level of differentiation within the minority group.

While it is acknowledged that there is significant differentiation within the Latino group, this paper treats Hispanics as a single social group, regardless of whether they identify as the same race or not. The analysis will focus on the Hispanic minority as a whole, rather than emphasizing internal differences within the group.

However, an important consideration arises when individuals identify as both Hispanic and Black, as they may be counted twice in the analysis. This raises the question of whether individuals can belong to multiple minority groups. For the purposes of this research, the focus is on the perception of identity. The paper examines whether specific minority groups are descriptively represented, meaning that the elected representative should share characteristics with their constituents. It is argued that constituents should identify with the same ethnicity as their representative. Therefore, if an individual identifies as both Black and Hispanic, they may feel represented by both a Black representative and a Hispanic representative. Consequently, it does not matter if they are counted in both minority groups.

Nevertheless, there is a limitation in the data. The percentages of races within districts are only recorded if respondents identify with a single race, while it is possible to identify with multiple races in the questionnaire. This does not impact the demographic measurement of Hispanics since they are captured through a separate question. However, for Blacks, this creates a

small error. Individuals who identify as both Black and another race are not counted as Black but as multiracial. This could lead to some individuals who would feel represented by a Black representative not being counted as Black in the district's demographics. In theory, this could also result in a majority-minority district being misidentified as a non-majority-minority district.

In analyzing the data, a total of 4,886 cases provide information on multi-ethnic percentages. Among these cases, 27 districts have more than 10 percent of respondents identifying as multi-racial. None of these districts qualify as majority-minority districts, and none of them would be considered a black majority-minority district if all multi-ethnic respondents also identified as black. There are 14 cases that could potentially be classified as black majority-minority districts if all multi-racial respondents identified as black. However, due to the lack of information explaining how multi-racial respondents are distributed, it is uncertain whether this is the case. Nonetheless, the possibility of misclassifying 14 cases out of the total number of cases used in the analysis is considered minimal and is not expected to significantly impact the results.

Models and Variables

Table 1. Schematic overview of models for different hypotheses.

	H1	H2	H2	H4
DV	Descriptive Representation	Descriptive Representation	Change in number of minority representatives in state delegation	Change in number of Democrats in state delegation
IV	Percentage minority population	Majority-minority districts	Majority-minority district change	Majority-minority district change
CV	Income		Income	Income
CV	Region		Region	Region
CV	Terms Served			

The models presented in Table 1 will be conducted separately for both Hispanics and Blacks. In the following section, the variables used in the models will be discussed. Firstly, the dependent variables will be addressed, followed by the independent variables, and finally, the control variables. It should be noted that some models utilize the same set of variables.

Dependent Variables

Descriptive Representation

Descriptive Representation is a binary variable that measures whether the elected representative of an electoral district belongs to either the Black or Hispanic minority, depending on the model being analyzed. This variable is based on the membership of the representative in either the Congressional Black Caucus (CBC) or the Congressional Hispanic Caucus (CHC). It is important

to note that as far as the available information indicates, all representatives who identify as Black or Hispanic are members of either the CBC or CHC (Foster-Molina, 2017).

Change in Number of Minority Representatives in State Delegation

The third model focuses on the aggregate of districts within a state. Therefore, the dependent variable in this model examines the change in the number of minority representatives in the state delegation. The aim is to assess the impact of the creation or decline of majority-minority districts within a state. The change in the number of minority representatives is measured by comparing the number of minority representatives in the current Congressional round with the number of minority representatives in the previous Congressional round. This results in a numeric variable that can be positive, indicating an increase; neutral, indicating no change; or negative, indicating a decrease.

Change in Number of Democrats in State Delegation

The final model incorporates partisanship by examining the change in the number of Democrats in the state delegation. Similar to the previous model, the dependent variable assesses the change by comparing the number of Democrats elected at the state level in the current electoral round with the number in the previous round. This also results in a numeric variable that can be positive, neutral, or negative, indicating an increase, no change, or a decrease, respectively.

Independent Variables

Percentage of Minority Population

The first model utilizes the percentage of the minority population within a single-member district as the independent variable. Separate models are constructed for the Black and Hispanic minorities using the respective variables available in the dataset. The measurement is based on the percentage of the district's total population belonging to the specific minority group.

A consideration arises regarding whether to use the total population within the district or the total number of eligible voters as the standard. While using eligible voters may seem preferable as they ultimately determine the election outcome, it is logical to employ the overall population composition since district boundaries are primarily drawn based on total population data, rather than eligible voters. In this thesis, the total population within a district is utilized, aligning with the principle that district boundaries aim to ensure equal total populations across districts.

For the percentage of Hispanics, estimates are derived from a survey in which respondents self-identify as Hispanic. For the Black population, the estimate is derived from individuals who identify as Black but not as Hispanic.

Majority-minority Districts

The concept of majority-minority districts is operationalized based on the percentages obtained from the dataset. Majority-minority districts are defined as electoral districts where the population of Blacks or Hispanics comprises at least fifty percent of the total population within the district. Separate models will be conducted for the Black and Hispanic populations, resulting in two distinct variables for analysis and interpretation.

Majority-Minority District Change

To examine H3 and H4, the quantity of majority-minority districts within each state is measured and compared to the previous redistricting round. This analysis results in a change variable, which is a numeric value that can be positive (indicating an increase in the number of majority-minority districts), neutral (no change), or negative (indicating a decrease in the number of majority-minority districts).

Control Variables

Income

The average income of an electoral district is included as a control variable in some models. Income has been shown to have a significant influence on various social phenomena, including voter turnout. Previous research has indicated a positive correlation between higher income levels and increased voter turnout (Rosenstone & Hansen, 1993). It is important to note that the average income of an entire district does not directly reflect differences in socioeconomic status between the Black/Hispanic population and other racial/ethnic groups. However, existing statistics on income and poverty reveal persistent inequalities between certain minority groups (including Hispanics and Blacks) and Whites. Consequently, it is possible that majority-minority districts with higher average incomes are more likely to elect a representative from their respective minority compared to districts with lower average incomes.

Percentage of Whites & Percentage of Whites with White Hispanics

To capture the ethnic diversity of the non-minority-majority population within majority-minority districts, two control variables are utilized. The first variable is the percentage of non-Hispanic

Whites in the district, which provides an indication of the ethnic composition among the non-minority population. However, it is important to acknowledge that this variable does not differentiate between other minority groups. For example, if both the percentages of Whites and Hispanics are low, it remains unclear whether the majority of the remaining population consists of Blacks, Asian-Americans, Native Americans, or another ethnic group.

Percentage of Non-Hispanic whites

The percentage of non-Hispanic Whites in the district is included as a control variable to measure the ethnic diversity among the non-minority-majority population. This variable provides an indication of the relative composition of other racial and ethnic groups within the district. However, it is important to note that this variable does not differentiate between other minority groups. For example, if both the percentages of Whites and Hispanics are low, it remains unclear whether the majority of the remaining population consists of Blacks, Asian-Americans, Native Americans, or another ethnic group.

Table 2 in this thesis presents the ranking of the share of the White population across all electoral districts analyzed from 1972 to 2014. The table ranks the White, Black, Hispanic, Asian-American, and multi-ethnic groups (excluding white Hispanics). It provides information on the number of districts where white residents constitute the majority and whether white residents are the second, third, or fourth largest group. Given that white residents consistently appear among the three largest groups, they serve as the reference group for assessing the ethnic composition and diversity of other groups within the district.

Table 2. Rank white population within electoral districts 1972-2013.

	Percent White incl. Hispanics	Percent White excl. Hispanics
Plurality	8328	6189
Second biggest	1013	799
Third biggest	72	104
Fourth biggest	0	0
Fifth biggest	0	0
N	9413	7092

Region

To account for regional differences in the analysis, an additional categorical variable will be included as a control. The regional classification by the U.S. Census Bureau will be used, dividing the United States into four regions: South, West, Midwest, and Northeast (U.S. Census Bureau, 2023b). This control variable helps capture the potential regional variations in the impact of majority-minority districts on minority representation.

Terms served

The number of terms served by the representative of the district is included as a control variable. This variable accounts for the potential influence of incumbency and voting patterns. In the U.S. House of Representatives, it is not uncommon for some representatives to serve for extended periods. Incumbents may have an advantage in elections due to name recognition, established networks, and constituent loyalty. Additionally, in some states, legislatures are responsible for redrawing district boundaries, which can lead to incumbent gerrymandering. Therefore, by

including the number of terms served as a control variable, the analysis considers the potential

positive bias towards long-serving representatives, even in districts with an increasing share of

minority constituents.

Analyses & Results

Analysis 1

The first analysis aims to test Hypothesis 1, which states that an increase in the percentage of a minority within a single member district leads to an increase in the likelihood of electing a representative from that minority group. Logistic regression will be used to examine this hypothesis, utilizing the dataset compiled by Foster-Molina (2017). The dataset covers representatives from the 93rd U.S. Congress to the 113th U.S. Congress, spanning a period of 42 years from January 3rd, 1973, to January 3rd, 2015.

The dataset includes both voting and non-voting members of the House of Representatives. Although non-voting members do not have voting rights in the House, they are included in the analysis as they represent specific constituencies within U.S. territory and participate in House commissions (U.S. Senate, 2023).

The dependent variable in this analysis is a binary variable indicating whether the elected representative is affiliated with either the Congressional Black Caucus (CBC) or the Congressional Hispanic Caucus (CHC). It is known that all representatives who self-identify as Black or Hispanic are members of either the CBC or the CHC (Foster-Molina, 2017).

To account for the level of ethnic homogeneity among other racial and ethnic groups, the control variable "percentage White" is included in the models. For the analysis focusing on black representatives, this variable includes Hispanics who identify as White, while they are excluded from the analysis examining Hispanic representatives.

Table 3. Logistic Regression models of Black/Hispanic House representatives being elected.

	Black		Hispanic	
	Model 1a	Model 1b	Model 2a	Model 2b
(Constant)	-6.54***	-0.66	-7.65***	-9.55***
	(0.19)	(0.67)	(0.29)	(0.95)
Percentage of minority within district	0.15***	0.13***	0.14***	0.19***
	(0.00)	(0.01)	(0.01)	(0.01)
Percentage Whites incl. Hispanics		-0.07***		
		(0.01)		
Percentage Whites excl. Hispanics				0.04***
				(0.01)
Mean income (in thousands of dollars)		0.00*		0.00***
		(0.00)		(0.00)
Region (Ref. = West)				
Midwest		0.13		-0.55
		(0.37)		(0.68)
Northeast		-3.29***		1.36***
		(0.38)		(0.30)
South		-2.01***		-0.95***
		(0.35)		(0.29)
Number of terms served by elected representative		-0.03		-0.11***
		(0.02)		(0.03)
-2LL	1282.22	987.91	765.33	687.56
Cox and Snell R^2	0.31	0.34	0.22	0.23
Nagelkerke's R^2	0.73	0.80	0.74	0.77
N	7094	7094	7093	7093

Note: logistic regression coëfficients with standard errors in brackets.
*** p < 0.001, ** p < 0.01, * p < 0.05

The results indicate that for every percent increase of the Black population within an electoral

district, the log-odds increase by 15% and this is statistically significant. When control variables

are included, the log-odds increase by 13% and are still statistically significant. Thus, indicating that an increase of the percentage of Blacks within an electoral district improves the likelihood of a Black representative of being elected.

What stands out is that the Northeast and South have significant negative coefficients. This indicates that in both the South as the Northeast, it is less likely to be elected as a Black minority with the same percentage of Black people as in the West and Midwest.

The results of the analysis support Hypothesis 1, indicating that an increase in the percentage of the Black population within an electoral district significantly improves the likelihood of electing a Black representative. For every percent increase in the Black population, the log-odds increase by 15%, and this effect remains statistically significant even after controlling for other variables. The results also highlight regional differences, with the South and Northeast showing a lower likelihood of electing Black representatives compared to the West and Midwest.

Similarly, for Hispanics, the results support the hypothesis that an increase in the percentage of the Hispanic population within a district increases the likelihood of electing a Hispanic representative. Without control variables, the log-odds increase by 14% for every percent increase in the Hispanic population, and this effect becomes even larger (19%) when controlling for other factors. Regional differences also emerge, with the South having a negative impact on the likelihood of descriptive representation for Hispanics compared to the West, while the Northeast shows a higher likelihood.

The analysis indicates that the average income of districts does not have a significant impact on the likelihood of electing a minority representative. However, the diversity among other ethnicities does have a significant effect. For Hispanics, higher percentages of Whites within

districts increase the likelihood of electing Hispanic representatives, while for Blacks, higher percentages of Whites have the opposite effect. This suggests that greater diversity within the non-minority population increases the chances of electing representatives from minority groups.

Including control variables significantly improves the model fit for both analyses, as indicated by increases in Cox and Snell's as well as Nagelkerke's R-squared values. This suggests that the control variables contribute valuable information to the models.

In conclusion, the results provide strong evidence that an increase in the percentage of a minority population within an electoral district improves the chances of electing a representative from that minority group, supporting the notion that clustering a minority group within a district enhances descriptive representation. Regional differences and the diversity of other ethnicities also play a role in shaping the likelihood of electing minority representatives.

Analysis 2.

Analysis 2 focuses on testing Hypothesis 2, which states that majority-minority districts are more likely to elect a member of that minority into office compared to non-majority-minority districts. The analysis uses the Historical Congressional Legislation and District Demographics 1972-2014 dataset.

All cases in the dataset are selected, representing electoral districts in various Congressional rounds along with their respective representatives. Two variables are created to determine whether a district is a majority-minority district by assessing if the percentage of the Black and Hispanic population exceeds fifty percent. These variables are then compared with the representation of the corresponding minority group in the district's representative, as indicated by

membership in the Congressional Black Caucus or the Congressional Hispanic Caucus. The results of this comparison are presented in Table 4 and Table 5, which display the crosstabs.

The crosstabs provide insights into the relationship between majority-minority districts and the election of a representative from the respective minority group. This analysis allows for the evaluation of Hypothesis 2.

Table 4. Crosstab of majority-Black districts and U.S. House members of the Congressional Black Caucus.

	No Member of CBC	Member of CBC	Total
No Majority-Black District	8628	256	8884
Majority-Black District	34	391	425
Total	8662	647	9309

As shown in Table 4, out of the 647 representatives who were members of the Congressional Black Caucus (CBC) between 1972 and 2014, it is known that all representatives who identified as black were part of the CBC (Foster-Molina, 2017). Among these representatives, more than half (60%) were elected in majority-minority districts. The crosstab analysis yielded a Pearson Chi-Squared value of 4980, which is statistically significant at the 0.01 level. This indicates a strong correlation between the election of black representatives and the presence of majority-Black districts.

Table 5. Crosstab of majority-Hispanic districts and U.S. House members of the Congressional Hispanic Caucus.

	No Member of CHC	Member of CHC	Total
No Majority-Hispanic District	8869	76	8945
Majority-Hispanic District	99	264	363
Total	8968	340	9309

The results presented in Table 5 demonstrate similar patterns. From 1972 to 2014, a total of 340 representatives were members of the Congressional Hispanic Caucus (CHC). It is known that all representatives who identified as Hispanic were part of the CHC (Foster-Molina, 2017). Among the Hispanic representatives, over 77% were elected in majority-Hispanic districts. This percentage is higher than that of black representatives. The Pearson chi-square value of 5121 confirms a statistically significant association at the 0.01 level.

Furthermore, both majority-black and majority-Hispanic districts exhibit a significantly lower likelihood of electing non-members of their respective ethnic/racial groups. These strong correlations allow us to reject the null hypothesis and support hypothesis 2: majority-minority districts are more likely to elect members of the corresponding minority group compared to other districts.

Additionally, it is worth noting that during the period from the 93rd to 113th Congressional districts, a total of 987 House Representatives were members of either the Congressional Black Caucus or the Congressional Hispanic Caucus (counted per term, with reelected representatives being counted cumulatively). In contrast, the total number of representatives elected into office during this period was 9309. This means that only 4.15% of House Representatives during these

Congressional Rounds belonged to either the Black or Hispanic minority groups in the U.S., which is relatively low considering that the combined percentage of Hispanics and Blacks in the U.S. population was 15.6% in 1970 and 29.9% in 2015 (Flores, 2017).

Analysis 3 & 4

The third and fourth analyses focus on testing hypotheses 3 and 4, which involve change variables and operate at the state level. Therefore, the dataset from Foster-Molina (2017) undergoes several transformations.

Firstly, the analysis focuses exclusively on electoral districts within U.S. states, excluding districts with non-voting members such as those from the U.S. Virgin Islands, District of Columbia, Commonwealth of Puerto Rico, and other similar territories.

Secondly, the data is aggregated at the state level for each Congressional round. However, a challenge arises when some districts have two representatives within one Congressional round due to special elections held to fill vacancies. To address this, the representative who served the longest term within the Congressional round is selected, as both the first and second representatives are elected and do not pose theoretical threats.

Thirdly, for both analyses, the independent variables are change variables related to majority-minority districts. The number of majority-minority districts in a Congressional round is compared with the number of such districts in the previous round. Separate variables are created for majority-Black districts and majority-Hispanic districts.

Fourthly, the dependent variables for the analyses are constructed by comparing the number of minority representatives (Black and Hispanic) or Democrats in a Congressional round

with the number in the previous round. These change variables capture the shifts in representation over time.

Fifthly, the average income for each state is constructed by computing the mean income of the districts within the state. While this variable represents the average income at the district level rather than the individual level, it serves as a proxy for the state's average income. It is important to note that this variable may be slightly less accurate due to this aggregation.

Sixthly, the region classification used by the U.S. Census Bureau is added as a variable for each state, providing regional context to the analysis.

The first Congressional round (93rd) is excluded from the analysis due to the absence of data on the preceding round. Although redistricting occurs once every decade, not all states implement redistricting in the same year, necessitating the inclusion of all Congressional rounds in the analysis.

Table 6. OLS regression model of change in elected minority representatives.

	Black		Hispanic	
	Model 1	Model 2	Model 1	Model 2
(Constant)	0.015 (0.01)	0.028 (0.017)	0.022** (0.007)	-0.001 (0.015)
Change in number of majority-minority districts	0.439*** (0.037)	0.434*** (0.038)	0.103*** (0.019)	0.097*** (0.019)
Mean Income		0.000 (0.000)		0.000* (0.000)
Region (Ref. South)				
Midwest		-0.19 (0.022)		-0.016 (0.018)
Northeast		-0.025 (0.023)		-0.015 (0.019)
West		-0.029 (0.021)		0.032 (0.018)
R^2	0.116	0.118	0.029	0.041
Adj. R^2	0.115	0.114	0.028	0.037
N	1050	1050	1050	1050

Note: OLS regression coëfficients with standard errors in brackets.
*** p < 0.001, ** p < 0.01, * p < 0.05

The results of the OLS regression analysis examining the impact of changes in the number of majority-minority districts on the election of minority representatives are presented in table 6. Both for Black and Hispanic representatives, there is a positive and statistically significant relationship. The findings indicate that an increase of one majority-Black district leads to an average of 0.439 more Black representatives being elected. This suggests that the creation of majority-Black districts within a state contributes to increased descriptive representation at the statewide level.

The analysis also reveals that the control variables do not have a statistically significant impact on the relationship, indicating that they do not meaningfully affect the observed relationship.

Similarly, an increase in the number of majority-Hispanic districts results in a greater number of Hispanic representatives being elected statewide. However, the OLS regression coefficient for majority-Hispanic districts is lower than that for majority-Black districts, suggesting that the effect of change in majority-Black districts on Black representation in the House of Representatives is stronger than the effect of change in majority-Hispanic districts on Hispanic representation.

It is important to note that all the models have low R-squared values, indicating that they have limited explanatory power. The models for majority-Black districts explain approximately 11% of the variation, while the models for majority-Hispanic districts have an even lower explanatory power at around 4%. This suggests that factors beyond those included in the analysis may also influence the election of minority representatives.

Overall, the results support the rejection of the null hypothesis and confirm that changes in majority-minority districts have a positive relationship with the change in Black/Hispanic representatives in state delegations. However, it is important to recognize the limited explanatory power of the models and consider additional factors that may impact minority representation.

Table 7. *OLS regression models of change in the number of elected Democratic representatives.*

	Black-majority districts		Hispanic-majority districts	
	Model 1	Model 2	Model 1	Model 2
(Constant)	-0.042	-0.086	-0.055	-0.091
	(0.035)	(0.077)	(0.035)	(0.075)
Majority-minority district change	-0.064	-0.032	0.394***	0.395***
	(0.165)	(0.165)	(0.095)	(0.095)
Mean Income		0.000		0.000
		(0.000)		(0.000)
Region (Ref. South)				
Midwest		0.058		0.072
		(0.095)		(0.094)
Northeast		0.122		0.136
		(0.101)		(0.100)
West		0.221*		0.213*
		(0.093)		(0.092)
R^2	0.000	0.007	0.016	0.023
Adj. R^2	-0.001	0.002	0.015	0.018
N	1050	1050	1050	1050

Note: OLS regression coëfficients with standard errors in brackets.
*** p < 0.001, ** p < 0.01, * p < 0.05

The results presented in Table 7 examine the impact of changes in majority-minority districts on the number of Democrats elected to the House of Representatives at the state level. The analysis specifically focuses on the effect of changes in majority-black districts on the election of Democrats. However, the results do not provide sufficient evidence to reject the null hypothesis. This suggests that there is insufficient confidence to assert that changes in majority-black districts significantly influence the number of Democrats elected to the House of Representatives.

The results of the analysis on majority-Hispanic districts show a promising finding, indicating that an increase in the number of majority-Hispanic districts within a state leads to a statistically significant increase of 0.395 in the number of Democratic representatives. This suggests that changes in the presence of majority-Hispanic districts can have a meaningful effect on the election outcomes and contribute to the representation of Democratic candidates.

However, it is important to note that the R-squared values of these models are relatively low, indicating that they explain only a small portion of the variation in the dependent variable. Therefore, the models have limited explanatory power in predicting the share of Democratic representatives based on changes in majority-minority districts. Consequently, there is insufficient evidence to support the hypothesis that changes in the number of majority-minority districts lead to a substantial increase in the representation of Democratic candidates.

Discussion

The findings of this research align with existing scholarship, indicating that majority-minority districts contribute to increased representation of minority groups. The results support the hypothesis that an increase in the percentage of a minority within an electoral district enhances the likelihood of electing a representative from that minority. Moreover, the strong correlation between majority-minority districts and the election of minority representatives reinforces the notion that these districts play a crucial role in promoting descriptive representation for minorities.

It is noteworthy that the majority of representatives identifying as either Black or Hispanic were elected in majority-minority districts. This suggests that it is challenging to secure election in districts where the population lacks a substantial representation of the specific identity. However, the data reveals that from 1972 to 2014, only 4.15 percent of House Representatives were Black or Hispanic, while the overall percentage of Hispanics and Blacks relative to the total population in the U.S. increased significantly. This stark disparity underscores the substantial underrepresentation of these minority groups in terms of descriptive representation. Consequently, the creation of majority-minority districts emerges as a desirable approach to enhance the (descriptive) representation of Blacks and Latinos.

This research also examines change variables to explore the impact of creating majority-minority districts on the number of minority representatives. While the predictive power of the models concerning the creation of majority-minority districts is limited, the findings demonstrate a significant effect of change in majority-minority districts on the number of minority representatives within a state. When combined with the results on the election of minority representatives in majority-minority districts, it can be concluded that the establishment of these districts is beneficial in increasing minority representation. This is particularly important

considering the low likelihood of electing a minority representative in non-majority-minority districts.

It is important to acknowledge that change variables have inherent limitations in their assessment, primarily capturing sudden changes and potentially overlooking gradual shifts. Future research could employ more sophisticated statistical tools to explore change variables and their impact on representation.

Regarding the ideal size of a minority for descriptive representation, the findings of this research do not provide a definitive answer. However, they do indicate that higher percentages of a minority population increase the likelihood of electing a minority representative. Further investigation could focus on nation- and state-wide quantitative analysis to examine the difference between majority- and plurality-minority districts and determine the threshold at which a plurality-minority becomes impactful for descriptive representation.

Lastly, the study addresses the partisan implications of racial redistricting. While there is insufficient evidence to support a clear relationship between the increase in majority-Black districts and the partisan composition of state-delegations, the results suggest that an increase in majority-Hispanic districts can influence the election of Democratic representatives. Still, these results offer no evidence that the descriptive representation creates a trade-off between descriptive and substantive representation, that is, if one considers partisanship as measurement of substantive representation.

In conclusion, this research confirms the importance of majority-minority districts for enhancing descriptive representation and increasing the likelihood of electing minority representatives. The findings underscore the need to address the underrepresentation of minority groups and highlight the potential benefits of creating and maintaining these districts.

Conclusion

In conclusion, this study provides strong evidence supporting the positive impact of majority-minority districts on minority representation in the United States, particularly for black and Hispanic minorities. The results confirm the hypotheses that higher percentages of a minority group within an electoral district, the creation of majority-minority districts, and racial redistricting all contribute to increased descriptive representation for minorities. However, the findings did not reveal a significant relationship between majority-minority districts and the partisan composition of state delegations.

The data clearly demonstrates the significance of majority-minority districts in facilitating the election of minority representatives. It is evident that minorities face significant challenges in securing election in districts with a smaller population that shares their identity. The study also reveals a substantial underrepresentation of Hispanics and Blacks in the House of Representatives compared to their proportion in the overall population, highlighting the need for increased descriptive representation.

It is important to acknowledge the limitations of this research, and future studies could explore the long-term effects of majority-minority and plurality-minority districts, as well as investigate these dynamics at both state and national levels. By delving deeper into these aspects, a more comprehensive understanding of the impact of redistricting and district composition on minority representation can be achieved.

Overall, this study underscores the importance of racial redistricting and the creation of majority-minority districts as effective strategies for enhancing minority representation in American politics. The findings contribute to the ongoing discourse surrounding electoral reforms and the pursuit of fair and equitable representation for all communities.

Literature

Altman, M., Magar, E., McDonald, M. P. & Trelles, A. (2014). The effects of automated redistricting and partisan strategic interaction on representation: The case of Mexico. *SSRN.* 1-19

Bernstein, M., & Duchin, M. (2017). A Formula Goes to Court: Partisan Gerrymandering and the Efficiency Gap. *Notices of the American Mathematical Society*, *64*(09), 1020–1024.

Brace, K., Handley, L., Niemi, R. G., & Stanley, H. W. (1995). Minority Turnout and the Creation of Majority-Minority Districts. *American Politics Quarterly*, *23*(2), 190–203.

Cameron, C., Epstein, D., & O'Halloran, S. (1996). Do Majority-Minority Districts Maximize Substantive Black Representation in Congress? *American Political Science Review*, *90*(4), 794–812.

Cascio, E. & Washington, E. (2014) Valuing the Vote. *The Quarterly Journal of Economics* 129(1): 379-434.

Creamer, J. (2020). Inequalities Persist Despite Decline in Poverty For All Major Race and Hispanic Origin Groups. *The U.S. Census Bureau.* Retrieved from: https://www.census.gov/library/stories/2020/09/poverty-rates-for-blacks-and-Hispanics-reached-historic-lows-in-2019.html

Flores, A. (2017). 2015, Hispanic Population in the United States Statistical Portrait: Statistical portrait of Hispanics in the United States. *PEW Research Center.* Retrieved from: https://www.pewresearch.org/Hispanic/2017/09/18/2015-statistical-information-on-Hispanics-in-united-states/#Hispanic-rising-share

Foster-Molina, E. (2017). *Historical Congressional Legislation and District Demographics 1972-2014* (V2 ed.) [dataset and codebook]. Harvard Dataverse.

Gilligan, T. W., & Matsusaka, J. G. (1999). Structural Constraints on Partisan Bias under the Efficient Gerrymander. *Choice* 100(1): 65-84.

Griffiths, A.P. & Wollheim, R. (1960). How Can One Person Represent Another? *Aristotelian Society.* Suppl. 34: 182-208.

Grofman, B. N., & Davidson, C. (1992). *Controversies in Minority Voting: The Voting Rights Act in Perspective*. Brookings Institution Press.

Grose, C.R. (2011). *Congress in Black and White.* New York: Cambridge University Press.

Lublin, D. (1997). *Paradox of Representation: Racial Gerrymandering and Minority Interests in Congress.* Princeton, N.J.: Princeton University Press.

Noe-Bustamante, L., Gonzalez-Barrera, A., Edwards, K., Mora, L. & Hugo Lopez, M. (2021, November 4). Majority of Latinos Say Skin Color Impacts Opportunity in America and Shapes Daily Life. *PEW Research Center.* Retrieved from: https://www.pewresearch.org/Hispanic/2021/11/04/majority-of-latinos-say-skin-color-impacts-opportunity-in-america-and-shapes-daily-life/

Pitkin, H. [1967] (1972). *The Concept of Representation.* Berkeley: University of California Press.

Rosenstone, S., & Hansen, J. (1993). *Mobilization, Participation, and Democracy in America.* New York: Macmillan Publishing Company.

Shotts, K. W. (2001). The Effect of Majority-Minority mandates on Partisan Gerrymandering. *American Journal of Political Science* 45: 120-35.

Shotts, K. W. (2002). Gerrymandering, Legislative Composition, and National Policy Outcomes. *American Journal of Political Science* 46: 398-414.

Shotts, K. W. (2003). Does Racial Redistricting Cause Conservative Policy Outcomes? Policy Preferences of Southern Representatives in the 1980s and 1990s. *Journal of Politics* 65: 216-26.

Swain, C. (1993). *Black Faces, Black Interests: The Representation of African Americans in Congress.* Cambridge: Harvard University Press.

The Guardian. (2022, June 3). *Florida supreme court declines to rule gerrymandered voting map unconstitutional.* Retrieved from: https://www.theguardian.com/us-news/2022/jun/03/florida-supreme-court-map-unconstitutional

U.S. Census Bureau. (2023a). *About the Topic of Race.* Retrieved From: https://www.census.gov/topics/population/race/about.html

U.S. Census Bureau. (2023b). *Census Regions and Divisions of the United States.* Retrieved from: https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf

U.S. Department of Justice. (2021, September 1). *Redistricting Information.* Retrieved from: https://www.justice.gov/crt/redistricting-information

U.S. Senate. (2023). *House of Representatives.* Retrieved from: https://www.senate.gov/reference/reference_index_subjects/House_of_Representatives_vrd.htm

Voting Rights Act, 52 U.S.C. § 10101 (1965). https://www.archives.gov/milestone-documents/voting-rights-act

Washington, E. (2012). Do majority-black districts limit blacks' representation? The case of the 1990 redistricting. *Journal of Law and Economics*, *55*(2): 251-74.

Wallace, S. (2014) Representing Latinos: Examining Descriptive and Substantive Representation in Congress. *Political Research Quarterly* 67(4): 917-29.

Young, I. M. (1997). Deferring Group Representation. In I. Shapiro & W. Kymlicka (Eds.),

Ethnicity and Group Rights: Nomos XXXIX. New York: New York University Press.