

Hate Crimes in the USA

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This is the Capsone Project in 2019 designed by Dan Snow

Keywords: Hate Crime

Investigation of Hate Crimes

Background:

Recent years, the data shows that hate crime is increasing. To figure out what influences the hate crime. We will examine the potential causes/ correlates of hate crimes in the United States. The Data comes from the Kaiser Family Foundation, FBI, and U.S. Census, as well as the proportion of the democrat and Jewish of the state- level.

Purpose

The purpose of this policy is to establish guidelines for identifying and investigating hate crimes and assisting victimized individuals and communities. A swift and strong response by law enforcement can help stabilize and calm the city as well as aid in a victim's recovery.

Glimpse of the Hate Crime:

At the very beginning, I randomly grab the article about the hate crime from the website and use Natural Language Process to see what causes people have the hate crime and in what situation people will think about the hate crime:

include Catholic, Jewish, Protestant, Muslim, Sikh, Hindu, and atheist

Race: A group of persons who possess common physical characteristics, for example, color of skin, eyes, and/or hair; facial features, and so forth, which are genetically transmitted by descent and heredity and that distinguish them as a distinct division of humankind. Examples include Asians, blacks or African Americans, and whites.

Ideology Party: The Democratic-Republican Party (formally called the Republican Party) was an American political party formed by Thomas Jefferson and James Madison around 1792 to oppose the centralizing policies of the new Federalist Party run by Alexander Hamilton, who was Secretary of the Treasury and chief architect of George Washington's administration.

Exploratory Data Analysis:

In this part, I will talk about how I load the data and will give a briefly overview of the data.

At first, I loaded the ACS data of 2016 by the state level, which includes the total population. By using the entire community, we can get the unemployment rate, only a high school degree rate, and white people below the poverty line rate, and the people who have the median household income rate. And then, I loaded the data of the Gini index, which can enhance the income inequality. And, similarly, loading the data of the noncitizen. At last, combine all the datasets we collect together. My goal is creating a dataset, which is a panel data from 2012-2016. Also, for plotting, I will create a Hate Crime data from 2008- 2017.

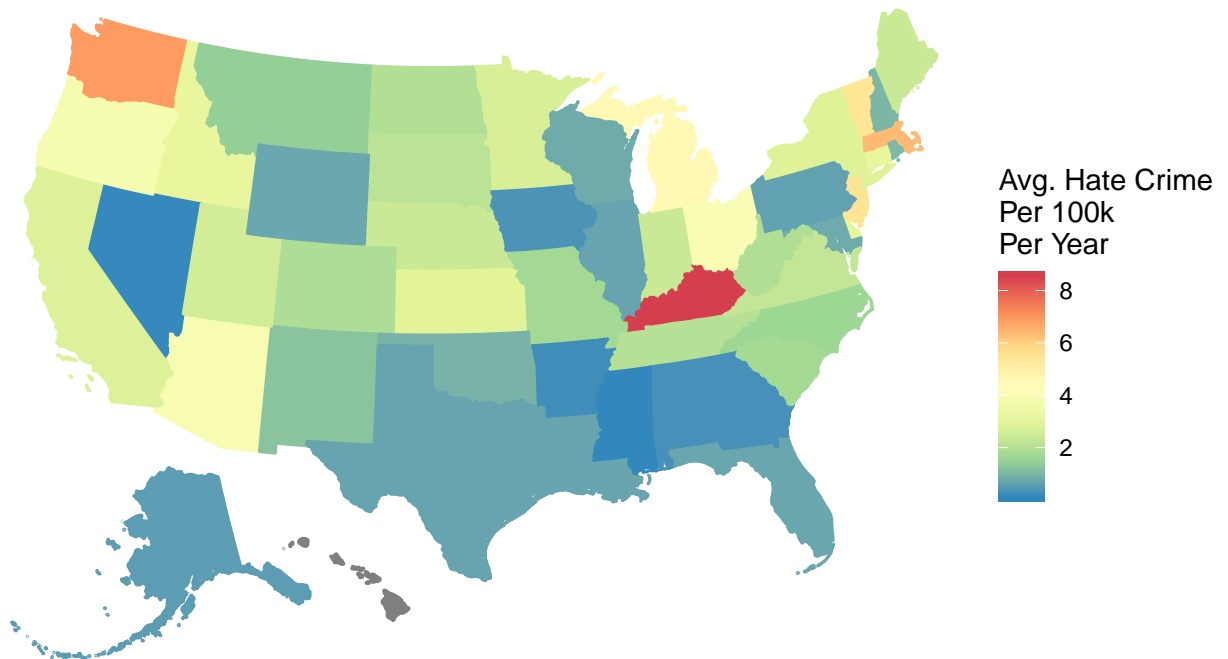
When I collected the data, I found the potential bias is from the following two parts:

The data about the annual hate crimes we are using is from the FBI, which collected from law enforcement agencies. However, these data are collected spontaneously which means the data can be potentially fake or not precise. Also, we do not have the data from Hawaii, and these data are collected on only prosecutable hate crimes. Sometimes the hate crime is complicated to characterize the hate crime.

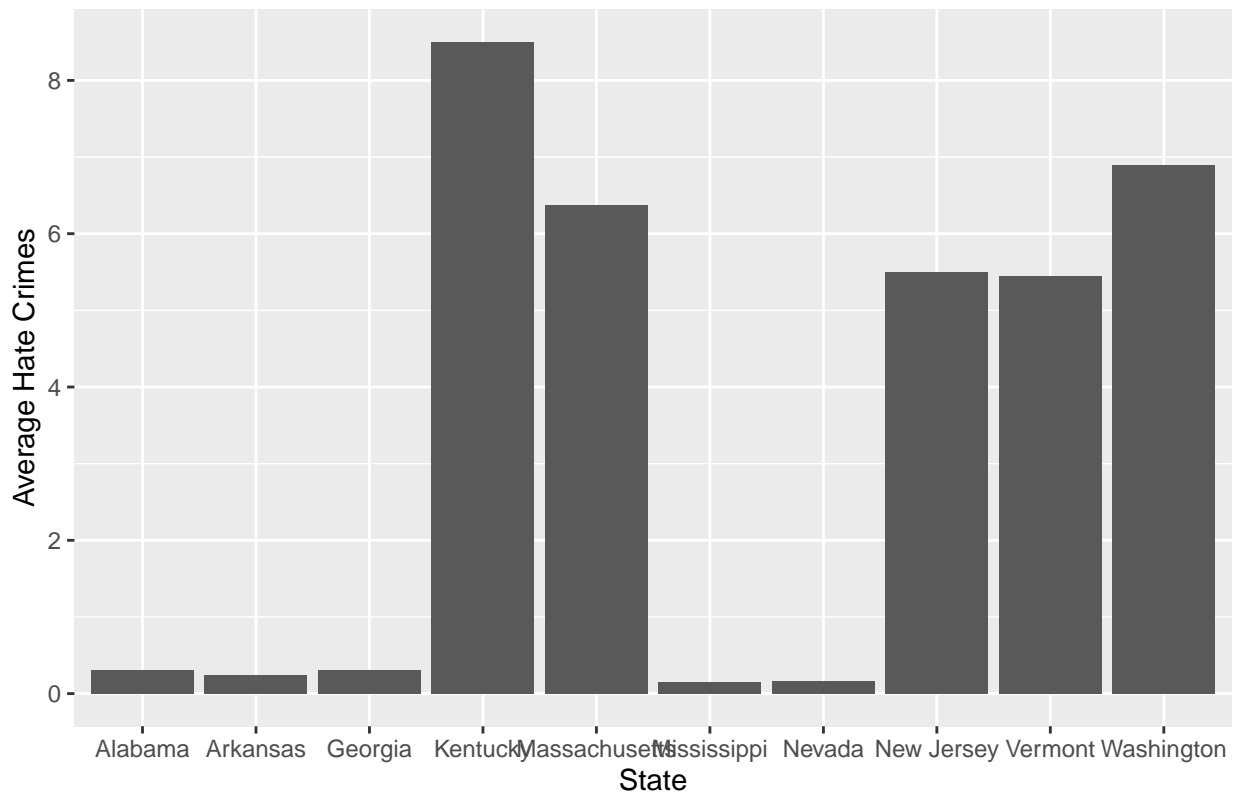
On the other hand, the data from the Southern Poverty Law Center combine both hate crimes and hate incidents, but the news reports that strengthen hate after the election may encourage people to report incidents that they would not have reported which will cause awareness bias. Do not even say some local officials do not have the training to tell what the hate crime is.

Hate Crime in USA (2017)

Avg annual hate crime per 100k residents

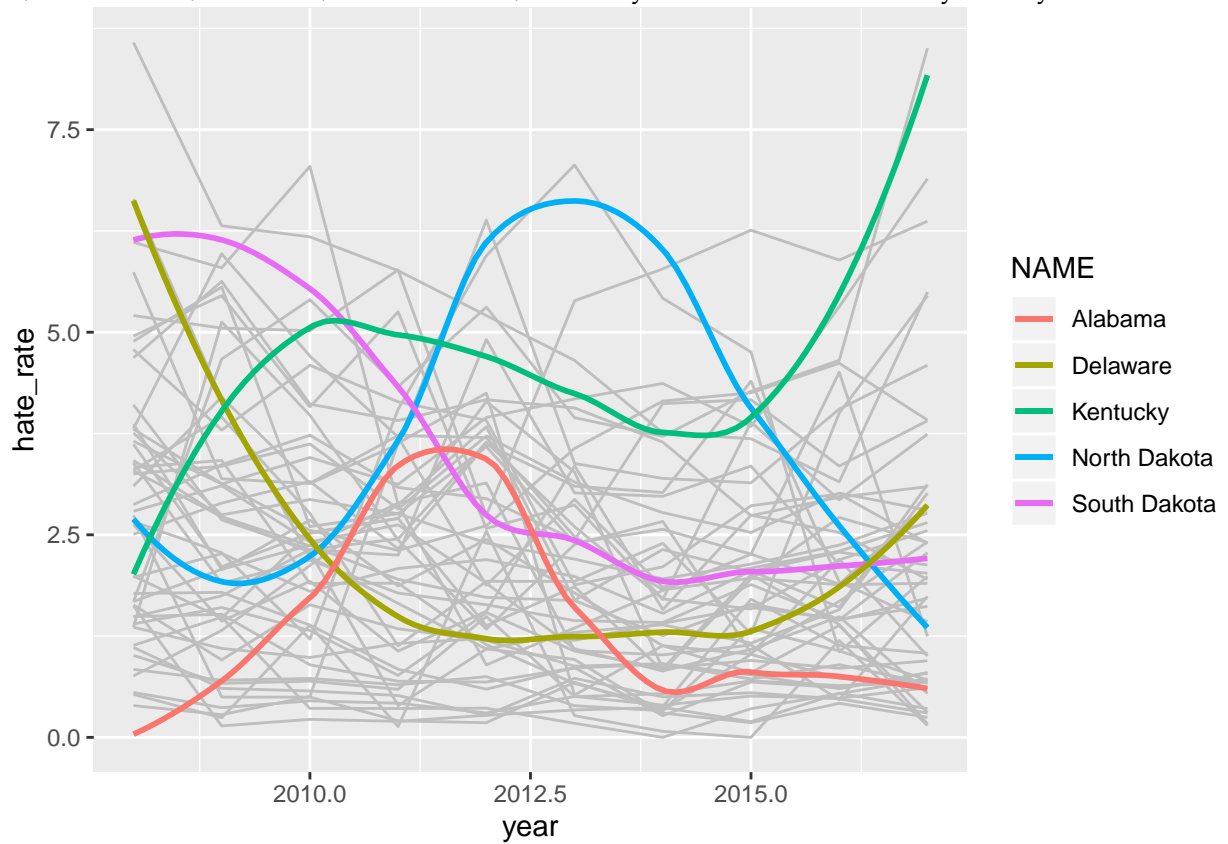


Highest Average Annual Hate Crimes



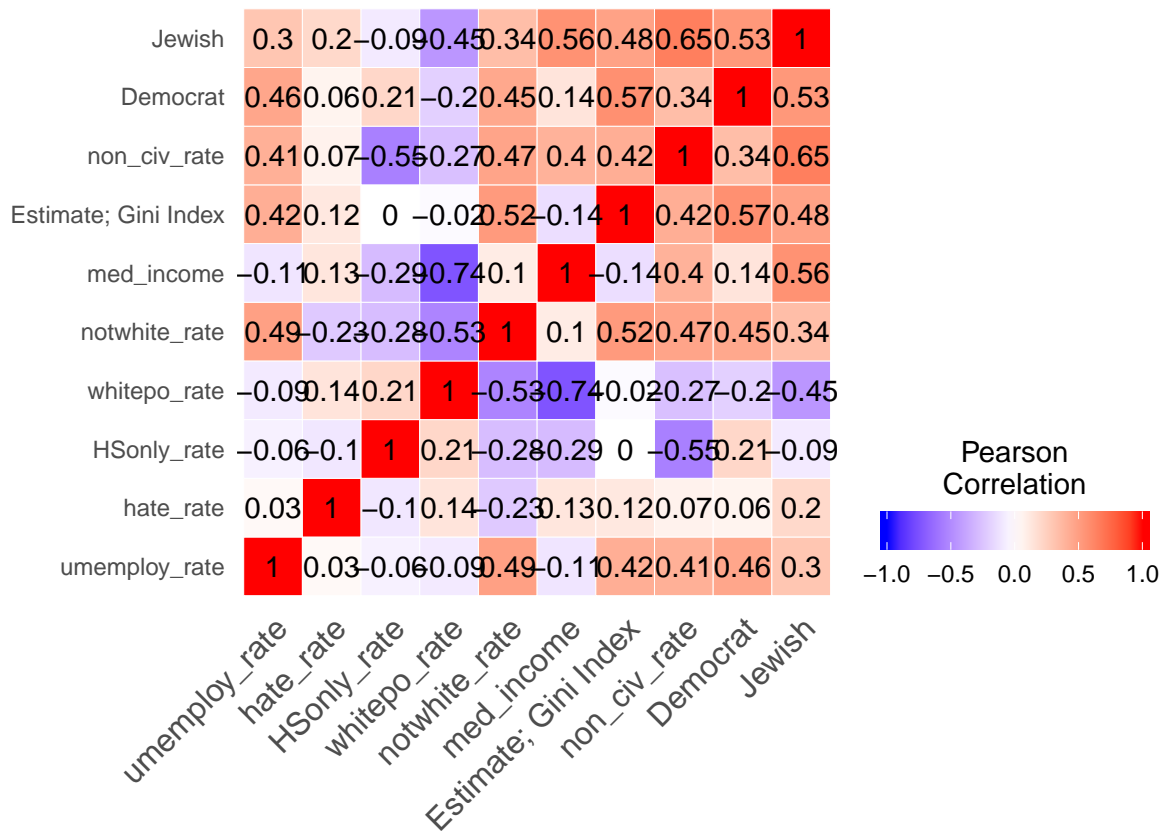
In some states, in recent years, the hate crime has a huge fluctuation, and some states suffering high hate crime rate. We can see that Kentucky has a severe problem in the hate crime, and Mas-

sachusetts New Jersey, Vermont, and Washington have the highest average annual hate crimes. Also, for the state, Alabama, North Dakota, etc. They have a vast difference year to year.



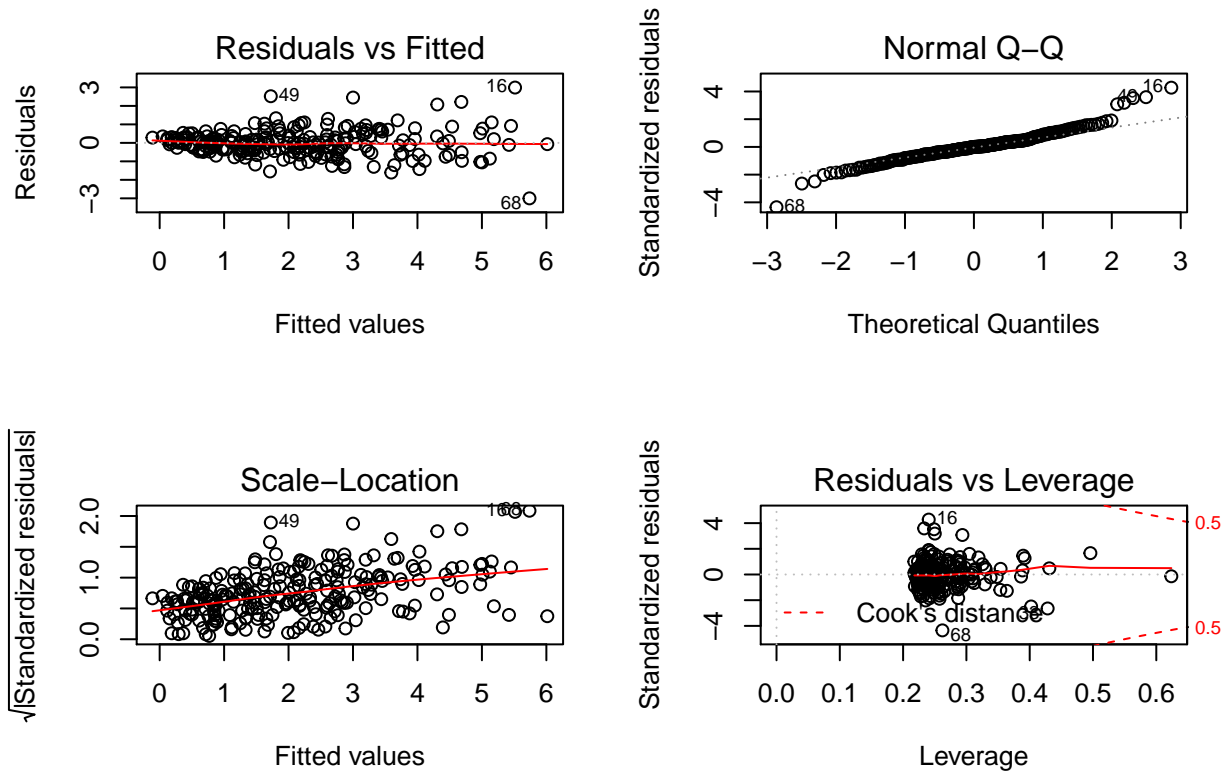
But why? What kind of factors influence these states? To solve this question, I create a regression model.

Before creating the model, we need to check the correlation between each variable we will use:



It is no surprise to see that the white people who have meager income related to the median income but, surprisingly, the Gini index has no relationship with people who own high school degree only. I think this is suspicious and keep this idea in mind.

Models:



These plots are pretty good, except there are a few of the outliers. Thus, we can use linear regression here. To see whether do we need the interaction term or indicator, and the variables make sense, I make four models here. The first model does not include any indicator and interaction term. The second model includes all the variables' square. The third model consists of two possible interaction term. The fourth model is the model I create to see if we have the overfitting problem. Also, all of the models include the time fixed effect and state fixed effect since I create panel data before. Here is how the table looks like:

From the result, we can barely see that there is a variable becomes significant after we add terms from the first three models. Instead, model 1 has the largest adjusted R square compare with the other two models (except "Filtered"). And also with a little bit lost of the R square, other models include more terms. After I run the AIC to filter some variables, I only have a litter improvement of the adjusted R squared. I want to say model 1, which has no indicator and interaction term performs best in this situation.

From the regression model, we can see the Gini index and white poverty people rate are the most two significant variables here. It is because these two are both the critical criteria for income

Table 1: Regression Result

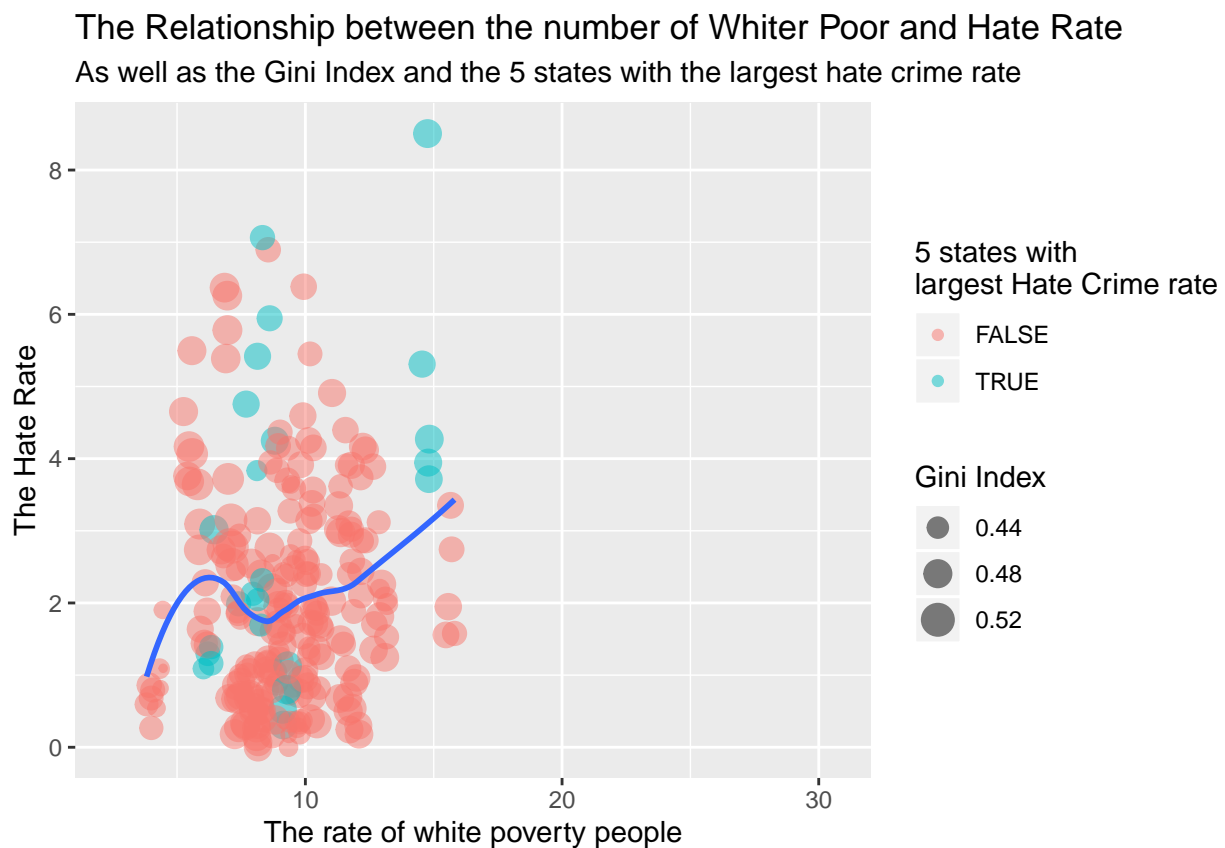
	Hate Crime Factors			
	Non Indicator	Indicator	hate_rate	Filtered
			Interaction Term	
	(1)	(2)	(3)	(4)
umemploy rate	−0.194	−1.528	−1.520	
umemploy rate square		0.126	0.129	
HS degree only rate	−0.916*	−0.456	−0.645	−1.006**
HS degree only rate square		0.005	0.009	
white poverty rate	0.952**	2.483*	2.648	1.125***
white poverty rate square		−0.078	−0.077	
non white rate	−0.198	0.614	0.695	
non white rate square		−0.016	−0.016	
median income	−0.0001	−0.002	−0.002	
median square		0.00000	0.00000	
Gini Index	31.875**	−298.400	−340.420	32.232**
Gini Index square		371.328	417.676	
non citizen rate	0.075	0.205	0.174	
non citizen rate square		−0.010	−0.014	
Democrat rate	0.008	0.092	0.092	
Democrat rate square		−0.002	−0.002	
Jewish rate	−0.093	0.391	0.086	
Jewish rate square		−0.067	−0.106	
non_civ_rate:Jewish			0.084	
whitepo_rate:notwhite_rate			−0.010	
Constant	2.436	80.481	87.789	−6.179
Observations	239	241	241	239
R ²	0.794	0.804	0.805	0.793
Adjusted R ²	0.724	0.723	0.721	0.730
Residual Std. Error	0.803 (df = 177)	0.807 (df = 170)	0.811 (df = 168)	0.793 (df = 183)
F Statistic	11.215*** (df = 61; 177)	9.963*** (df = 70; 170)	9.608*** (df = 72; 168)	12.728*** (df = 55; 183)

Note:

*p<0.1; **p<0.05; ***p<0.01

inequality, which is the most influenceable factor for the hate crime.

Maps for Wihter Poverty Prople and Hate rate:



As we can see, the regression line shows that the hate rate has the positive relationship with the poor people, and the five states which have the most massive hate rate have a significant point which means the Gini index is extensive and the income inequality is severe in these state which causes serious hate crime problem.

Recommendations

Our goal is to reduce or fix income inequality. Thus, we can do this from the following policies:

Education policies matter. We can see from the correlation table; high degree always leads to top pay.

Well-designed labor market policies and institutions.

Removing product market regulations that stifle competition can reduce labor income inequality by boosting employment.

Tax and transfer systems play a crucial role in lowering overall income inequality.

The personal income tax. We can apply the tax rate classification system.