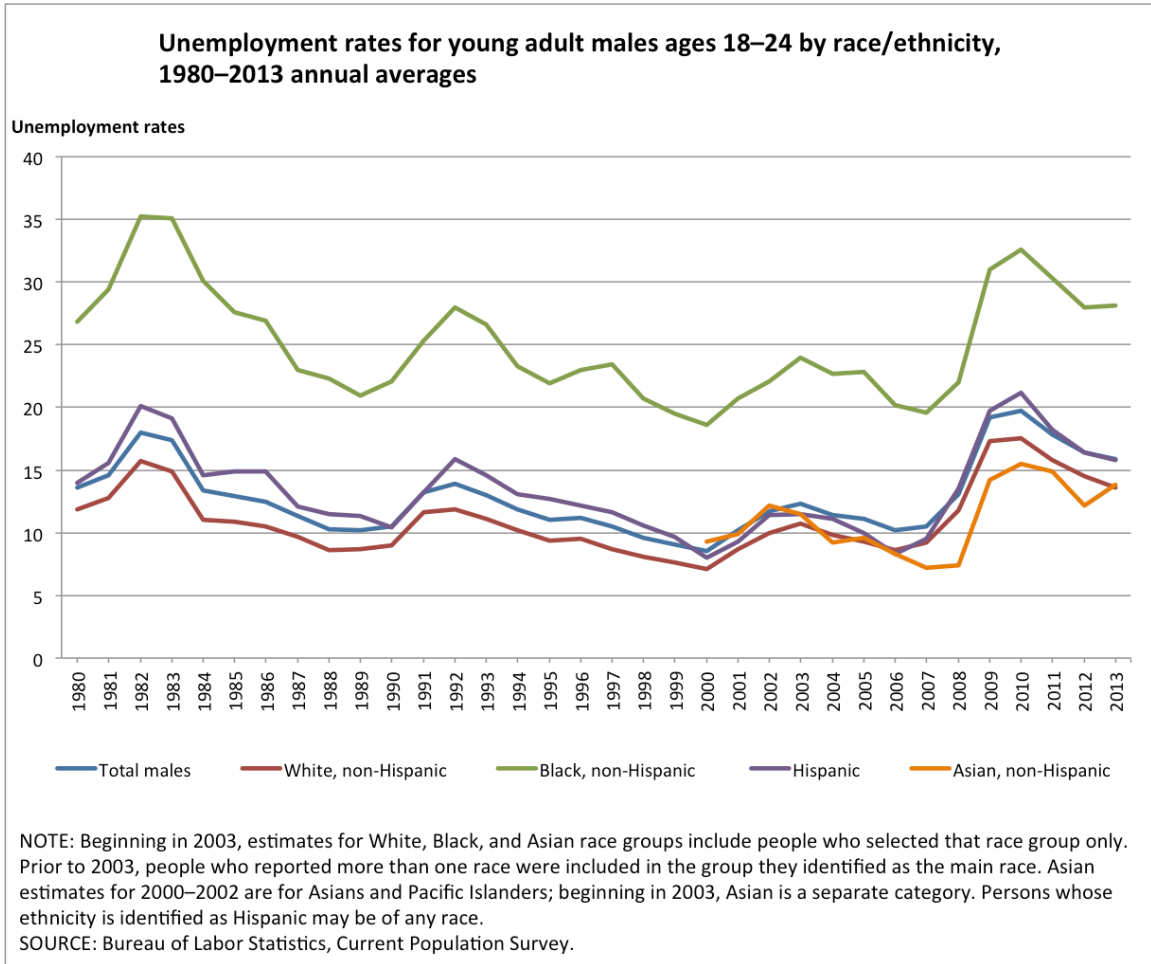
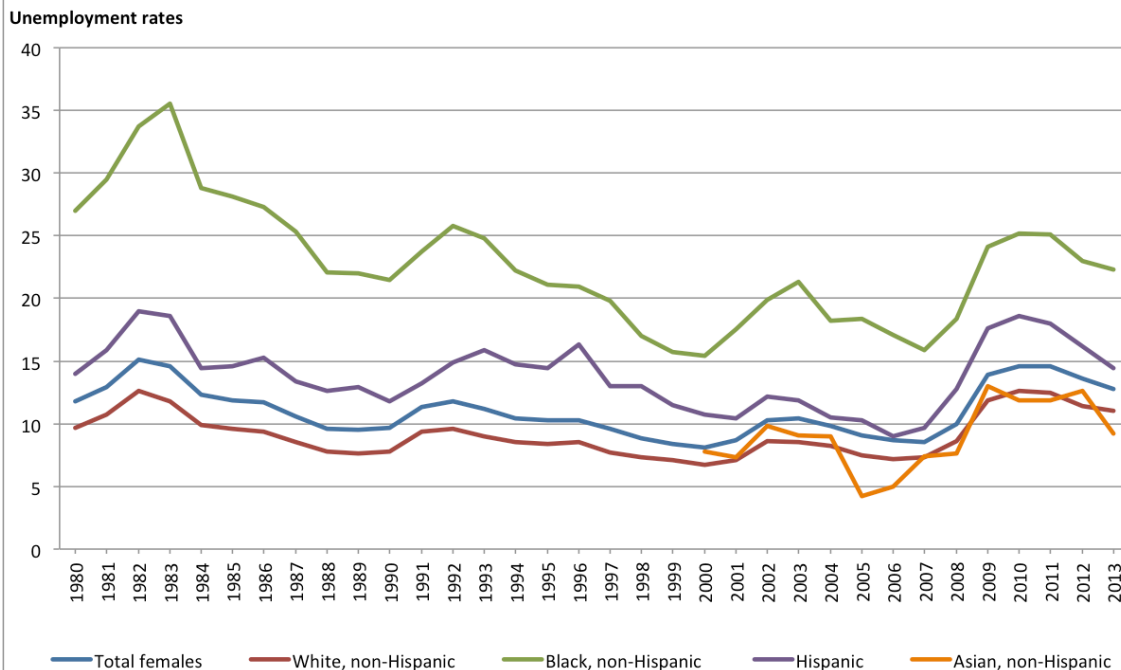


Black Unemployment – Essential Questions and Analysis for Ages 18-24

Created by: Roland Lucas
Modified: 1/17/16 3:43 PM



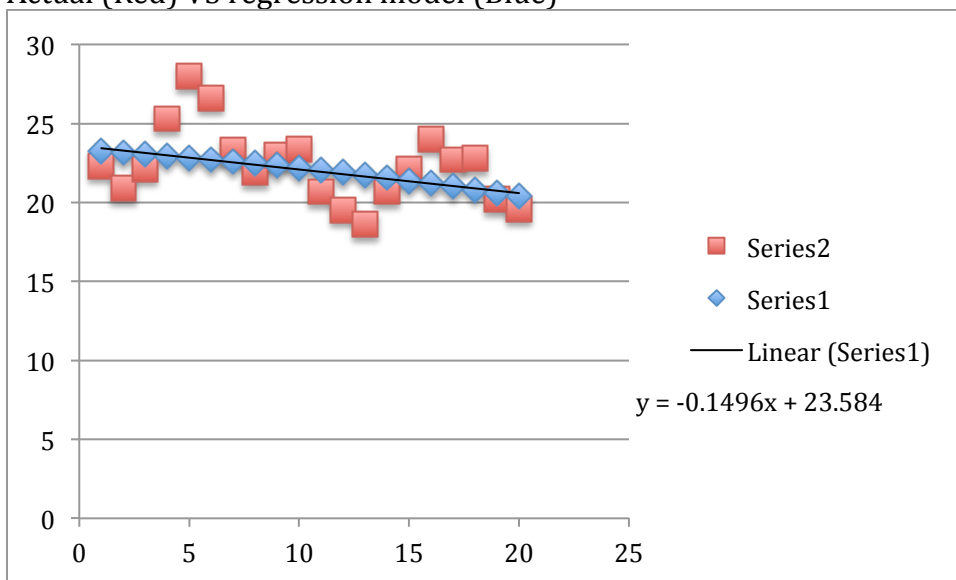
Unemployment rates for young adult females ages 18–24 by race/ethnicity, 1980–2013 annual averages



NOTE: Beginning in 2003, estimates for White, Black, and Asian race groups include people who selected that race group only. Prior to 2003, people who reported more than one race were included in the group they identified as the main race. Asian estimates for 2000–2002 are for Asians and Pacific Islanders; beginning in 2003, Asian is a separate category. Persons whose ethnicity is identified as Hispanic may be of any race.
 SOURCE: Bureau of Labor Statistics, Current Population Survey.

Regression model for Black male unemployment, ages 18-24:

Actual (Red) VS regression model (Blue)



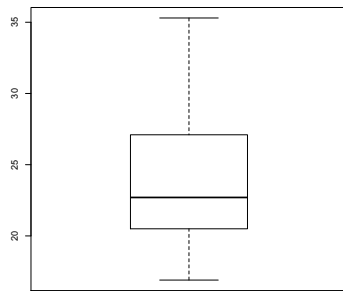
Years since 1980	Black Umemployment	White Umemployment	Diff.
0	26.9	10.9	16
1	29.5	11.8	17.7
2	34.6	14.3	20.3
3	35.3	13.5	21.8
4	29.5	10.5	19
5	27.8	10.3	17.5
6	27.1	10	17.1
7	24.1	9.1	15
8	22.2	8.2	14
9	21.4	8.2	13.2
10	21.8	8.5	13.3
11	24.5	10.6	13.9
12	26.9	10.8	16.1
13	25.7	10.1	15.6
14	22.8	9.4	13.4
15	21.4	8.9	12.5
16	22	9	13
17	21.4	8.2	13.2
18	18.7	7.7	11
19	17.5	7.4	10.1
20	16.9	6.9	10
21	19	8	11
22	21	9.3	11.7
23	22.6	9.6	13
24	20.3	9.1	11.2
25	20.5	8.5	12
26	18.7	8	10.7
27	17.7	8.3	9.4
28	20.1	10.3	9.8
29	27.5	14.8	12.7
30	28.8	15.2	13.6
31	27.7	14.3	13.4
32	25.4	13.1	12.3
33	25.1	12.4	12.7

Summary for Black unemployment, ages 18-24, using "R":

> summary(b)

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
16.90	20.62	22.70	23.89	27.05	35.30

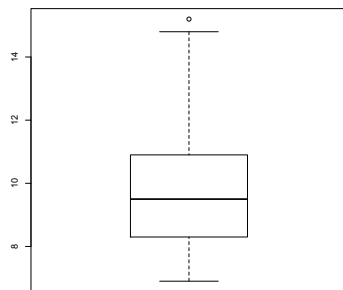
Boxplot of Black unemployment, ages 18-24, using "R":



Summary for White unemployment, ages 18-24, using "R".

```
> summary(w)
  Min. 1st Qu.  Median   Mean 3rd Qu.   Max.
  6.90  8.35  9.50 10.15 10.88 15.20
```

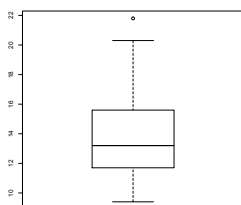
Boxplot of Black unemployment, ages 18-24, using "R":



Summary of difference between Black and White unemployment:

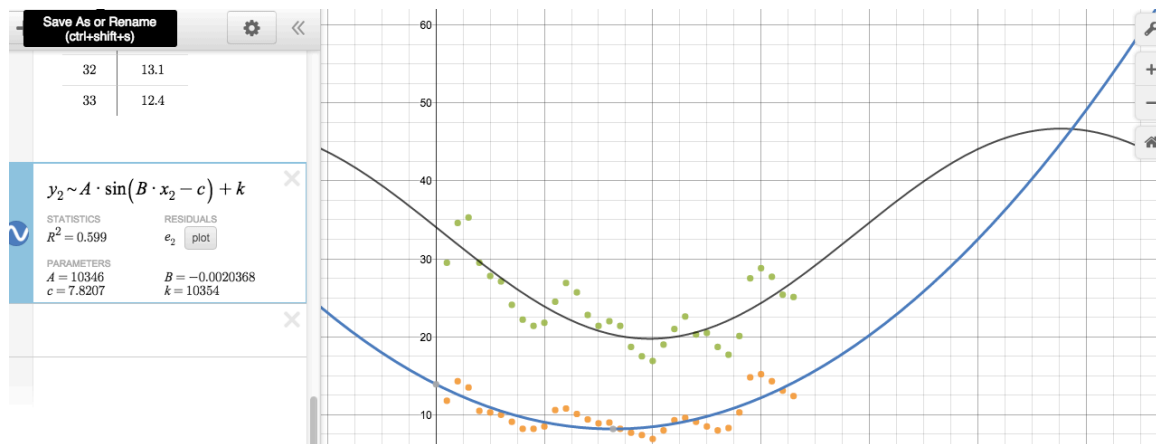
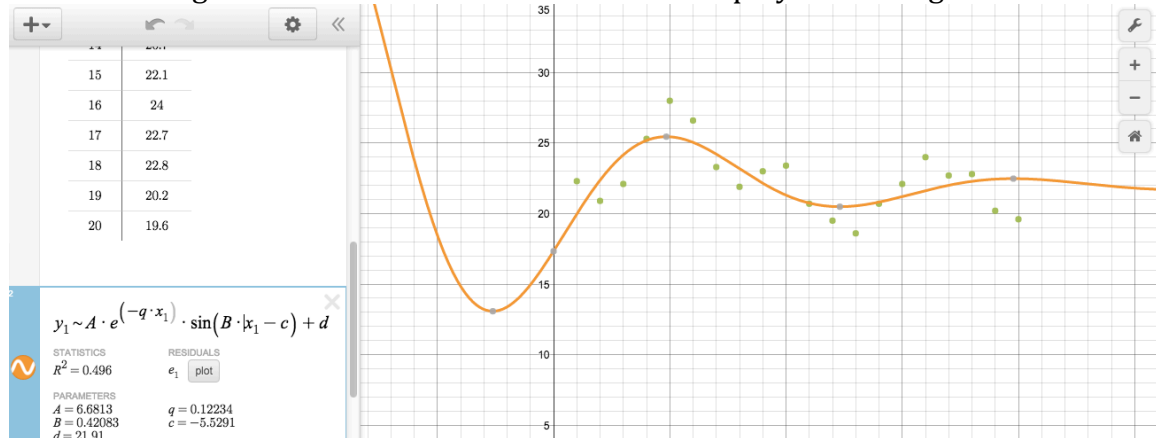
```
> summary(diff)
  Min. 1st Qu.  Median   Mean 3rd Qu.   Max.
  9.40 11.77 13.20 13.74 15.45 21.80
```

```
> boxplot(w)
```



Non-linear regression model of Black VS White unemployment using desmos.com

Non-linear regression model of Black VS White unemployment using desmos.com



Project detailed questions for modeling and comparing unemployment over time for Black and White demographic groups

- How has the Black unemployment rate, ages 18-24, been changing since 1980 to 20013?
 - Create a line graph of the unemployment rate over time.
 - Create regression lines (linear and non-linear) over the rates through time. Does the regression line predict an increase or decrease in the rate of Black unemployment over the next 5-10 years?
 - Create boxplots and summaries for the data using the “R” statistical tool.
- How has the White unemployment rate, ages 18-24, been changing since 1980 to 20013?
 - Create a line graph of the unemployment rate over time.

- Create regression lines (linear and non-linear) over the rates through time. Does the regression line predict an increase or decrease in the rate of White unemployment over the next 5-10 years?
- Do the regression lines of Black and White unemployment rates appear to converge, diverge or remain constant over time?
 - What is the average difference between Black males and White males?
 - If the graphs appear to converge, approximate the year when they will intersect.
 - How would you describe the transformation of the regression lines of Black unemployment in comparison to White unemployment? (Describe vertical shifts).
- How does the graph for females compare to males for both Whites and Blacks?
 - Create a line graph of the unemployment rate over time for White and Black females.
 - What is the average difference between males and females?
- Based on your observations with this data set, are there any grounds for expecting that Black men and Black women have different economic problems between them selves?
- What kinds of structural changes would you suppose need to occur in order to remove the gap between Black unemployment and White unemployment as evidenced with the data?