## NM2207 Week 9 Submission Gwen Teo (A0222116X)

20 word description: My final project will explore the role of gender discrimination and other factors that affect the Gender Wage gap.

1) What is your project about? (A 1-2 word answer that describes your main focus, e.g., climate change)

The Gender Wage Gap in the US.

2) What is the data you plan to use? (A link to the dataset with one sentence describing it)

Historical Income Tables, Census Data from United States Census Bureau <a href="https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-people.html">https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-people.html</a>

## Datasets extracted:

- Table P-2. Race and Hispanic Origin of People by Median Income and Sex
- Table P-16. Educational Attainment—People 25 Years Old and Over by Median Income and Sex
- Table P-40. Women's Earnings as a Percentage of Men's Earnings by Race and Hispanic Origin

Highlights of women's earnings in 2020, CPS earnings data from US Bureau of Labour Statistics (BLS) in 2020

https://www.bls.gov/opub/reports/womens-earnings/2020/home.htm Tables used:

- Table 2 Median usual weekly earnings of full-time wage and salary workers, by detailed occupation, 2020 annual averages [Numbers in thousands]
- Table 7 Median usual weekly earnings of full-time wage and salary workers, by marital status and presence and age of own children under 18 years old, 2020 annual averages
- 3) What is the question you plan to answer? (One sentence that ends with a question mark that could act like the title of your data story)
  - What are the factors that can explain the gender wage gap and how much of it can be credited to gender discrimination?
- 4) Why is this an important question? (Three sentences, each of which has some evidence, e.g., "According to the United Nations..." to justify why the question you have chosen is important

The gender pay gap has a compounding effect that results in a woman's reduced earning capacity over her lifetime. Gender equality in the workplace means

- ensuring that women have the same opportunities, and are paid the as much as men for equal work. *Will edit/touch up on this later*
- 5) Which rows and columns of the dataset do you plan to use, to answer this question? (Actual names of the values you plan to filter (rows) or subset (columns) the data on)

To emphasize the trend in gender wage differences across various factors, we can have a general view, education view and racial view of differences in wages.

- Table P-2. Race and Hispanic Origin of People by Median Income and Sex
  - o Table for 'All Races', filtered the median income for males and females
  - Plotted 'General View' chart: Median income for males and females from years 2000-2021.
- Table P-16. Educational Attainment—People 25 Years Old and Over by Median Income and Sex
  - Table for 'Bachelor Degree or Higher', filtered the median income for males and females
  - Plotted 'Educational Attainment View' chart: Median income for higher-institution-educated males and females from years 2000-2021.
  - Table P-40. Women's Earnings as a Percentage of Men's Earnings by Race and Hispanic Origin
    - Tables for White alone, non-Hispanic (31)/Black alone(33) /Asian alone (34)/Hispanic (any race) (4)
    - Plotted 'Race view' chart: (still not sure which chart to use)
      - 1) Earnings % line chart from years 2000 2021 by race
      - 2) Earnings % bar chart in year 2021 by race

To delve deeper into the reasons, we will explore 1) occupational segregation and 2) motherhood penalty. Occupational segregation is the theory where women self-segregate into lower-paying jobs for more temporal flexibility. Motherhood penalty is the penalties that mothers incur in their wages when they leave the workforce to take care of children. Men do not suffer the same penalty.

- Table 2 Median usual weekly earnings of full-time wage and salary workers, by detailed occupation, 2020 annual averages [Numbers in thousands]
  - Filtered the number of workers for men and women in several occupations: Management, business, and financial operations occupations/Professional and related occupations/Computer and mathematical occupations/Education, training, and library occupations/Healthcare practitioners and technical occupations/Service occupations/Sales and office occupations/Office and administrative support occupations/Natural resources, construction, and maintenance occupations/Production, transportation, and material moving occupations
  - o Calculated the % of women and men in each of the occupations

- Table 7 Median usual weekly earnings of full-time wage and salary workers, by marital status and presence and age of own children under 18 years old, 2020 annual averages
  - Median weekly earnings from married men and women with children under 18 and 6 years

I plan on supplementing both with more data from papers/articles in the next weeks!

## Outline:

- 1) What is the gender wage gap and why is it important?
- 2) Datasets used and general trends
- 3) Research Insights: Occupational segregation & Motherhood penalty
- 4) Conclusion & References
- 5) Contact me form (?)

Session	Concept	How I've used it	Line number	Filename
1/2	Relative paths	Add a few icons on the webpage, including the navigation bar, the main header and in a few sections in the body.	21, 55, 68, 151	index.html
2	Adding links to a paragraph	Linked to the data source	73	index.html
3	Declaring variables and assigning values to them	Declared variables to create charts from either a .csv dataset or by typing out data.	Throughout main.js file	main.js
4	Functions	Used functions to create charts from .csv files  Planning on using functions to help design a button that will be able to change the view of the chart – from a general to an education and race view.	Still figuring it out	main.js
4	buttons	Create buttons for the different views of the chart	93-95	index.html
4&5	getElementbyId and event listeners	Planning on using getElementbyId to design a button that will be able to change the view of charts with a click	Still figuring it out	main.js
5	Arrays	Use arrays to store values in constants and datasets to create charts	Throughout main.js file	main.js
7	Canvas element	Created a canvas element for the charts I created	99,104,107, 124,140	Index.html
7&8	Bar charts	Created bar charts with 2 categories, one for males and females	Line 245 - 289 Line 295 - 357 Line 359 - 421	main.js
9	FetchApi	Created linecharts using FetchAPI to get data from the .csv files in my github portfolio	Line 6 -75 Line 80 -149 Line 151- 243 (Commented out)	Main.js