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NM2207 Week 10 submission

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)**

   The dataset features historical income tables of census data, categorized by age, race, origin, education and more, from the United States Census Bureau.
   Link: https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-people.html

   Datasets extracted for project:
   - 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

   The dataset features women's CPS earnings data in 2020, from the US Bureau of Labour Statistics.
   Link: https://www.bls.gov/opub/reports/womens-earnings/2020/home.htm

   Tables used for project:
   - 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)**

   Research question: 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 wage gap is an important symbol of inequality for men and women. According to WGEA Australia (2020), the gender pay gap has a compounding effect that results in a woman's reduced earning capacity over her lifetime, leading to less career progression and less security for retirement. While individual factors such as education, working time, occupational segregation, skills, or experience can explain a portion of the gender pay gap, the International Labour Organisation reports that discrimination based on one's gender remains a significant part of the problem.

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
  - Table for 'All Races', filtered the median income for males and females
  - Plotted 'General View' line 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' line 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:
    - 1) Percentage earnings of females to males line chart from years 2000 – 2021, by race
    - 2) Percentage earnings bar chart in year 2021 only 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 that are usually classified as 'women's work' and 'men's

work'. This includes: 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 to view the concentration of women in each industry

- 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
  - o Median weekly earnings from married men and women with children under 18 and 6 years