## **Questions of Interest**:

1. What’s the relation between education level and employment rate gap?
   * Data we need:
     + Average Education level (for females and/or Males?)
     + Women's labor force participation
     + Mens labor force participation
2. Are birth rates correlated to unemployment rate (by education level)?
3. What are the differences between paternity and maternity leave in the United States?
4. What is the correlation between GDP and women’s labor participation?
5. How does women’s labor participation rate change over time?
6. How much of the global labor rate gap is due to cultural norm differences?

## **Indicators for Questions of Interest**:

Note: The indicators are chosen from world bank gender portal in each sector

<https://genderdata.worldbank.org/topics/employment-and-time-use>

1. What’s the relation between education level and employment rate gap?
   * Education
     + [Primary completion rate (% of relevant age group)](https://genderdata.worldbank.org/indicators/se-prm-cmpt-zs) → We have a secondary completion rate
     + [School enrollment, primary (%)](https://genderdata.worldbank.org/indicators/se-prm-enrr)
     + [School enrollment, secondary (%)](https://genderdata.worldbank.org/indicators/se-sec-enrr)
     + Gender Parity Index(GPI)
   * Employment and Time Use
     + Labor force participation rate, female (% of female population ages 15+) (modeled ILO estimate)
     + [Labor force by level of education (%)](https://genderdata.worldbank.org/indicators/sl-tlf-zs)
     + [Unemployment by level of education (%)](https://genderdata.worldbank.org/indicators/sl-uem-elv-zs)
2. Are birth rates correlated to unemployment rate (by education level)?
3. What are the differences between paternity and maternity leave in the United States?
4. What is the correlation between GDP and women’s labor participation?
5. How does women’s labor participation rate change over time?
   * Employment and Time Use
     + [Employment to population ratio (%)](https://genderdata.worldbank.org/indicators/sl-emp-sp-zs)
     + [Labor force, female (% of total labor force)](https://genderdata.worldbank.org/indicators/sl-tlf-totl-fe-zs)
     + [Part time employment (% of employment)](https://genderdata.worldbank.org/indicators/sl-tlf-part-zs)
     + Proportion of time spent on unpaid domestic and care work, female (% of 24 hour day)
     + Unemployment, female (% of female labor force) (modeled ILO estimate)
6. How much of the global labor rate gap is due to cultural norm differences?
   * Norms and Decision making
     + A woman has the same rights to remarry as a man (1=yes; 0=no)
     + [A woman can get a job in the same way as a man (1=yes; 0=no)](https://genderdata.worldbank.org/indicators/sg-get-jobs-eq)
     + [A woman can work in an industrial job in the same way as a man (1=yes; 0=no)](https://genderdata.worldbank.org/indicators/sg-ind-work-eq)
   * Employment and Time Use
     + Employment in agriculture, female (% of female employment) (modeled ILO estimate)
     + [Employment by sector (%)](https://genderdata.worldbank.org/indicators/sl-empl-zs)
     + [Employment to population ratio (%)](https://genderdata.worldbank.org/indicators/sl-emp-sp-zs)
     + [Labor force participation rate (% of population)](https://genderdata.worldbank.org/indicators/sl-tlf-acti-zs)

STEPS for EMPLOYMENT AND TIME USE DATASET:

1. Filter data by indicators
2. Transform to put year and country in row (country as primary index and year as secondary) and indicator in columns
3. Delete some values in the excel so we have some data to clean

STEPS for

TIMELINE (MARKDOWN FORMAT)

\* Data Collection - Shaunak - 10/19

\* Data Filtering - Shaunak - 10/24

\* Data Selection - Shamit 10/25

\* Handling Missing Data - Ishita - 10/28

\* Data Transformation and Merging - Siddhant - 10/31

\* Data Cleaning - Yue - 11/6

\* Data Processing - Asheer - 11/9

\* Data Analysis (DA) - Siddhant - 11/15

\* DA: Educational Attainment vs. Employment Rate - Yue - 11/18

\* DA: Birth Rates vs. Unemployment Rates - Andreas - 11/18

\* DA: Comparison of Paternity and Maternity Leave - Asheer - 11/18

\* DA: Global Gender Employment Gap and Cultural Norms - Shamit - 11/18

\* DA: GDP vs. Women's Labor Participation - Shaunak - 11/20

\* DA: Trends in Women's Labor Participation - Yue - 11/20

\* DA: Correlation - Construct correlation

matrices to identify relationships between socio-economic

factors and gender disparities - Andreas - 11/20

\* Comparison of Employment Disparities at Different Education

Levels - Asheer - 11/22

\* Predicting Future Trends - Siddhant - 11/22

\* Inference from all Processing and Analysis - Ishita - 11/25

\* Completion of Final Analysis and Observations - Andreas - 11/25

\* Document Verification and Assignment Submission - Shamit - 12/1