

Project Presentation: Gender Inequality

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Project Goal and Focus

Questions:

- Is the Wage Gap still occurring, and what are its root causes?
- Is gender inequality as prevalent in the US as it is in other less developed nations?
- What gender inequality issues are common besides the wage gap?

Background/Motivation:

According to American Association of University Women, women working full time in the U.S. are still paid just 83 cents to every dollar earned by men. Studies show that the wage gap has been decreasing overtime, but the issues for women don't just start and stop at the monetary disparities. Women experience unique and unfortunate circumstances that hinder them greatly, all around the world.

This project will be used to dig deeper into what issues effect women today, as well as what aspects of the modern world contribute to them.

Model

Data Science: Statistical Analyzing

- Statistical Analyzing
- Linear Regression
- Plotting the Data
- Comparing conclusions to current educational research results.

What data was used:

- Data from The Organization for Economic Co-operation and Development (OECD)
- Data from CORGIS: The Collection of Really Great, Interesting, Situated Datasets
- Comparative research from UNICEF, Inequality.org, Times Magazine, Harvard Articles, AAUW.

Computational Techniques

Linear Regression

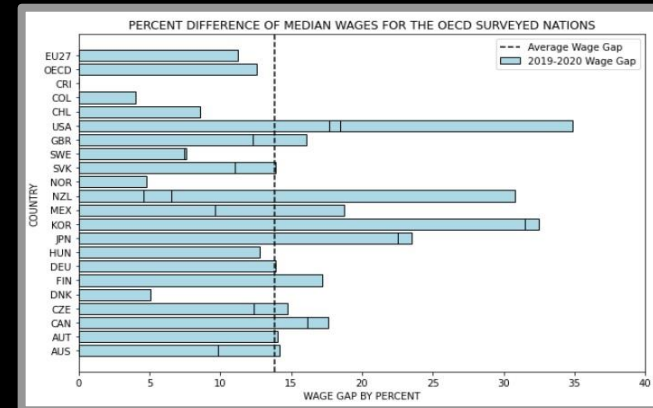


Statistical Analyzing

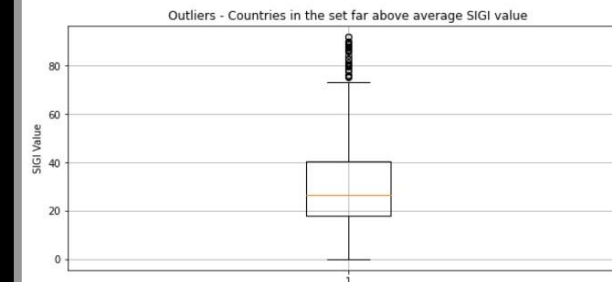
- Interquartile Range (IQR) for removing outliers
- RMSE for checking the accuracy of the best fit line
- Finding averages and standard deviations

```
1 Q25 = np.percentile(Wage_Gap["Value"], 25, interpolation = 'midpoint')
2 Q75 = np.percentile(Wage_Gap["Value"], 75, interpolation = 'midpoint')
3 IQR = Q75 - Q25
4 print("Percentiles:", "25th =", Q25, "75th =", Q75, "IQR =", IQR)
5
6
7 Cut_Off = IQR * 1.5
8 lower_cut = Q25 - Cut_Off
9 upper_cut = Q75 + Cut_Off
10
11 # Getting the outliers:
12 Outliers = []
13 for i in Wage_Gap["Value"]:
14     if i > upper_cut or i < lower_cut:
15         Outliers.append(i)
16 print("These are the outliers in the dataset:", Outliers)
17
18 # Removing them for a clean set:
19 Mask = ((Wage_Gap["Value"] > lower_cut) & (Wage_Gap["Value"] < upper_cut))
20 Wage_Gap2 = Wage_Gap[Mask]
21 print("Length before removed,", len(Wage_Gap), "Length after outliers removed,", len(Wage_Gap2))
```

Plotting



The countries: Yemen, Iran, Lebanon, Jordan, TOGO, have the highest SIGI.



Results

Is the Wage Gap still occurring, and what are its root causes?

Yes, the difference between men and women's average/median earnings is still significant and occurs worldwide.

From the research I have done, the primary cause in the developed nations seems to be income inequality.

For global occurrences, the primary causes are the lack women holding positions of power, occupational segregation, and restricted civil liberties.

Is gender inequality still prevalent in the US as it is to less developed nations?

Yes, gender inequality still occurs in the United States, although it is not as frequent, or as at large, as the issues that plague other less developed nations. This does not make the issue any less important.

My results show that in many instances, it has gone significantly down overtime, such as the wage gap and violence against women globally.

What other gender inequality issues are common besides the wage gap?

The OECD sets provided data on SIGI, which is a survey of a geographic area where women measure their overall rights and liberties. This data showed that women still do not have equal rights, ownership, or liberties in many countries.

The common gender inequality issues are as follows:

- Lack of civil liberties/personal rights in less developed nations.
- Occupational Segregation.
- Not enough Women holding political/governmental positions of power that can effect change.
- Violence against women globally.