Women and Economy

Gender Wage Gap Project

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I am analyzing the gender wage gap between **Physicians** in Ohio for one given year. To narrow it down, I have chosen the industry of Offices and Clinics of Physicians.

The profession of a Physician requires on average more years of education than many other careers, so as you can see after filtering out the Physicians by their respective industry, everyone in the list have 5+ years of education.

Later, I filtered out Male physicians and Female physicians in Offices & Clinics of Physicians Industry.

To show a gender wage gap between male and female income using a data visualization, I have created two scatter plots considering their age and hourly wages.

The hourly wages for men are scattered all over the graph and generally it shows a trend of increment with increasing age, whereas the trendline for women physicians is almost horizontal over the years.

The trendline shows that for every additional year of experience, hourly wages for men increase by 53.5 cents, whereas for women it increases by 16.2 cents

This shows the trend we discussed in class that when women enter the workforce which changes quite frequently with technological innovations and discoveries, their gross benefit is not visible much, because they might take some years off for childcare or other family reasons. Whereas men seem to have gained experience over those years and so their trendline is positively correlated.

This shows that gender wage gap exists in the same profession with the same education!

For my regression, I considered the variables Marital Status and Hours worked per week to come up with the unadjusted and adjusted wage gap as well as explained and unexplained wage gap differences.

I took regression for men and women considering 2 variables and came up with following data: -

|  |  |  |  |
| --- | --- | --- | --- |
| **Men** | | **Women** | |
| Intercept | 161.465515 | Intercept | 147.775869 |
| Married (Coefficient) | 23.223187 | Married (Coefficient) | 35.3133822 |
| Married (Mean) | 0.88571429 | Married (Mean) | 0.77142857 |
| Hours worked per week (Coefficient) | -1.3363475 | Hours worked per week (Coefficient) | -1.4864106 |
| Hours worked per week (Mean) | 51.7714286 | Hours worked per week (Mean) | 42.0571429 |

For Men, each year of marital status increases the hourly wage by $23.22 & hours worked per week decreases the hourly wage by $1.34

For Women, each year of marital status increases the hourly wage by $35.31 & hours worked per week decreases the hourly wage by $1.49

|  |  |
| --- | --- |
|  | 112.849999 |
|  | 112.503439 |
|  | 123.177582 |
| Gender Wage difference | 0.346560203 |
| Explained difference | -10.32758331 |
| Unexplained difference | 10.67414351 |
| Unadjusted wage gap | 0.9969 |
| Adjusted wage gap () | 0.9133 |

Here, the explained gender wage difference is negative which means that there is no explained gender wage difference between physicians based on marital status and hours worked per week, but whatever gender wage difference is portrayed is due to unexplained factors.

I believe the other reason women get paid less is because as **Stacey Vanek Smith** mentioned in her book that women are shy when it comes to asking for a raise or negotiating salary because it makes them look not compassionate enough. And then she goes on talking about how a transformational leadership can make all the difference and it is quite effective in motivating people as well, so women in the workforce should apply it in their work life!

For the theoretical graph, I have considered hourly wages of white men and white women. When I graphed it out, I got the following trendlines: -

White Men – y = 0.4169x + 89.291

White Women – y = -0.7758x + 141.56

This suggests that for every additional year of experience, hourly wages for white men increase by 41.69 cents, whereas for women it decreases by 77.58 cents.

I presented that information in two theoretical graphs.

***Earnings***M

***Age***M

*D*2

*D*1

***E***2

***E***1

*S*M

Assume that supply of white men and women is constant. When white men get into the profession of a physician after completing their education, their hourly wages are low because of no experience but as they gain more experience, generally their earnings increase with their age.

Whereas, when women enter the workforce, their hourly wage is little less than that of men in the same profession for the entry level job. Also, over the years, white women might take some years off work when they get pregnant or for childcare and lose that time of experience. So, when women re-enter the workforce, their earnings stay low because of the lost years of experience.

***Earnings***W

***Age***W

*D*1

*D*2

***E***1

***E***2

*S*W

References

Smith, Stacey Vanek. *Machiavelli for Women: Defend Your Worth, Grow Your Ambition, and Win the Workplace*. GALLERY Books, 2022.