

On the Gender Pay Gap in the Philippines and the Occupational Placement and Educational Attainment Levels of Men and Women in the Labor Force

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ABSTRACT

An investigation on the current gender pay gap in the Philippine labor market was conducted based on the results of the July 2018 Labor Force Survey through a Blinder-Oaxaca decomposition methodology. Unadjusted, the pay gap against women is at 4.84%, with the geometric means of pay for men and women at ₱361.60 and ₱344.91, respectively. However, with the independent adjustments on the pay gap based on the educational attainment and primary occupations of the respondents, the results show an increase in the pay differential, respectively, to 26.8% and 24.5%. The analyses reveal that decisive advantages of women, in terms of basic pay, with respect to occupational placement and educational attainment levels, mask the existence of a large (currently unattributed) pay gap in the country's labor force. The independent and concurrent effects of occupational placement and educational attainment levels on the current pay gap are further examined in detail.

Keywords: pay gap, wage gap, gender, labor, Philippines, Oaxaca-Blinder, decomposition

1. Introduction

The gender pay gap, defined as the average difference between incomes of men and women, is one of the indicators of the current status of gender equality in the society. As such, a thorough investigation on the current gender pay gap in a country could provide insights and policy solutions to gender inequality issues both inside and outside the workplace.

On studies involving gender pay gap, a distinction must be emphasized between the so-called adjusted and unadjusted pay gap. The unadjusted pay gap is the raw relative difference between incomes of men and women, while the adjusted pay gap is the calculated relative difference between incomes when certain factors, such as differences in hours worked, occupations chosen, education, and job experience, are taken into account. The idea of the adjusted gender pay gap, thus, aims to eliminate the compounded effect of the multidimensionality of gender inequality through the calculation of the pay differentials from the perspective of the workplace alone.

One of the most comprehensive studies on gender gap is the Global Gender Gap report published annually by the World Economic Forum. The Global Gender Gap report includes the Global Gender Gap Index which evaluates the gender gap in a country across four major areas: health, education, economy, and politics. In the 2016 Global Gender Gap Report, the estimated average global income for women was at \$10,778 as compared to \$19,873 for men suggesting a large (unadjusted) wage gap between the two sexes. The report reveals that men, on average,

do only about 34% of the amount of unpaid work women do, which could possibly be an indirect measure of differences in the total hours worked and, therefore, the total annual income of the two sexes. The report also showed that upon examination of post-secondary education, only 16% of females had degrees in STEM fields as compared to 30% of males [1].

An undertaking that involved the calculations of adjusted gender wage gap in select countries was conducted by the website Glassdoor in 2016. Consistent with previous findings, the study revealed that the unadjusted gender wage gap in the United States was at around 24.1% [2]. However, when age, education, and years of experience are taken into account, the gap is reduced to 19.2%. Further, when factors such as job title, employer, and location are finally taken into account, the gap is narrowed to 5.4%. The results suggest that most of the observed unadjusted gender wage gap is due to differences in career choices between men and women. However, despite the considerations discussed, a difference of 5.4% between the wages of the two sexes still remains. While the results could suggest a possible gender discrimination in work environments, the remainder of the unexplained wage gap could also be attributed to factors not considered in the study.

In the Philippines, studies involving gender pay gap are either scarce or nonexistent. Thus, for this paper, the researchers aimed to conduct an investigation on the gender pay gap in the country.

2. Methodology

2.1 The Blinder-Oaxaca Decomposition

The Blinder-Oaxaca is a widely used methodology in studies involving labor-market outcomes by groups (sex, race, and so on). In the procedure, the mean differences in log wages is decomposed based on linear regression models. The wage differential between two groups is divided into two parts: the part that is explained by group differences in productivity characteristics, such as education and work experience, and the “unexplained” part that is not accounted for by the selected predictors. The “unexplained” part is mostly used as a measure of gender discrimination in the work environment but is also dependent on the effects of predictors not considered in the equation [3].

The mean outcome difference of the two groups A and B, with outcome variable Y , is given as

$$R = E(Y_A) - E(Y_B)$$

where $E(Y)$ denotes the expected value of the outcome variable.

Based on the linear model

$$Y_l = X_l^T \beta_l + \epsilon_l; E(\epsilon_l) = 0$$

where X is a vector containing the predictors and a constant, β contains the slope parameters and the intercept, and ϵ is the error, the mean outcome difference is given by

$$R = E(Y_A) - E(Y_B) = E(X_A)^T \beta_A - E(X_B)^T \beta_B$$

A twofold decomposition is based on the idea that a nondiscriminatory coefficient vector could be used to determine the contribution of differences in the predictors. Let the nondiscriminatory vector be defined as β^* . Then the outcome difference can be expressed as

$$R = \{E(X_A) - E(X_B)\}^T \beta^* + \{E(X_A)^T (\beta_A - \beta^*) - E(X_B)^T (\beta^* - \beta_B)\}$$

The first component

$$Q = \{E(X_A) - E(X_B)\}^T \beta^*$$

is the part of the outcome difference that is explained by the group differences in the predictors, termed as the “quantity effect”.

The second component

$$U = \{E(X_A)^T (\beta_A - \beta^*) - E(X_B)^T (\beta^* - \beta_B)\}$$

is the “unexplained” part of the outcome differential and is usually attributed to discrimination but, in reality, also captures all potential effects of differences in unobserved variables.

2.2 July 2018 Labor Force Survey

The data used in the study is based on the July 2018 Labor Force Survey results obtained from the official website of the Philippine Statistical Authority. The data includes information on 182,956 respondents sampled from the country through the 2013 Master Sample Design.

The 2013 Master Sample Design is a two-stage cluster sampling design for household surveys with barangays, or group of small adjacent barangays, as the primary sampling units (Enumeration Areas) and the households within the barangays as the secondary sampling units. The 2013 Master Sample frame for the July 2018 Labor Force Survey was constructed from the results of the 2015 Population Census.

3. Results and Discussion

For the study, the basic per day was selected as the outcome variable for two groups: men and women. The (geometric) mean of pay of the respondents was determined to be at ₱355.31 where the mean pay for men and women are ₱361.60 and ₱344.91, respectively. Thus, unadjusted, the pay gap is at 4.84%. The predictor variables considered were age, geographical location (region), highest grade completed and primary occupation of the selected respondents. For the continuous variable, age, however, a twofold decomposition shows that, at a 0.05 level of significance, the age of the respondents does not explain the pay differential between the two gender groups.

For the case of the categorical variable, region, a twofold decomposition shows that the geographical location of the respondents (by regions) does not explain the pay differential between the two groups. The decomposition further reveals that when the geographical location of the respondents are taken into account, the pay differential against women increases to 7.17%. The result implies that women have a slight advantage in pay with respect to geographical location. The most significant contribution to such an advantage is the slightly higher proportion of women workers, at 40.53%, in the National Capital Region (the region with highest average

basic pay), as compared to the overall proportion of 37.15%, coupled with the fact that the region accounts for almost a quarter of the labor force.

For the case of the categorical variable, primary occupation, a twofold decomposition shows that the primary occupation of the respondents does not explain the pay differential between the two groups. The decomposition further reveals that when the primary occupation of the respondents are taken into account, the pay differential against women increases to 24.5%. The result implies that women have a definitive advantage in pay with respect to occupational placement. The most significant contributions to such an advantage are: (i) the disproportionately high proportion of women, at 66.21%, in the category of Professionals – the highest paid occupation (Women comprise 37.15% of the total labor force.); (ii) the high proportion of men, at 70.25%, in the category of Elementary Occupation Workers – the lowest paid occupational group – coupled with the fact that the category accounts for more than a third of the country’s entire labor force (Men comprise 61.85% of the total labor force.); and (iii) the overwhelmingly high proportion of men, at 89.81%, in the category of Craft and Related Trades Workers – the second lowest paid occupational group.



Table 1: BASIC PAY BY PRIMARY OCCUPATION

Primary Occupation	Basic Pay
Professionals	₱787.88
Armed Forces	₱734.96
Managers	₱599.65
Technicians	₱496.44
Clerical Support	₱475.85
Plant Operators	₱395.19
Crafts Workers	₱364.70
Fishery Workers	₱313.89
Services Workers	₱309.12
Elementary Occupations	₱250.62

For the case of the categorical variable, grade, a twofold decomposition shows that the highest educational attainment of the respondents does not explain the pay differential between the two groups. The decomposition further reveals that when the highest educational attainment of the respondents are taken into account, the pay differential against women increases to 26.8%. The result implies that women have a definitive advantage in pay with respect to educational qualification. The most significant contributions to such an advantage are: the disproportionately high proportion of women, at 58.20%, in the category of College Graduates and Post-Graduates – the second highest paid category – coupled with the fact that the category accounts for almost a quarter of the country’s entire labor force; and the relatively high proportion of men, at 77.30%, 70.62%, and 72.74%, in the in the relatively low-paid categories of Elementary Undergraduates, High School Undergraduates, and Elementary Graduates.

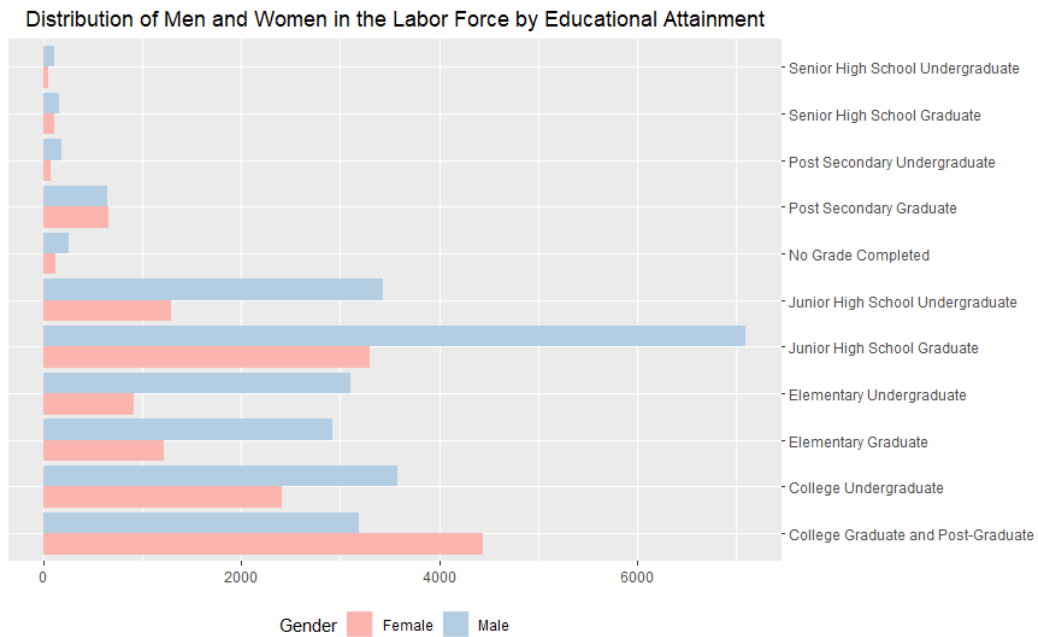


Table 2: BASIC PAY BY EDUCATIONAL ATTAINMENT

Highest Educational Attainment	Basic Pay
College Graduate and Post-Graduate	665.91
Post Secondary Graduate	450.68
College Undergraduate	405.21
Post Secondary Undergraduate	362.15
Junior High School Graduate	314.16
Junior High School Undergraduate	271.03
Elementary Graduate	252.02
Elementary Undergraduate	240.33
Senior High School Graduate	238.46
Senior High School Undergraduate	226.00
No Grade Completed	224.31

A twofold decomposition on the pay differential with respect to both primary occupation and educational attainment of the respondents was also explored, and the results show that the differential only increases to 26.6%. The result strongly suggest a significant interaction between the two variables with regards to effect on the pay differential and a closer inspection of the data reveals that: (i) in the category of Professionals, 88.12% are College Graduates and Post-Graduates (College Graduates and Post-Graduates comprise 22.28% of the total labor force.); (ii) in the category of Elementary Occupations, 57.65% are Elementary Undergraduates, High School Undergraduates, and Elementary Graduates (Elementary Undergraduates, High School Undergraduates, and Elementary Graduates comprise 32.77% of the total labor force.); and (iii) in the category of Craft and Related Trades Workers, 44.34% are Elementary Undergraduates, High School Undergraduates, and Elementary Graduates.

4. Conclusion

The study shows that a pay gap of 4.84% currently exists in the country. The results also show that the age and geographical location of the respondents were not the main determining factors for the pay gap. However, with the independent considerations of the primary occupation and educational attainment of the respondents, the pay gap increased to 24.5% and 26.8%, respectively. The concurrent effects of the primary occupation and educational attainment of the respondents on the pay gap, however, only results in an increase 26.6%, and is strongly suggestive of a significant interaction between the two variables with regards to effect on the pay differential. The results provide an insight into the multidimensionality of the issue of gender inequality and suggests that decisive advantages of women, in terms of basic pay, with respect to occupational placement and educational attainment levels, mask the existence of a large (currently unattributed) pay gap in the country's labor force.

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