

THEORY AND EMPIRICAL EVIDENCE OF THE GENDER WAGE GAP

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ABSTRACT

Women participation in the labor force has steadily increased over the last several decades. Despite this, women still remain in lower status, less interesting and less well paid jobs. Differences in family and economic roles between men and women have resulted in wage discrimination between men and women. Attempts to explain the gender wage differential generally rely on human capital and labor market segmentation theories. The human capital theory attributes wage differentials to differences in education, training and work experience. Labor market segmentation theory on the other hand attribute wage differentials to the segmentation of the labor market into primary and secondary sectors. The human capital theory remains the dominant theory explaining wage differentials between male and females. Research evidence does suggest that differences in the level of education and experience between male and female influence wages.

INTRODUCTION

Women participation in the labor force has been steadily increasing (Andersen, 1988; Loscocco, 1990). The increased participation of women in the labor force has given rise to wage inequality between male and female workers. Generally women doing the same job as men earn less than male employees. Numerous studies have been conducted to determine wage differences between male and female workers. Huang (1999) reported that in the wage gap in UK is 68% and in France is 79%. Essentially this means that wage gap between men and women in France are narrower compared to that in the UK. In the Nordic countries, the wage gap ranges between 78-89%. In Asia, Huang reported that the wage gap is 44% for Japan, South Korea (56%), Singapore (58%), Taiwan (61%), and Hong Kong (66%). In the US the estimated wage differential is 60% (Blau & Kahn, 1994) while that in Canada is 64% (Quinlan, 2000).

Although women's labor market penetration has increased rapidly over the last few decades, nevertheless much of them remain in lower status, less interesting and less well paid jobs (Shiple, 1990). Historically, these differences can be attributed to family and economic roles between men and women. By tradition women generally assume the role of home production and childcare whereas men are the main breadwinners and providers. As a result of these social factors, discrimination in wages between male and female do occur. The only difference being its magnitude.

The aim of this paper is to first examine the dominant labor market theories that can help explain the gender wage gap or sometimes referred to as gender wage differentials.

Second, the paper examines some empirical research that has been carried out that investigates the gender wage gap.

THEORIES EXPLAINING GENDER WAGE DIFFERENTIALS

Gender wage differential can be explained using two main theories i.e. human capital theory and labor market segmentation theory.

Human Capital Theory

The human capital theory is the most dominant theory used to explain wage differential. According to this theory, education, training, and work experience affects individual labor productivity (Mincer, 1993). According to Mincer (1993) human capacities is acquired or developed through formal and informal education both at home and at school. These capacities are also acquired and developed through training, experience, and mobility in the labor market. However, education and training are expensive as it involves direct cost. Therefore the acquisition of human capacities is an investment as its benefits can only be accrued in the future.

According to this theory individuals investing in the accumulation of human capital will recoup this cost through earnings from their job. The higher their investment in human capital for instance through higher education, the expectation will be a greater return through wages. Individuals will therefore choose jobs that will provide the highest returns. Employers on the other hand are generally more inclined to pay higher wages to the more educated workers. This is because the value productivity of better-educated workers is generally greater than less educated workers.

Men and women differ in their investment in human capital investment. According to Quinlan (2000) women on average spend less time in paid labor force than men. Women's responsibility towards child-care and home production tends to reduce their available time in the labor market and contributes to interrupted work. This limits their participation in the labor force. As a result of their limited labor market participation, women have less incentive to make human capital investment compared to men. As a result of the differences in human capital investment by men and women, differences in wages become pronounced between men and women.

Labor Market Segmentation Theory

This theory was advanced as an alternative to human capital theory. This theory has its roots to the early sociological studies of urban American Blacks in the early 1960s, which examined the structural barriers inherent in the labor markets (Quinlan, 2000). According to this theory, labor markets are segmented and can be divided into primary and secondary sectors. Jobs within these two sectors differ in terms of pay, security, advancement opportunities and working conditions.

The characteristics of the primary market is one in which workers have long tenure and relatively high wages. The jobs in this market also require specialized education. The level of job security offered by this segment of the market is relatively high as a result, of

which the commitment of the employees is also high. The secondary market on the other hand is characterized by low wages and low-skill requirements. The employee turnover in this sector is high due to greater mobility of workers in search of better wages. The job security in this market is relatively low and consequently the level of employee commitment to the job is also relatively low.

According to this theory wage differentials between male and female is a result of the location of employees in segmented labor market. Women are generally confined to the secondary labor market (Quinlan, 2000). As a result of this segmentation, large number of women is found in a narrow range of jobs. This overcrowding effects result in reduces wages for women (Huang, 1999).

Human Capital Theory and Labor Market Segmentation Theory are the two dominant theories that explain wage differences between male and female. The focus of the human capital theory is on individual differences whereas the labor segmentation theory considers differences in the job. The human capital theory examines the participants in the labor market whereas the labor segmentation theory examines the structures of the market.

According to Quinlan (2000), both the human capital theory and labor market segmentation theory are complementary theories and not competing theories. According to her, education plays a vital but different role in both theories. In the human capital theory, the role of education is merely a vehicle for social equality. Through acquisition of education, the cognitive capabilities of the workers improve and this has a bearing on productivity and consequently social status. Thus workers who are willing to invest in education are brighter, more skillful and productive workers and consequently enjoy higher wages. The labor market segmentation theory on the other hand view education as a vehicle for social stratification. Individual decisions on human capital investment such as education is dictated by labor market location and is thus bound by structural constraints. Education is thus an instrument of class structure and the returns on this investment dictates wages.

EMPIRICAL EVIDENCE

The following section presents some empirical studies that have examined gender wage differences. It's not an exhaustive review of studies in this area; nevertheless it gives a general indication of the extent of the differences in the gender wage gap and also the varied way in which this issue has been examined.

Huang (1999) conducted a study on the impact of education and seniority on gender wage gap in Taiwan. According to Huang education is one of the most important component of human capital investment. Therefore higher education will be strongly correlated with higher income. Huang argues that employers are willing to offer higher levels of compensation to workers who are better educated. As a result of this more and more people will strive to attain higher level of education in order to acquire better skills that will make them more attractive to prospective employers and consequently earn higher

wages. Huang also noted that the human capital theory recognizes work experience as an important productivity-enhancing investment. Similar to education, experience is also positively related to higher wages. Wage increases are generally viewed as a reward to workers for training and work experience accumulated during a worker's life. Workers therefore expect periodic increases in wages as they mature with the company. Companies are also willing to offer higher wages in order to retain their more senior workers since their resignation will represent a serious loss of human capital investment to the company. The population of the study consisted of 8 million workers data maintained in an electronic file at the Bureau of Labor Insurance in Taiwan. The study used a stratified random sampling method to select a potential pool of 9000 respondents from six major industries consisting of manufacturing; water, electricity, and gas; construction; commerce; transportation, storage, and communications; and finance, insurance, and real estate. The final sample of the study consisted of 3,037 employees. The study found that level of education, previous work experience and current length of service all have a significant positive impact on wage rate suggesting that investing in education and accumulating years of work experience will lead to higher wages. The study also found for females a negative relationship between gender and wage level suggesting that gender discrimination in wages exist in Taiwan. The study also found the wage effect of the current length of service for female workers was higher than that of male workers. The study also noted that the differential wage effects of education for both male and female workers increase as the level of education increases until the junior-college level. After that level, the impact of further education on wages was greater for female than for male workers.

In the US, Blau and Kahn (2000) found earning disparities has narrowed considerably. A substantial gender earnings convergence occurred between 1978 and 1999 in which the weekly earnings of women in full-time employment increased from 61% to 76.5% of men's earnings. But this ration has plateau at 60% for several decades. Despite the narrowing of the gender wage gap, Blau and Kahn found that this was occurring in an environment of sharp increases in wage inequality. This situation raises a paradox because the labor market is not favorable to women workers because they continue to have less experience than men and they are continually being located in lower paying occupations and industries. Since the rewards to higher skills and wage premium for employment in occupation and industries where men are more heavily represented is rising, women would find themselves increasingly being disadvantaged. However, this is not being reflected in the gender wage gap. Blau and Kahn suggest that although wage inequality persisted, nevertheless this was offset by improvement in gender-specific factors such as education and training. For example, they found that the gender gap in full-time experience fell from 7.5 years to 4.6 years. Further, the relative proportion of women employed as professionals and managers increased and the relative representation of women in the clerical and service job declined.

Stanley and Jarrell (1998) conducted a quantitative review using meta-analysis on the empirical literature on gender wage discrimination. According to Stanley and Jarrell, researchers examining the gender wage gap cite 30 – 40% differences as though it was an

established fact whereas their uncovering of the literature indicated wide variations in wage gap estimates. These variations ranges from 50% to –19% of average male wages. The negative wage differential suggests that women are overpaid compared to men. Stanley and Jarrell included 55 published empirical studies that estimated the US gender wage gap in their meta-analysis. Using meta-regression analysis technique, their study found that the gender wage gap ranged from –2.7% to 91% with a mean of 31.8%. They concluded that although there is a wide consensus on the existence of gender wage discrimination, nevertheless there is very little agreement on the magnitude of the wage discrimination.

Machin and Puhani (2002) examined the effect of subject of university degree on gender wage differential in the UK and Germany. According to Machin and Puhani, researchers have debated regarding the variables that should be considered in the earnings function in determining the gender wage differential. The standard Mincer equation model includes age, schooling, industry, occupation, region, etc. but little attention is given to the subject of degree attained at university. They argue that in many of the US research using standard US data sets especially Current Population Survey (CPS) and Panel Survey of Income Dynamics (PSID), information on subject of degree was not asked. Machin and Puhani further argue that subject of study at university could be an important factor that can explain why women are paid less than men. According to them there are clear differences in degree enrolment between men and women and also clear wage differentials by subject of degree. One good example cited by the researchers is information technology where those who studied computer science enjoy comparatively higher earnings. In their study Machin and Puhani used data from the UK and German Labour Force Survey. Both these surveys ask graduates to report the subject of study for their degrees. According to the authors, traditionally German students are more likely to specialize in engineering/technology degrees while the UK students tend to study biological, physical, and mathematical sciences. The study found marked gender differences in degree subjects in both countries. In both Britain and Germany, males are heavily represented in engineering/technology and physical/mathematical sciences, whereas women have a larger share of graduates in language studies and humanities, creative arts and education. The authors suggested that science-related subjects are generally higher paid and have a higher concentration of males and arts related subjects are generally lower paid and have a larger concentration of females. The findings of the study indicated that gender wage differences among graduates in Germany was 28 % whereas in the UK was 21 %. The findings also indicate that in the UK 7% of the overall 21% gender wage gap is explained by degree subject. In Germany 6% of the overall 28% is explained by the degree subject. According to the authors, this is a sizeable contribution to explain wage differentials between male and female graduates in both countries.

SUMMARY

Gender wage discrimination can be explained using the human capital theory as well as labor market segmentation theory. However the human capital theory remains the dominant theory. The human capital theory asserts that individual characteristics such as

education, training and experience are the primary determinants of wage inequality. The market segmentation theory on the other hand asserts that wage inequality is a direct result of the location of the individual in a segmented labor market. Numerous researches have been conducted on determining the gender wage gap. Much of the existing evidence suggests education and experience does influence the wage gap between male and females. Nevertheless research evidence do point to a narrowing of the of the wage gap between male and females. But as long as women take the primary responsibility towards child-care and home production, they will continue to have less incentive to make human capital investments and this will remain a major contributing factor to wage inequality.

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