

Explaining the gender wage gap: Is culture the missing link?

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Abstract

The topic of the gender wage gap has been an important research issue for several decades. While many have investigated reasons for the persistence of a differential in the wages of men and women, none has successfully explained away the entire difference. The wage differential is a global problem. Despite differences in political and economic make-up of countries all over the world, the gender wage gap is present. The purpose of the paper is to examine the gender wage gap from an international perspective and to determine whether any pattern exists between cultural dimensions of a country and the male-female wage differential. The paper will utilize the cultural dimensions developed by Hofstede (2001) to profile a country's cultural status and compare those cultural dimensions to the gender wage gap.

Introduction

The economic status of women is a global issue. Worldwide statistics continue to show that women throughout the world lag behind men in labor force participation, educational attainment, and wages. The body of the literature (Blau et. al., 2006; England, 1984; Green and Ferber, 2005; Polachek and Siebert, 1993; Smith et. al., 2004; Stevenson, 1984; Treiman and Hartmann, 1981) documents the persistence of gender-related wage differentials. A variety of factors have been investigated to explain the wage gap between genders, and although governments have acted to alleviate those factors and improve conditions for women in the labor market, the gap still exists. This is puzzling, and the question remains: why does the wage differential persist and what can be done to eliminate the wage gap? For some, the answer to the wage differential may be discrimination, but there is no consensus. Since there seems to be no clear answer, some other analysts have proposed that it is only a matter of time until the gap closes. Nations need to get used to the idea of wage equality, but it will not be a fast process. In 2003, a labor economist from the Economic Policy Institute estimated that the gender wage gap would be closed in thirty years (Lips, 2006). However, researchers were predicting the same thing forty years ago when the Equal Pay Act was passed in the United States. And according to the U. S. Bureau of Labor Statistics (2004), women on average still earn only 77 percent of men's earnings. It seems that one critical factor has been omitted in previous analyses of the gender wage gap. The social and cultural histories of most nations in the world are quite different. We believe that those differences have a significant impact on gender-related wage differentials, and that cultural convergence may be the only solution to the problem. The purpose of this paper is to examine the impact of several cultural dimensions as given by Hofstede (2001) on wage differences between men and women.

Previous Work

Explanations for the gender wage gap are typically offered at three levels: 1) individual; 2) occupational; and, 3) organizational/industry level. At the individual level, the differential is attributed to women's lower level of human capital skills, specifically, less education and fewer years in the labor force. Women therefore earn less than men because they have a lower stock of human capital which makes them less valuable in the labor market. Increasing their stock of human capital would increase their productivity and result in higher wages for women (Wobman, 2000). In their 2005 study of full-time workers using detailed work history and educational data, Green and Ferber found that significant gender wage differentials remain after accounting for human capital differences. Between 20 and 44 percent of the differential remained unexplained depending on race and ethnicity. Blau et. al. (2006) found that even after accounting for human capital differences, 41 percent of the gender wage differential was still unexplained.

At the occupational level, the differential is attributed to women's concentration in lower-paying occupations. Occupational segregation is a problem for women because there is a negative relationship between the percentage of women in an occupation and the relative pay for that occupation (Blau & Ferber, 2006). Also, while there is debate as to why it occurs, it is true that occupations that were predominately female forty years ago are still gender segregated today (Blau and Beller, 1988; Smith, et. al., 2004; Sorenson, 1990). Bernadin & Russell (1998) found that more than 60 percent of women in the labor market are employed in low-paying service, clerical, and retail sales jobs. In a 2003 study using Current Population Survey data, Boraas & Rodgers investigated the role of occupational segregation in gender wage differentials. They found that limited occupational choice is still a problem for women, and that "the share of women in an occupation is still one of the largest contributors to the gender pay gap" (p. 14).

At the organizational/industry level, the wage gap is attributed to factors such as differences in the level of product market competition within the industry and differences in organizational characteristics such as organizational size, location, organizational wage structure, and the presence of a union (Drazin and Auster, 1987; Hodson, 1986; Hultin and Szulkin, 1999). Hollister (2004) found that while it has been generally accepted that large firms pay more than small, this effect has declined by one-third over the past fifteen years due to changes in organizational structures. Barbezat and Hughes (2005) found that the gender wage differential differed by geographic region. They also found that differing wage structures across organizations contributed to gender wage differentials. Sosin et. al. (1998) found some evidence that union representation decreased the gender wage differential at all job levels, but particularly at the entry level. Green and Ferber (2005) found that union representation resulted in higher wages for men and women, but that the returns were much higher for men than women. They also found that the inclusion of a control variable for industry explained fourteen percent of the differential for whites but only four percent for blacks.

After accounting for legitimate differences at the individual, occupational, and organizational/industry level, any remaining unexplained wage differential is attributed to unjust discrimination against women (Blinder, 1973; Blau et. al., 2006; Dunlop, 1985; GAO, 2003). However, in spite of the explanations for the differential summarized above, no study has accounted for the entire disparity. A significant gender wage gap still exists (GAO, 2003; Green and Ferber, 2005).

Studies have also examined the gender wage gap at the international level for a particular country or by comparing the gap across countries. Aller and Arce (2001) investigated the gender wage gap in Spain and concluded that a decline in the gap from 1990 to 1994 was due to declines in manufacturing employment and increases in employment in the service sector. They did not find that the decline was due to a decrease in discrimination against women. In their study of gender wage differentials in Libya, Arabsheibani and Manfor (2002) pointed out that there are few studies of the differential in developing countries. The authors found that only 22 percent of the difference was explained by legitimate factors and attributed the unexplained portion to discrimination. The authors also discussed the difficulties for women in the labor market despite government reform. Johansson et. al. (2005) studied gender wage differentials in Sweden from 1981 to 1998 and found that the differential increased over the period. They found that individual and occupational differences only accounted for three-fifths of the differential at most. They attributed the increase in the differential to the increase in wage dispersion and trend towards decentralization of wage setting policies. They also suggested that studies need to further examine the role of institutional factors such as wage structure and promotion policies in gender wage differentials.

Fewer studies have been conducted across countries because of differences in samples available for analysis and in the definition of the gender wage differential. Brainerd (2000) examined gender wage differentials across ten countries in Eastern Europe and the former Soviet Union and found that the differential was due to gender differences in human capital factors, widening of the wage structure and discrimination. The European Industrial Relations Observatory On-Line (EIROnline) (2002) investigated the gender wage gap across the European Union and Norway. The study found that while the gap has narrowed over time, there remained an unexplained differential that was attributed to discrimination. Despite numerous studies of the gender wage gap, no studies have looked at the influence of culture on the gap and the role of specific cultural dimensions in decreasing the gap. The culture of a society comprises the values and beliefs of that society and sets the guidelines for the way its citizens interact. This study will utilize the work of Geert Hofstede (2001) to classify important dimensions of a country's culture. Hofstede's work provides a comprehensive and appropriate classification of culture which can be used to draw inferences about the gender wage gap.

Classifying Culture

What is culture? Culture is viewed in many ways. Anthropologists have defined it as "that complex whole which includes knowledge, belief, art, morals, law, custom, and other capabilities acquired by man as a member of society" (Tylor, 1871). Since these early descriptions, many attempts at redefining culture have been made. For example, Geert Hofstede (1984) defined culture as "the collective programming of the mind which distinguishes the members of one human group from another." This mental programming referred to by Hofstede consists of shared values, beliefs and norms. These mental constructs influence how people raised within a particular culture perceive events; they also help to determine what behaviors are considered appropriate or inappropriate in various social situations. Since the mental programming is shared, i.e. developed through years of socialization within a culture, it results in relatively predictable responses to commonly experienced social situations or contexts. These characteristic patterns of behavior create differences between cultures that may also be observed in differences in work-related attitudes. In his most recent study, Hofstede (2001) defined culture according to five dimensions which describe and differentiate a country's society. The dimensions are: Power Distance; Individualism; Masculinity; Uncertainty Avoidance; and Long-Term Orientation. He described the important aspects of each dimension, as seen in Tables 1 through 5. Hofstede also developed index rankings for each of these dimensions. The index rankings range from a low of 5 to a high of 104. Additionally, Hofstede calculated a world average for each index (see Figure 1). According to Hofstede, the first four dimensions, Power Distance, Individualism, Masculinity, and Uncertainty Avoidance are the primary dimensions.

The Power Distance Index (PDI) measures the level of inequality between people in the society. A low ranking on this index means that the society encourages equal opportunity and discourages the growth in differences between the power and wealth of its people. Characteristics of low and high power distance are listed in Table 1.

The Individualism Index (IDV) measures the degree to which a society focuses on the rights of individuals versus the development of collectivism and family-type structures where members of the society protect and care for one another. A high rank on this index means that the society focuses on the rights of individuals and loose relationships between people, as close ties would interfere with a sense of individuality that is important in these cultures. Characteristics of individualism/collectivism are listed in Table 2.

The Masculinity Index (MAS) examines the importance of the traditional male model of achievement, power, and control by men in the society. A high ranking indicates that a large gender differential persists in the society and that females are not treated as equals to males in many aspects of society. The characteristics of low and high masculinity cultures are listed in Table 3.

The Uncertainty Avoidance Index (UAI) quantifies the degree to which the people of that culture can tolerate uncertainty and ambiguity. If the society has a low tolerance for unstructured situations, it will create many laws, regulations, rules and controls to reduce the ambiguity. A society such as this would receive a high ranking on the index. Characteristics of low and high uncertainty avoidance are listed in Table 4.

The final cultural dimension is Long-Term Orientation (LTD). This index measures how strongly the society holds on to tradition and emphasizes the values of hard work now to reap rewards in the future. A low ranking on this index means that the society does not emphasize long-term commitments so that change can occur more easily since it is not restricted by traditional thinking. The characteristics of a short and long-term time orientation are listed in Table 5.

The Study

In order to investigate the relationship between culture and the gender wage gap, we utilized the index numbers calculated by Hofstede for each of the following cultural dimensions: Power Distance, Individualism, Masculinity, and Uncertainty Avoidance. These four were deemed most important by Hofstede. Index numbers were not available for most countries for the Long Term Orientation scale, and using this dimension would have greatly reduced the size of our sample. Several sources were used to derive the percentage male/female wage differential. We utilized the most current data available from the International Labour Organization (2005), the EIROnline (2002), the European Foundation for the Improvement of Living and Working Conditions (2005), and the UNIFEM (2000). The variety of sources helped in deriving consistent data for the thirty-four countries chosen based on the availability of current wage information. Those countries are listed in Table 6.

We computed the average for the thirty-four countries for each of the four cultural dimensions used in the study. These average scores are given in Figure 2. Notice that the averages for our sample are very similar to the world averages in Figure 1.

Results

A multiple regression was run with the percentage wage differential as the dependent variable and the culture indices as the independent variables. Based on the graphical analysis (as shown in Figure 3), we hypothesized that there would be a positive relationship between the Power Distance Index and the percentage wage differential, a positive relationship between the Individualism Index and the percentage wage differential, and a positive relationship between the Masculinity Index and the percentage wage differential. With each of these dimensions, a low score on the index would represent a culture favorable to women; therefore the wage differential should also be less. On the Uncertainty Avoidance Index, we hypothesized that there would be a negative relationship between that index and the percentage wage differential. A high score on the Uncertainty Avoidance Index indicates the presence of many rules and laws in the society. The creation of laws would help women achieve equality; therefore, the more laws, the lower the wage differential.

Results indicate that cultural influences do have an impact on the size of the gender wage gap. As seen in Table 7, according to the t scores reported, the Power Distance Index (PDI) is significant at the .10 level. The Individualism (IDV) and the Uncertainty Avoidance (UAI) indices are both significant at the .05 level, while the Masculinity index (MAS) is significant at the .01 level. Our hypotheses were supported by the directional signs of the coefficients. All indices have the expected sign. Overall, even without additional control variables often used to explain the wage differential such as human capital, occupational segregation, and industry differences, our model explained forty-two percent of the differential ($R^2 = 0.42$). This is a robust result indeed.

Implications And Conclusions

Gender is an aspect of society that has a great impact on international business in many different ways. Gender equality in political, private and business issues is dependent on a country's laws, judicial system, and, as we have just shown, culture. Our analysis of Hofstede's cultural factors indicates that the gender wage gap is more likely to be smaller within cultures that express values related to low power distance, low individualism, low masculinity and high uncertainty avoidance. Our results support the hypothesis that cultural values and beliefs create a "mental programming" among society members that is used to evaluate social practices such as the status of women, measured in this study as the gender wage gap. We have shown that cultural dimensions, as defined by Hofstede, do explain wage differences between genders.

The results have intriguing managerial implications, depending of course on the country that is in question. One single solution does not apply to every country; a customized approach is needed. For example, we have shown that countries that have a low power distance score have a smaller gender wage gap. Therefore, to reduce the power distance, companies could work to 'flatten' their organization and reduce the number of supervisors. They could also promote managers who were more resourceful and democratic, rather than autocratic. Managers would be encouraged to interact with their employees. This is a process and would, as would any attempt at changing culture, take time. The employees would have to also be trained in this new philosophy of reducing the power distance for it to be successful. Similarly, a lower individualism index also indicates a lower wage differential based on our results. Managerial implications for this are apparent, although not easily embraced. To promote the collectivism that is vital in shifting away from individualism, companies could reward team or group efforts more than individual efforts. Team solutions to problems rather than individual ones, would become the ideal. Loyalty and longevity to a company would be rewarded as well to reduce the mobility that characterizes more individualistic cultures.

The masculinity index results have perhaps even more obvious managerial implications. We have shown that countries with a high index have a higher gender wage gap. To reduce the gap on this front, it is logical to propose that women should be encouraged to apply for and should be aggressively sought to fill jobs that in the past had typically been performed by males. Again, this is often mentioned, but for this kind of change to become engrained in a culture, it must be embraced at the very early levels of education. Girls need to be encouraged to pursue the educational paths that will lead them into the 'traditional' male jobs. A more original approach could also include hiring men for what had been traditional 'female' jobs and directing boys into educational paths that lead them into these non-traditional roles. Attacking the masculinity index from both of these sides must be met with cultural acceptance. It can be accomplished, as evidenced by the countries that do have a low score on this index. The results we found for the uncertainty avoidance index indicate that a higher score on this index indicates a smaller gender wage gap. It follows that with this higher uncertainty avoidance comes more rules and regulations, which in turn promote less differences in wages. Therefore, in terms of managerial implications, it seems that more rules and procedures need to be adopted in countries and companies having a larger gender wage gap.

It is also important to realize that all the dimensions matter and that they need to be considered as a whole; that is, not just one of these dimensions alone can explain wage differences and not just one solution is right for every country or company. For example, the United States ranks low on power distance, and therefore, the wage gap should be relatively low. However, that is, as we know, not true. The high ranks of the masculinity index and the individualism index explain the magnitude of the wage differences in the United States. Therefore, culture, in its totality, matters and implications need to be considered in totality as well.

The purpose of this study was to conduct a preliminary investigation into the role of culture in explaining the global gender wage gap. Using Hofstede's cultural index scales, we found a significant relationship between culture and the size of the gap. There is no doubt that the status of women has come a long way since the beginning of the 19th century when Finland became the first country to give women the right to vote. Today, it is not uncommon to see Finnish women in leading positions, even as high as the presidency of the nation. The progress of women is evident in many countries, but not the norm in many others. We have shown that the international differences in the evolution of the status of women as measured by the wage differential can be attributed to cultural differences.

As mentioned earlier, some authors have predicted that the gender wage gap would be non-existent in thirty years. However, based on our explanation of this gap by cultural attributes, thirty years might be very optimistic. Cultures do not change that quickly, unless the emergence of new technologies accelerates convergence; that is, facilitated by technology, people learn of and adapt to other cultures. This work provides a promising future avenue of investigation into the reasons women continue to earn less than men around the globe.

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Table 1: Characteristics of power distance

Low Power Distance	High Power Distance
• Flat organizations	• Tall organizations
• Fewer supervisors	• More supervisors
• Ideal boss: resourceful and democratic	• Ideal boss: well-meaning autocrat
• Subordinates expect to be consulted, and they may do important work, thus having the opportunity to get promoted quickly	• Subordinates expect orders and directions, and they are rarely given important work.
• Supervisors are expected to treat employees respectfully	• Class distinctions are emphasized
• Managers socialize and interact with workers often	• Managers rarely interact or socialize with workers

Table 2: Characteristics of individualism/collectivism

Low Individualism (Collectivism)	High Individualism
• "We" not me orientation	• "I" identity
• Group, family or rights for the common good are seen as more important than the rights of individuals.	• Promotes individual goals, initiative and achievement; achievement of personal goals at others' expense
• Rules promote stability, order, obedience.	• Individual rights seen as most important; rules attempt to ensure independence, choices and freedom of speech.

Table 3: Characteristics of masculinity/femininity

Low Masculine (Feminine) Culture	High Masculine Culture
• Priorities are relationships, nurturance, environmental protection, and quality of life	• Priorities are achievement, performance, wealth
• Women chose female bosses	• Women chose male bosses
• Women's liberation means that men and women should share equal roles	• Women's liberation means that women begin to participate in male-dominated areas
• Professionals "work to live" (i.e. - short work hours and high use of vacation time)	• Professionals often "live to work" (i.e. - long work hours and little use of vacation time)
• A high number of women in politics	• A low number of women represented in politics
• The ideal icon is someone who helps and nurtures the community	• Manufacturing and business are seen as more important than arts and healing

Table 4: Characteristics of uncertainty avoidance

Low Uncertainty Avoidance	High Uncertainty Avoidance
• Risk is valued in business	• Low tolerance for risk-taking behavior
• Low emotional resistance to change	• Rules and procedures heavily relied upon
• High turnover in most organizations	• Preference for larger organizations
• Few written rules and regulations	• High level of loyalty
• Typically the country is newer or more recently settled	• Conflict and competition tend to be avoided

Table 5: Characteristics of time orientation

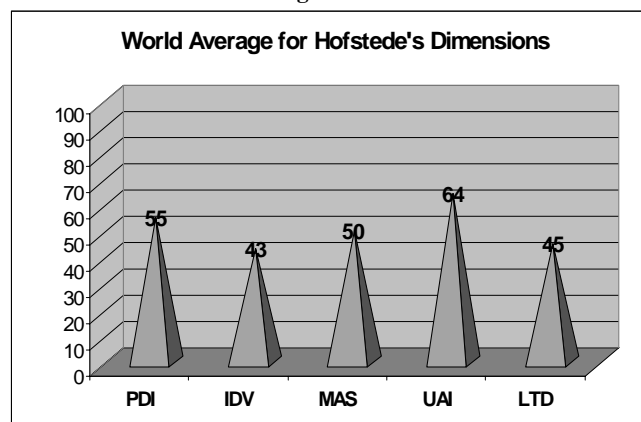
Long-Term Orientation	Short-Term Orientation
Persistance	Persistance and stability
Ordering relationships by status and observing this order	Protecting one's face can hinder the flow of business
Having a sense of shame	Too much respect for tradition w

Table 6: Countries used in the study

Argentina	Ireland
Australia	Italy
Belgium	Japan
Brazil	Mexico
Chile	Netherlands
Columbia	New Zealand
Costa Rica	Norway
Czech Republic	Panama
Denmark	Poland
Ecuador	Portugal
El Salvador	Singapore
France	Spain
Germany	Sweden
Hungary	United Kingdom
India	United States
Indonesia	Uruguay
Iran	Venezuela

Table 7: Parameter Estimates Dependent Variable: Percentage Male-Female Wage Differential

Variable	Coefficient	Standard Error	t	Prob> t
PDI	0.312916	0.193793	1.614695	0.10
IDV	0.204831	0.091749	2.232511	0.05
MAS	0.225361	0.081804	2.754886	0.01
UAI	-0.26973	0.103004	-2.61862	0.05

R² = 0.42**Figure 1: Hofstede's world average scores for each of the cultural indices**

Source: Hofstede, 2001

