September 10, 2011

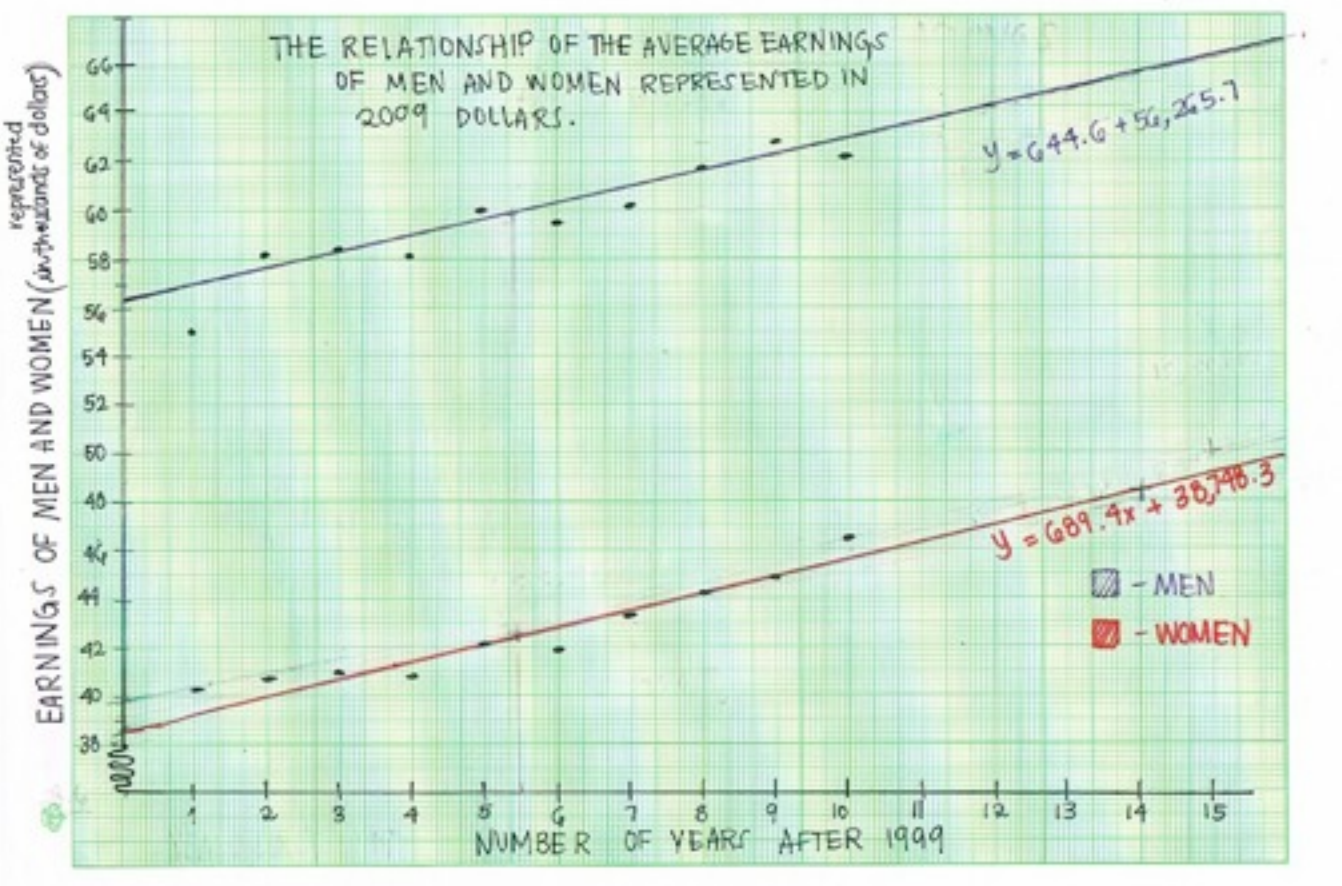
ARE WE CLOSING THE GENDER GAP IN EARNED WAGES?

Figure 1: The table shows the average earnings of men and women from the year 2000

Year	Men's Average Earnings (in 2009 dollars)	Women's Average Earnings (in 2009 dollars)
2000	57,000	40,300
2001	58,200	40,700
2002	58,300	40,900
2003	58,100	40,800
2004	60,000	42,100
2005	59,500	41,900
2006	60,200	43,300
2007	61,800	44,200
2008	62,800	44,800
2009	62,200	46,400

Inequality between men and women has been an issue since any human being can remember. Women were only to work at home, tending to the household needs. But after the first world war, women started to gain independence, and were given jobs that *only men* were allowed to have. Now, in the 21st century, the divide between men and women is almost non-existent although not completely gone. This is because women are still earning less money than men. An example of this is shown through data collected from "Statistics Canada, CANSIM, table (forfee) 202-0102." The table depicts the average earnings of men and women over the course of 10 years. Because equality between men and women is still progressing, there is a possibility that their salary's will be the same.

Figure 2: The Relationship of the average earnings of men and women (represented in a graph.



From the data collected, and through my analysis I can conclude that we will eventually close the gender gap.

It is obvious that the graph does not directly start on the year of the first data point given on the data table, it starts on the year 1999; and the trend line shows that the initial point on the graph [or salary in the year 1999] of women was approximately $38,748.3 while the men's was approximately $56,265.7. This serves as the base of the data. As shown through these numbers, it is clear that in the year 1999 women were still being greatly oppressed in their salaries, as the difference was $17,517.4.

Already from this graph people may conclude that the lines are parallel and therefore will never meet. Although, when the data is calculated in a specific way: to find the verified annual rate of increase of both the men and the women's salaries, it shows that the women's salary is increasing at a higher rate. The women's annual salary increases at a rate of $689.5 per year, and the men's salary at a rate of $644.6 per year. Though the difference may be small, the fact that the women's annual rate of increase is higher than the men's shows that the women's salary is increasing at a faster pace and therefore would allow an *intersection* or a meeting of the two salaries in the future.

Because the two lines do not have the same rate of increase, it proves that there is a time wherein the lines will meet, and cause what is called an intersection. When calculated from the information on the graph, these lines are destined to intersect 391 years from 1999, or the year 2390. The salary that both the men and the women will have amounts to $308,304.3 dollars. The information is relevant because it shows that the gender gap will indeed be closed however, it will take almost 3 centuries before it happens.

To be able to compute for these numbers I used a method called substitution At this point of intersection, the salary of both men and the women should be the same, which would allow me to equate the two equations as the variable y is the amount of salary that the men and the women get. This allows me to get rid of the y variable in the equation and just solve for x. After subtracting 644.6 from 689.4 I get $44.8x$. Then I subtract 38,748.3 from 56,265.7 to get 17,517.4. After dividing by 44.8 I get $x = 391$. – which equals to the years after 1999 that this intersection will occur. Then I substitute again into one of the original equations [in this case, the men's equation] and get $y = 308,304.3$. Which means the average earnings that the men and women will have 391 years from now will be $308,304.3.

The intersection point that I got for the two equations can be supported by the fact that the intersection firstly cannot be negative. As (a) the rate of annual increase found would not allow this to happen and (b) historically speaking, it is impossible for men and women to have the same amount of average earnings in previous years because men and women were not even close to equal status before the 21st century. Because the line's rate of increase are almost the same, it *should* take a very long time before the lines meet as the change is gradual. Another claim that can back up why the salary is very high is because of inflation.

Another method that could be used is called elimination, after rearranging the equation to follow the "$Ax + By = C$" After eliminating y, solve for x. And then replace the answer back into the original equation to verify y.
*Computations shown at the back.

There are many people who may be interested in this data. The first of them would be employers, who are concerned with the salary of their workers; and the fact that women would be paid less than men. Another group of people who would be interested in this data are feminists. They would use this information to vie for women's equality, and as evidence that women are in fact still unequal to men. Economists may also be interested in this data, concerned with the inflation rate and the difference in salaries of men and women.

Although the information shown on my graph is not necessarily what is going to happen in the coming times, it is a logical view of what may happen. But until that time, the gender gap in earned wages is still inching its way to being closed.