ECON 381 Midterm #2 Answer Key

Prof. Krauth, Spring 2012

True, false or uncertain (7 points each)

1. False. When firms have more market power in their product markets, their labour demand will be less elastic. Inelastic demand means a weaker quantity response to a cost increase.
2. False. If the minimum wage is above the competitive market wage, then even a monopsonist will reduce labour in response.
3. False. Results from Mincer wage regressions suggest that the return to potential experience is lower for women than it is for men.
4. False. Schooling raises a person's wage in both hypotheses, so either hypothesis is consistent with this observation.
5. False. Firm-specific human capital creates a surplus to the worker-firm relationship. This surplus will be divided by bargaining, and there is no reason to think that the worker will have all of the bargaining power.
6. Uncertain or False. If unionized firms pay more and men receive preferential entry to unionized firms, then unionization will increase the gap.
7. False. We may have left some important other determinant of productivity out of the model.

Problems

1. **(24 points)**
   a. (3 points) $\bar{w}_1 = \frac{1}{2}w_H + \frac{1}{2}w_L + p$
   b. (3 points) $\bar{w}_0 = w_L$
   c. (3 points) $\bar{w} = \frac{1}{3}w_h + \frac{2}{3}w_L + \frac{2}{3}p$
   d. (3 points) $\bar{w}_1 - \bar{w}_0 = \frac{1}{2}w_H + \frac{1}{2}w_L + p - w_L = p + \frac{1}{2}(w_H - w_L)$
   e. (3 points) This is because university-educated workers are more likely to be high ability, and high ability workers earn more at a given level of education.
   f. (3 points) $\bar{v} = \frac{1}{3}w_H + \frac{2}{3}w_L + \frac{1}{3}p$
   g. (3 points) First we note that $\bar{w} - \bar{v} = \left(\frac{1}{3}w_h + \frac{2}{3}w_L + \frac{2}{3}p\right) - \left(\frac{1}{3}w_h + \frac{2}{3}w_L + \frac{1}{3}p\right) = \frac{1}{3}p$. This means that $p = 3(\bar{w} - \bar{v})$.
   h. (3 points) It will measure p_L.

2. **(27 points)**

a. (3 points for each entry, for a total of 24 points) The table should look like this:

Quantity	In algebraic Terms	In numeric Terms
Average (log) wage of females	$\beta_0^F + \beta_1^F \bar{S}^F + \beta_2^F \overline{EXP}^F$	2.28
Average (log) wage of males	$\beta_0^M + \beta_1^M \bar{S}^M + \beta_2^M \overline{EXP}^M$	2.62
Male-female (log) wage gap	$(\beta_0^M + \beta_1^M \bar{S}^M + \beta_2^M \overline{EXP}^M)$ $- (\beta_0^F + \beta_1^F \bar{S}^F$ $+ \beta_2^F \overline{EXP}^F)$	0.34
Male-female (log) wage gap attributable to differences in education and experience	$\beta_1^M (\bar{S}^M - \bar{S}^F) + \beta_2^M (\overline{EXP}^M - \overline{EXP}^F)$	0.08
Male-female (log) wage gap not attributable to differences in education and experience	$(\beta_0^M - \beta_0^F) + (\beta_1^M - \beta_1^F)\bar{S}^F$ $+ (\beta_2^M - \beta_2^F)\overline{EXP}^F$	0.26

b. (3 points) 23.5% of the wage gap is attributable to differences in education and experience.