Manning Worthley
ECON 6217
Assignment 6

Problem 1

Independent	Coef.	Std. Err	t	P>t
edu	0.0929	0.0013	73.99	0
exper	0.0172	0.0003	57.41	0
black	-0.2180	0.0123	-17.78	0
smsa	0.1572	0.0076	20.7	0
parttime	-1.0709	0.0145	-73.95	0
neast	0.0883	0.0090	9.78	0
midwest	0.0501	0.0089	5.65	0
west	0.0686	0.0096	7.15	0
_cons	4.5935	0.0200	229.7	0

Comments:

The indicator variable for individuals being in the south was omitted. Also, all variables are highly statistically significant.

Each year of education increases wages by a percentage increase of 9.29%.
Each year of experience increases wages by a percentage increase of 1.72%.
If one is identified as black, then one experiences a 21.8% decrease in wages.
An individual in the city makes 15.7% more in wages not in the city.
If someone works part-time, then he or she makes 15.72% less than someone who does not.
The north east region makes 8.83% more than the south.
The midwest region makes 5.01% more than the south.
The west region makes 6.86% more than the south.

Problem 2

Quantiles	*5%*	*50%*	*95%*	*OLS*
Independent				
edu	0.0748***	0.0976***	0.0927***	0.0929***
	(21.25)	(73.19)	(36.01)	(73.99)
exper	0.0144***	0.0179***	0.0196***	0.0172***
	(27.50)	(49.59)	(24.22)	(57.41)
black	-0.210***	-0.234***	-0.223***	-0.218***
	(-7.25)	(-16.09)	(-11.26)	(-17.78)
smsa	0.146***	0.169***	0.150***	0.1572***
	(7.42)	(18.31)	(12.15)	(20.70)
parttime	-1.137***	-1.152***	-0.696***	-1.071***
	(-49.80)	(-94.63)	(-18.17)	(-73.95)
neast	0.159***	0.0867***	0.0723***	0.0883***
	(7.86)	(8.24)	(3.65)	(9.78)
midwest	0.0703**	0.0640***	0.0230*	0.0501***
	(2.75)	(6.41)	(2.37)	(5.65)
west	0.05	0.0656***	0.128***	0.0686***
	(1.95)	(7.89)	(6.54)	(7.15)
_cons	3.941***	4.551***	5.331***	4.5935***
	(73.16)	(209.86)	(126.37)	(229.70)
Observations	28155	28155	28155	28155

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Comments:

All variables are found to be statistically significant. At the median, the coefficient estimates have the same sign compared to the OLS estimates but slightly different magnitude. In some cases however, the estimates have a clear trend across the quantiles. For part-time workers, the coefficient estimates appear to be increasing through the quantiles. Also increasing through the quantiles, are the coefficient estimates for education and experience which makes sense - more experience and education should lead to increasingly more pay.

Problem 3

Quantile	*0.1*	*0.2*	*0.3*	*0.4*	*0.5*	*0.6*	*0.7*	*0.8*	*0.9*
Dependent	ln_wage	ln_wage	ln_wage	ln_wage	ln_wage	ln_wage	ln_wage	ln_wage	ln_wage
Independent									
edu	0.0883***	0.0980***	0.0997***	0.101***	0.0976***	0.0974***	0.0956***	0.0946***	0.0936***
	(38.69)	(61.67)	(69.95)	(72.80)	(64.24)	(65.99)	(77.61)	(56.12)	(53.59)
exper	0.0159***	0.0173***	0.0177***	0.0181***	0.0179***	0.0180***	0.0179***	0.0186***	0.0186***
	(37.45)	(38.86)	(50.15)	(57.70)	(54.86)	(89.90)	(59.06)	(40.53)	(42.96)
black	-0.222***	-0.211***	-0.206***	-0.225***	-0.234***	-0.226***	-0.203***	-0.201***	-0.231***
	(-11.07)	(-11.04)	(-13.91)	(-16.26)	(-14.07)	(-12.40)	(-16.43)	(-18.28)	(-13.62)
smsa	0.147***	0.161***	0.168***	0.165***	0.169***	0.160***	0.154***	0.148***	0.148***
	(8.85)	(16.21)	(16.73)	(17.13)	(18.39)	(21.39)	(23.66)	(17.73)	(14.78)
parttime	-1.233***	-1.239***	-1.217***	-1.184***	-1.152***	-1.107***	-1.047***	-0.946***	-0.820***
	(-67.45)	(-59.54)	(-62.48)	(-54.06)	(-87.83)	(-72.47)	(-67.42)	(-57.37)	(-33.50)
neast	0.130***	0.110***	0.106***	0.0897***	0.0867***	0.0800***	0.0664***	0.0645***	0.0668***
	(8.21)	(9.22)	(7.80)	(7.21)	(10.14)	(7.90)	(6.06)	(5.23)	(6.29)
midwest	0.0598***	0.0649***	0.0728***	0.0667***	0.0640***	0.0532***	0.0457***	0.0358***	0.0353**
	(3.34)	(4.30)	(5.66)	(5.01)	(5.86)	(5.82)	(8.88)	(3.38)	(2.72)
west	0.0356	0.0442**	0.0534***	0.0537***	0.0656***	0.0748***	0.0802***	0.0824***	0.0905***
	(1.96)	(2.93)	(3.58)	(5.94)	(6.34)	(7.44)	(7.58)	(7.20)	(8.14)
_cons	4.001***	4.122***	4.261***	4.394***	4.551***	4.676***	4.830***	4.974***	5.174***
	(114.11)	(160.12)	(170.74)	(201.73)	(201.85)	(216.32)	(275.64)	(182.28)	(219.06)
Observations	28155	28155	28155	28155	28155	28155	28155	28155	28155

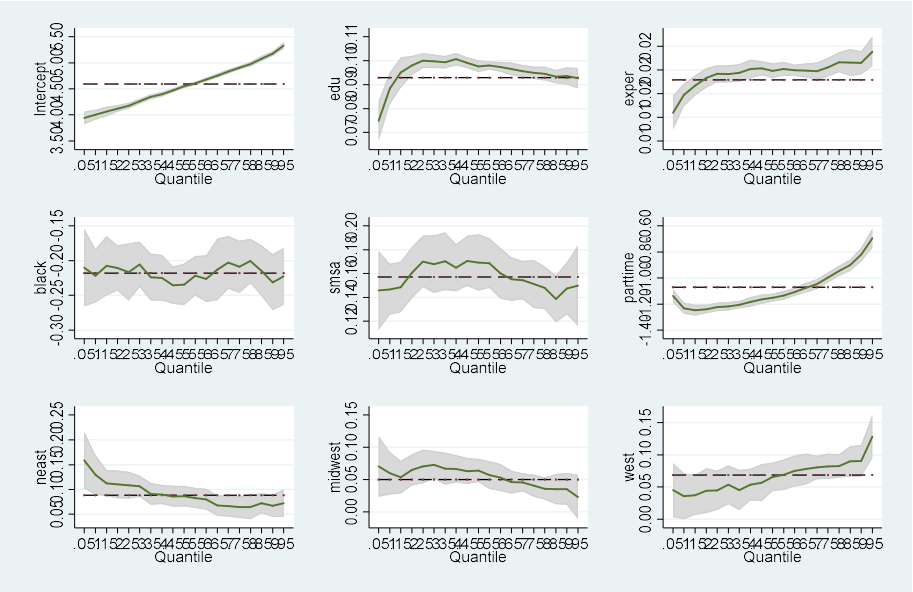
t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Problem 4

Comments:

The intercept represents the predicted quartile given the independent variables. Therefore the 20 precentile estimate is 4.066 given the independent variable set. The 60 precentile estimate is 4.641 given the independent variable set.

Problem 5



Comments:

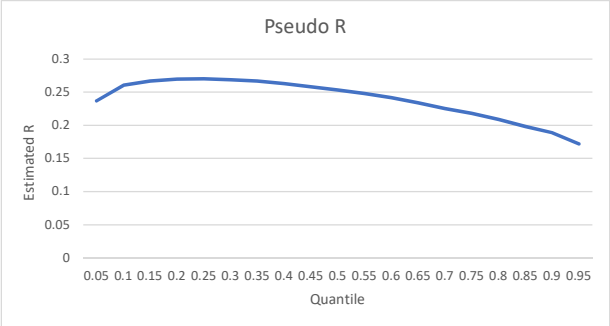
Education, experience, and part-time coefficients appear to increase across the quantiles. The indicator for being black, in a city, and in the regions all have fluctuations around the OLS estimate but the ols estimate is still in the confidence interval so these could statistically not be different.

Problem 6

Comments:

Part-time status at higher wages increases the wage. Compared to the lower wages of the distribution, this is polar opposite. One explanation may be that experienced workers retire, are brought back on as expensive contractors, and are only allowed to work part time. Being black appears to have a consistent negative impact to wages regardless of the quantile.

Problem 7



Comments:

The strength of the model decreases increasing through the quantiles as indicated by the above graph.