

PAF 573
ADVANCED REGRESSION
HETEROSKEDASTICITY

```
log: C:\PUAF611\spring 2001\class handouts\heteroscedasticity handout.smcl
log type: smcl
opened on: 15 Mar 2001, 18:14:06
```

```
. use "C:\PUAF611\Fall 2000\datasets\mnook5.dta", clear
(Santa Clara County Divorce Data)
```

```
. reg award confcust nkids earndad earnmom petmom
```

Source	SS	df	MS	Number of obs =	281
+					
Model	6365420.71	5	1273084.14	F(5, 275) =	35.00
Residual	10002036.2	275	36371.0407	Prob > F =	0.0000
+					
Total	16367456.9	280	58455.2033	R_squared =	0.3889
				Adj R_squared =	0.3778
				Root MSE =	190.71

award	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
+						
confcust	_.3768068	2.355364	_.160	0.111	_.8404903	.8687679
nkids	143.4686	18.04398	7.95	0.000	107.9467	178.9905
earndad	.0406805	.0046119	8.82	0.000	.0316015	.0497595
earnmom	_.0216605	.0120308	_.180	0.073	_.0453447	.0020237
petmom	_.67.40331	27.94068	_.2.41	0.017	_.122.4081	_.12.39851
_cons	181.7554	45.4601	4.00	0.000	92.26138	271.2494

```
. hettest
```

Cook_Weisberg test for heteroskedasticity using fitted values of award

```
Ho: Constant variance
chi2(1) = 379.44
Prob > chi2 = 0.0000
```

```
. rvfplot, border yline(0)
```

```
. reg award confcust nkids earndad earnmom petmom, robust
```

```
Regression with robust standard errors
Number of obs = 281
F( 5, 275) = 12.30
Prob > F = 0.0000
R_squared = 0.3889
Root MSE = 190.71
```

award	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
+						
confcust	_.3768068	2.03614	_.185	0.065	_.777647	.2403347
nkids	143.4686	22.44898	6.39	0.000	99.27496	187.6623
earndad	.0406805	.0171923	2.37	0.019	.0068353	.0745257
earnmom	_.0216605	.0131891	_.1.64	0.102	_.0476249	.0043039
petmom	_.67.40331	30.17557	_.2.23	0.026	_.126.8078	_.7.998845
_cons	181.7554	51.95987	3.50	0.001	79.46576	284.045