```
  (51,618 real changes made)
 1 . clear

 2 . set more off

 3 .
 4 . * PS5-II.1.a
 5 .
 6 . use k93

 7 . keep if 16 <= age & age <= 65
  (134,523 observations deleted)

 8 . keep if working == 1
  (69,081 observations deleted)

 9 .
10 . gen educ_cat = 0

11 . replace educ_cat = 1 if educ == 12
  (51,618 real changes made)

12 . replace educ_cat = 2 if 12 < educ
  (54,091 real changes made)

13 . replace educ_cat = 3 if educ == 16
  (16,776 real changes made)

14 . replace educ_cat = 4 if 16 < educ
  (12,145 real changes made)

15 .
16 . gen age_cat = .
  (123,561 missing values generated)

17 . replace age_cat = 0 if 18 <= age
  (122,776 real changes made)

18 . replace age_cat = 1 if 25 <= age
  (105,763 real changes made)

19 . replace age_cat = 2 if 40 <= age
  (50,893 real changes made)

20 . replace age_cat = 3 if 55 <= age
  (14,276 real changes made)

21 .
22 . gen union_cat = 0

23 . replace union_cat = 1 if union == 0
  (21,678 real changes made)

24 .
25 . gen parttime_cat = 0

26 . replace parttime_cat = 1 if parttime == 0
  (120,119 real changes made)

27 .
28 . gen use_comp_pct = use_comp*100
  (6,695 missing values generated)
```

```
29 .
30 . eststo: mean use_comp_pct if year == 1984

Mean estimation                   Number of obs    =     57,634

------------------------------------------------------------------------------
             |       Mean   Std. Err.     [95% Conf. Interval]
-------------+----------------------------------------------------------------
use_comp_pct |   25.17264   .1807836       24.8183    25.52698
------------------------------------------------------------------------------

(est1 stored)

31 . eststo: mean use_comp_pct if year == 1989

Mean estimation                   Number of obs    =     59,232

------------------------------------------------------------------------------
             |       Mean   Std. Err.     [95% Conf. Interval]
-------------+----------------------------------------------------------------
use_comp_pct |   37.98116   .1994212      37.59029    38.37203
------------------------------------------------------------------------------

(est2 stored)

32 . esttab using PS5-21a.csv, replace ///
>         nolines nonum ///
>         mtitles("1984" "1989") ///
>         varlabels(use_comp_pct "All workers") ///
>         b(a1) nostar not noobs
(output written to PS5-21a.csv)

33 . eststo clear

34 .
35 . foreach var in female educ_cat black age_cat union_cat parttime_cat region {
  2.         eststo: mean use_comp_pct if year == 1984, over(`var')
  3.         eststo: mean use_comp_pct if year == 1989, over(`var')
  4.         esttab using PS5-21a.csv, append ///
>                 nolines nonum nomtitles ///
>                 varlabels(c.use_comp_pct@0.female "Men" c.use_comp_pct@1.fema
> le "Women" c.use_comp_pct@0.educ_cat "Less than high school" c.use_comp_pct@1
> .educ_cat "High school" c.use_comp_pct@2.educ_cat "Some college" c.use_comp_p
> ct@3.educ_cat "College" c.use_comp_pct@4.educ_cat "Postcollege" c.use_comp_pc
> t@0.black "White" c.use_comp_pct@1.black "Black" c.use_comp_pct@0.age_cat "Ag
> e 18-24" c.use_comp_pct@1.age_cat "Age 25-39" c.use_comp_pct@2.age_cat "Age 4
> 0-54" c.use_comp_pct@3.age_cat "Age 55-65" c.use_comp_pct@0.union_cat "Union
> member" c.use_comp_pct@1.union_cat "Nonunion" c.use_comp_pct@0.parttime_cat "
> Part-time" c.use_comp_pct@1.parttime_cat "Full-time" c.use_comp_pct@1.region
> "Northeast" c.use_comp_pct@2.region "Midwest" c.use_comp_pct@3.region "South"
>  c.use_comp_pct@4.region "West") ///
>                 refcat(c.use_comp_pct@0.female "Gender" c.use_comp_pct@0.educ
> _cat "Education" c.use_comp_pct@0.black "Race" c.use_comp_pct@0.age_cat "Age"
>  c.use_comp_pct@0.union_cat "Union status" c.use_comp_pct@0.parttime_cat "Hou
> rs" c.use_comp_pct@1.region "Region", nolabel) ///
>                 b(a1) nostar not noobs
  5.         eststo clear
  6. }

Mean estimation                   Number of obs    =     57,634

------------------------------------------------------------------------------
                             |       Mean   Std. Err.     [95% Conf. Interval]
-----------------------------+----------------------------------------------------------------
c.use_comp_pct@female        |
                           0 |    21.3834   .2260842      20.94027    21.82653
                           1 |   30.20934   .2919061      29.63721    30.78148
------------------------------------------------------------------------------

(est1 stored)

Mean estimation                   Number of obs    =     59,232
```

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@female				
0	**32.49499**	**.2600214**	**31.98535**	**33.00463**
1	**44.62612**	**.3037338**	**44.03081**	**45.22144**

(**est2** stored)
(output written to PS5-21a.csv)

Mean estimation Number of obs = **57,634**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@educ_cat				
0	**5.075508**	**.233905**	**4.617053**	**5.533963**
1	**19.73355**	**.2548169**	**19.23411**	**20.23299**
2	**32.32626**	**.438987**	**31.46584**	**33.18667**
3	**42.16259**	**.5691898**	**41.04698**	**43.27821**
4	**43.2895**	**.665084**	**41.98593**	**44.59307**

(**est1** stored)

Mean estimation Number of obs = **59,232**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@educ_cat				
0	**7.87381**	**.3075292**	**7.271052**	**8.476569**
1	**29.7275**	**.2932455**	**29.15274**	**30.30227**
2	**47.21584**	**.4443213**	**46.34497**	**48.08671**
3	**59.16471**	**.5331695**	**58.11969**	**60.20972**
4	**59.93162**	**.6253301**	**58.70597**	**61.15727**

(**est2** stored)
(output written to PS5-21a.csv)

Mean estimation Number of obs = **57,634**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@black				
0	**25.67747**	**.1900389**	**25.30499**	**26.04994**
1	**19.60334**	**.5736693**	**18.47895**	**20.72774**

(**est1** stored)

Mean estimation Number of obs = **59,232**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@black				
0	**38.96936**	**.2098935**	**38.55797**	**39.38075**
1	**27.81167**	**.6186917**	**26.59903**	**29.0243**

(**est2** stored)
(output written to PS5-21a.csv)

Mean estimation Number of obs = **57,290**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@age_cat				
0	**20.868**	**.4309157**	**20.0234**	**21.7126**
1	**29.78865**	**.286116**	**29.22786**	**30.34944**
2	**24.01749**	**.3376808**	**23.35564**	**24.67935**
3	**17.132**	**.455585**	**16.23905**	**18.02495**

(**est1** stored)

Mean estimation Number of obs = **58,845**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@age_cat				
0	**31.14392**	**.5440122**	**30.07766**	**32.21019**
1	**41.91234**	**.3016155**	**41.32117**	**42.50351**
2	**39.56479**	**.3602236**	**38.85875**	**40.27083**
3	**26.42422**	**.5509029**	**25.34445**	**27.504**

(**est2** stored)
(output written to PS5-21a.csv)

Mean estimation Number of obs = **57,634**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@union_cat				
0	**24.40199**	**.1970039**	**24.01587**	**24.78812**
1	**28.79913**	**.4505797**	**27.91599**	**29.68227**

(**est1** stored)

Mean estimation Number of obs = **59,232**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@union_cat				
0	**37.16318**	**.2190853**	**36.73377**	**37.59258**
1	**41.74308**	**.4794731**	**40.80331**	**42.68285**

(**est2** stored)
(output written to PS5-21a.csv)

Mean estimation Number of obs = **57,634**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@parttime_cat				
0	**14.59202**	**.8618088**	**12.90287**	**16.28117**
1	**25.49013**	**.1842372**	**25.12902**	**25.85123**

(**est1** stored)

Mean estimation Number of obs = **59,232**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@parttime_cat				
0	**23.36449**	**1.056552**	**21.29364**	**25.43533**
1	**38.38826**	**.2025917**	**37.99117**	**38.78534**

(**est2** stored)
(output written to PS5-21a.csv)

Mean estimation Number of obs = **57,634**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@region				
1	**25.8848**	**.3846268**	**25.13093**	**26.63867**
2	**24.20905**	**.3587808**	**23.50584**	**24.91226**
3	**23.43544**	**.3276599**	**22.79323**	**24.07766**
4	**27.6212**	**.3820727**	**26.87234**	**28.37007**

(**est1** stored)

Mean estimation Number of obs = **59,232**

	Mean	Std. Err.	[95% Conf.	Interval]
c.use_comp_pct@region				
1	**38.24059**	**.4123469**	**37.43239**	**39.04879**
2	**36.97984**	**.3990623**	**36.19768**	**37.76201**
3	**36.76787**	**.3579223**	**36.06634**	**37.4694**
4	**40.6148**	**.438284**	**39.75576**	**41.47383**

(**est2** stored)
(output written to PS5-21a.csv)

```
36 .
37 . * PS5-II.1.b
38 .
39 . drop if rhrwg < 1.5 | 250 < rhrwg
(97,110 observations deleted)

40 . gen expsq_100 = expsq / 100

41 .
42 . eststo: reg rlnhrwg use_comp if year == 1984
```

Source	SS	df	MS		
				Number of obs	= **12,568**
				F(1, 12566)	= **640.69**
Model	**177.610565**	**1**	**177.610565**	Prob > F	= **0.0000**
Residual	**3483.50726**	**12,566**	**.277216876**	R-squared	= **0.0485**
				Adj R-squared	= **0.0484**
Total	**3661.11782**	**12,567**	**.291327908**	Root MSE	= **.52651**

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	**.2675039**	**.0105683**	**25.31**	**0.000**	**.2467884**	**.2882194**
_cons	**1.956253**	**.0055001**	**355.68**	**0.000**	**1.945472**	**1.967034**

(**est1** stored)

```
43 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
> a veteran female married marr_fem union i.region if year == 1984
```

Source	SS	df	MS		
				Number of obs	= **10,742**
				F(16, 10725)	= **523.35**
Model	**1390.74555**	**16**	**86.9215971**	Prob > F	= **0.0000**
Residual	**1781.28856**	**10,725**	**.166087512**	R-squared	= **0.4384**
				Adj R-squared	= **0.4376**
Total	**3172.03412**	**10,741**	**.295320186**	Root MSE	= **.40754**

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	**.1711258**	**.0094247**	**18.16**	**0.000**	**.1526517**	**.1895998**
educ	**.071771**	**.0016181**	**44.35**	**0.000**	**.0685991**	**.0749429**
exp	**.0260246**	**.0011851**	**21.96**	**0.000**	**.0237017**	**.0283476**
expsq_100	**-.0388034**	**.0025907**	**-14.98**	**0.000**	**-.0438817**	**-.0337251**
black	**-.1022379**	**.0131844**	**-7.75**	**0.000**	**-.1280818**	**-.076394**
other_race	**-.1021396**	**.0230475**	**-4.43**	**0.000**	**-.1473169**	**-.0569623**
parttime	**-.2426543**	**.0124434**	**-19.50**	**0.000**	**-.2670457**	**-.218263**
smsa	**.0968179**	**.0088251**	**10.97**	**0.000**	**.0795192**	**.1141167**
veteran	**.0414483**	**.0121042**	**3.42**	**0.001**	**.0177219**	**.0651747**

female	-.1594742	.0138854	-11.48	0.000	-.1866923	-.1322562
married	.154896	.0123607	12.53	0.000	.1306667	.1791253
marr_fem	-.1788214	.0169575	-10.55	0.000	-.2120612	-.1455815
union	.1765335	.0102618	17.20	0.000	.1564186	.1966485
region						
2	-.0088898	.0113011	-0.79	0.432	-.0310422	.0132625
3	-.0276676	.0109086	-2.54	0.011	-.0490505	-.0062847
4	.0976691	.012352	7.91	0.000	.0734569	.1218813
_cons	.7284823	.0259739	28.05	0.000	.6775687	.7793959

(**est2** stored)

```
44 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
   > a veteran female married marr_fem union occup_* i.region if year == 1984
note: occup_6 omitted because of collinearity
note: occup_7 omitted because of collinearity
note: occup_8 omitted because of collinearity
```

Source	SS	df	MS		
Model	1528.85421	21	72.8025816	Number of obs	= 10,742
Residual	1643.1799	10,720	.153281707	F(21, 10720)	= 474.96
				Prob > F	= 0.0000
Total	3172.03412	10,741	.295320186	R-squared	= 0.4820
				Adj R-squared	= 0.4810
				Root MSE	= .39151

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1391903	.009432	14.76	0.000	.1207019	.1576788
educ	.049855	.0018701	26.66	0.000	.0461892	.0535208
exp	.0243882	.0011401	21.39	0.000	.0221534	.0266231
expsq_100	-.0373813	.0024928	-15.00	0.000	-.0422677	-.0324949
black	-.0700418	.0127348	-5.50	0.000	-.0950043	-.0450792
other_race	-.0855175	.0221687	-3.86	0.000	-.1289722	-.0420628
parttime	-.1971423	.0121314	-16.25	0.000	-.2209221	-.1733625
smsa	.0916953	.0085184	10.76	0.000	.0749976	.1083929
veteran	.0462537	.0116563	3.97	0.000	.0234051	.0691023
female	-.144687	.0137486	-10.52	0.000	-.1716368	-.1177371
married	.1324247	.011899	11.13	0.000	.1091005	.155749
marr_fem	-.1676574	.0162989	-10.29	0.000	-.1996063	-.1357085
union	.1800614	.010037	17.94	0.000	.160387	.1997358
occup_1	.466608	.0338213	13.80	0.000	.4003121	.532904
occup_2	.2604093	.0330613	7.88	0.000	.1956031	.3252155
occup_3	.048858	.0336797	1.45	0.147	-.0171605	.1148765
occup_4	.3720963	.0333641	11.15	0.000	.3066964	.4374961
occup_5	.2133729	.0328553	6.49	0.000	.1489704	.2777753
occup_6	0	(omitted)				
occup_7	0	(omitted)				
occup_8	0	(omitted)				
region						
2	-.006845	.0108719	-0.63	0.529	-.028156	.014466
3	-.0274779	.0104841	-2.62	0.009	-.0480287	-.0069271
4	.1039162	.0118737	8.75	0.000	.0806415	.1271909
_cons	.7525134	.0401744	18.73	0.000	.6737642	.8312626

(**est3** stored)

```
45 . eststo: reg rlnhrwg use_comp if year == 1989
```

Source	SS	df	MS	Number of obs	=	12,643
				F(1, 12641)	=	1141.60
Model	313.525759	1	313.525759	Prob > F	=	0.0000
Residual	3471.67315	12,641	.274635958	R-squared	=	0.0828
				Adj R-squared	=	0.0828
Total	3785.19891	12,642	.299414563	Root MSE	=	.52406

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.3210507	.009502	33.79	0.000	.3024253	.3396761
_cons	1.95476	.006032	324.06	0.000	1.942936	1.966584

(**est4** stored)

```
46 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
> a veteran female married marr_fem union i.region if year == 1989
```

Source	SS	df	MS	Number of obs	=	10,233
				F(16, 10216)	=	534.72
Model	1416.34734	16	88.521709	Prob > F	=	0.0000
Residual	1691.25043	10,216	.165549181	R-squared	=	0.4558
				Adj R-squared	=	0.4549
Total	3107.59777	10,232	.303713621	Root MSE	=	.40688

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1874646	.0090232	20.78	0.000	.1697773	.2051518
educ	.0763609	.0016639	45.89	0.000	.0730994	.0796225
exp	.0256539	.0012244	20.95	0.000	.0232538	.028054
expsq_100	-.0387851	.0027142	-14.29	0.000	-.0441054	-.0334648
black	-.130125	.0137358	-9.47	0.000	-.1570499	-.1032001
other_race	-.0254048	.0221527	-1.15	0.251	-.0688284	.0180188
parttime	-.2101989	.0127767	-16.45	0.000	-.2352437	-.1851541
smsa	.1726277	.0089914	19.20	0.000	.1550029	.1902526
veteran	.0301996	.0130171	2.32	0.020	.0046835	.0557157
female	-.1687577	.0135405	-12.46	0.000	-.1952997	-.1422158
married	.1560465	.0124209	12.56	0.000	.131699	.180394
marr_fem	-.147084	.0168876	-8.71	0.000	-.1801869	-.113981
union	.1822289	.0112077	16.26	0.000	.1602596	.2041983
region						
2	-.0871848	.0117636	-7.41	0.000	-.1102438	-.0641258
3	-.0888571	.0117472	-7.56	0.000	-.111884	-.0658302
4	-.0013394	.012649	-0.11	0.916	-.026134	.0234552
_cons	.6881032	.0266713	25.80	0.000	.6358223	.7403841

(**est5** stored)

```
47 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
> a veteran female married marr_fem union occup_* i.region if year == 1989
note: occup_6 omitted because of collinearity
note: occup_7 omitted because of collinearity
note: occup_8 omitted because of collinearity
```

Source	SS	df	MS	Number of obs	=	10,233
				F(21, 10211)	=	467.29
Model	1522.91975	21	72.5199879	Prob > F	=	0.0000
Residual	1584.67803	10,211	.155193226	R-squared	=	0.4901
				Adj R-squared	=	0.4890
Total	3107.59777	10,232	.303713621	Root MSE	=	.39395

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1595079	.009333	17.09	0.000	.1412133	.1778025
educ	.0567101	.0018931	29.96	0.000	.0529992	.060421
exp	.0241224	.0011876	20.31	0.000	.0217945	.0264502
expsq_100	-.0373118	.0026329	-14.17	0.000	-.0424727	-.0321509
black	-.1053313	.013344	-7.89	0.000	-.1314881	-.0791744
other_race	-.0086156	.0214648	-0.40	0.688	-.0506907	.0334595
parttime	-.1730643	.0125331	-13.81	0.000	-.1976316	-.1484969
smsa	.1623917	.0087763	18.50	0.000	.1451884	.179595
veteran	.0343128	.0126328	2.72	0.007	.00955	.0590756
female	-.1557646	.0134538	-11.58	0.000	-.1821367	-.1293925
married	.1435863	.0120376	11.93	0.000	.1199902	.1671824
marr_fem	-.1422626	.0163721	-8.69	0.000	-.1743551	-.1101701
union	.1781709	.0109567	16.26	0.000	.1566936	.1996482
occup_1	.4503563	.0331426	13.59	0.000	.3853904	.5153223
occup_2	.2334465	.0322603	7.24	0.000	.1702099	.2966831
occup_3	.112683	.0327481	3.44	0.001	.0484902	.1768758
occup_4	.359335	.0326223	11.02	0.000	.2953889	.4232811
occup_5	.2247862	.0319017	7.05	0.000	.1622526	.2873199
occup_6	0	(omitted)				
occup_7	0	(omitted)				
occup_8	0	(omitted)				
region						
2	-.0788303	.0113969	-6.92	0.000	-.1011706	-.0564901
3	-.0900897	.0113781	-7.92	0.000	-.1123929	-.0677864
4	.0032953	.0122601	0.27	0.788	-.020737	.0273276
_cons	.6884446	.0391252	17.60	0.000	.6117515	.7651377

(**est6** stored)

```
48 . esttab using PS5-21b.csv, replace ///
>         nomtitles ///
>         drop(occup_* *.region) ///
>         varlabels(use_comp "Uses computer at work (1 = yes)" educ "Years of e
> ducation" exp "Experience" expsq_100 "Experience-squared / 100" black "Black
> (1 = yes)" other_race "Other race (1 = yes)" parttime "Part-time (1 = yes)" s
> msa "Lives in SMSA (1 = yes)" veteran "Veteran (1 = yes)" female "Female (1 =
>  yes)" married "Married (1 = yes)" marr_fem "Married*Female" union "Union mem
> ber (1 = yes)" _cons "Intercept") ///
>         refcat(union "8 Occupation dummies", below nolabel) ///
>         b(3) se(3) nostar ///
>         r2 noobs nonotes
(output written to PS5-21b.csv)

49 . eststo clear

50 .
51 . * PS5-II.1.c
52 .
53 . eststo: reg rlnhrwg use_comp comp_* educ exp expsq_100 black other_race partt
> ime smsa veteran female married marr_fem union occup_* if year == 1989
note: occup_3 omitted because of collinearity
note: occup_7 omitted because of collinearity
note: occup_8 omitted because of collinearity
```

Source	SS	df	MS		
				Number of obs	= 10,233
				F(28, 10204)	= 352.87
Model	1528.76745	28	54.5988375	Prob > F	= 0.0000
Residual	1578.83032	10,204	.15472661	R-squared	= 0.4919
				Adj R-squared	= 0.4906
Total	3107.59777	10,232	.303713621	Root MSE	= .39335

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1358739	.0115503	11.76	0.000	.113233	.158514
comp_wordproc	.0334983	.0138878	2.41	0.016	.0062756	.060721
comp_bookkeep	-.0513174	.0151915	-3.38	0.001	-.0810958	-.02153
comp_cad	.0107908	.0232295	0.46	0.642	-.0347437	.056325
comp_email	.1249254	.0186701	6.69	0.000	.0883284	.161522
comp_inventory	-.0572587	.015097	-3.79	0.000	-.0868518	-.027665
comp_program	.047265	.0172667	2.74	0.006	.0134189	.081111
comp_dtp	-.0434818	.0237682	-1.83	0.067	-.0900722	.003108
comp_spreadsht	.085358	.0165568	5.16	0.000	.0529033	.117812
comp_sales	.0139252	.0180929	0.77	0.442	-.0215405	.049390
comp_games	-.082865	.0293554	-2.82	0.005	-.1404073	-.025322
educ	.0556521	.001895	29.37	0.000	.0519376	.059366
exp	.0242476	.0011864	20.44	0.000	.0219219	.026573
expsq_100	-.0373291	.00263	-14.19	0.000	-.0424844	-.032173
black	-.1243925	.0130408	-9.54	0.000	-.149955	-.098829
other_race	.0172075	.0210797	0.82	0.414	-.0241128	.058527
parttime	-.165162	.0124927	-13.22	0.000	-.1896502	-.140673
smsa	.1700458	.0086888	19.57	0.000	.1530142	.187077
veteran	.0364169	.0126197	2.89	0.004	.0116799	.06115
female	-.1550534	.0134752	-11.51	0.000	-.1814674	-.128639
married	.1389525	.0120161	11.56	0.000	.1153986	.162506
marr_fem	-.1397534	.0163658	-8.54	0.000	-.1718336	-.107673
union	.1937053	.0108578	17.84	0.000	.1724218	.214988
occup_1	.3300809	.0157792	20.92	0.000	.2991505	.361011
occup_2	.1218166	.014159	8.60	0.000	.0940621	.14957
occup_3	0	(omitted)				
occup_4	.2476107	.0168245	14.72	0.000	.2146313	.2805
occup_5	.1087219	.0152707	7.12	0.000	.0787884	.138655
occup_6	-.1107248	.0326898	-3.39	0.001	-.1748033	-.046646
occup_7	0	(omitted)				
occup_8	0	(omitted)				
_cons	.7574561	.0289392	26.17	0.000	.7007295	.814182

(**est1** stored)

```
54 . estadd summ, mean

   added matrices:
                  e(mean) :  1 x 32

55 . esttab using PS5-21c.csv, replace ///
   >         keep(use_comp comp_*) ///
   >         nonumbers nomtitles ///
   >         collabels("Coefficient (std. error)" "Proportion") ///
   >         coeflabels(use_comp "Uses computer at work for any task" comp_wordpro
   > c "Word processing" comp_bookkeep "Bookkeeping" comp_cad "Computer-assisted d
   > esign" comp_email "Electronic mail" comp_inventory "Inventory control" comp_p
   > rogram "Programming" comp_dtp "Desktop publishing or newsletters" comp_spread
   > sht "Spread sheets" comp_sales "Sales" comp_games "Computer games") ///
   >         refcat(comp_wordproc "Specific Task", nolabel) ///
   >         cells("b(fmt(3)) mean(fmt(3))" se(par fmt(3))) ///
   >         r2 noobs
   (output written to PS5-21c.csv)

56 . eststo clear

57 .
58 . * PS5-II.1.d
59 .
60 . reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime smsa vetera
   > n female married marr_fem union occup_* if year == 1989
   note: occup_3 omitted because of collinearity
   note: occup_7 omitted because of collinearity
   note: occup_8 omitted because of collinearity
```

Source	SS	df	MS		
Model	1505.47493	18	83.6374961	Number of obs	10,233
				F(18, 10214)	533.21
Residual	1602.12284	10,214	.156855575	Prob > F	0.0000
				R-squared	0.4844
Total	3107.59777	10,232	.303713621	Adj R-squared	0.4835
				Root MSE	.39605

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1599875	.0093798	17.06	0.000	.1416013	.1783737
educ	.0571187	.0018986	30.08	0.000	.053397	.0608403
exp	.0245005	.0011932	20.53	0.000	.0221615	.0268395
expsq_100	-.0377835	.0026457	-14.28	0.000	-.0429697	-.0325974
black	-.1268319	.0131204	-9.67	0.000	-.1525505	-.1011133
other_race	.0166457	.0212122	0.78	0.433	-.0249344	.0582258
parttime	-.1674948	.0125716	-13.32	0.000	-.1921377	-.1428519
smsa	.1750031	.0087287	20.05	0.000	.1578931	.192113
veteran	.0323631	.0126957	2.55	0.011	.007477	.0572492
female	-.1591968	.0135216	-11.77	0.000	-.1857018	-.1326918
married	.1384935	.0120912	11.45	0.000	.1147924	.1621945
marr_fem	-.1411481	.0164581	-8.58	0.000	-.1734093	-.108887
union	.1884417	.0108831	17.32	0.000	.1671086	.2097748
occup_1	.3379249	.0158402	21.33	0.000	.3068749	.3689749
occup_2	.1200341	.0142237	8.44	0.000	.0921529	.1479154
occup_3	0	(omitted)				
occup_4	.244884	.0169261	14.47	0.000	.2117056	.2780624
occup_5	.1070605	.0153691	6.97	0.000	.0769341	.137187
occup_6	-.1095656	.0329049	-3.33	0.001	-.1740656	-.0450655
occup_7	0	(omitted)				
occup_8	0	(omitted)				
_cons	.7381463	.0289963	25.46	0.000	.6813079	.7949846

```
61 . esttab using PS5-21d.tex, replace ///
   >         nomtitles ///
   >         drop(occup_*) ///
   >         varlabels(use_comp "Uses computer at work (1 = yes)" educ "Years of e
   > ducation" exp "Experience" expsq_100 "Experience-squared / 100" black "Black
   > (1 = yes)" other_race "Other race (1 = yes)" parttime "Part-time (1 = yes)" s
   > msa "Lives in SMSA (1 = yes)" veteran "Veteran (1 = yes)" female "Female (1 =
   >  yes)" married "Married (1 = yes)" marr_fem "Married*Female" union "Union mem
   > ber (1 = yes)" _cons "Intercept") ///
   >         refcat(union "8 Occupation dummies", below nolabel) ///
   >         b(3) se(3) nostar ///
   >         r2 noobs nonotes
   (output written to PS5-21d.tex)

62 .
63 . local r2_short = e(r2)

64 . reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime smsa vetera
   > n female married marr_fem union occup_* i.region if year == 1989
   note: occup_6 omitted because of collinearity
   note: occup_7 omitted because of collinearity
   note: occup_8 omitted because of collinearity
```

Source	SS	df	MS		
				Number of obs	= 10,233
				F(21, 10211)	= 467.29
Model	1522.91975	21	72.5199879	Prob > F	= 0.0000
Residual	1584.67803	10,211	.155193226	R-squared	= 0.4901
				Adj R-squared	= 0.4890
Total	3107.59777	10,232	.303713621	Root MSE	= .39395

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1595079	.009333	17.09	0.000	.1412133	.1778025
educ	.0567101	.0018931	29.96	0.000	.0529992	.060421
exp	.0241224	.0011876	20.31	0.000	.0217945	.0264502
expsq_100	-.0373118	.0026329	-14.17	0.000	-.0424727	-.0321509
black	-.1053313	.013344	-7.89	0.000	-.1314881	-.0791744
other_race	-.0086156	.0214648	-0.40	0.688	-.0506907	.0334595
parttime	-.1730643	.0125331	-13.81	0.000	-.1976316	-.1484969
smsa	.1623917	.0087763	18.50	0.000	.1451884	.179595
veteran	.0343128	.0126328	2.72	0.007	.00955	.0590756
female	-.1557646	.0134538	-11.58	0.000	-.1821367	-.1293925
married	.1435863	.0120376	11.93	0.000	.1199902	.1671824
marr_fem	-.1422626	.0163721	-8.69	0.000	-.1743551	-.1101701
union	.1781709	.0109567	16.26	0.000	.1566936	.1996482
occup_1	.4503563	.0331426	13.59	0.000	.3853904	.5153223
occup_2	.2334465	.0322603	7.24	0.000	.1702099	.2966831
occup_3	.112683	.0327481	3.44	0.001	.0484902	.1768758
occup_4	.359335	.0326223	11.02	0.000	.2953889	.4232811
occup_5	.2247862	.0319017	7.05	0.000	.1622526	.2873199
occup_6	0	(omitted)				
occup_7	0	(omitted)				
occup_8	0	(omitted)				
region						
2	-.0788303	.0113969	-6.92	0.000	-.1011706	-.0564901
3	-.0900897	.0113781	-7.92	0.000	-.1123929	-.0677864
4	.0032953	.0122601	0.27	0.788	-.020737	.0273276
_cons	.6884446	.0391252	17.60	0.000	.6117515	.7651377

```
65 . local r2_long = e(r2)

66 . display "R2 version of the F-test : " ((e(N) - e(df_m) - 1)/3)*((`r2_long' -
> `r2_short')/(1 - `r2_long'))
R2 version of the F-test : 37.469028

67 . test 1.region 2.region 3.region 4.region

 ( 1)  1b.region = 0
 ( 2)  2.region = 0
 ( 3)  3.region = 0
 ( 4)  4.region = 0
       Constraint 1 dropped

       F(  3, 10211) =   37.47
            Prob > F =    0.0000

68 .
69 . * PS5-II.1.e
70 .
71 . eststo: reg rlnhrwg use_comp if year == 1984
```

Source	SS	df	MS	Number of obs	=	12,568
				F(1, 12566)	=	640.69
Model	177.610565	1	177.610565	Prob > F	=	0.0000
Residual	3483.50726	12,566	.277216876	R-squared	=	0.0485
				Adj R-squared	=	0.0484
Total	3661.11782	12,567	.291327908	Root MSE	=	.52651

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.2675039	.0105683	25.31	0.000	.2467884	.2882194
_cons	1.956253	.0055001	355.68	0.000	1.945472	1.967034

(**est1** stored)

```
72 . eststo: reg rlnhrwg use_comp if year == 1984, robust

Linear regression                               Number of obs     =     12,568
                                                F(1, 12566)       =     664.63
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0485
                                                Root MSE          =     .52651
```

rlnhrwg	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.2675039	.0103762	25.78	0.000	.247165	.2878429
_cons	1.956253	.0055583	351.95	0.000	1.945358	1.967148

(**est2** stored)

```
73 . eststo: reg rlnhrwg use_comp if year == 1989
```

Source	SS	df	MS	Number of obs	=	12,643
				F(1, 12641)	=	1141.60
Model	313.525759	1	313.525759	Prob > F	=	0.0000
Residual	3471.67315	12,641	.274635958	R-squared	=	0.0828
				Adj R-squared	=	0.0828
Total	3785.19891	12,642	.299414563	Root MSE	=	.52406

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.3210507	.009502	33.79	0.000	.3024253	.3396761
_cons	1.95476	.006032	324.06	0.000	1.942936	1.966584

(**est3** stored)

```
74 . eststo: reg rlnhrwg use_comp if year == 1989, robust

Linear regression                               Number of obs     =     12,643
                                                F(1, 12641)       =    1160.66
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0828
                                                Root MSE          =     .52406

------------------------------------------------------------------------------
             |               Robust
     rlnhrwg |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    use_comp |   .3210507   .0094237    34.07   0.000     .3025789    .3395226
       _cons |    1.95476    .006134   318.68   0.000     1.942736    1.966783
------------------------------------------------------------------------------

(est4 stored)

75 . esttab using PS5-21e.tex, replace ///
>         mtitles("Regular" "Robust" "Regular" "Robust") ///
>         varlabels(use_comp "Uses computer at work (1 = yes)" _cons "Intercept
> ") ///
>         b(3) se(3) nostar ///
>         r2 noobs nonotes
(output written to PS5-21e.tex)

76 . eststo clear

77 .
78 . * PS5-II.1.f
79 .
80 . gen use_comp_fem = use_comp*female
(1,240 missing values generated)

81 . gen educ_fem = educ*female

82 .
83 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
> a veteran female married marr_fem union use_comp_fem  i.region if year == 198
> 4

      Source |       SS           df       MS      Number of obs   =    10,742
-------------+----------------------------------   F(17, 10724)    =    492.53
       Model |  1390.76458        17  81.8096813   Prob > F        =    0.0000
    Residual |  1781.26953    10,724  .166101225   R-squared       =    0.4384
-------------+----------------------------------   Adj R-squared   =    0.4376
       Total |  3172.03412    10,741  .295320186   Root MSE        =    .40756

------------------------------------------------------------------------------
     rlnhrwg |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    use_comp |   .1742768   .0132476    13.16   0.000      .148309    .2002445
        educ |   .0717091   .0016285    44.03   0.000     .0685169    .0749013
         exp |   .0260105   .0011859    21.93   0.000      .023686     .028335
   expsq_100 |  -.0387857   .0025914   -14.97   0.000    -.0438653   -.0337062
       black |  -.1022802   .0131856    -7.76   0.000    -.1281263   -.0764341
  other_race |  -.1022071   .0230493    -4.43   0.000     -.147388   -.0570263
    parttime |  -.2429652   .0124777   -19.47   0.000    -.2674238   -.2185065
        smsa |   .0968045   .0088255    10.97   0.000     .0795048    .1141041
     veteran |   .0414217   .0121049     3.42   0.001     .0176938    .0651496
      female |   -.157792   .0147487   -10.70   0.000    -.1867021   -.1288819
     married |    .154838   .0123624    12.52   0.000     .1306054    .1790706
    marr_fem |  -.1787454   .0169597   -10.54   0.000    -.2119895   -.1455013
       union |   .1767592   .0102838    17.19   0.000      .156601    .1969174
use_comp_fem |  -.0060928   .0180009    -0.34   0.735    -.0413778    .0291922

      region |
          2  |  -.0089053   .0113017    -0.79   0.431    -.0310587    .0132481
          3  |  -.0276363   .0109095    -2.53   0.011    -.0490209   -.0062517
          4  |   .0977393   .0123543     7.91   0.000     .0735226    .1219559

       _cons |   .7287386    .025986    28.04   0.000     .6778013    .7796759
------------------------------------------------------------------------------

(est1 stored)
```

```
84 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
   > a veteran female married marr_fem union educ_fem i.region if year == 1984
```

Source	SS	df	MS	Number of obs	=	10,742
				F(17, 10724)	=	496.67
Model	1397.3133	17	82.1948998	Prob > F	=	0.0000
Residual	1774.72082	10,724	.165490565	R-squared	=	0.4405
				Adj R-squared	=	0.4396
Total	3172.03412	10,741	.295320186	Root MSE	=	.40681

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1728584	.0094117	18.37	0.000	.1544097	.1913071
educ	.0646594	.0019706	32.81	0.000	.0607966	.0685221
exp	.0266032	.0011865	22.42	0.000	.0242774	.0289289
expsq_100	-.0399152	.0025921	-15.40	0.000	-.0449962	-.0348342
black	-.1014336	.0131613	-7.71	0.000	-.1272322	-.075635
other_race	-.1010246	.0230067	-4.39	0.000	-.146122	-.0559272
parttime	-.2387298	.0124366	-19.20	0.000	-.2631079	-.2143518
smsa	.0974578	.0088098	11.06	0.000	.080189	.1147266
veteran	.0423002	.0120832	3.50	0.000	.018615	.0659854
female	-.4095335	.042044	-9.74	0.000	-.4919476	-.3271194
married	.1530756	.0123419	12.40	0.000	.1288833	.1772679
marr_fem	-.1759931	.016933	-10.39	0.000	-.2091848	-.1428014
union	.1704951	.0102881	16.57	0.000	.1503286	.1906616
educ_fem	.019027	.0030203	6.30	0.000	.0131066	.0249473
region						
2	-.0082173	.0112813	-0.73	0.466	-.0303307	.0138962
3	-.0282721	.0108894	-2.60	0.009	-.0496174	-.0069268
4	.0964647	.0123313	7.82	0.000	.0722931	.1206363
_cons	.8172674	.0295101	27.69	0.000	.7594222	.8751126

(**est2** stored)

```
85 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
   > a veteran female married marr_fem union use_comp_fem educ_fem i.region if yea
   > r == 1984
```

Source	SS	df	MS	Number of obs	=	10,742
				F(18, 10723)	=	469.44
Model	1397.97611	18	77.6653394	Prob > F	=	0.0000
Residual	1774.05801	10,723	.165444186	R-squared	=	0.4407
				Adj R-squared	=	0.4398
Total	3172.03412	10,741	.295320186	Root MSE	=	.40675

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1922272	.013498	14.24	0.000	.1657686	.2186859
educ	.0636895	.002029	31.39	0.000	.0597122	.0676668
exp	.026565	.0011865	22.39	0.000	.0242393	.0288907
expsq_100	-.0399	.0025917	-15.40	0.000	-.0449803	-.0348197
black	-.101625	.0131598	-7.72	0.000	-.1274207	-.0758293
other_race	-.101344	.023004	-4.41	0.000	-.1464361	-.0562518
parttime	-.2402995	.0124596	-19.29	0.000	-.2647226	-.2158765
smsa	.0974288	.0088085	11.06	0.000	.0801624	.1146952
veteran	.0422088	.0120816	3.49	0.000	.0185267	.0658909
female	-.4200857	.0423674	-9.92	0.000	-.5031337	-.3370376
married	.15257	.0123427	12.36	0.000	.128376	.176764
marr_fem	-.1752942	.0169342	-10.35	0.000	-.2084883	-.1421001
union	.1713691	.0102959	16.64	0.000	.1511872	.1915509
use_comp_fem	-.0371726	.0185717	-2.00	0.045	-.0735766	-.0007685
educ_fem	.0206108	.0031218	6.60	0.000	.0144915	.0267301
region						
2	-.0082555	.0112797	-0.73	0.464	-.0303659	.0138549
3	-.0281314	.0108881	-2.58	0.010	-.0494741	-.0067887
4	.0967924	.0123306	7.85	0.000	.0726221	.1209628

_cons	.8262215	.0298431	27.69	0.000	.7677234	.8847195

(**est3** stored)

```
86 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
   > a veteran female married marr_fem union use_comp_fem  i.region if year == 198
   > 9
```

Source	SS	df	MS		
Model	1416.35298	17	83.3148809	Number of obs	10,233
Residual	1691.2448	10,215	.165564836	F(17, 10215)	503.22
				Prob > F	0.0000
Total	3107.59777	10,232	.303713621	R-squared	0.4558
				Adj R-squared	0.4549
				Root MSE	.4069

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1858668	.012509	14.86	0.000	.1613468	.2103869
educ	.0763996	.0016771	45.55	0.000	.0731121	.079687
exp	.025656	.0012245	20.95	0.000	.0232556	.0280563
expsq_100	-.0387808	.0027144	-14.29	0.000	-.0441015	-.03346
black	-.1301026	.013737	-9.47	0.000	-.1570298	-.1031754
other_race	-.0254507	.0221551	-1.15	0.251	-.0688791	.0179777
parttime	-.2099777	.0128334	-16.36	0.000	-.2351338	-.1848217
smsa	.1726105	.0089923	19.20	0.000	.1549839	.1902372
veteran	.0301607	.0130194	2.32	0.021	.00464	.0556813
female	-.1699325	.0149644	-11.36	0.000	-.1992656	-.1405993
married	.1561551	.0124355	12.56	0.000	.1317791	.1805311
marr_fem	-.1472693	.0169182	-8.70	0.000	-.1804324	-.1141063
union	.182131	.0112209	16.23	0.000	.1601359	.204126
use_comp_fem	.0031036	.0168283	0.18	0.854	-.0298832	.0360905
region						
2	-.0871906	.0117642	-7.41	0.000	-.1102507	-.0641304
3	-.0888699	.011748	-7.56	0.000	-.1118983	-.0658415
4	-.0013684	.0126506	-0.11	0.914	-.0261661	.0234292
_cons	.6880522	.026674	25.79	0.000	.635766	.7403384

(**est4** stored)

```
87 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
   > a veteran female married marr_fem union educ_fem i.region if year == 1989
```

Source	SS	df	MS		
Model	1422.37199	17	83.6689406	Number of obs	10,233
Residual	1685.22578	10,215	.164975603	F(17, 10215)	507.16
				Prob > F	0.0000
Total	3107.59777	10,232	.303713621	R-squared	0.4577
				Adj R-squared	0.4568
				Root MSE	.40617

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1898889	.0090165	21.06	0.000	.1722149	.207563
educ	.0686992	.0020896	32.88	0.000	.0646031	.0727952
exp	.0259098	.001223	21.18	0.000	.0235125	.0283072
expsq_100	-.039246	.0027106	-14.48	0.000	-.0445592	-.0339328
black	-.1295477	.0137123	-9.45	0.000	-.1564265	-.1026689
other_race	-.0269017	.0221157	-1.22	0.224	-.0702527	.0164494
parttime	-.2077725	.0127609	-16.28	0.000	-.2327863	-.1827587
smsa	.1725198	.0089758	19.22	0.000	.1549255	.1901141
veteran	.0304305	.0129946	2.34	0.019	.0049585	.0559024
female	-.4078006	.0418024	-9.76	0.000	-.4897414	-.3258597
married	.1585939	.0124066	12.78	0.000	.1342746	.1829132
marr_fem	-.1521825	.0168794	-9.02	0.000	-.1852694	-.1190956
union	.1765076	.0112283	15.72	0.000	.154498	.1985173
educ_fem	.0183165	.003031	6.04	0.000	.0123751	.0242579
region						
2	-.0871235	.0117432	-7.42	0.000	-.1101425	-.0641045
3	-.0901748	.0117289	-7.69	0.000	-.1131658	-.0671838

4	-.0013904	.0126271	-0.11	0.912	-.026142	.0233611
_cons	.7849303	.0310745	25.26	0.000	.7240181	.8458424

(**est5** stored)

```
88 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
   > a veteran female married marr_fem union use_comp_fem educ_fem i.region if yea
   > r == 1989
```

Source	SS	df	MS		
Model	1422.98986	18	79.0549924	Number of obs	= 10,233
Residual	1684.60791	10,214	.164931262	F(18, 10214)	= 479.32
				Prob > F	= 0.0000
Total	3107.59777	10,232	.303713621	R-squared	= 0.4579
				Adj R-squared	= 0.4570
				Root MSE	= .40612

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.2079085	.0129595	16.04	0.000	.1825053	.2333117
educ	.067405	.0021937	30.73	0.000	.0631049	.0717051
exp	.0259155	.0012229	21.19	0.000	.0235184	.0283125
expsq_100	-.0393464	.0027107	-14.52	0.000	-.0446599	-.0340329
black	-.1297308	.0137108	-9.46	0.000	-.1566067	-.102855
other_race	-.0265602	.0221134	-1.20	0.230	-.0699068	.0167864
parttime	-.2099547	.0128089	-16.39	0.000	-.2350625	-.1848468
smsa	.1726987	.0089751	19.24	0.000	.1551058	.1902916
veteran	.0308891	.012995	2.38	0.017	.0054163	.0563618
female	-.4217503	.0424136	-9.94	0.000	-.5048893	-.3386113
married	.1576752	.012414	12.70	0.000	.1333414	.1820091
marr_fem	-.1506997	.0168945	-8.92	0.000	-.1838162	-.1175832
union	.1769498	.0112291	15.76	0.000	.1549385	.198961
use_comp_fem	-.0344716	.01781	-1.94	0.053	-.0693828	.0004395
educ_fem	.0203852	.0032135	6.34	0.000	.014086	.0266844
region						
2	-.0870528	.0117417	-7.41	0.000	-.1100688	-.0640367
3	-.0901817	.0117273	-7.69	0.000	-.1131696	-.0671938
4	-.0010735	.0126265	-0.09	0.932	-.0258239	.0236768
_cons	.7964322	.0316335	25.18	0.000	.7344243	.8584401

(**est6** stored)

```
89 . esttab using PS5-21f-1.tex, replace ///
   >         nomtitles ///
   >         drop(*.region) ///
   >         varlabels(use_comp "Uses computer at work (1 = yes)" use_comp_fem "Co
   > mputer-use*Female" educ "Years of education" educ_fem "Education*Female" exp
   > "Experience" expsq_100 "Experience-squared / 100" black "Black (1 = yes)" oth
   > er_race "Other race (1 = yes)" parttime "Part-time (1 = yes)" smsa "Lives in
   > SMSA (1 = yes)" veteran "Veteran (1 = yes)" female "Female (1 = yes)" married
   >  "Married (1 = yes)" marr_fem "Married*Female" union "Union member (1 = yes)"
   >  _cons "Intercept") ///
   >         refcat(union "8 Occupation dummies", below nolabel) ///
   >         b(3) se(3) nostar ///
   >         r2 noobs nonotes
   (output written to PS5-21f-1.tex)

90 . eststo clear
```

```
91 .
92 . gen use_comp_educ = use_comp*educ
   (1,240 missing values generated)

93 . gen use_comp_educ_fem = use_comp*educ*female
   (1,240 missing values generated)

94 .
95 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
   > a veteran female married marr_fem union i.region if year == 1984
```

Source	SS	df	MS	Number of obs	=	10,742
				F(16, 10725)	=	523.35
Model	1390.74555	16	86.9215971	Prob > F	=	0.0000
Residual	1781.28856	10,725	.166087512	R-squared	=	0.4384
				Adj R-squared	=	0.4376
Total	3172.03412	10,741	.295320186	Root MSE	=	.40754

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1711258	.0094247	18.16	0.000	.1526517	.1895998
educ	.071771	.0016181	44.35	0.000	.0685991	.0749429
exp	.0260246	.0011851	21.96	0.000	.0237017	.0283476
expsq_100	-.0388034	.0025907	-14.98	0.000	-.0438817	-.0337251
black	-.1022379	.0131844	-7.75	0.000	-.1280818	-.076394
other_race	-.1021396	.0230475	-4.43	0.000	-.1473169	-.0569623
parttime	-.2426543	.0124434	-19.50	0.000	-.2670457	-.218263
smsa	.0968179	.0088251	10.97	0.000	.0795192	.1141167
veteran	.0414483	.0121042	3.42	0.001	.0177219	.0651747
female	-.1594742	.0138854	-11.48	0.000	-.1866923	-.1322562
married	.154896	.0123607	12.53	0.000	.1306667	.1791253
marr_fem	-.1788214	.0169575	-10.55	0.000	-.2120612	-.1455815
union	.1765335	.0102618	17.20	0.000	.1564186	.1966485
region						
2	-.0088898	.0113011	-0.79	0.432	-.0310422	.0132625
3	-.0276676	.0109086	-2.54	0.011	-.0490505	-.0062847
4	.0976691	.012352	7.91	0.000	.0734569	.1218813
_cons	.7284823	.0259739	28.05	0.000	.6775687	.7793959

```
   (est1 stored)

96 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
   > a veteran female married marr_fem union use_comp_educ i.region if year == 198
   > 4
```

Source	SS	df	MS	Number of obs	=	10,742
				F(17, 10724)	=	492.95
Model	1391.42807	17	81.8487101	Prob > F	=	0.0000
Residual	1780.60604	10,724	.166039355	R-squared	=	0.4387
				Adj R-squared	=	0.4378
Total	3172.03412	10,741	.295320186	Root MSE	=	.40748

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.0646217	.0533694	1.21	0.226	-.0399921	.1692355
educ	.0700974	.0018163	38.59	0.000	.066537	.0736577
exp	.0261676	.001187	22.05	0.000	.0238408	.0284943
expsq_100	-.0392172	.0025984	-15.09	0.000	-.0443106	-.0341239
black	-.1031949	.013191	-7.82	0.000	-.1290517	-.0773382
other_race	-.1034392	.023053	-4.49	0.000	-.1486274	-.058251
parttime	-.2430029	.0124428	-19.53	0.000	-.2673931	-.2186128
smsa	.0970135	.0088243	10.99	0.000	.0797163	.1143108
veteran	.0428834	.0121231	3.54	0.000	.0191199	.0666469
female	-.1568654	.0139429	-11.25	0.000	-.1841962	-.1295347
married	.1546426	.0123596	12.51	0.000	.1304155	.1788696
marr_fem	-.1788796	.0169551	-10.55	0.000	-.2121147	-.1456446
union	.1764952	.0102603	17.20	0.000	.1563831	.1966073
use_comp_educ	.0076515	.0037739	2.03	0.043	.0002539	.015049

```
      region |
           2 |   -.0084801   .0113013    -0.75   0.453    -.0306327    .0136726
           3 |   -.0278931   .0109076    -2.56   0.011     -.049274   -.0065122
           4 |    .0976706   .0123502     7.91   0.000     .0734618    .1218793
             |
       _cons |    .7477949   .0276619    27.03   0.000     .6935724    .8020173
------------------------------------------------------------------------------

(est2 stored)

97 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
> a veteran female married marr_fem union use_comp_educ educ_fem i.region if ye
> ar == 1984

      Source |       SS           df       MS      Number of obs   =    10,742
-------------+----------------------------------   F(18, 10723)    =    469.34
       Model |  1397.81751        18  77.6565285   Prob > F        =    0.0000
    Residual |   1774.2166    10,723  .165458976   R-squared       =    0.4407
-------------+----------------------------------   Adj R-squared   =    0.4397
       Total |  3172.03412    10,741  .295320186   Root MSE        =    .40677

------------------------------------------------------------------------------
      rlnhrwg |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     use_comp |    .0811999   .0533427     1.52   0.128    -.0233618    .1857615
         educ |    .0633093   .0021168    29.91   0.000       .05916    .0674585
          exp |    .0267188   .0011882    22.49   0.000     .0243897     .029048
    expsq_100 |   -.0402572   .0025992   -15.49   0.000    -.0453522   -.0351622
        black |   -.1022673   .0131687    -7.77   0.000    -.1280804   -.0764541
   other_race |   -.1021569   .0230136    -4.44   0.000    -.1472679   -.0570459
     parttime |   -.2390794    .012437   -19.22   0.000    -.2634583   -.2147005
         smsa |     .097618   .0088094    11.08   0.000     .0803499    .1148861
      veteran |    .0435242   .0121023     3.60   0.000     .0198014     .067247
       female |   -.4041277   .0421539    -9.59   0.000    -.4867572   -.3214982
      married |    .1528805   .0123412    12.39   0.000     .1286895    .1770715
     marr_fem |    -.176079   .0169314   -10.40   0.000    -.2092677   -.1428903
        union |    .1705385   .0102871    16.58   0.000     .1503738    .1907031
use_comp_educ |    .0065834   .0037712     1.75   0.081     -.000809    .0139757
     educ_fem |    .0187864   .0030231     6.21   0.000     .0128605    .0247123
              |
       region |
           2 |   -.0078732    .011282    -0.70   0.485    -.0299879    .0142415
           3 |   -.0284585   .0108889    -2.61   0.009    -.0498027   -.0071142
           4 |    .0964811   .0123301     7.82   0.000     .0723119    .1206504
             |
       _cons |    .8327616   .0308133    27.03   0.000     .7723619    .8931613
------------------------------------------------------------------------------

(est3 stored)

98 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
> a veteran female married marr_fem union use_comp_educ educ_fem use_comp_educ_
> fem i.region if year == 1984

      Source |       SS           df       MS      Number of obs   =    10,742
-------------+----------------------------------   F(19, 10722)    =    444.85
       Model |  1398.25512        19  73.5923746   Prob > F        =    0.0000
    Residual |   1773.779    10,722  .165433594   R-squared       =    0.4408
-------------+----------------------------------   Adj R-squared   =    0.4398
       Total |  3172.03412    10,741  .295320186   Root MSE        =    .40674

------------------------------------------------------------------------------
> ------
      rlnhrwg |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Inter
> val]
-------------+----------------------------------------------------------------
> ------
     use_comp |    .0984701   .0543854     1.81   0.070    -.0081353     .205
> 0755
         educ |    .0625865   .0021628    28.94   0.000     .0583471     .066
> 8259
          exp |    .0266638   .0011886    22.43   0.000     .0243339     .028
> 9937
    expsq_100 |   -.0401797   .0025995   -15.46   0.000    -.0452752   -.035
> 0843
```

```
            black |  -.1022235   .0131677    -7.76   0.000    -.1280348   -.076
> 4123
       other_race |  -.1022081   .0230119    -4.44   0.000    -.1473157   -.057
> 1005
         parttime |  -.2402614   .0124573   -19.29   0.000    -.2646801   -.215
> 8428
             smsa |   .0975484   .0088088    11.07   0.000     .0802814    .114
> 8153
          veteran |   .0434115   .0121016     3.59   0.000     .0196901    .067
> 1329
           female |  -.4193563   .0431782    -9.71   0.000    -.5039935   -.334
> 7192
          married |   .1525091   .0123424    12.36   0.000     .1283158    .176
> 7024
         marr_fem |  -.1754737   .0169342   -10.36   0.000    -.2086678   -.142
> 2795
            union |   .1713035   .0102971    16.64   0.000     .1511194    .191
> 4877
    use_comp_educ |    .006443   .0037719     1.71   0.088    -.0009507    .013
> 8367
         educ_fem |   .0205744   .0032166     6.40   0.000     .0142693    .026
> 8796
use_comp_educ_fem |  -.0021794     .00134    -1.63   0.104    -.0048061    .000
> 4473
                  |
           region |
              2   |  -.0079376   .0112812    -0.70   0.482    -.0300507    .014
> 1756
              3   |  -.0282686   .0108887    -2.60   0.009    -.0496124   -.006
> 9247
              4   |   .0967571   .0123303     7.85   0.000     .0725874    .120
> 9268
                  |
            _cons |   .8393903   .0310793    27.01   0.000     .7784691    .900
> 3114
------------------------------------------------------------------------------
> ———
(est4 stored)

 99 . lincom educ + use_comp_educ

 ( 1)  educ + use_comp_educ = 0

------------------------------------------------------------------------------
     rlnhrwg |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0690295   .0036262    19.04   0.000     .0619215    .0761375
------------------------------------------------------------------------------

100 . lincom educ + educ_fem + use_comp_educ + use_comp_educ_fem

 ( 1)  educ + use_comp_educ + educ_fem + use_comp_educ_fem = 0

------------------------------------------------------------------------------
     rlnhrwg |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0874245   .0038675    22.60   0.000     .0798434    .0950056
------------------------------------------------------------------------------

101 . esttab using PS5-21f-2.tex, replace ///
>         nomtitles ///
>         drop(*.region) ///
>         varlabels(use_comp "Uses computer at work (1 = yes)" use_comp_fem "Co
> mputer-use*Female" educ "Years of education" use_comp_educ "Computer_use*Educ
> ation" educ_fem "Education*Female" exp "Experience" expsq_100 "Experience-squ
> ared / 100" black "Black (1 = yes)" other_race "Other race (1 = yes)" parttim
> e "Part-time (1 = yes)" smsa "Lives in SMSA (1 = yes)" veteran "Veteran (1 =
> yes)" female "Female (1 = yes)" married "Married (1 = yes)" marr_fem "Married
> *Female" union "Union member (1 = yes)" use_comp_educ_fem "Computer*Education
> *Female" _cons "Intercept") ///
>         b(3) se(3) nostar ///
>         r2 noobs nonotes
(output written to PS5-21f-2.tex)
```

```
102 . eststo clear

103 .
104 . * PS5-II.1.g
105 .
106 . gen year_cat = 0

107 . replace year_cat = 1 if year == 1989
(13,223 real changes made)

108 . gen educ_year = educ*year_cat

109 . gen use_comp_year = use_comp*year_cat
(1,240 missing values generated)

110 .
111 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
> a veteran female married marr_fem union i.region
```

Source	SS	df	MS	Number of obs	=	20,975
				F(16, 20958)	=	1049.47
Model	2798.88752	16	174.93047	Prob > F	=	0.0000
Residual	3493.37178	20,958	.166684406	R-squared	=	0.4448
				Adj R-squared	=	0.4444
Total	6292.2593	20,974	.300002827	Root MSE	=	.40827

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1846363	.0064654	28.56	0.000	.1719636	.1973091
educ	.0741038	.0011606	63.85	0.000	.071829	.0763786
exp	.0259546	.0008498	30.54	0.000	.024289	.0276202
expsq_100	-.0389304	.0018723	-20.79	0.000	-.0426003	-.0352606
black	-.1152032	.0095304	-12.09	0.000	-.1338835	-.0965229
other_race	-.0618633	.0160012	-3.87	0.000	-.0932268	-.0304998
parttime	-.2260586	.0089314	-25.31	0.000	-.243565	-.2085523
smsa	.1336916	.0063076	21.20	0.000	.1213282	.146055
veteran	.0345761	.0088478	3.91	0.000	.0172338	.0519184
female	-.1652211	.0097136	-17.01	0.000	-.1842606	-.1461817
married	.1555954	.0087701	17.74	0.000	.1384053	.1727856
marr_fem	-.1632703	.011989	-13.62	0.000	-.1867697	-.139771
union	.1786961	.0075702	23.61	0.000	.1638579	.1935343
region						
2	-.0452682	.0081518	-5.55	0.000	-.0612464	-.02929
3	-.0549513	.0080085	-6.86	0.000	-.0706486	-.0392541
4	.0502281	.0088399	5.68	0.000	.0329012	.0675551
_cons	.7033553	.0186122	37.79	0.000	.6668739	.7398366

```
(est1 stored)

112 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
> a veteran female married marr_fem union use_comp_year i.region
```

Source	SS	df	MS	Number of obs	=	20,975
				F(17, 20957)	=	989.60
Model	2801.8838	17	164.816694	Prob > F	=	0.0000
Residual	3490.3755	20,957	.166549387	R-squared	=	0.4453
				Adj R-squared	=	0.4448
Total	6292.2593	20,974	.300002827	Root MSE	=	.4081

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1601816	.0086608	18.49	0.000	.1432057	.1771575
educ	.0740085	.0011603	63.78	0.000	.0717342	.0762828
exp	.0257579	.0008507	30.28	0.000	.0240904	.0274253
expsq_100	-.0385868	.0018733	-20.60	0.000	-.0422587	-.034915
black	-.1151419	.0095265	-12.09	0.000	-.1338146	-.0964691
other_race	-.0630309	.0159971	-3.94	0.000	-.0943864	-.0316754
parttime	-.2264965	.0089284	-25.37	0.000	-.2439969	-.2089961
smsa	.1340631	.0063057	21.26	0.000	.1217035	.1464227
veteran	.0362548	.008853	4.10	0.000	.0189022	.0536074
female	-.1648308	.0097101	-16.98	0.000	-.1838634	-.1457982
married	.1561755	.0087676	17.81	0.000	.1389903	.1733607
marr_fem	-.1631737	.0119842	-13.62	0.000	-.1866636	-.1396838
union	.1789749	.0075674	23.65	0.000	.1641421	.1938076
use_comp_year	.0421377	.0099346	4.24	0.000	.0226651	.0616102
region						
2	-.0459116	.0081499	-5.63	0.000	-.0618861	-.0299371
3	-.0555736	.0080066	-6.94	0.000	-.0712672	-.0398801
4	.049949	.0088366	5.65	0.000	.0326286	.0672694
_cons	.7058239	.0186138	37.92	0.000	.6693395	.7423083

(**est2** stored)

```
113 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
    > a veteran female married marr_fem union educ_year i.region
```

Source	SS	df	MS	Number of obs	=	20,975
				F(17, 20957)	=	989.57
Model	2801.84383	17	164.814343	Prob > F	=	0.0000
Residual	3490.41547	20,957	.166551294	R-squared	=	0.4453
				Adj R-squared	=	0.4448
Total	6292.2593	20,974	.300002827	Root MSE	=	.40811

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1808964	.0065235	27.73	0.000	.1681098	.1936831
educ	.0732227	.0011788	62.12	0.000	.0709122	.0755333
exp	.0256791	.000852	30.14	0.000	.0240092	.027349
expsq_100	-.0384663	.0018748	-20.52	0.000	-.042141	-.0347915
black	-.1154826	.0095268	-12.12	0.000	-.1341559	-.0968094
other_race	-.0626873	.015996	-3.92	0.000	-.0940407	-.031334
parttime	-.2266831	.0089291	-25.39	0.000	-.2441848	-.2091814
smsa	.1342203	.0063063	21.28	0.000	.1218594	.1465812
veteran	.0370616	.0088639	4.18	0.000	.0196877	.0544355
female	-.1643215	.0097121	-16.92	0.000	-.183358	-.1452851
married	.1570668	.0087736	17.90	0.000	.1398699	.1742637
marr_fem	-.1633756	.0119842	-13.63	0.000	-.1868656	-.1398855
union	.1797947	.0075717	23.75	0.000	.1649536	.1946358
educ_year	.0018101	.0004296	4.21	0.000	.000968	.0026522
region						
2	-.0467742	.0081564	-5.73	0.000	-.0627614	-.0307871
3	-.0554157	.008006	-6.92	0.000	-.0711082	-.0397233
4	.049092	.0088405	5.55	0.000	.0317639	.0664201
_cons	.7058248	.018614	37.92	0.000	.6693399	.7423097

(**est3** stored)

```
114 . eststo: reg rlnhrwg use_comp educ exp expsq_100 black other_race parttime sms
    > a veteran female married marr_fem union use_comp_year educ_year i.region
```

Source	SS	df	MS	Number of obs	=	20,975
				F(18, 20956)	=	934.99
Model	2802.57964	18	155.698869	Prob > F	=	0.0000
Residual	3489.67966	20,956	.16652413	R-squared	=	0.4454
				Adj R-squared	=	0.4449
Total	6292.2593	20,974	.300002827	Root MSE	=	.40807

rlnhrwg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
use_comp	.1670135	.0092827	17.99	0.000	.1488187	.1852083
educ	.0735034	.0011862	61.96	0.000	.0711783	.0758286
exp	.0256622	.0008519	30.12	0.000	.0239924	.027332
expsq_100	-.0384302	.0018747	-20.50	0.000	-.0421049	-.0347556
black	-.1153362	.0095263	-12.11	0.000	-.1340085	-.096664
other_race	-.0631008	.0159959	-3.94	0.000	-.094454	-.0317476
parttime	-.2267163	.0089284	-25.39	0.000	-.2442166	-.2092159
smsa	.1342489	.0063058	21.29	0.000	.1218889	.1466088
veteran	.0371534	.0088633	4.19	0.000	.0197808	.0545261
female	-.1644244	.0097114	-16.93	0.000	-.1834596	-.1453893
married	.1568619	.0087734	17.88	0.000	.1396653	.1740584
marr_fem	-.1632744	.0119834	-13.63	0.000	-.1867627	-.139786
union	.179545	.007572	23.71	0.000	.1647032	.1943867
use_comp_year	.0264114	.0125645	2.10	0.036	.0017839	.0510388
educ_year	.0011107	.0005434	2.04	0.041	.0000457	.0021757
region						
2	-.0465957	.0081562	-5.71	0.000	-.0625824	-.0306089
3	-.0556264	.008006	-6.95	0.000	-.0713188	-.0399339
4	.049356	.0088407	5.58	0.000	.0320276	.0666845
_cons	.706418	.0186146	37.95	0.000	.6699319	.7429041

```
(est4 stored)

115 . test use_comp_year educ_year

 ( 1)  use_comp_year = 0
 ( 2)  educ_year = 0

       F(  2, 20956) =   11.09
            Prob > F =    0.0000

116 . esttab using PS5-21g-1.tex, replace ///
>         nomtitles ///
>         drop(*.region) ///
>         varlabels(use_comp "Uses computer at work (1 = yes)" use_comp_fem "Co
> mputer-use*Female" educ "Years of education" use_comp_educ "Computer_use*Educ
> ation" educ_fem "Education*Female" exp "Experience" expsq_100 "Experience-squ
> ared / 100" black "Black (1 = yes)" other_race "Other race (1 = yes)" parttim
> e "Part-time (1 = yes)" smsa "Lives in SMSA (1 = yes)" veteran "Veteran (1 =
> yes)" female "Female (1 = yes)" married "Married (1 = yes)" marr_fem "Married
> *Female" union "Union member (1 = yes)" use_comp_educ_fem "Computer*Education
> *Female" use_comp_year "Computer-use*Year" educ_year "Education*Year" _cons "
> Intercept") ///
>         b(3) se(3) nostar ///
>         r2 noobs nonotes
(output written to PS5-21g-1.tex)

117 . eststo clear

118 .
119 . log close
      name:  <unnamed>
       log:  C:\Users\wonja\Documents\GitHub\DEDP\14.320\PS5\PS5-21.smcl
  log type:  smcl
 closed on:  29 Apr 2021, 12:26:46
```