

**Technical Appendix II: Comparison of Labor Market Data from the Current Expenditure Survey and Current Population Survey for the sample of workers used in “Household Labor Supply and Taxes: A Nonparametric, Revealed Preference Approach”**

**by Melissa Famulari**

The primary focus of the Current Expenditure Survey (CE) is to collect household consumption expenditures to provide the items and weights for the basket of goods in the Consumer Price Index. How does information on annual earnings, weeks worked per year, and hours worked per week reported by the CE households compare to data from the Current Population Survey (CPS), a frequently analyzed source of labor market data?

The CE sample used in “Household Labor Supply and Taxes: A Nonparametric Approach” is comprised of complete responders (those households that respond to all 5 quarters of the CE survey) in twenty-five major metropolitan areas from 1982-85. In the fifth interview, the household reports annual earnings, weeks worked per year, and hours worked per week contemporaneous with the expenditures data. Annual hours worked is the product of weeks worked per year and hours worked per week. The gross hourly wage for both the reference person and spouse (where relevant) is the ratio of annual earnings to annual hours worked. For a family to be in the sample: (1) the reference person must be employed (or the spouse in married households), (2) earnings, weeks, and hours must be reported (3) no more than 5% of labor earnings can be derived from self-employment, and (4) hourly wages must be between \$1.50 and \$65.00 per hour. This resulted in a total sample of 1790 households and 3,413 working individuals.

I obtained a comparable sample of individuals from the March CPS for 1982-85. There are 78,913 men and women between the ages of 18 and 64, in the same cities as in the CE sample, who report annual earnings, weeks worked per year, hours worked per week and occupation.<sup>1</sup>

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<sup>1</sup> I excluded from the CPS sample the 6804 individuals who had an occupation code of either “45” (never worked) in the 1982 survey or “52” (no previous work experience or armed forces) in the 1983-1985

In Table 1, I report sample statistics for the CE in Column 1, for the CPS in Column 2, and differences in means and corresponding standard errors in Column 3. As a fraction of the CPS sample means, workers in the CE earn 18.6% more per year, work 4.7% more hours per year, and are paid 22.9% more per hour than workers in the CPS. These differences are due in part to significant differences in demographic characteristics across samples: CE workers have 0.4 year more education, are 3.37 years older, are 3.4 percentage points less likely to be black, and are more likely to be married (15.8 percentage points). In the CE data, the number of households per month is similar. However, the CE data used in this study start in September, 1982 and end in November, 1985. Therefore, only 9.5% of the CE sample is from 1982, when the economy was in a recession (the NBER dates November 1982 as the trough), whereas 24.9% of the CPS sample is from 1982.

To examine the distributions of reported annual hours, I report the fraction of the sample in 1985 (a non-recessionary year) reporting less than, equal to, or greater than 2080 (the annual hours for someone working 52 weeks a year and 40 hours per week). In 1985, 41.7% of CE men report working exactly 2080 hours and 36.0% of CE men report working more than 2080. Among CPS men, 45.2% report working exactly 2080 hours and only 25.6% of the men report working more than 2080 hours. CE women report working 2080 hours per year 6.4 percentage points less than CPS women (33.1% versus 39.5%). Women in both samples are much less likely to work more than 2080 hours than men, though again CE respondents are more likely to report working more than 2080 hours than CPS respondents: 13.9% of CE women and 9.8% of CPS women report working more than 2080 hours per year.

How much of the difference in annual earnings, annual hours worked and hourly wages across the CE and the CPS can be explained by differences in demographic, location, year, and job characteristics across the two samples? To answer this question I estimate identical log

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survey. In 1985, a new variable “employment status” was collected. Individuals with an occupation code of “52” in the 1985 CPS had an employment status of looking (3), housework (4), school (5), unable (6), or other (7).

annual earnings, log hourly wage and annual hours of work regressions for men and women separately in both samples. For each dependent variable (log hourly wage, log annual earning and annual hours worked), I top and bottom coded the dependent variable at the top and bottom 1% of the reported values in the combined CPS-CE sample. The regressors are age, age squared, education, education squared, education and age interaction, married, black and black interactions with all the demographic variables, “other race” and “other” interactions with all the demographic variables and 3 year, 13 industry, 8 occupation, and 24 city dichotomous variables. The regressions are presented in Tables 2-4.

Across all three dependent variables, the fraction of the variance that is explained by demographic, job, year, and location variables is lower in the smaller CE sample. The R-squared of the log annual earnings regression is .329 for CPS women, .252 for CE women, .457 for CPS men and .288 for CE men. The same regressors explain less of the variation in log hourly wages than annual earnings. The R-squared of the log wage regression for CPS men is the highest (.387) while the R-squared is the lowest for CPS women (.258). Finally, variation in annual hours worked is the least accounted for by demographic, job, year, and location variables and this is particularly true in the CE: the R-squared of the annual hours regression is .183 and .139 for CE women and men and is .254 and .316 for CPS women and men.

I next decompose the differences in mean earnings, wages, and hours worked across the CE and the CPS into that attributable to differences in demographic characteristics, industry, occupation, year, and location variables, the explained difference, and that due to differences in regression coefficients, the unexplained difference. For the explained difference, I use the CPS regression coefficients to value the average CPS and the average CE observed characteristics i.e.,  $(\hat{\beta}^{CPS} X^{CPS} - \hat{\beta}^{CPS} X^{CE})$ . The unexplained difference in average earnings is then the difference in regression coefficients evaluated at the average characteristics of the CE workers:  $(\hat{\beta}^{CE} X^{CE} - \hat{\beta}^{CPS} X^{CE})$ . There results are presented in Table 5. Most of the differences in mean earnings, wages and hours can be explained by differences in observed characteristics across the two samples. For example, women in the CE earn 13.4% more than women in the CPS and 10.2

percentage points of the difference is explained by the more valuable characteristics of CE women (9.181-9.079). Men in the CE earn 29.6% more than CPS men. If CPS men had the same observed characteristics as the CE men, then CE wages would be only 4.4% higher. On average, CE women are paid 13.9% more per hour and 6.8 percentage points are unexplained. CE men are paid 19.4% more per hour than CPS men and 3.6 percentage points are unexplained. On average, men in the CE work 146 more hours per year than CPS men and differences in observed characteristics can explain all but 32 of those hours. Finally, CE women work an average of 34 more hours per year than CPS women. Using CPS coefficients, I predict that the average CE women would work 15 *more* hours than I observe her working.

Do the CE and CPS regression estimates of the log earnings equation (log wage and annual hours regressions) generate similar earnings (log wage and annual hours) distributions in the CE? To assess this, I predict each dependent variable using the estimated CE and CPS regression coefficients for the CE sample. The correlation between the two predicted log wages is .945 for women and .939 for men. The correlation between predicted log earnings is .908 for women and .939 for men. Finally, predicted annual hours are correlated .778 for CE women and .694 for CE men.

In conclusion, as a fraction of the CPS sample means, workers in the CE earn 18.6% more per year, work 4.7% more hours per year, and are paid 22.9% more per hour than workers in the CPS. Differences in observed demographic, location and job characteristics across the two samples explain most of these mean differences. Estimated CE and CPS regression coefficients generate very similar hourly wage and annual earnings patterns across workers. Estimated CE and CPS regression coefficients generate a similar distribution of annual hours worked, though the linear association is smaller than for either earnings or wages.

**Table 1: CE and CPS Sample Statistics and Mean Differences**

Variable	CE Means		CPS Means		Difference between
	(Std. Dev.)	(Std. Dev.)	(Std. Dev.)	(Std. Dev.)	CE and CPS Means (Std. Error)
Annual Earnings	21013.36	(16481)	17715.55	(14076)	3297.81** (.248)
Weeks worked per year	47.19	(10.98)	46.13	(11.74)	1.07** (.20)
Hours worked per Week	39.66	(11.06)	38.81	(10.17)	.85** (.18)
Annual Hours	1905.6	(708)	1819.7	(680)	85.85** (11.91)
Hourly Wage	11.50	(17.34)	9.36	(8.29)	2.14** (.15)
Education	13.42	(2.77)	13.04	(2.91)	.38** (.05)
Age	40.12	(11.13)	36.75	(12.21)	3.37** (.21)
Female	.476	(.499)	.451	(.499)	.025** (.009)
Married	.731	(.443)	.573	(.495)	.158** (.009)
Black	.089	(.285)	.123	(.329)	-.034** (.006)
Other	.058	(.234)	.046	(.210)	.012** (.004)
Year in Sample					
1982	.095	(.294)	.249	(.432)	-.154** (.007)
1983	.306	(.461)	.246	(.431)	.060** (.008)
1984	.311	(.463)	.245	(.430)	.066** (.008)
1985	.287	(.452)	.260	(.438)	.027** (.008)
Industry:					
Agriculture	.002	(.045)	.005	(.071)	-.003** (.001)
Mining	.003	(.054)	.007	(.081)	-.004** (.001)
Construction	.045	(.207)	.054	(.226)	-.009 (.004)
Durable Manuf	.087	(.282)	.084	(.278)	.003 (.005)
Non Durable Manuf	.146	(.353)	.119	(.324)	.026** (.006)
Transp, Commun, Public Util	.083	(.276)	.081	(.273)	.002 (.005)
Wholesale trade	.062	(.242)	.044	(.205)	.019** (.004)
Retail trade	.121	(.326)	.149	(.356)	-.028** (.006)
FIRE	.085	(.279)	.079	(.269)	.006 (.005)
Services: business and repair	.051	(.219)	.060	(.237)	-.009** (.004)
Services: personal	.020	(.141)	.031	(.173)	-.011** (.003)
Services entertainment	.008	(.089)	.011	(.106)	-.003* (.002)
Services: professional	.216	(.412)	.212	(.409)	.004 (.007)
Services: Public Admin	.071	(.257)	.064	(.245)	.007 (.004)
Occupation					
Executive, Admin, Managerial	.147	(.355)	.125	(.331)	.022** (.006)
Professional	.173	(.378)	.150	(.357)	.022** (.006)
Technicians	.039	(.195)	.029	(.168)	.010** (.003)
Sales	.100	(.300)	.094	(.292)	.006 (.005)
Administrative support	.192	(.394)	.202	(.402)	-.010 (.007)
Services	.103	(.304)	.129	(.335)	-.026** (.006)
Farming, Forestry Fishing	.003	(.051)	.006	(.078)	-.003** (.001)
Precision production, craft, repair	.113	(.316)	.112	(.316)	.000 (.006)
Operator, fabricator or laborer	.130	(.336)	.152	(.359)	-.022* (.006)
City					
New York City	.086	(.281)	.130	(.336)	-.043** (.006)
Philadelphia	.030	(.171)	.053	(.223)	-.022** (.004)
Boston	.029	(.168)	.041	(.198)	-.012** (.003)
Pittsburgh	.024	(.152)	.024	(.154)	-.001 (.002)

Buffalo	.035 (.183)	.015 (.121)	.020** (.002)
Chicago	.038 (.192)	.085 (.278)	-.046** (.005)
Detroit	.029 (.168)	.045 (.208)	-.016** (.004)
St. Louis	.046 (.210)	.026 (.158)	.020** (.003)
Cleveland	.030 (.172)	.021 (.144)	.009** (.003)
Minneapolis	.054 (.227)	.030 (.170)	.025** (.003)
Milwaukee	.041 (.199)	.018 (.134)	.023** (.002)
Cincinnati	.030 (.170)	.018 (.132)	.012** (.002)
Kansas City	.047 (.213)	.020 (.139)	.028** (.002)
Washington, DC	.036 (.186)	.069 (.253)	-.033** (.004)
Dallas	.050 (.219)	.028 (.166)	.022** (.003)
Baltimore	.040 (.197)	.029 (.169)	.011** (.003)
Houston	.031 (.173)	.037 (.189)	-.006* (.003)
Atlanta	.043 (.204)	.019 (.138)	.024** (.002)
Los Angeles	.070 (.255)	.109 (.312)	-.040** (.005)
San Francisco	.037 (.189)	.045 (.207)	-.007** (.004)
Seattle	.037 (.189)	.020 (.141)	.017** (.003)
San Diego	.038 (.191)	.024 (.153)	.014** (.003)
Honolulu	.041 (.198)	.011 (.105)	.030** (.002)
Anchorage	.025 (.155)	.049 (.216)	-.024** (.004)
Denver	.031 (.173)	.034 (.182)	-.003 (.003)
Sample Size	3,413	78,913	

Notes to Table: \* indicates significant at the 10% level or better. \*\* indicates significant at the 5% level or better. As noted in the text, the CE data has approximately the same number of households per month. However, the CE data start in September, 1982 and end in November, 1985. In the CPS, all Alaska respondents were in city size 3. So, all Alaska respondents in the CPS were counted as in Anchorage.

**Table 2: CE and CPS Log Earnings Regressions for Men and Women**

Variable	FEMALE		MALE	
	CE	CPS	CE	CPS
Age	.0445**(.0210)	.0854**(.0036)	.1242**(.0145)	.1280**(.0027)
Age <sup>2</sup> /100	-.0351* (.0194)	-.0891**(.0037)	-.0013**(.0001)	-.1427**(.0030)
Education	-.0786 (.0784)	.0124 (.0124)	.0637* (.0387)	.0430**(.0076)
Education <sup>2</sup> /100	.6456**(.2335)	.1827**(.0396)	-.0313 (.1261)	-.0398 (.0265)
Education*Age/10	-.0089 (.0089)	-.0021 (.0017)	-.0028 (.0054)	.0052**(.0011)
Married	-.4237**(.0534)	-.1780**(.0109)	.1419**(.0448)	.3011**(.0096)
Black	-6.0755* (3.554)	-.8155**(.3851)	-4.1567 (3.024)	-2.1804**(.2948)
Black*Age	.1444* (.0773)	.0346**(.0102)	.0728 (.0783)	.0510**(.0086)
Black*Age <sup>2</sup> /100	-.0871 (.0640)	-.0300**(.0095)	-.0290 (.0615)	-.0179**(.0086)
Black*Education	.4189 (.3698)	-.0234 (.0394)	.3875 (.2742)	.1448**(.0300)
Black*Ed <sup>2</sup>	-.0080 (.0104)	.0017 (.0012)	-.0078 (.0058)	-.0012 (.0009)
Black*Ed*Age	-.0045 (.0034)	-.0001 (.0005)	-.0039 (.0037)	-.0028**(.0004)
Black*Married	.4066**(.1478)	.2321**(.0278)	-.0462 (.1417)	-.0291 (.0263)
Other	-.0664 (3.095)	-.9313**(.4631)	-2.8263 (1.564)	-.0244 (.4132)
Other*Age	.0167 (.1053)	.0374**(.0168)	.1273**(.0594)	.0069 (.0128)
Other*Age <sup>2</sup> /100	-.0232 (.0930)	-.0500**(.0177)	-.1099* (.0609)	.0041 (.0139)
Other*Education	-.0629 (.2567)	-.0012 (.0395)	.0206 (.1088)	-.0487 (.0401)
Other*Ed <sup>2</sup> /100	.0900 (.7743)	-.0500 (.1171)	.0036 (.0033)	.2947**(.1154)
Other*Ed*Age	.0006 (.0042)	.0006 (.0006)	-.0029 (.0019)	-.0008 (.0005)
Other*Married	.2951 (.2316)	.0974**(.0473)	.0082 (.1960)	-.0308 (.0439)
Year=1983	-.0860 (.0813)	.0353**(.0132)	-.0310 (.0621)	-.0002 (.0106)
Year=1984	.0056 (.0809)	.0901**(.0132)	.0845 (.0620)	.0582**(.0106)
Year=1985	-.0146 (.0816)	.1419**(.0130)	.1017 (.0624)	.1246**(.0105)
Industry:				
Agriculture	.1156 (.4951)	-.4384**(.1032)	-.3297 (.4313)	-.3667**(.0548)
Mining	.3142 (.4170)	.1485**(.0736)	.3267 (.3172)	.1918**(.0427)
Construction	-.3883* (.2210)	-.2765**(.0464)	-.1870**(.0905)	-.2478**(.0204)
Durable Manuf	-.0084 (.1279)	.0699**(.0298)	.0303 (.0848)	-.0231 (.0192)
Non Durable Manuf	.1627 (.1245)	-.0744**(.0262)	-.0523 (.0742)	-.0390**(.0185)
Trans, Comm, Pblc Utls	.1440 (.1323)	.1229**(.0276)	.0483 (.0808)	.0339* (.0190)
Wholesale trade	-.1817 (.1439)	-.1090**(.0328)	-.0751 (.0885)	-.0368* (.0224)
Retail trade	-.4308**(.1145)	-.4674**(.0239)	-.4348**(.0831)	-.3521**(.0186)
FIRE	-.0310 (.1139)	-.0728**(.0242)	-.1643* (.0921)	-.1267**(.0213)
Services: busnss & repair	-.6222**(.1353)	-.4028**(.0275)	-.2729**(.0949)	-.3075**(.0207)
Services: personal	-.5666**(.1598)	-.6318**(.0300)	-.3954**(.1839)	-.4622**(.0313)
Services entertainment	-.5324* (.2864)	-.5170**(.0485)	-.2544 (.1863)	-.4231**(.0368)
Services: professional	-.3367**(.1021)	-.2992**(.0214)	-.3944**(.0765)	-.3143**(.0179)
Occupation				
Exec, Admin, Managr	.7381**(.1130)	.5509**(.0246)	.3940**(.0635)	.4023**(.0144)
Professional	.4573**(.1171)	.4082**(.0251)	.4214**(.0706)	.3407**(.0162)
Technicians	.5349**(.1514)	.4874**(.0341)	.2248**(.0917)	.3095**(.0231)
Sales	.1083 (.1199)	.0505**(.0253)	.2564**(.0730)	.2324**(.0166)
Administrative support	.3116**(.0953)	.2144**(.0204)	.1110 (.0780)	.0658**(.0159)
Services	-.1616 (.1109)	-.1533**(.0229)	-.1474* (.0765)	-.1014**(.0151)
Farm, Forestry Fish	-.0681 (.6828)	-.1884 (.1176)	-.0359 (.2761)	-.2460**(.0466)
Precsn prod, craft, repair	.1459 (.1541)	.2192**(.0371)	.1913**(.0560)	.2217**(.0121)

City				
Philadelphia	-.1437 (.1520)	-.0853**(.0237)	-.2401**(.1061)	-.0012 (.0189)
Boston	-.1417 (.1485)	-.0438* (.0257)	-.1130 (.1118)	.0361* (.0210)
Pittsburgh	.0112 (.1712)	-.1114**(.0327)	-.2292**(.1143)	-.0977**(.0252)
Buffalo	-.2795* (.1461)	-.2074**(.0402)	-.2237**(.1003)	-.0612* (.0313)
Chicago	.0109 (.1386)	-.0498**(.0204)	-.0862 (.0980)	.0302* (.0161)
Detroit	-.2006 (.1513)	-.0881**(.0253)	.0060 (.1088)	.0341* (.0200)
St. Louis	-.1156 (.1313)	-.0343 (.0311)	-.0575 (.0919)	-.0093 (.0251)
Cleveland	.0285 (.1451)	-.0578* (.0350)	-.0910 (.1107)	.0391 (.0265)
Minneapolis	-.0807 (.1186)	-.0775**(.0290)	-.2196**(.0918)	-.0032 (.0240)
Milwaukee	-.0960 (.1311)	-.1129**(.0360)	-.0277 (.0983)	-.0048 (.0289)
Cincinnati	-.1611 (.1419)	-.1216**(.0370)	-.1749 (.1155)	-.0703**(.0292)
Kansas City	-.1017 (.1269)	-.0389 (.0352)	-.2567**(.0930)	-.0401 (.0280)
Washington, DC	-.0044 (.1378)	.1054**(.0216)	-.0187 (.1078)	.1145**(.0182)
Dallas	-.0361 (.1246)	.0134 (.0305)	.0267 (.0916)	.0701 (.0238)
Baltimore	-.1766 (.1339)	-.0297 (.0292)	-.0230 (.0997)	.0587**(.0239)
Houston	-.0260 (.1577)	.0610**(.0283)	.0618 (.1055)	.1072**(.0212)
Atlanta	.0649 (.1318)	.0036 (.0349)	-.1483 (.0965)	.0438 (.028)
Los Angeles	.1493 (.1145)	.0173 (.0192)	-.0431 (.0828)	-.0145 (.0152)
San Francisco	.0160 (.1406)	.0546**(.0251)	-.0741 (.0998)	.0715**(.0203)
Seattle	-.0784 (.1448)	.0049 (.0349)	-.1271 (.0984)	-.0022 (.0274)
San Diego	.0159 (.1433)	-.0748**(.0321)	-.1899* (.0975)	.0063 (.0259)
Honolulu	.1009 (.1704)	.1538**(.0473)	-.1437 (.1174)	.0325 (.0403)
Anchorage	.2737* (.1638)	.0780**(.0248)	.2834**(.1186)	.1463**(.0198)
Denver	.0154 (.1479)	-.0155 (.0280)	-.2679**(.1079)	.0434* (.0223)
Constant	8.6376**(.8084)	6.9853**(.1241)	6.4795**(.4602)	6.1094**(.0809)
Number of Obs	1,624	35,601	1,789	43,312
R-squared	.2591	.2399	.2895	.4051
Adj R-squared	.2267	.2385	.2615	.4042
MSE	.7825	.7411	.4612	.5741

Notes: The omitted category is a single, white individual living in New York City in 1982, working in the “services: public admin” industry as an “operator, fabricator or laborer.” \* indicates significant at the 10% level and \*\* indicates significant at the 5% level.

**Table 3: CE and CPS Annual Hours Regressions for Men and Women**

Variable	FEMALE		MALE	
	CE	CPS	CE	CPS
Age	22.70 (15.53)	47.96**(2.60)	59.48**(12.28)	76.60**(1.97)
Age <sup>2</sup> /100	-.10 (.144)	-.50**(0.03)	-73.13**(12.41)	-89.99**(2.19)
Education	-1.38 (58.08)	-27.64**(8.87)	12.09 (32.81)	-6.54**(5.62)
Education <sup>2</sup> /100	2.66 (1.73)	1.75**(0.28)	-1.02 (106.93)	42.31**(19.59)
Education*Age/10	-1.18* (.66)	-.13 (.12)	.79 (.46)	2.33**(.80)
Married	-372.81**(39.62)	-181.36**(7.84)	34.75 (37.94)	160.43**(7.09)
Black	-4285.86 (2634.0)	-1244.66**(276.5)	-4635.44* (2563.18)	-1217.46**(218.2)
Black*Age	81.89 (57.29)	31.96**(7.33)	109.08 (66.43)	26.90**(6.38)
Black*Age <sup>2</sup> /100	-.54 (.475)	-.25**(0.07)	-50.38 (.52)	-5.64 (6.37)
Black*Education	392.56 (274.10)	83.86**(28.27)	355.35 (232.41)	79.79 (22.24)
Black*Ed <sup>2</sup>	-12.29 (7.72)	-2.53**(0.84)	-3.75 (4.90)	-78.47 (66.84)
Black*Ed*Age	-2.05 (2.549)	-.52 (.35)	-5.52 (3.12)	-1.44**(.29)
Black*Married	178.45 (109.6)	158.90**(19.97)	14.94 (120.15)	-45.52**(19.48)
Other	-974.52 (2295)	-260.28 (332.5)	-2212.44* (1325.98)	-128.46 (305.80)
Other*Age	59.20 (78.02)	14.68 (12.05)	79.26 (50.33)	.08 (9.51)
Other*Age <sup>2</sup> /100	-.37 (.69)	-.28**(.13)	-23.31 (51.61)	6.82 (10.25)
Other*Education	-26.24 (190.3)	-15.91 (28.37)	1.77 (92.23)	-14.00 (29.69)
Other*Ed <sup>2</sup> /100	4.55 (5.74)	-.92 (.84)	739.39**(276.06)	92.76 (85.42)
Other*Ed*Age	-2.38 (3.13)	1.01**(.41)	-4.39**(1.59)	-.26 (.37)
Other*Married	135.95 (171.7)	84.96**(34.00)	162.13 (166.15)	62.12* (32.51)
Year=1983	32.72 (60.29)	-6.46 (9.50)	53.29 (52.67)	-44.57**(7.85)
Year=1984	7.18 (59.98)	5.99 (9.50)	90.77* (52.58)	-12.79 (7.87)
Year=1985	-27.92 (60.47)	24.79**(9.35)	92.16* (52.90)	28.20**(7.80)
Industry:				
Agriculture	218.09 (367.0)	-100.06 (74.07)	-136.67 (365.64)	-41.16 (40.56)
Mining	-266.80 (309.1)	48.81 (52.85)	-3.61 (268.88)	98.00**(31.57)
Construction	-378.25**(163.8)	-174.59**(33.29)	-256.43**(76.69)	-216.16**(15.06)
Durable Manuf	115.88 (92.29)	74.79**(21.38)	2.41 (71.85)	-14.53 (14.21)
Non Durable Manuf	-7.77 (94.78)	4.97 (18.79)	-112.35* (62.94)	11.29 (13.67)
Trans, Comm, PubUtl	-20.85 (98.04)	24.75 (19.80)	-27.34 (68.46)	29.65**(14.04)
Wholesale trade	-141.29 (106.7)	5.43 (23.52)	-109.00 (75.06)	42.58**(16.56)
Retail trade	-215.67**(84.91)	-217.67**(17.19)	-149.57**(70.49)	-43.76**(13.79)
FIRE	-27.72 (84.40)	15.87 (17.38)	-207.30**(78.11)	-38.47**(15.76)
Servcs: busnss-repair	-338.11**(100.3)	-197.75**(19.73)	-204.96**(80.49)	-50.87**(15.29)
Services: personal	-268.56**(118.4)	-218.46**(21.58)	-258.63* (155.93)	-78.75**(23.14)
Services entertainmt	-476.40**(212.3)	-294.08**(34.80)	-157.03 (157.97)	-167.30**(27.24)
Services: professnl	-231.68**(75.70)	-156.75**(15.32)	-210.20**(64.86)	-49.59**(13.28)
Occupation				
Exec, Admin, Managr	395.886**(83.79)	322.31**(17.65)	239.92**(53.82)	261.66**(10.68)
Professional	77.326 (86.81)	154.63**(18.04)	193.07**(59.84)	137.95**(11.99)
Technicians	80.920 (112.26)	211.41**(24.52)	5.48 (77.77)	110.16**(17.11)
Sales	52.852 (88.85)	13.85 (18.17)	219.30**(61.90)	177.33**(12.29)
Admin support	149.292**(70.68)	120.57**(14.65)	-7.55 (66.16)	55.49**(11.80)
Services	-157.447* (82.21)	-82.64**(16.46)	19.70 (64.88)	-2.92 (11.14)
Farm, Forestry Fish	-41.763 (506.1)	-164.67* (84.46)	422.14* (234.03)	-42.61 (34.49)
Precsn prod, craft, repr	222.638* (114.3)	141.44**(26.63)	9.48 (47.43)	88.70**(8.97)

City							
Philadelphia	-30.41	(112.7)	19.29	(17.05)	-80.45	(89.93)	41.05**(13.97)
Boston	15.53	(110.1)	-11.05	(18.43)	10.06	(94.79)	61.69**(15.52)
Pittsburgh	183.47	(126.9)	7.41	(23.49)	-132.57	(96.88)	-123.03**(18.66)
Buffalo	-31.48	(108.3)	-76.67**	(28.80)	-119.86	(85.01)	-60.29**(23.18)
Chicago	50.32	(102.7)	5.19	(14.67)	78.60	(83.08)	7.03 (11.91)
Detroit	-46.50	(112.1)	-15.89	(18.19)	48.57	(92.23)	-.50 (14.79)
St. Louis	11.21	(97.35)	84.85**	(22.32)	132.07*	(77.91)	-1.29 (18.58)
Cleveland	31.35	(107.5)	45.04*	(25.16)	70.75	(93.83)	60.78**(19.64)
Minneapolis	3.78	(87.90)	24.37	(20.84)	-74.40	(77.83)	8.79 (17.75)
Milwaukee	46.66	(97.18)	-28.90	(25.88)	94.81	(83.30)	-22.32 (21.40)
Cincinnati	53.14	(105.2)	-18.92	(26.59)	112.01	(97.87)	-15.25 (21.58)
Kansas City	115.58	(94.07)	125.59**	(25.30)	41.53	(78.89)	12.76 (20.69)
Washington, DC	-.57	(102.2)	121.52**	(15.49)	1.30	(91.40)	75.14**(13.50)
Dallas	78.81	(92.39)	121.50**	(21.89)	237.60**	(77.62)	119.77**(17.59)
Baltimore	-73.83	(99.29)	88.29**	(20.99)	51.77	(84.52)	74.49 (17.71)
Houston	147.01	(116.9)	134.85**	(20.31)	139.86	(89.40)	109.23 (15.65)
Atlanta	152.73	(97.67)	84.43**	(25.07)	164.00**	(81.83)	55.63**(20.96)
Los Angeles	161.17*	(84.86)	60.59**	(13.75)	31.47	(70.15)	-14.10 (11.25)
San Francisco	6.83	(104.2)	49.28**	(18.04)	-46.76	(84.63)	-15.42 (14.99)
Seattle	-86.42	(107.3)	4.51	(25.07)	-85.20	(83.42)	-39.61* (20.29)
San Diego	34.85	(106.2)	-4.44	(23.06)	-41.82	(82.64)	12.69 (19.19)
Honolulu	156.71	(126.3)	177.99**	(33.97)	195.51**	(99.50)	59.43 (29.79)
Anchorage	161.55	(121.4)	.05	(17.78)	19.80	(100.58)	3.88 (14.67)
Denver	83.79	(109.6)	85.08**	(20.07)	-115.32	(91.50)	58.87**(16.53)
Constant	1323.69**	(599.2)	814.53**	(89.11)	665.47*	(390.16)	217.42**(59.85)
Number of Obs	1,624		35,601		1,789		43,312
R-squared	.1813		.1291		.1425		.2139
Adj R-squared	.1455		.1275		.1086		.2127
MSE	429944.9		382129.1		331425.99		314452.5

Notes: The omitted category is a single, white individual living in New York City in 1982, working in the "services: public admin" industry as an "operator, fabricator or laborer." \* indicates significant at the 10% level and \*\* indicates significant at the 5% level.

**Table 4: CE and CPS Log Wage Regressions for Men and Women**

Variable	FEMALE		MALE	
	CE	CPS	CE	CPS
Age	.0243**(.0118)	.0399** (.0021)	.0692**(.0112)	.0643**(.0018)
Age <sup>2</sup> /100	-.0328**(.0109)	-.0449**(.0022)	-.0699**(.0113)	-.0697**(.0020)
Education	-.0852* (.0442)	.0200**(.0072)	.0122 (.0300)	.0364**(.0052)
Education <sup>2</sup> /100	.4300**(.1318)	.0727**(.0230)	.0829 (.0010)	-.0279 (.0181)
Education*Age/10	.0048 (.0050)	.0014 (.0010)	.0007 (.0042)	.0045**(.0007)
Married	-.0688**(.0303)	-.0121* (.0063)	.1013 (.0347)	.1647**(.0065)
Black	-2.9406 (2.005)	.5756**(.2234)	.5790**(.2343)	-.3741* (.2014)
Black*Age	.0696 (.0436)	-.0039 (.0059)	-.0324 (.0607)	.0093 (.0059)
Black*Age <sup>2</sup> /100	-.0295 (.0361)	-.0012 (.0055)	.0116 (.0477)	.0001 (.0059)
Black*Education	.1798 (.2087)	-.1016**(.0228)	-.0054 (.2124)	.0170 (.0205)
Black*Ed <sup>2</sup>	-.0010 (.0059)	.0035**(.0007)	-.0024 (.0045)	.0645 (.0617)
Black*Ed*Age	-.0030 (.0019)	.0005* (.0003)	.0017 (.0029)	-.0010**(.0003)
Black*Married	.1843**(.0834)	.0692**(.0161)	.0222 (.1098)	-.0058 (.0180)
Other	-.1733 (1.747)	-.4066 (.2686)	-.5213 (1.212)	.1198 (.2823)
Other*Age	-.0011 (.0594)	.0109 (.0097)	.0296 (.0460)	.0070 (.0088)
Other*Age <sup>2</sup> /100	-.0066 (.0524)	-.0079 (.0103)	-.0387 (.0472)	-.0015 (.0095)
Other*Education	.0242 (.1448)	.0191 (.0229)	.0592 (.0843)	-.0343 (.0274)
Other*Ed <sup>2</sup> /100	-.0030 (.0043)	-.0284 (.0680)	-.0030 (.0025)	.2135**(.0789)
Other*Ed*Age	.0010 (.0024)	-.0003 (.0003)	-.0002 (.0015)	-.0006* (.003)
Other*Married	.0780 (.1307)	.0365 (.0275)	-.1122 (.1519)	-.1049**(.0300)
Year=1983	-.0605 (.0460)	.0550**(.0077)	-.0662 (.0481)	.0363**(.0072)
Year=1984	.0088 (.0457)	.0929**(.0077)	.0389 (.0481)	.0745* (.0073)
Year=1985	.0530 (.0460)	.1342**(.0076)	.0571 (.0484)	.1115**(.0072)
<b>Industry:</b>				
Agriculture	-.0972 (.2793)	-.2994**(.0598)	-.4038 (.3342)	-.2946**(.0374)
Mining	.3993* (.2353)	.0750* (.0427)	.2585 (.2457)	.1369**(.0291)
Construction	.0015 (.1247)	-.1241**(.0269)	.0046 (.0701)	-.0637**(.0139)
Durable Manuf	-.0170 (.0721)	.0076 (.0173)	.0167 (.0657)	-.0145 (.0131)
Non Durable Manuf	.0471 (.0703)	-.0831**(.0152)	.0075 (.0575)	-.0444**(.0126)
Trans, Comm, Pblc Utls	.1445* (.0746)	.1080**(.0160)	.0598 (.0626)	.0251* (.0130)
Wholesale trade	-.0829 (.0812)	-.1078**(.0190)	.0045 (.0686)	-.0634**(.0153)
Retail trade	-.2377**(.0646)	-.2815**(.0139)	-.2904**(.0644)	-.2842**(.0127)
FIRE	-.0183 (.0643)	-.0923**(.0140)	-.0071 (.0714)	-.0953**(.0145)
Services: busnss & repair	-.2352**(.0764)	-.2082**(.0159)	-.1658**(.0736)	-.2250**(.0141)
Services: personal	-.3518**(.0902)	-.3869** (.0174)	-.2567* (.1425)	-.3406**(.0214)
Services entertainment	-.1524 (.1616)	-.2372** .0281)	-.1172 (.1444)	-.2617**(.0251)
Services: professional	-.1569**(.0576)	-.1648**(.0124)	-.2340**(.0593)	-.2438**(.0123)
<b>Occupation</b>				
Exec, Admin, Managr	.3819**(.0638)	.3050**(.0143)	.2479**(.0492)	.2228**(.0099)
Professional	.3696**(.0661)	.3088**(.0146)	.2851**(.0547)	.2241**(.0111)
Technicians	.3559**(.0855)	.3036**(.0198)	.1837**(.0711)	.1868**(.0158)
Sales	.0396 (.0676)	.0689**(.0147)	.1199**(.0566)	.1155**(.0113)
Administrative support	.1442**(.0538)	.1151**(.0118)	.0881 (.0605)	.0103 (.0109)
Services	.0103 (.0626)	-.0470**(.0133)	-.1516**(.0593)	-.1011**(.0103)
Farm, Forestry Fish	-.2469 (.3853)	-.0219 (.0682)	-.3123 (.2139)	-.1847**(.0318)
Precsn prod, craft, repair	.0599 (.0870)	.1101**(.0215)	.1590**(.0434)	.1362**(.0083)

City								
Philadelphia	-.0675	(.0858)	-.0816**	(.0138)	-.1897**	(.0822)	-.0127	(.0129)
Boston	-.1215	(.0838)	-.0224	(.0149)	-.0585	(.0866)	.0002	(.0143)
Pittsburgh	-.1387	(.0966)	-.1053**	(.0190)	-.0442	(.0885)	.0225	(.0172)
Buffalo	-.2307**	(.0824)	-.1192**	(.0233)	-.1302*	(.0777)	-.0058	(.0214)
Chicago	-.0365	(.0782)	-.0180	(.0119)	-.0946	(.0759)	.0418**	(.0110)
Detroit	-.0564	(.0854)	-.0434**	(.0147)	-.0298	(.0843)	.0779**	(.0137)
St. Louis	-.0896	(.0741)	-.0875**	(.0180)	-.0720	(.0712)	.0129	(.0172)
Cleveland	-.0239	(.0819)	-.0530**	(.0203)	-.1018	(.0858)	.0025	(.0181)
Minneapolis	-.0842	(.0669)	-.0767**	(.0169)	-.1626**	(.0711)	.0024	(.0164)
Milwaukee	-.1338*	(.0740)	-.0561**	(.0209)	-.0794	(.0761)	.0229	(.0198)
Cincinnati	-.1366*	(.0801)	-.0742**	(.0215)	-.2113**	(.0895)	-.0270	(.0199)
Kansas City	-.1366*	(.0716)	-.0935**	(.0204)	-.2546**	(.0721)	-.0376**	(.0191)
Washington, DC	.0003	(.0778)	.0291**	(.0125)	.0287	(.0835)	.0700**	(.0125)
Dallas	-.0633	(.0703)	-.0639**	(.0177)	-.0666	(.0709)	-.0043	(.0162)
Baltimore	-.0882	(.0756)	-.0628**	(.0170)	-.0577	(.0772)	.0174	(.0163)
Houston	-.1618*	(.0890)	-.0301*	(.0164)	.0246	(.0817)	.0511**	(.0144)
Atlanta	-.0481	(.0744)	-.0555**	(.0203)	-.1831**	(.0748)	.0079	(.0193)
Los Angeles	-.0068	(.0646)	-.0160	(.0111)	-.0249	(.0641)	.0001	(.0104)
San Francisco	.0124	(.0793)	.0272*	(.0146)	-.0002	(.0773)	.0901**	(.0138)
Seattle	.0827	(.0817)	.0130	(.0203)	.0003	(.0762)	.0380**	(.0187)
San Diego	.0245	(.0809)	-.0437**	(.0186)	-.1552**	(.0755)	.0048	(.0177)
Honolulu	-.0565	(.0961)	.0083	(.0274)	-.3300**	(.0909)	-.0141	(.0275)
Anchorage	.1455	(.0924)	.1214**	(.0144)	.2137**	(.0919)	.1671**	(.0135)
Denver	-.0449	(.0835)	-.0619**	(.0162)	-.1935**	(.0836)	.0018	(.0153)
Constant	1.6772**	(.4561)	.5654**	(.0720)	.3872	(.3566)	.0773	(.0552)
Number of Obs	1,692		35,601		1,877		43,312	
R-squared	.2777		.2672		.2636		.3841	
Adj R-squared	.2461		.2658		.2413		.3832	
MSE	.2492		.2494		.3074		.2679	

Notes: The omitted category is a single, white individual living in New York City in 1982, working in the “services: public admin” industry as an “operator, fabricator or laborer.” \* indicates significant at the 10% level and \*\* indicates significant at the 5% level.

**Table 5: Comparison of CE and CPS Regressions**

	CPS		CE	
	Women	Men	Women	Men
<b>I. Dependent Variable: Log Earnings</b>				
R-squared	.240	.405	.259	.290
Mean Log Earnings	9.079	9.661	9.213	9.957
$\beta^{CE} X^{CPS}$	9.213	9.776		
$\beta^{CPS} X^{CE}$			9.181	9.913
Correl $\beta^{CE} X^{CPS}, \beta^{CPS} X^{CPS}$	.870	.959		
Correl $\beta^{CPS} X^{CE}, \beta^{CPS} X^{CE}$			.908	.939
<b>II. Dependent Variable: Log Hourly Wage</b>				
R-squared	.267	.384	.278	.274
Mean Log Hourly Wage	1.826	2.188	1.965	2.382
$\beta^{CE} X^{CPS}$	1.929	2.270		
$\beta^{CPS} X^{CE}$			1.897	2.346
Correl $\beta^{CE} X^{CPS}, \beta^{CPS} X^{CPS}$	.931	.959		
Correl $\beta^{CPS} X^{CE}, \beta^{CPS} X^{CE}$			.945	.939
<b>III. Dependent Variable: Annual Hours Worked</b>				
R-squared	.129	.214	.181	.143
Mean Annual Hours	1656	1945	1690	2091
$\beta^{CE} X^{CPS}$	1708	1999		
$\beta^{CPS} X^{CE}$			1705	2059
Correl $\beta^{CE} X^{CPS}, \beta^{CPS} X^{CPS}$	.713	.784		
Correl $\beta^{CPS} X^{CE}, \beta^{CPS} X^{CE}$			.778	.694
Sample Size	35,601	43,312	1,624	1,789

Notes: All regressions had 69 regressors: age, age2, ed, ed2, edage, married, black and black interactions, "other" race (neither white nor black) and other interactions, 3 year dummies, 13 industry dummies, 8 occupation dummies, missing occupation/industry, and 24 city dummies.