Home Production and Hours Constraints  
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# Abstract

First I discuss issues with my previous summary statistics of the full sample. Next, I turn to the factors driving workers to be hours constrained. I find that age, race, and family income are consistent important for explaining both transitions into constrained status as well as being in constrained status. Other variables are significant, as explained below, and many are consistently important across workers of different salary types.

# Unconditional Means

First, I have resolved the issues we found when computing unconditional means of all our variables. A detailed breakdown of explanations/changes is included following the tables.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Unconditional Means of Variables | | | | | |
| Variable | **N** | **Mean** | **Std Dev** | **Min.** | **Max.** |
| construp | 54,389 | 0.245 | 0.430 | 0 | 1 |
| wifeconstrup | 17,556 | 0.069 | 0.254 | 0 | 1 |
| constrdown | 54,389 | 0.049 | 0.215 | 0 | 1 |
| marwage | 9,861 | 9.781 | 8.853 | 0 | 99.98 |
| gender | 54,389 | 1.192 | 0.394 | 1 | 2 |
| headage | 54,389 | 39.932 | 11.045 | 25 | 65 |
| famsize | 54,389 | 3.468 | 1.926 | 1 | 17 |
| children | 54,389 | 1.430 | 1.584 | 0 | 13 |
| age2 | 51,960 | 0.407 | 1.149 | 0 | 14 |
| age6 | 51,960 | 0.436 | 1.216 | 0 | 14 |
| age12 | 51,960 | 0.478 | 1.215 | 0 | 12 |
| age18 | 51,960 | 0.207 | 0.700 | 0 | 8 |
| headocc | 53,063 | 4.742 | 3.304 | 0 | 12 |
| headind | 52,593 | 5.940 | 3.523 | 0 | 12 |
| HWHW | 15,857 | 1491.210 | 825.568 | 0 | 4420 |
| HWHead | 43,913 | 386.347 | 436.809 | 0 | 2974 |
| HWHeadWeekly | 25,944 | 9.363 | 7.832 | 0 | 57 |
| HomeProd | 11,115 | 69.513 | 161.638 | 0 | 4060 |
| Repair | 11,115 | 7.871 | 26.810 | 0 | 999 |
| HeadTakeVacation | 49,490 | 0.792 | 0.406 | 0 | 1 |
| HeadVacationWeek | 41,002 | 3.023 | 2.698 | 1 | 27 |
| faminc | 54,389 | 21185.190 | 15607.970 | 1244 | 99600 |
| headlabor | 54,389 | 14911.280 | 10964.370 | 0 | 95700 |
| headhour | 54,389 | 2059.650 | 398.140 | 1001 | 3000 |
| headext | 17,068 | 0.224 | 0.417 | 0 | 1 |
| headsalary | 50,649 | 0.337 | 0.473 | 0 | 1 |
| headhourly | 50,649 | 0.487 | 0.500 | 0 | 1 |
| lagheadhour | 51,820 | 2057.090 | 565.032 | 0 | 5824 |
| year | 54,389 | 1977.300 | 5.733 | 1967 | 1986 |
| headwhite | 54,389 | 0.633 | 0.482 | 0 | 1 |
| headblack | 54,389 | 0.334 | 0.472 | 0 | 1 |
| disLimitHswrk | 54,302 | 0.083 | 0.277 | 0 | 1 |
| selfEmployed | 52,918 | 0.099 | 0.298 | 0 | 1 |
| headmarried | 54,389 | 0.775 | 0.417 | 0 | 1 |
| leadmarried | 54,389 | 0.761 | 0.426 | 0 | 1 |
| homeowner | 54,389 | 0.576 | 0.494 | 0 | 1 |
| homeown | 51,820 | 2.689 | 2.155 | 1 | 8 |
| headstatus | 54,389 | 1.032 | 0.203 | 1 | 3 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Means for Wife of Head\* | | | | | |
| Variable | **N** | **Mean** | **Std Dev** | **Min.** | **Max.** |
| wifeage | 42,162 | 34.237 | 14.054 | 0 | 65 |
| wifeedu | 33,987 | 2.049 | 1.020 | 1 | 4 |
| wifeocc | 40,828 | 2.870 | 3.767 | 0 | 12 |
| wifeind | 40,367 | 4.077 | 4.475 | 0 | 12 |
| HWWife | 33,430 | 1238.360 | 732.971 | 0 | 3000 |
| HWWifeWeekly | 21,045 | 24.235 | 12.536 | 0 | 57 |
| wifeext | 4,918 | 0.154 | 0.361 | 0 | 1 |
| WifeVacationWeek | 11,953 | 4.139 | 4.512 | 1 | 27 |
| WifeTakeVacation | 15,565 | 0.768 | 0.422 | 0 | 1 |
| wifelabor | 42,168 | 4383.480 | 6313.700 | 0 | 55000 |
| wifehour | 42,168 | 838.547 | 864.836 | 0 | 3000 |
| wifesalary | 32,268 | 0.152 | 0.359 | 0 | 1 |
| wifehourly | 32,268 | 0.214 | 0.410 | 0 | 1 |
| \*Conditional on head being married or separated. | | | | | |

## Issues with previous iteration of these tables

**Low/No Obs:**

* Missing **head industry** variable: fixed by rerunning head.sas.
* Low # of observations for **head occupation** variable: fixed by rerunning head.sas.
* Age bins (**age2**, **age6**, **age12**, **age18**) not binary, but categorical (i.e. not probability of having a child in that age range but rather the number of children in that age range), hence explaining the seemingly high values of it.
* **Wifeextra** missing: fixed by running empbus.sas instead of labor.sas (for some reason the variable is excluded in the latter but not in the former).
* Low number of observations for **marwage**: I recoded 0 and NA/DK values to missing. In 1985, for example, almost 83% of individuals were recoded to missing. Hence the low number of observations over which the mean is taken is unsurprising.
  + Could consider replacing missing values for those “not working for money now at all” or for whom there is “no more work available” as having a $0.00 marginal wage.
* Low # of obs. For **HWHW**: due to variables existence for only 1967-73.
  + Consider making variable for later years by summing head and wife housework.
* Low # of obs. For **HWHead** and **HWWife**: due to missing years in 1974-5 and 1982.
* Low # of obs. For **HomeProd** due to existence only for 1967-71.
* Low # of obs. For **Repair** due to existence only for 1967-71 and 1978. Added 1978 to housework.sas.

**Recode**:

* **WGT** maximum of 99: doesn’t appear top-coded, just the maximum weight value in some years.
* **Foodin** is top coded at $9,999.
* **Repair** top coded at 999 hours.
* Recoded **Headrace, Dis[[1]](#footnote-1), Selfemploy, headmarital, head/wifesalaried,** and **head/wifeextra** as dummies.

The variable for identifying salaried status changes after 1976. I assume that if a respondent doesn’t earn income from more-than-usual hours per week, he is salaried.

The chain of questions is like this: Asked if you earn income from extra hours of work. If yes, assume hourly worker since this question is not directly asked. If no, go to follow-up question of whether respondent earns a regular wage. If yes, the person is wage/hourly worker. If no, person is salaried.

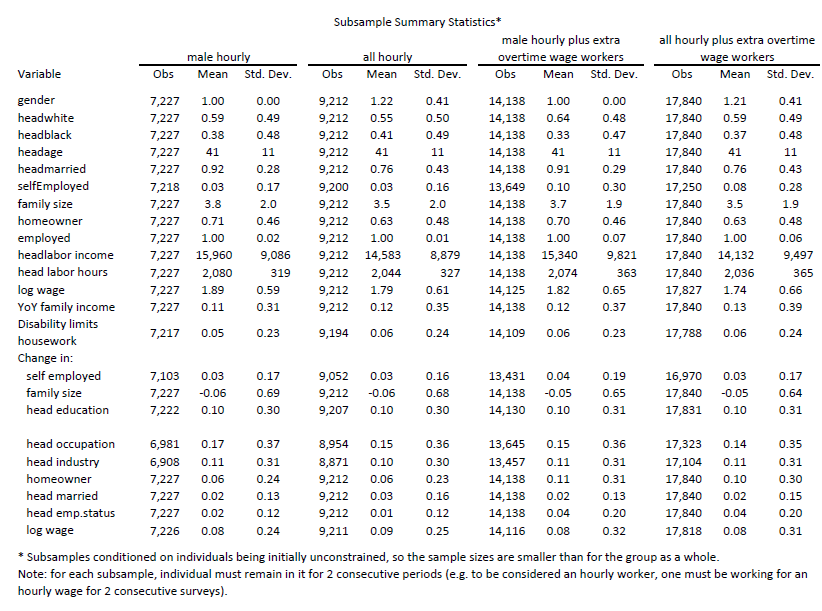
**Conditional**:

* Added conditional means calculation for wife variables when head is married or separated.

# Why are workers constrained?

My results are as follows: an individual’s race, age, change in family income, log wage, and occupation, are associated with entry into constrained status across workers of all salary types. Family size and industry are only important for salaried workers in explaining transitions to constrained status. When considering why individuals are constrained (rather than why they are transitioning into constrained status), a person’s race, age, family income, marital status, family size, education status, and whether they work as a professional or manager are important. In addition, when we include more salary workers, self-employed status, having a college degree, homeownership status, and certain industry dummies become important.

To answer this question, I conducted two sets of regressions: one on the transitions from not being constrained into a constrained status, and another with constrained status as the dependent variable. Since the dependent variable is categorical (downside constrained, unconstrained, and upward constrained) I set downside constrained equal to 0, unconstrained to 1, and upward constrained to 2 and ran an ordered logit regression in both cases for each of the various subsamples (hourly male workers, all hourly workers, male hourly plus those earning additional income for overtime hours, both males and females for the previous category, and finally all workers).



The subsamples do not differ substantially, as shown in the table above, except on a few variables such as change and percent in homeownership status, head labor income, and self-employed status.

*Setup*  
First, I discuss the general results of the transitions into constrained status. I regress a dummy for transitioning into constrained status on a few demographic variables and a set of dummies indicating whether a variable has changed between interviews. The demographic variables are: gender (where applicable), dummies for the head being white and black, the head’s age and age squared, the change in family size, and whether there was a change in education levels marital status. The income variables are: year-over-year change in family income and log wage. The remaining variables which indicate change from year to year are: whether disabilities limited the amount of housework a respondent could do, a self-employed dummy, occupation, industry, homeownership status, and employment status. Finally, I included year fixed affects to control for changes in macroeconomics conditions.

*Results*  
7 variables show statistically and (for the most part) economically significant effects on the probability of transitioning into constrained status for all subsamples: dummies for the head being black or white, head’s gender, the age squared, year-over-year changes in the family’s income, a change in the head’s occupation, and the log of the change in wage. See the tables below (note, however, that I exclude variables which are never statistically significant), which display the change in probability of transitioning at variable means:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Not constrained to downward constrained | | | | | | | | | | | | | | |
|  | (1) | | (2) | | (3) | | (4) | | | (5) | | |
| VARIABLES | | Male hourly workers NCtoDC | | all hourly workers NCtoDC | | male hourly + extra OT wage workers NCtoDC | | all hourly + extra OT wage workers NCtoDC | | | all workers NCtoDC | | |
|  | |  | |  | |  | |  | | |  | | |
| headwhite | | 0.0387\*\*\* | | 0.0355\*\*\* | | 0.0317\*\*\* | | 0.0310\*\*\* | | | 0.0329\*\*\* | | |
|  | | (0.00614) | | (0.00583) | | (0.00450) | | (0.00421) | | | (0.00357) | | |
| headblack | | 0.0213\*\*\* | | 0.0187\*\*\* | | 0.00772\* | | 0.00934\*\* | | | 0.00286 | | |
|  | | (0.00605) | | (0.00575) | | (0.00447) | | (0.00417) | | | (0.00355) | | |
| headage | | -0.000913 | | -0.00111 | | -0.000918 | | -0.00131\*\* | | | -0.000926\* | | |
|  | | (0.000983) | | (0.000900) | | (0.000697) | | (0.000630) | | | (0.000506) | | |
| headage2 | | 1.96e-05\* | | 2.11e-05\*\* | | 1.81e-05\*\* | | 2.20e-05\*\*\* | | | 1.64e-05\*\*\* | | |
|  | | (1.14e-05) | | (1.04e-05) | | (8.04e-06) | | (7.25e-06) | | | (5.81e-06) | | |
| famincchg\_1yr | | 0.0359\*\*\* | | 0.0270\*\*\* | | 0.0224\*\*\* | | 0.0195\*\*\* | | | 0.0180\*\*\* | | |
|  | | (0.00517) | | (0.00409) | | (0.00321) | | (0.00272) | | | (0.00220) | | |
| selfEmp\_chg | | -0.0143\*\* | | -0.0139\*\* | | -0.00265 | | -0.00333 | | | -0.00355 | | |
|  | | (0.00662) | | (0.00654) | | (0.00452) | | (0.00443) | | | (0.00316) | | |
| famsize\_chg | | -0.00173 | | -0.00239 | | -0.00122 | | -0.00156 | | | -0.00187\* | | |
|  | | (0.00171) | | (0.00161) | | (0.00132) | | (0.00122) | | | (0.00100) | | |
| headocc\_chg | | -0.00780\*\* | | -0.00715\*\* | | -0.00624\*\* | | -0.00615\*\* | | | -0.00382\* | | |
|  | | (0.00348) | | (0.00328) | | (0.00271) | | (0.00252) | | | (0.00201) | | |
| headind\_chg | | -0.00313 | | -0.00272 | | -0.00362 | | -0.00182 | | | -0.00497\*\* | | |
|  | | (0.00425) | | (0.00399) | | (0.00321) | | (0.00299) | | | (0.00233) | | |
| lnwage\_chg | | -0.0161\*\*\* | | -0.0109\*\* | | -0.0103\*\*\* | | -0.00938\*\*\* | | | -0.00786\*\*\* | | |
|  | | (0.00583) | | (0.00518) | | (0.00343) | | (0.00314) | | | (0.00251) | | |
|  | |  | |  | |  | |  | | |  | | |
| Observations | | 6,769 | | 8,695 | | 12,738 | | 16,217 | | | 26,299 | | |
| Standard errors in parentheses | | |  | |  | | | |  | | |  | | |
| \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 | | |  | |  | | | |  | | |  | | |
| Marginal effects at means | | |  | |  | | | |  | | |  | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Not constrained to upward constrained | | | | | | | | | | | | | | |
|  | (1) | | (2) | | (3) | | (4) | | | (5) | | |
| VARIABLES | | Male hourly workers NCtoUC | | all hourly workers NCtoUC | | male hourly + extra OT wage workers NCtoUC | | all hourly + extra OT wage workers NCtoUC | | | all workers NCtoUC | | |
|  | |  | |  | |  | |  | | |  | | |
| headwhite | | -0.151\*\*\* | | -0.131\*\*\* | | -0.118\*\*\* | | -0.112\*\*\* | | | -0.101\*\*\* | | |
|  | | (0.0230) | | (0.0209) | | (0.0163) | | (0.0149) | | | (0.0107) | | |
| headblack | | -0.0831\*\*\* | | -0.0691\*\*\* | | -0.0288\* | | -0.0338\*\* | | | -0.00878 | | |
|  | | (0.0233) | | (0.0210) | | (0.0166) | | (0.0151) | | | (0.0109) | | |
| headage | | 0.00357 | | 0.00412 | | 0.00342 | | 0.00473\*\* | | | 0.00284\* | | |
|  | | (0.00384) | | (0.00332) | | (0.00260) | | (0.00228) | | | (0.00155) | | |
| headage2 | | -7.67e-05\* | | -7.81e-05\*\* | | -6.76e-05\*\* | | -7.95e-05\*\*\* | | | -5.04e-05\*\*\* | | |
|  | | (4.45e-05) | | (3.84e-05) | | (2.99e-05) | | (2.62e-05) | | | (1.78e-05) | | |
| famincchg\_1yr | | -0.140\*\*\* | | -0.0998\*\*\* | | -0.0837\*\*\* | | -0.0704\*\*\* | | | -0.0551\*\*\* | | |
|  | | (0.0194) | | (0.0147) | | (0.0117) | | (0.00966) | | | (0.00666) | | |
| selfEmp\_chg | | 0.0557\*\* | | 0.0513\*\* | | 0.00990 | | 0.0121 | | | 0.0109 | | |
|  | | (0.0257) | | (0.0241) | | (0.0169) | | (0.0160) | | | (0.00968) | | |
| famsize\_chg | | 0.00676 | | 0.00882 | | 0.00456 | | 0.00563 | | | 0.00575\* | | |
|  | | (0.00668) | | (0.00596) | | (0.00493) | | (0.00442) | | | (0.00307) | | |
| headocc\_chg | | 0.0305\*\* | | 0.0264\*\* | | 0.0233\*\* | | 0.0222\*\* | | | 0.0117\* | | |
|  | | (0.0135) | | (0.0121) | | (0.0101) | | (0.00909) | | | (0.00616) | | |
| headind\_chg | | 0.0122 | | 0.0100 | | 0.0135 | | 0.00660 | | | 0.0152\*\* | | |
|  | | (0.0166) | | (0.0147) | | (0.0120) | | (0.0108) | | | (0.00714) | | |
| lnwage\_chg | | 0.0629\*\*\* | | 0.0403\*\* | | 0.0384\*\*\* | | 0.0339\*\*\* | | | 0.0241\*\*\* | | |
|  | | (0.0226) | | (0.0191) | | (0.0127) | | (0.0113) | | | (0.00767) | | |
|  | |  | |  | |  | |  | | |  | | |
| Observations | | 6,769 | | 8,695 | | 12,738 | | 16,217 | | | 26,299 | | |
| Standard errors in parentheses | | |  | |  | | | |  | | |  | | |
| \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 | | |  | |  | | | |  | | |  | | |
| Marginal effects at means | | |  | |  | | | |  | | |  | | |

Note that the probability of transitioning from no constraint into upside and downside constrained is 8.1% and 2.3%, respectively. Hence, compared to those probabilities, all the statistically significant effects are also economically significant since their effect sizes are comparable to the probabilities of transition.

Next I turn to the regressions on the probability of being constrained. The following two tables display the results (again with never-statistically significant variables removed). Consistently significant are head white, head age and age squared, family income, head married, family size, education status, and whether the individual is a professional or a manager.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Upward Constrained | | | |  | |  | |
|  | (1) | | (2) | | (3) | | (4) | | (5) | |
| VARIABLES | Male hourly workers | | all hourly workers | | male hourly + extra OT wage workers | | all hourly + extra OT wage workers | | all workers | |
|  |  | |  | |  | |  | |  | |
| headwhite | -0.0449\*\* | | -0.0414\*\* | | -0.0530\*\*\* | | -0.0493\*\*\* | | -0.0470\*\*\* | |
|  | (0.0215) | | (0.0199) | | (0.0131) | | (0.0121) | | (0.00961) | |
| headage | 0.0106\*\*\* | | 0.00671\*\* | | 0.00767\*\*\* | | 0.00750\*\*\* | | 0.00601\*\*\* | |
|  | (0.00376) | | (0.00327) | | (0.00212) | | (0.00185) | | (0.00142) | |
| headage^2 | -0.000180\*\*\* | | -0.000128\*\*\* | | -0.000132\*\*\* | | -0.000124\*\*\* | | -0.000100\*\*\* | |
|  | (4.39e-05) | | (3.81e-05) | | (2.49e-05) | | (2.17e-05) | | (1.66e-05) | |
| faminc | -7.28e-06\*\*\* | | -6.40e-06\*\*\* | | -6.12e-06\*\*\* | | -5.58e-06\*\*\* | | -4.38e-06\*\*\* | |
|  | (5.61e-07) | | (5.06e-07) | | (3.16e-07) | | (2.87e-07) | | (2.00e-07) | |
| selfEmployed | 0.0358 | | 0.0334 | | 0.0217\*\* | | 0.0230\*\*\* | | 0.0286\*\*\* | |
|  | (0.0275) | | (0.0255) | | (0.00938) | | (0.00874) | | (0.00608) | |
| headmarried | 0.0827\*\*\* | | 0.0759\*\*\* | | 0.0589\*\*\* | | 0.0604\*\*\* | | 0.0407\*\*\* | |
|  | (0.0172) | | (0.0106) | | (0.0102) | | (0.00638) | | (0.00488) | |
| famsize | 0.0183\*\*\* | | 0.0194\*\*\* | | 0.0172\*\*\* | | 0.0166\*\*\* | | 0.0144\*\*\* | |
|  | (0.00251) | | (0.00222) | | (0.00149) | | (0.00132) | | (0.00103) | |
| High school grad | -0.0235\*\* | | -0.0275\*\*\* | | -0.0276\*\*\* | | -0.0253\*\*\* | | -0.0219\*\*\* | |
|  | (0.0114) | | (0.00990) | | (0.00711) | | (0.00623) | | (0.00511) | |
| Some post-secondary education | -0.0410\*\*\* | | -0.0384\*\*\* | | -0.0438\*\*\* | | -0.0403\*\*\* | | -0.0429\*\*\* | |
|  | (0.0114) | | (0.00998) | | (0.00687) | | (0.00604) | | (0.00480) | |
| college or higher degree | -0.0290 | | -0.0446\*\* | | -0.0421\*\*\* | | -0.0364\*\*\* | | -0.0518\*\*\* | |
|  | (0.0252) | | (0.0214) | | (0.0114) | | (0.0103) | | (0.00652) | |
| Proffesional or manager | -0.0478\*\*\* | | -0.0361\*\* | | -0.0508\*\*\* | | -0.0495\*\*\* | | -0.0736\*\*\* | |
|  | (0.0178) | | (0.0154) | | (0.00887) | | (0.00790) | | (0.00511) | |
| In farm or service occupation | 0.0147 | | -0.00245 | | -0.00710 | | -0.0183\*\*\* | | -0.0160\*\*\* | |
|  | (0.0120) | | (0.0101) | | (0.00711) | | (0.00611) | | (0.00488) | |
| Services industry | -0.0167 | | -0.0590\*\*\* | | 0.0138 | | -0.0168\*\* | | 0.000434 | |
|  | (0.0179) | | (0.0135) | | (0.00959) | | (0.00767) | | (0.00559) | |
| “Blue-collar” industry | 0.00415 | | 0.00145 | | 0.0173\*\*\* | | 0.0140\*\* | | 0.0246\*\*\* | |
|  | (0.0116) | | (0.0102) | | (0.00657) | | (0.00589) | | (0.00453) | |
| In finance industry | -0.0284 | | -0.0350 | | -0.0474\*\*\* | | -0.0652\*\*\* | | -0.0361\*\*\* | |
|  | (0.0414) | | (0.0312) | | (0.0178) | | (0.0145) | | (0.00983) | |
| In public administration industry | -0.0102 | | -0.0207 | | 0.0163 | | 0.00783 | | -0.0174\*\* | |
|  | (0.0221) | | (0.0198) | | (0.0122) | | (0.0108) | | (0.00771) | |
| homeowner | -0.0160 | | 0.000704 | | -0.0169\*\*\* | | -0.00489 | | -0.00705\* | |
|  | (0.0100) | | (0.00858) | | (0.00610) | | (0.00531) | | (0.00405) | |
| lnwage | -0.0226\* | | -0.0347\*\*\* | | -6.05e-06 | | -0.0104\* | | -0.00412 | |
|  | (0.0130) | | (0.0113) | | (0.00685) | | (0.00601) | | (0.00455) | |
|  |  | |  | |  | |  | |  | |
| Observations | 12,010 | | 15,021 | | 29,819 | | 37,203 | | 52,810 | |
| Standard errors in parentheses |  |  | |  | |  | |
| \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 |  |  | |  | |  | |
| Marginal effects at means |  |  | |  | |  | |

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| --- |
| Downward Constrained |
|  | (1) | | (2) | | | (3) | | (4) | (5) |
| VARIABLES | Male hourly workers DC | | all hourly workers DC | | | male hourly + extra OT wage workers DC | | all hourly + extra OT wage workers DC | all workers DC |
|  |  | |  | | |  | |  |  |
| headwhite | 0.00846\*\* | | 0.00836\*\* | | | 0.00979\*\*\* | | 0.00968\*\*\* | 0.0104\*\*\* |
|  | (0.00406) | | (0.00401) | | | (0.00243) | | (0.00239) | (0.00214) |
| headage | -0.00200\*\*\* | | -0.00135\*\* | | | -0.00142\*\*\* | | -0.00147\*\*\* | -0.00133\*\*\* |
|  | (0.000711) | | (0.000660) | | | (0.000392) | | (0.000363) | (0.000314) |
| Headage^2 | 3.39e-05\*\*\* | | 2.58e-05\*\*\* | | | 2.45e-05\*\*\* | | 2.44e-05\*\*\* | 2.22e-05\*\*\* |
|  | (8.32e-06) | | (7.70e-06) | | | (4.62e-06) | | (4.27e-06) | (3.68e-06) |
| faminc | 1.37e-06\*\*\* | | 1.29e-06\*\*\* | | | 1.13e-06\*\*\* | | 1.10e-06\*\*\* | 9.72e-07\*\*\* |
|  | (1.14e-07) | | (1.08e-07) | | | (6.27e-08) | | (5.96e-08) | (4.62e-08) |
| selfEmployed | -0.00674 | | -0.00674 | | | -0.00401\*\* | | -0.00451\*\*\* | -0.00634\*\*\* |
|  | (0.00518) | | (0.00514) | | | (0.00174) | | (0.00172) | (0.00135) |
| headmarried | -0.0156\*\*\* | | -0.0153\*\*\* | | | -0.0109\*\*\* | | -0.0119\*\*\* | -0.00902\*\*\* |
|  | (0.00328) | | (0.00218) | | | (0.00189) | | (0.00127) | (0.00109) |
| famsize | -0.00345\*\*\* | | -0.00390\*\*\* | | | -0.00317\*\*\* | | -0.00326\*\*\* | -0.00320\*\*\* |
|  | (0.000486) | | (0.000462) | | | (0.000283) | | (0.000266) | (0.000235) |
| High school grad | 0.00429\*\* | | 0.00540\*\*\* | | | 0.00485\*\*\* | | 0.00474\*\*\* | 0.00431\*\*\* |
|  | (0.00212) | | (0.00199) | | | (0.00128) | | (0.00120) | (0.00103) |
| Some post-secondary education | 0.00788\*\*\* | | 0.00779\*\*\* | | | 0.00813\*\*\* | | 0.00795\*\*\* | 0.00926\*\*\* |
|  | (0.00227) | | (0.00209) | | | (0.00132) | | (0.00123) | (0.00106) |
| college or higher degree | 0.00538 | | 0.00924\* | | | 0.00776\*\*\* | | 0.00708\*\*\* | 0.0117\*\*\* |
|  | (0.00499) | | (0.00493) | | | (0.00231) | | (0.00217) | (0.00161) |
| Proffesional or manager | 0.00901\*\*\* | | 0.00727\*\* | | | 0.00939\*\*\* | | 0.00973\*\*\* | 0.0163\*\*\* |
|  | (0.00337) | | (0.00312) | | | (0.00165) | | (0.00156) | (0.00115) |
| In farm or service occupation | -0.00276 | | 0.000493 | | | 0.00131 | | 0.00359\*\*\* | 0.00354\*\*\* |
|  | (0.00226) | | (0.00205) | | | (0.00131) | | (0.00120) | (0.00108) |
| Services industry | 0.00315 | | 0.0119\*\*\* | | | -0.00256 | | 0.00330\*\* | -9.62e-05 |
|  | (0.00337) | | (0.00275) | | | (0.00177) | | (0.00151) | (0.00124) |
| “Blue-collar” industry | -0.000783 | | -0.000292 | | | -0.00319\*\*\* | | -0.00274\*\* | -0.00546\*\*\* |
|  | (0.00218) | | (0.00205) | | | (0.00122) | | (0.00116) | (0.00101) |
| In finance industry | 0.00536 | | 0.00706 | | | 0.00875\*\*\* | | 0.0128\*\*\* | 0.00800\*\*\* |
|  | (0.00779) | | (0.00629) | | | (0.00329) | | (0.00285) | (0.00218) |
| In public administration industry | 0.00193 | | 0.00418 | | | -0.00302 | | -0.00154 | 0.00387\*\* |
|  | (0.00416) | | (0.00400) | | | (0.00225) | | (0.00212) | (0.00171) |
| homeowner | 0.00302 | | -0.000142 | | | 0.00313\*\*\* | | 0.000960 | 0.00156\* |
|  | (0.00189) | | (0.00173) | | | (0.00113) | | (0.00104) | (0.000898) |
| lnwage | 0.00425\* | | 0.00700\*\*\* | | | 1.12e-06 | | 0.00205\* | 0.000912 |
|  | (0.00246) | | (0.00229) | | | (0.00127) | | (0.00118) | (0.00101) |
|  |  | |  | | |  | |  |  |
| Observations | 12,010 | | 15,021 | | | 29,819 | | 37,203 | 52,810 |
| Standard errors in parentheses |  |  | |  |  | |
| \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 |  |  | |  |  | |
| Marginal effects at means |  |  | |  |  | |

Once we start including salaried workers in the regression, whether an individual is working in a “blue collar” industry[[2]](#footnote-2), whether a head is working in a farm or service occupation[[3]](#footnote-3), and whether an individual is working in the finance industry become significant.

Note that the probability of being up- or downside constrained is about 25 percent and 5 percent, respectively.

*Extensions*Next, I hope to do similar regressions for married couples only, including regressors for wife’s employment status and wages, among other factors. We might also want to add regressors for macroeconomics conditions (rather than just the year fixed-effects) such as the unemployment rate.

*Analysis*  
Interestingly, the factors for transitioning into constrained status, either up or down, are quite similar. The same goes when comparing the significant factors associated with a head being upside constrained versus downside constrained.

*Concerns*Perhaps I should have simplified the analysis by simply conducting OLS on dummies for each outcome of interest rather than ordinal logit regressions.

Should I break out the dependent variable into its components, i.e. dummies for being willing and able to work more or fewer hours?

Should I include a fourth outcome for being unemployed while still excluding the disabled, students, and home spouses?

1. Disability limits housework. [↑](#footnote-ref-1)
2. A “blue collar” industry is defined as one of the following: (1) Agriculture, forestry, and fisheries, (2) mining, (3) construction, (4) manufacturing, or (5) transportation communication and other public utilities. I aggregated some of the industries for the regression because, using Stata, I was finding marginal effects to be “not estimable” when I included a dummy for all but one industry and occupation. [↑](#footnote-ref-2)
3. These occupations are (1) laborers, expect farm, (2) farmers and farm managers, (3) farm laborers and farm foremen, (4) services workers expect private household, and (5) private household workers. I aggregate these occupations for the same reasons given in the above footnote. [↑](#footnote-ref-3)