

STARTING SALARY

```
-----
name: <unnamed>
log: C:\Users\TAOVLW1\Documents\WORK\Faculty_Salary_Study\PROGRAMS\rEGoU
> T\LMORATERob_tab1B-SALSTART_SPEC.log
log type: text
opened on: 10 Mar 2018, 15:22:34
```

```
. **** USE DATA SET *****
. use C:\Users\TAOVLW1\Documents\WORK\Faculty_Salary_Study\DATA\FSS2015-16C

. keep if morate ~= . & merit ~= . & yrsoth ~= .
(0 observations deleted)
```

```
. describe
```

```
Contains data from C:\Users\TAOVLW1\Documents\WORK\Faculty_Salary_Study\DATA\FSS
> 2015-16C.dta
```

```
obs:          575
vars:          87          9 Mar 2018 16:55
size:        120,750
```

```
-----
```

variable name	storage type	display format	value label	variable label
control	long	%12.0g		
college	byte	%8.0g		
dept	byte	%8.0g		
age	double	%12.0g		
female	byte	%8.0g		
minority	byte	%8.0g		
asian	byte	%8.0g		
black	byte	%8.0g		
hispanic	byte	%8.0g		
morate	double	%12.0g		
full	byte	%8.0g		
assoc	byte	%8.0g		
rkyrs	double	%12.0g		
yrsnu	double	%12.0g		
yrsoth	float	%9.0g		
merit	double	%12.0g		
saladj	byte	%8.0g		
seadj	byte	%8.0g		
profship	byte	%8.0g		
RKST_FULL	byte	%8.0g		
RKST_ASSOC	byte	%8.0g		
CUPA_NAT	double	%12.0g		
CUPA_NIU	double	%12.0g		
CUPA_NATR	double	%12.0g		
yearstart	int	%8.0g		
quint	float	%9.0g		
quintTOP	float	%9.0g		
quint2ND	float	%9.0g		
quintMID	float	%9.0g		
quint4TH	float	%9.0g		
quintBOT	float	%9.0g		
lmorate	float	%9.0g		
cupa000	float	%9.0g		
whmale	float	%9.0g		
RKST_ASSIST	float	%9.0g		
assist	float	%9.0g		
salstart	float	%9.0g		

```
-----
```

STARTING SALARY

```

yrsni u2      float %9.0g
yrsoth2      float %9.0g
dept1        byte %8.0g      dept== 1.0000
dept2        byte %8.0g      dept== 2.0000
dept3        byte %8.0g      dept== 3.0000
dept4        byte %8.0g      dept== 4.0000
dept5        byte %8.0g      dept== 5.0000
dept6        byte %8.0g      dept== 6.0000
dept7        byte %8.0g      dept== 7.0000
dept8        byte %8.0g      dept== 8.0000
dept9        byte %8.0g      dept== 9.0000
dept10       byte %8.0g      dept== 10.0000
dept11       byte %8.0g      dept== 11.0000
dept12       byte %8.0g      dept== 13.0000
dept13       byte %8.0g      dept== 14.0000
dept14       byte %8.0g      dept== 15.0000
dept15       byte %8.0g      dept== 16.0000
dept16       byte %8.0g      dept== 17.0000
dept17       byte %8.0g      dept== 18.0000
dept18       byte %8.0g      dept== 19.0000
dept19       byte %8.0g      dept== 20.0000
dept20       byte %8.0g      dept== 21.0000
dept21       byte %8.0g      dept== 22.0000
dept22       byte %8.0g      dept== 23.0000
dept23       byte %8.0g      dept== 24.0000
dept24       byte %8.0g      dept== 25.0000
dept25       byte %8.0g      dept== 26.0000
dept26       byte %8.0g      dept== 27.0000
dept27       byte %8.0g      dept== 28.0000
dept28       byte %8.0g      dept== 29.0000
dept29       byte %8.0g      dept== 30.0000
dept30       byte %8.0g      dept== 31.0000
dept31       byte %8.0g      dept== 32.0000
dept32       byte %8.0g      dept== 34.0000
dept33       byte %8.0g      dept== 35.0000
dept34       byte %8.0g      dept== 36.0000
dept35       byte %8.0g      dept== 38.0000
dept36       byte %8.0g      dept== 39.0000
dept37       byte %8.0g      dept== 40.0000
dept38       byte %8.0g      dept== 41.0000
dept39       byte %8.0g      dept== 42.0000
dept40       byte %8.0g      dept== 43.0000
dept41       byte %8.0g      dept== 44.0000
dept42       byte %8.0g      dept== 45.0000
qui ntD      float %9.0g
qui ntDTOP   float %9.0g
qui ntD2ND   float %9.0g
qui ntDMI D   float %9.0g
qui ntD4TH   float %9.0g
qui ntDBOT   float %9.0g

```

Sorted by: qui ntD

. summarize

Variabl e	Obs	Mean	Std. Dev.	Min	Max
control	575	121888.3	12709.46	102101	148139
col lege	575	4.537391	1.950139	1	8
dept	575	25.37391	13.00138	1	45
age	575	50.00178	10.10232	27.26575	80.11507
femal e	575	.4313043	.4956896	0	1

STARTING SALARY

mi nori ty	575	. 2295652	. 4209194	0	1
asi an	575	. 1513043	. 3586573	0	1
bl ack	575	. 0417391	. 2001666	0	1
hi sp	575	. 0330435	. 1789058	0	1
morate	575	8754. 981	2560. 947	4084	19444. 46
ful l	575	. 333913	. 4720197	0	1
assoc	575	. 4452174	. 4974225	0	1
rkyrs	575	4. 71827	4. 919266	0	29
yr sni u	575	13. 03161	8. 601392	0	46. 96986
yrsoth	575	2. 29913	4. 026816	0	33
meri t	575	4. 56711	1. 324462	1. 636667	9. 666667
sal adj	575	. 0313043	. 1742906	0	1
seadj	575	. 0886957	. 2845515	0	1
profshi p	575	. 08	. 2715294	0	1
RKST_FULLL	575	. 026087	. 1595327	0	1
RKST_ASSOC	575	. 0765217	. 2660625	0	1
CUPA_NAT	575	9410. 338	2287. 929	6129. 519	16705. 33
CUPA_NIU	575	9516. 085	2291. 557	6348. 247	16693
CUPA_NATR	575	9625. 953	2622. 314	5818. 849	18179. 78
yearstart	575	2003. 031	8. 594974	1969	2016
qui nt	575	2. 963478	1. 415588	1	5
qui ntTOP	575	. 1930435	. 3950305	0	1
qui nt2ND	575	. 1982609	. 3990369	0	1
qui ntMI D	575	. 1930435	. 3950305	0	1
qui nt4TH	575	. 2104348	. 4079724	0	1
qui ntBOT	575	. 2052174	. 404212	0	1
l morate	575	9. 040346	. 2650569	8. 314832	9. 875318
cupa000	575	9. 516085	2. 291557	6. 348247	16. 693
whmal e	575	. 4434783	. 4972276	0	1
RKST_ASSI ST	575	. 8973913	. 3037113	0	1
assi st	575	. 2208696	. 4151939	0	1
sal start	570	8147. 535	3902. 547	1199. 88	32521. 98
yr sni u2	575	243. 6781	281. 4372	0	2206. 168
yrsoth2	575	21. 47304	72. 00897	0	1089
dept1	575	. 0295652	. 169532	0	1
dept2	575	. 0121739	. 1097573	0	1
dept3	575	. 0191304	. 1371027	0	1
dept4	575	. 013913	. 1172321	0	1
dept5	575	. 0121739	. 1097573	0	1
dept6	575	. 013913	. 1172321	0	1
dept7	575	. 0208696	. 1430721	0	1
dept8	575	. 0191304	. 1371027	0	1
dept9	575	. 0226087	. 1487819	0	1
dept10	575	. 0191304	. 1371027	0	1
dept11	575	. 0191304	. 1371027	0	1
dept12	575	. 0156522	. 1242338	0	1
dept13	575	. 0173913	. 1308381	0	1
dept14	575	. 0086957	. 092925	0	1
dept15	575	. 0156522	. 1242338	0	1
dept16	575	. 0295652	. 169532	0	1
dept17	575	. 026087	. 1595327	0	1
dept18	575	. 0173913	. 1308381	0	1
dept19	575	. 0243478	. 1542608	0	1

	STARTING SALARY					
femal e	.0096896	.0127752	0.76	0.448	-.0154037	.0347828
asi an	.0300274	.0172127	1.74	0.082	-.0037821	.0638369
bl ack	.0357315	.0219879	1.63	0.105	-.0074575	.0789205
hi sp	-.0121166	.0251872	-0.48	0.631	-.0615898	.0373566
cupa000	.0790024	.0028918	27.32	0.000	.0733223	.0846824
ful l	.2274834	.0250428	9.08	0.000	.1782939	.2766729
assoc	.0706437	.0194378	3.63	0.000	.0324636	.1088239
yr sni u	-.0003079	.0010009	-0.31	0.759	-.0022738	.0016581
yrsoth	.0082752	.0019338	4.28	0.000	.0044768	.0120737
qui ntTOP	.0312521	.0167403	1.87	0.062	-.0016294	.0641336
qui nt2ND	.0270241	.0162393	1.66	0.097	-.0048734	.0589217
qui ntMI D	.0150677	.0158874	0.95	0.343	-.0161385	.046274
profshi p	.0770364	.0213971	3.60	0.000	.035008	.1190649
sal adj	.0257892	.0268449	0.96	0.337	-.0269401	.0785184
seadj	.0507989	.0166291	3.05	0.002	.0181358	.0834619
_cons	8.130538	.0323619	251.24	0.000	8.066972	8.194104

```

. * SALSTART ADDED, SALSTART NOT SS
. regress l morate femal e asi an bl ack hi sp ///
> cupa00 ful l assoc yr sni u yrsoth ///
> qui ntTOP qui nt2ND qui ntMI D profshi p sal adj seadj sal start, vce
> (robust)

```

```

Linear regression                               Number of obs   =       570
                                                F(16, 553)     =       97.40
                                                Prob > F        =       0.0000
                                                R-squared       =       0.7242
                                                Root MSE       =       .1413

```

l morate	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
femal e	.0056567	.013048	0.43	0.665	-.019973	.0312864
asi an	.030346	.017116	1.77	0.077	-.0032744	.0639664
bl ack	.0367689	.021887	1.68	0.094	-.006223	.0797607
hi sp	-.0081264	.0255566	-0.32	0.751	-.0583264	.0420735
cupa000	.0789051	.0029551	26.70	0.000	.0731005	.0847096
ful l	.2296541	.0255458	8.99	0.000	.1794756	.2798327
assoc	.0697308	.0197341	3.53	0.000	.0309678	.1084938
yr sni u	.0002109	.0011084	0.19	0.849	-.0019662	.002388
yrsoth	.0083519	.0019504	4.28	0.000	.0045209	.0121829
qui ntTOP	.0305224	.0168553	1.81	0.071	-.0025859	.0636307
qui nt2ND	.0262107	.0163695	1.60	0.110	-.0059433	.0583647
qui ntMI D	.0174534	.0160158	1.09	0.276	-.0140058	.0489126
profshi p	.0738996	.02191	3.37	0.001	.0308626	.1169366
sal adj	.0250106	.0273814	0.91	0.361	-.0287736	.0787948
seadj	.048528	.0168424	2.88	0.004	.015445	.081611
sal start	-2.53e-06	2.07e-06	-1.23	0.221	-6.59e-06	1.53e-06
_cons	8.146597	.0344695	236.34	0.000	8.07889	8.214304

```

. * (2) NOW TO EXPLORE WHICH OF THE VARS IN THE BASE MODEL ARE REPRESENTING THE E
> XPLANTORY POWER OF SALSTART,
. * START BY ESTIMATING A MODEL WITH ONLY SALSTART AND THE TARGET VARS
. * SALSTART SS
. regress l morate femal e asi an bl ack hi sp ///
> sal start, vce(robust)

```

```

Linear regression                               Number of obs   =       570

```


STARTING SALARY						
bl ack	-. 0452786	. 0265224	-1. 71	0. 088	-. 097374	. 0068167
hi sp	-. 023118	. 0487953	-0. 47	0. 636	-. 1189618	. 0727258
profshi p	. 2397823	. 0283187	8. 47	0. 000	. 1841587	. 2954059
sal adj	. 0661645	. 048828	1. 36	0. 176	-. 0297435	. 1620725
seadj	. 0845611	. 0224845	3. 76	0. 000	. 0403971	. 1287251
sal start	6. 10e-06	2. 79e-06	2. 18	0. 029	6. 12e-07	. 0000116
_cons	8. 987288	. 028977	310. 15	0. 000	8. 930371	9. 044204

```

. * PROFSHIP AND ADJUSTMENTS DROPPED, CUPA ADDED
. * SALSTART NOT SS
. regress l morate female asi an bl ack hi sp ///
> cupa00 sal start, vce(robust)

```

```

Linear regression                Number of obs   =           570
                                F(6, 563)       =          172.96
                                Prob > F             =           0.0000
                                R-squared             =           0.5333
                                Root MSE         =           .18217

```

l morate	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
female	-. 0288487	. 0157219	-1. 83	0. 067	-. 0597294	. 002032
asi an	. 0022354	. 0207181	0. 11	0. 914	-. 0384588	. 0429295
bl ack	. 047797	. 0288396	1. 66	0. 098	-. 0088494	. 1044434
hi sp	-. 0344738	. 033327	-1. 03	0. 301	-. 0999342	. 0309866
cupa000	. 0828323	. 0026999	30. 68	0. 000	. 0775292	. 0881355
sal start	3. 43e-06	2. 32e-06	1. 48	0. 141	-1. 14e-06	7. 99e-06
_cons	8. 235022	. 0334569	246. 14	0. 000	8. 169307	8. 300738

```

. * CUPA DROPPED, FULL ASSOC ADDED
. * SALSTART NOT SS
. regress l morate female asi an bl ack hi sp ///
> full assoc sal start, vce(robust)

```

```

Linear regression                Number of obs   =           570
                                F(7, 562)       =           30.86
                                Prob > F             =           0.0000
                                R-squared             =           0.2597
                                Root MSE         =           .22963

```

l morate	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
female	-. 045113	. 0201245	-2. 24	0. 025	-. 0846415	-. 0055845
asi an	. 0565539	. 0301335	1. 88	0. 061	-. 0026341	. 1157419
bl ack	-. 0562905	. 0249222	-2. 26	0. 024	-. 1052425	-. 0073385
hi sp	. 0108774	. 0502109	0. 22	0. 829	-. 0877466	. 1095013
full	. 3212951	. 0278134	11. 55	0. 000	. 2666642	. 375926
assoc	. 0804919	. 0264971	3. 04	0. 002	. 0284465	. 1325374
sal start	-9. 03e-07	2. 84e-06	-0. 32	0. 751	-6. 49e-06	4. 68e-06
_cons	8. 917585	. 0321037	277. 77	0. 000	8. 854527	8. 980643

```

. * FULL AND ASSOC DROPPED, YRSNI U AND YRSOTH ADDED
. * SALSTART NOT SS

```

STARTING SALARY

```
. regress l morate female asian black hisp ///
> yrsniu yrsoth salstart, vce(robust)
```

```
Linear regression                Number of obs   =       570
                                F(7, 562)       =       15.92
                                Prob > F            =       0.0000
                                R-squared           =       0.1523
                                Root MSE        =       .24572
```

l morate	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
female	-.0602544	.0217112	-2.78	0.006	-.1028994	-.0176095
asian	.0606259	.0306184	1.98	0.048	.0004854	.1207664
black	-.0663802	.025541	-2.60	0.010	-.1165477	-.0162127
hisp	.0274873	.0451425	0.61	0.543	-.0611813	.1161559
yrsniu	.0074002	.0014086	5.25	0.000	.0046335	.010167
yrsoth	.0177217	.0025201	7.03	0.000	.0127717	.0226716
salstart	-4.71e-07	3.14e-06	-0.15	0.881	-6.65e-06	5.71e-06
_cons	8.925116	.0294864	302.69	0.000	8.867199	8.983033

```
.
.
. * (4) THE ABOVE REGRESSIONS INDICATE THAT IF THE MODEL INCLUDED THE TARGET VARS
>
. * PLUS EITHER THE QUINTILES OR THE PROFESSORSHIP AND ADJUSTMENT VARS,
. * SALSTART IS SS
. * SO LET'S CHECK A MODEL WITH JUST THOSE TWO ADDITIONAL VARS
. * SALSTART IS SS
```

```
. regress l morate female asian black hisp ///
> quintTOP quint2ND quintMID profship saladj seadj salstart, vce
> (robust)
```

```
Linear regression                Number of obs   =       570
                                F(11, 558)      =       15.43
                                Prob > F            =       0.0000
                                R-squared           =       0.1276
                                Root MSE        =       .25017
```

l morate	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
female	-.0724911	.0223613	-3.24	0.001	-.1164138	-.0285684
asian	.0475947	.0309476	1.54	0.125	-.0131933	.1083827
black	-.0404811	.0276119	-1.47	0.143	-.0947169	.0137548
hisp	-.0272109	.0477059	-0.57	0.569	-.1209159	.0664942
quintTOP	.0304753	.0290551	1.05	0.295	-.0265955	.0875461
quint2ND	.0075709	.0278619	0.27	0.786	-.0471562	.0622979
quintMID	.01168	.0298576	0.39	0.696	-.0469671	.070327
profship	.2391325	.0284081	8.42	0.000	.1833327	.2949324
saladj	.0651714	.0480696	1.36	0.176	-.0292481	.1595908
seadj	.0803379	.022567	3.56	0.000	.0360113	.1246646
salstart	6.25e-06	2.81e-06	2.23	0.026	7.33e-07	.0000118
_cons	8.977472	.0325774	275.57	0.000	8.913483	9.041461

```
. * (5) NOW ADD OTHER VARS FROM THE BASE MODEL
. * ADD CUPA
. * SALSTART NOT SS
```


STARTING SALARY

```
. * DROP FULL ASSOC, ADD YRSNI U AND YRSOTH
. * SALSTART NOT SS
. regress l morate female asi an black hi sp ///
> yrsni u yrsoth ///
> qui ntTOP qui nt2ND qui ntMI D profshi p sal adj seadj sal start, vce
> (robust)
```

```
Linear regression                Number of obs    =          570
                                F(13, 556)       =          21.24
                                Prob > F               =          0.0000
                                R-squared              =          0.2007
                                Root MSE           =          .23988
```

l morate	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
female	-.0551788	.0217228	-2.54	0.011	-.0978476	-.01251
asian	.0659543	.030619	2.15	0.032	.0058113	.1260973
black	-.0563864	.0209279	-2.69	0.007	-.0974938	-.0152791
hispanic	.0108994	.0449732	0.24	0.809	-.0774387	.0992375
yrsni u	.0054735	.0013825	3.96	0.000	.002758	.0081891
yrsoth	.0159942	.0025209	6.34	0.000	.0110425	.0209458
qui ntTOP	.0289045	.0276378	1.05	0.296	-.0253827	.0831918
qui nt2ND	.0124006	.0271321	0.46	0.648	-.0408933	.0656946
qui ntMI D	.0184119	.0286523	0.64	0.521	-.0378682	.074692
profshi p	.1864625	.0261286	7.14	0.000	.1351396	.2377853
sal adj	.0374338	.0468749	0.80	0.425	-.0546398	.1295074
seadj	.0646931	.0200989	3.22	0.001	.0252141	.1041722
sal start	8.33e-07	2.97e-06	0.28	0.779	-5.00e-06	6.67e-06
_cons	8.90714	.0323892	275.00	0.000	8.84352	8.97076

```
. ** CONCLUSION: THE ABOVE ILLUSTRATES THAT THE INCLUSION OF CUPA, FULL AND ASSO
> C,
. * OR YRSNI U AND YRSOTH, CAUSE SALSTART TO BE STATISTICALLY INSIGNIFICANT.
. * THESE EXPERIENCE AND PRODUCTIVITY, AND DISCIPLINE VARIABLES APPEAR TO BE CA
> PTURING
. * THE EFFECT OF SALSTART ON MONTHLY SALARY SO THAT IT NO LONGER ADDS EXPLANAT
> ORY POWER TO THE MODEL.
```

```
. ***** CLOSE OUTPUT
. log close
  name: <unnamed>
  log: C:\Users\TAOVLW1\Documents\WORK\Facul ty_Sal ary_Study\PROGRAMS\rEGoU
> T\LMORATERob_tab1B-SALSTART_SPEC.log
  log type: text
  closed on: 10 Mar 2018, 15:22:35
```