```
. do "/Users/dailondolojan/Desktop/Econ 113/H3 Q6.do"

. use "/Users/dailondolojan/desktop/stata_data/us_wage_sample", clear

.
. **Question 6**
. **Part A***
. summ wage if female==0
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| wage | **270** | **7.106037** | **4.176828** | **1.5** | **24.98** |

```
. summ wage if female==1
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| wage | **249** | **4.559518** | **2.451669** | **.53** | **21.63** |

```
.
. **The male mean wage is 7.11 and the female mean wage is 4.56
.
. **Part B**
. summ wage if female==0 & married==0
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| wage | **85** | **5.162353** | **2.738495** | **1.5** | **12.5** |

```
13 . summ wage if female==1 & married==0
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| wage | **118** | **4.640847** | **3.011398** | **.53** | **21.63** |

```
14 .
15 . **Unmarried male has an average wage of 5.16 while an unmarried female earns 4.64
16 .
17 . **Part C**
18 . regress wage educ exper tenure female married
```

| Source | SS | df | MS | | |
|---|---|---|---|---|---|
| Model | **2619.9658** | **5** | **523.993159** | Number of obs | = **519** |
| Residual | **4403.6481** | **513** | **8.58410935** | F(5, 513) | = **61.04** |
| Total | **7023.61389** | **518** | **13.5591002** | Prob > F | = **0.0000** |
| | | | | R-squared | = **0.3730** |
| | | | | Adj R-squared | = **0.3669** |
| | | | | Root MSE | = **2.9299** |

| wage | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| educ | **.5503562** | **.0497676** | **11.06** | **0.000** | **.4525828** | **.6481296** |
| exper | **.0190051** | **.0120949** | **1.57** | **0.117** | **-.0047565** | **.0427667** |
| tenure | **.1421758** | **.0211915** | **6.71** | **0.000** | **.1005431** | **.1838085** |
| female | **-1.780975** | **.266455** | **-6.68** | **0.000** | **-2.304452** | **-1.257498** |
| married | **.5225787** | **.2851987** | **1.83** | **0.067** | **-.0377223** | **1.08288** |
| _cons | **-1.537821** | **.7226097** | **-2.13** | **0.034** | **-2.957459** | **-.1181825** |

```
19 .
20 . **Part D**
21 . gen fmar=female*married

22 .
23 . regress wage educ exper tenure female married fmar
```

| Source | SS | df | MS | | |
|---|---|---|---|---|---|
| Model | **2809.16376** | **6** | **468.19396** | Number of obs | = **519** |
| Residual | **4214.45014** | **512** | **8.23134792** | F(6, 512) | = **56.88** |
| Total | **7023.61389** | **518** | **13.5591002** | Prob > F | = **0.0000** |
| | | | | R-squared | = **0.4000** |
| | | | | Adj R-squared | = **0.3929** |
| | | | | Root MSE | = **2.869** |

| wage | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| educ | **.5475568** | **.0487378** | **11.23** | **0.000** | **.4518061** | **.6433074** |

| | | | | | | |
|---|---|---|---|---|---|---|
| exper | .0192937 | .0118439 | 1.63 | 0.104 | -.003975 | .0425624 |
| tenure | .1327804 | .0208438 | 6.37 | 0.000 | .0918305 | .1737302 |
| female | -.2700179 | .4091524 | -0.66 | 0.510 | -1.073842 | .5338063 |
| married | 1.852119 | .3935749 | 4.71 | 0.000 | 1.078898 | 2.625339 |
| fmar | -2.52297 | .5262467 | -4.79 | 0.000 | -3.556839 | -1.489102 |
| _cons | -2.357088 | .7279479 | -3.24 | 0.001 | -3.78722 | -.9269556 |

```
24 .
25 . **Part E**
26 . **Part B explains the wage gap between unmarried males and unmarried females**
27 . **where males had a wage of $5.16 and females had a wage of $4.64.**
28 . **This result makes sense because of the bias in predominately male society**
29 . **Part D explains how the interaction term of female and married plays a **
30 . **part in the regression. If we were to take the derivative as shown on the
31 . **right in respect to wage/ female in order to control for education. **
32 . **The wage gap would be -0.27 and if married would also decrease by -2.523.**
33 . **This makes sense because married women usually have children which would**
34 . **Decrease the amount of money they earn if they took time off for maternity**
35 . **leave**
36 .
end of do-file

37 . do "/Users/dailondolojan/Desktop/Econ 113/H3 Q7.do"

38 . use "/Users/dailondolojan/desktop/stata_data/us_wage_sample", clear

39 .
40 . **Question 7**
41 . **Part A***
42 . regress wage south
```

| Source | SS | df | MS | | |
|---|---|---|---|---|---|
| Model | 72.3235133 | 1 | 72.3235133 | Number of obs | = 519 |
| Residual | 6951.29038 | 517 | 13.4454359 | F(1, 517) | = 5.38 |
| | | | | Prob > F | = 0.0208 |
| | | | | R-squared | = 0.0103 |
| | | | | Adj R-squared | = 0.0084 |
| Total | 7023.61389 | 518 | 13.5591002 | Root MSE | = 3.6668 |

| wage | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| south | -.7775594 | .3352596 | -2.32 | 0.021 | -1.436198 | -.1189207 |
| _cons | 6.164458 | .2012419 | 30.63 | 0.000 | 5.769105 | 6.55981 |

```
43 .
44 . **Part B**
45 . regress wage south educ
```

| Source | SS | df | MS | Number of obs | = | 519 |
|---|---|---|---|---|---|---|
| | | | | F(2, 516) | = | 50.82 |
| Model | 1155.84794 | 2 | 577.923971 | Prob > F | = | 0.0000 |
| Residual | 5867.76595 | 516 | 11.3716394 | R-squared | = | 0.1646 |
| | | | | Adj R-squared | = | 0.1613 |
| Total | 7023.61389 | 518 | 13.5591002 | Root MSE | = | 3.3722 |

| wage | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| south | -.4339759 | .3103253 | -1.40 | 0.163 | -1.043632 | .1756805 |
| educ | .524723 | .0537554 | 9.76 | 0.000 | .4191166 | .6303295 |
| _cons | -.5431464 | .7116492 | -0.76 | 0.446 | -1.941232 | .8549397 |

```
46 .
47 . **Part C**
48 . gen exp2=exper^2

49 . gen exp3=exper^3

50 . regress wage south educ exper exp2 exp3
```

| Source | SS | df | MS | Number of obs | = | 519 |
|---|---|---|---|---|---|---|
| | | | | F(5, 513) | = | 38.96 |
| Model | 1932.99045 | 5 | 386.59809 | Prob > F | = | 0.0000 |
| Residual | 5090.62344 | 513 | 9.92324258 | R-squared | = | 0.2752 |
| | | | | Adj R-squared | = | 0.2681 |
| Total | 7023.61389 | 518 | 13.5591002 | Root MSE | = | 3.1501 |

| wage | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| south | -.6659115 | .2923572 | -2.28 | 0.023 | -1.240276 | -.0915468 |
| educ | .5762782 | .0534839 | 10.77 | 0.000 | .4712038 | .6813526 |
| exper | .3405903 | .0861538 | 3.95 | 0.000 | .1713327 | .5098479 |
| exp2 | -.008365 | .0044502 | -1.88 | 0.061 | -.0171078 | .0003778 |
| exp3 | .0000517 | .0000632 | 0.82 | 0.414 | -.0000725 | .0001758 |
| _cons | -3.782425 | .8175734 | -4.63 | 0.000 | -5.388629 | -2.176221 |

```
51 .
52 . **Part D**
53 . **We might need data on the person's ethnicity, if they're married or not with**
54 . **or without kids. Discrimination often occurs in the south which could affect
55 . **wages of POC. Marriage might also affect a person's wage depending on when **
56 . **they marry and if they have kids**
57 .
```

```
. end of do-file

58 .
```