**a.**

**代码：. bysort year: sum ahe**

--------------------------------------------------------------------------------

-> year = 1992

Variable | Obs Mean Std. Dev. Min Max

-------------+---------------------------------------------------------

ahe | 7,605 11.62637 5.613272 1.314103 46.63414

--------------------------------------------------------------------------------

-> year = 2008

Variable | Obs Mean Std. Dev. Min Max

-------------+---------------------------------------------------------

ahe | 7,711 18.97609 10.13944 2.003205 82.41758

**b.**

**代码：**

**. gen ahe1992 = ahe if year == 1992**

**. gen ahe2008 = ahe if year == 2008**

**. gen ahe1992adj = ahe1992 \* 215.2 / 140.3**

**. sum ahe1992adj, d**

ahe1992adj

-------------------------------------------------------------

Percentiles Smallest

1% 4.424585 2.015644

5% 7.175003 2.064806

10% 8.521422 2.212292 Obs 7,605

25% 11.6809 2.212292 Sum of Wgt. 7,605

50% 16.22348 Mean 17.83317

Largest Std. Dev. 8.609951

75% 22.12292 66.36877

90% 29.49723 67.84364 Variance 74.13126

95% 33.71112 70.05592 Skewness 1.229043

99% 45.72071 71.53005 Kurtosis 5.587606

.

**c. I will choose b, because the data in form of (b) has eliminate the influence of price inflation.**

**d.**

**.代码： bysort bachelor: sum ahe2008, d**

--------------------------------------------------------------------------------

-> bachelor = 0

ahe2008

-------------------------------------------------------------

Percentiles Smallest

1% 3.846154 2.051282

5% 5.961538 2.292647

10% 7.478632 2.403846 Obs 4,002

25% 10 2.403846 Sum of Wgt. 4,002

50% 13.94231 Mean 15.33174

Largest Std. Dev. 7.700994

75% 18.84615 66.82692

90% 24.30385 72.11539 Variance 59.3053

95% 29.05983 72.11539 Skewness 1.719761

99% 43.26923 72.11539 Kurtosis 8.522692

--------------------------------------------------------------------------------

-> bachelor = 1

ahe2008

-------------------------------------------------------------

Percentiles Smallest

1% 4.807693 2.003205

5% 9.230769 2.005495

10% 11.10281 2.461539 Obs 3,709

25% 15.38461 2.884615 Sum of Wgt. 3,709

50% 20.67308 Mean 22.90834

Largest Std. Dev. 10.95333

75% 28.84615 74.78632

90% 38.46154 75.91093 Variance 119.9754

95% 43.26923 76.92308 Skewness 1.180297

99% 58 82.41758 Kurtosis 5.038058

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**e.**

**代码：bysort bachelor: sum ahe1992adj, d**

--------------------------------------------------------------------------------

-> bachelor = 0

ahe1992adj

-------------------------------------------------------------

Percentiles Smallest

1% 3.994417 2.064806

5% 6.391067 2.212292

10% 7.66928 2.212292 Obs 4,643

25% 10.32403 2.212292 Sum of Wgt. 4,643

50% 14.10737 Mean 15.31326

Largest Std. Dev. 7.052216

75% 18.77097 54.27491

90% 24.58103 55.30731 Variance 49.73376

95% 28.18624 58.99446 Skewness 1.275802

99% 37.60897 67.84364 Kurtosis 6.208076

--------------------------------------------------------------------------------

-> bachelor = 1

ahe1992adj

-------------------------------------------------------------

Percentiles Smallest

1% 5.899446 2.015644

5% 9.130095 2.528334

10% 11.27835 2.612612 Obs 2,962

25% 15.11733 2.621976 Sum of Wgt. 2,962

50% 20.64806 Mean 21.78319

Largest Std. Dev. 9.31878

75% 26.9689 63.58292

90% 33.67846 66.36877 Variance 86.83965

95% 38.3464 70.05592 Skewness 1.0342

99% 51.76764 71.53005 Kurtosis 4.937231

f. **工资增长了。**

**代码：. sum ahe1992adj ahe2008**

Variable | Obs Mean Std. Dev. Min Max

-------------+---------------------------------------------------------

ahe1992adj | 7,605 17.83317 8.609951 2.015644 71.53005

ahe2008 | 7,711 18.97609 10.13944 2.003205 82.41758

**代码：. sum ahe1992adj ahe2008, d**

ahe1992adj

-------------------------------------------------------------

Percentiles Smallest

1% 4.424585 2.015644

5% 7.175003 2.064806

10% 8.521422 2.212292 Obs 7,605

25% 11.6809 2.212292 Sum of Wgt. 7,605

50% 16.22348 Mean 17.83317

Largest Std. Dev. 8.609951

75% 22.12292 66.36877

90% 29.49723 67.84364 Variance 74.13126

95% 33.71112 70.05592 Skewness 1.229043

99% 45.72071 71.53005 Kurtosis 5.587606

ahe2008

-------------------------------------------------------------

Percentiles Smallest

1% 4.326923 2.003205

5% 7.067307 2.005495

10% 8.653846 2.051282 Obs 7,711

25% 12.01923 2.292647 Sum of Wgt. 7,711

50% 16.82692 Mean 18.97609

Largest Std. Dev. 10.13944

75% 23.55769 74.78632

90% 32.45192 75.91093 Variance 102.8082

95% 38.46154 76.92308 Skewness 1.44071

99% 53.07692 82.41758 Kurtosis 6.076874

**大学生的也增长了。**

**. gen ahe1992adj\_b = ahe1992adj if bachelor == 1**

**. gen ahe2008\_b = ahe2008 if bachelor == 1**

**. sum ahe1992adj\_b ahe2008\_b**

Variable | Obs Mean Std. Dev. Min Max

-------------+---------------------------------------------------------

ahe1992adj\_b | 2,962 21.78319 9.31878 2.015644 71.53005

ahe2008\_b | 3,709 22.90834 10.95333 2.003205 82.41758

g. **There is a noticeable relationship between ahe and bachelor.**

**薪水和学历之间有一个很明显的统计关系。**

**代码：. reg ahe1992adj bachelor, r**

Linear regression Number of obs = 7,605

F(1, 7603) = 1045.77

Prob > F = 0.0000

R-squared = 0.1343

Root MSE = 8.0115

------------------------------------------------------------------------------

| Robust

ahe1992adj | Coef. Std. Err. t P>|t| [95% Conf. Interval]

-------------+----------------------------------------------------------------

bachelor | 6.469927 .2000695 32.34 0.000 6.077736 6.862118

\_cons | 15.31326 .1034991 147.96 0.000 15.11037 15.51615

------------------------------------------------------------------------------

**代码：. reg ahe2008 bachelor, r**

Linear regression Number of obs = 7,711

F(1, 7709) = 1217.08

Prob > F = 0.0000

R-squared = 0.1394

Root MSE = 9.4068

------------------------------------------------------------------------------

| Robust

ahe2008 | Coef. Std. Err. t P>|t| [95% Conf. Interval]

-------------+----------------------------------------------------------------

bachelor | 7.576594 .2171769 34.89 0.000 7.150869 8.00232

\_cons | 15.33174 .1217336 125.95 0.000 15.09311 15.57037

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