ECON613 HW2

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Exercise 1

1.1

The correlation is -0.1788512.

1.2

Table 1: The coefficients of regression

	coefficients
intercept	22075.11
age	-180.18

1.3

Table 2: The standard error of regression using standard formula of OLS

	standard error
intercept	357.827521
age	6.968652

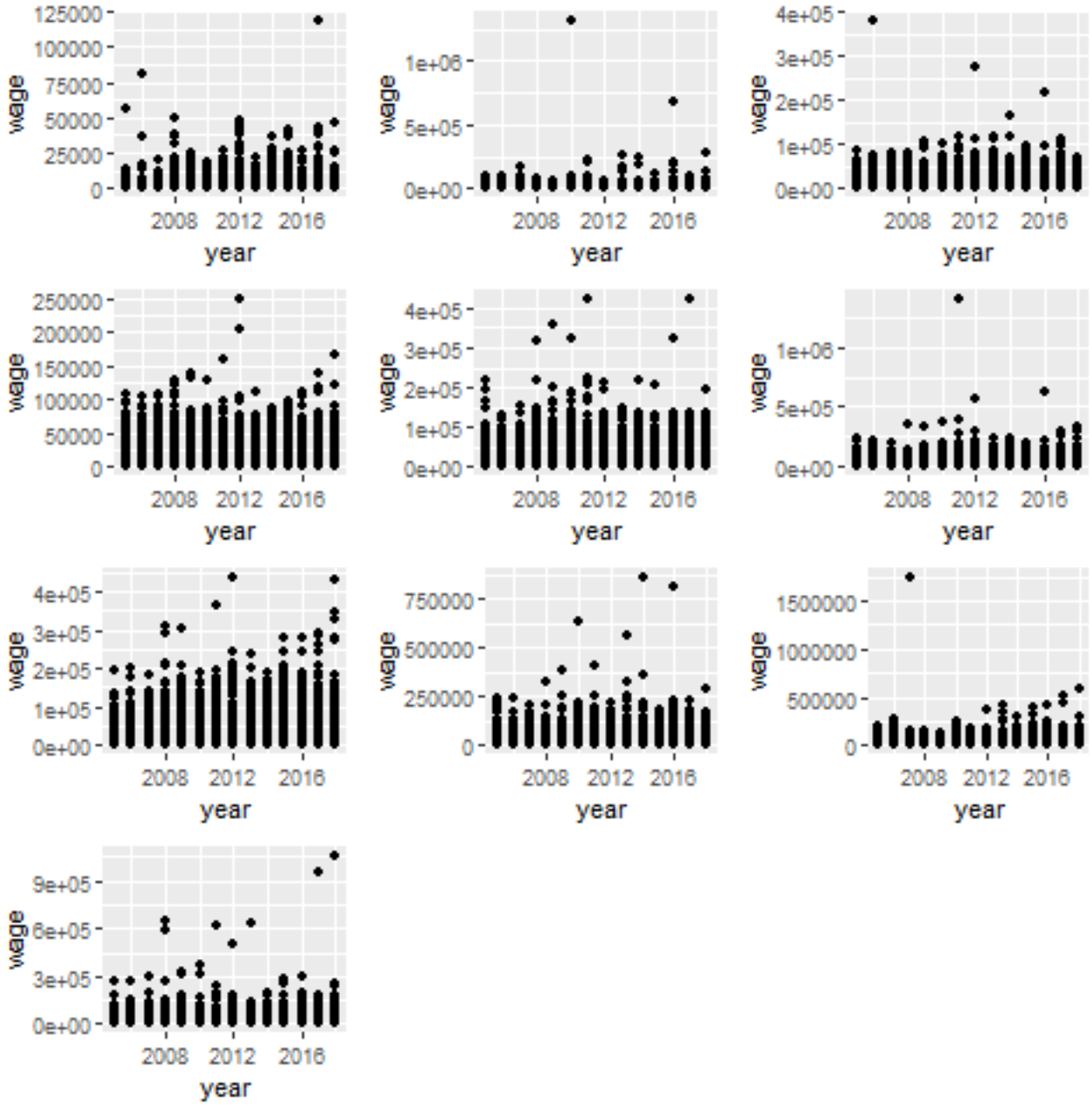
Table 3: results of Bootstrap with 49/499 replications

	49: coef	49: se	499: coef	499: se
intercept	22102.66	295.92	22066.00	305.61
age	-180.50	5.68	-180.04	5.36

Exercise 2

2.2

There is a trend in some specific groups, the wage is growing as the year goes on.



2.3

Table 4: The regression with time fixed effects

	wage	wage
intercept	22075.11	22559.30
age	-180.18	-182.49
time fixed effects	NO	YES

Exercise 3

3.3

For individuals, one more age, will lose 6.79% probability to get employed.

Table 5: The results of Probit Model

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	3.8292	0.0506	75.72	0.0000
age	-0.0679	0.0009	-73.40	0.0000

3.4

The wage cannot be the determinant of the labor market, because it will be omitted with the employment status Once individuals get employed, it will get wage. and wage is not a factor that have effects on employment status.

Exercise 4

Table 6: The results of different models

	Probit	Logit	Linear
(Intercept)	3.5724***	7.0307***	1.5446***
	(0.0183)	(0.0374)	(0.0038)
age	-0.0636***	-0.1241***	-0.0185***
	(0.0003)	(0.0006)	(0.0000)
time fixed effects	YES	YES	YES

Exercise 5

Table 7: The Margin effects of Probit and Logit model

	Margin	se
Probit	0.6337799	0.001339341
Logit	0.6783121	0.001470586