

Results

Relationship: correlation matrix

Coeffs for all variables and model

Table 1: Coefficient Estimates for all models

	variables	OLS	Ridge	Lasso	PCR	PLSR
1	Income	-0.5985	0.0000	-0.5514	-0.5992	-0.5991
2	Limit	0.9565	-0.5688	0.7816	0.6714	0.6755
3	Rating	0.3845	0.7186	0.5111	0.6707	0.6665
4	Cards	0.0532	0.5931	0.0388	0.0409	0.0410
5	Age	-0.0236	0.0443	-0.0168	-0.0239	-0.0236
6	Education	-0.0075	-0.0255	0.0000	-0.0060	-0.0058
7	GenderFemale	-0.0104	-0.0059	-0.0000	-0.0104	-0.0105
8	StudentYes	0.2784	-0.0104	0.2661	0.2766	0.2767
9	MarriedYes	-0.0093	0.2733	0.0000	-0.0114	-0.0115
10	EthnicityAsian	0.0160	-0.0111	0.0000	0.0175	0.0187
11	EthnicityCaucasian	0.0101	0.0164	0.0000	0.0103	0.0116

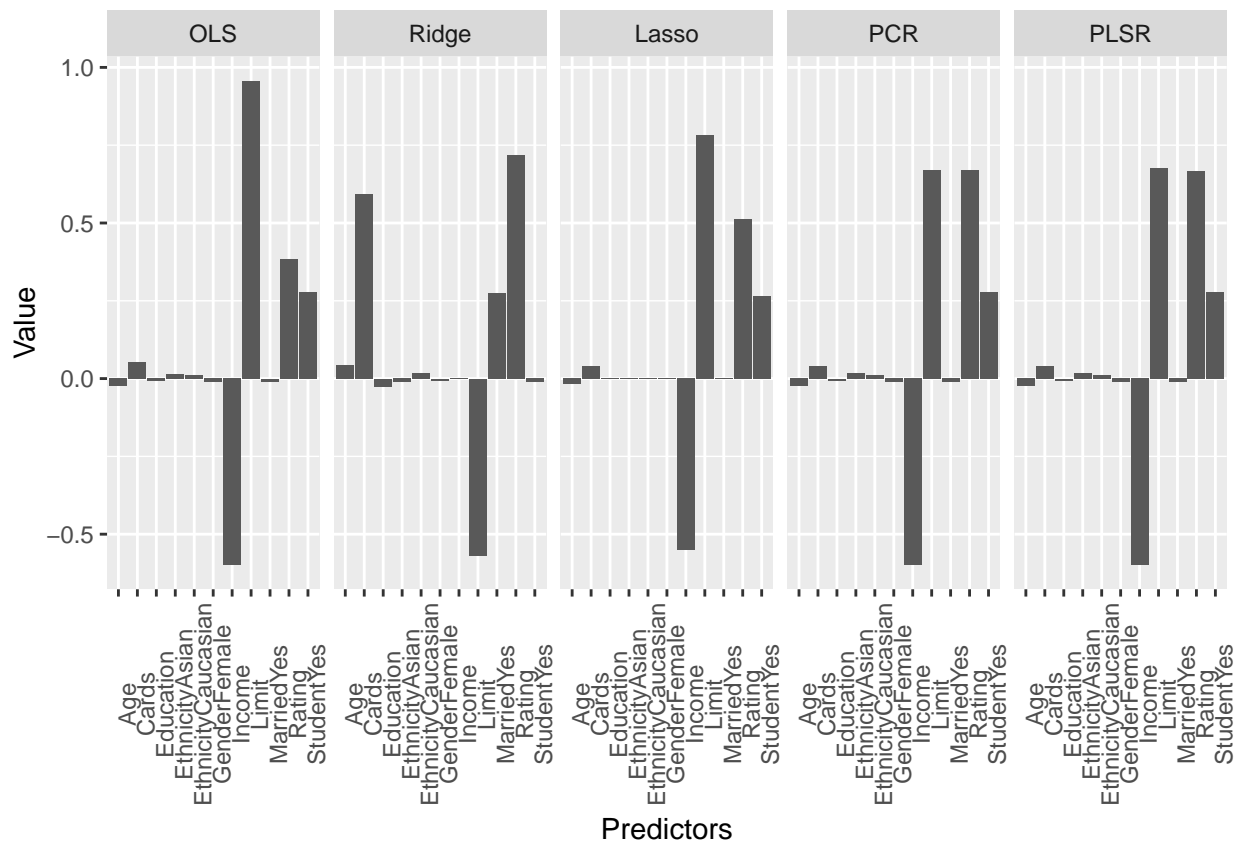
Table with each model's MSE.

Table 2: MSE for all models

	Model	MSE
1	OLS	0.0447
2	Ridge	0.0416
3	Lasso	0.0417
4	PCR	1.7717
5	PLS	2.0761

##	Predictors	Method	Value
## 1	Income	OLS	-5.985009e-01
## 2	Limit	OLS	9.565035e-01
## 3	Rating	OLS	3.844851e-01
## 4	Cards	OLS	5.319873e-02
## 5	Age	OLS	-2.362012e-02
## 6	Education	OLS	-7.465745e-03
## 7	GenderFemale	OLS	-1.038833e-02
## 8	StudentYes	OLS	2.784291e-01
## 9	MarriedYes	OLS	-9.315884e-03
## 10	EthnicityAsian	OLS	1.600130e-02
## 11	EthnicityCaucasian	OLS	1.011880e-02
## 12	Income	Ridge	2.146661e-05
## 13	Limit	Ridge	-5.687834e-01
## 14	Rating	Ridge	7.185823e-01
## 15	Cards	Ridge	5.931485e-01
## 16	Age	Ridge	4.434887e-02
## 17	Education	Ridge	-2.552423e-02
## 18	GenderFemale	Ridge	-5.880734e-03
## 19	StudentYes	Ridge	-1.039090e-02
## 20	MarriedYes	Ridge	2.732521e-01

## 21	EthnicityAsian	Ridge	-1.108734e-02
## 22	EthnicityCaucasian	Ridge	1.639077e-02
## 23	Income	Lasso	-5.514258e-01
## 24	Limit	Lasso	7.815746e-01
## 25	Rating	Lasso	5.110649e-01
## 26	Cards	Lasso	3.884469e-02
## 27	Age	Lasso	-1.676893e-02
## 28	Education	Lasso	0.000000e+00
## 29	GenderFemale	Lasso	-1.522737e-05
## 30	StudentYes	Lasso	2.660849e-01
## 31	MarriedYes	Lasso	0.000000e+00
## 32	EthnicityAsian	Lasso	0.000000e+00
## 33	EthnicityCaucasian	Lasso	0.000000e+00
## 34	Income	PCR	-5.991992e-01
## 35	Limit	PCR	6.714441e-01
## 36	Rating	PCR	6.706655e-01
## 37	Cards	PCR	4.085961e-02
## 38	Age	PCR	-2.387219e-02
## 39	Education	PCR	-6.005605e-03
## 40	GenderFemale	PCR	-1.041403e-02
## 41	StudentYes	PCR	2.766487e-01
## 42	MarriedYes	PCR	-1.141366e-02
## 43	EthnicityAsian	PCR	1.745100e-02
## 44	EthnicityCaucasian	PCR	1.027863e-02
## 45	Income	PLSR	-5.991453e-01
## 46	Limit	PLSR	6.755385e-01
## 47	Rating	PLSR	6.665459e-01
## 48	Cards	PLSR	4.102470e-02
## 49	Age	PLSR	-2.362500e-02
## 50	Education	PLSR	-5.782007e-03
## 51	GenderFemale	PLSR	-1.045143e-02
## 52	StudentYes	PLSR	2.767160e-01
## 53	MarriedYes	PLSR	-1.152015e-02
## 54	EthnicityAsian	PLSR	1.870108e-02
## 55	EthnicityCaucasian	PLSR	1.161435e-02



Graph for all models