© Reasons

1. The estimators implies that among the possible unbiased estimation, the OLS, achives the minimum variance which sets a non-unique value for the OLS estimator
2. The obtained estimates are highly unstable despite being unbiased thus making the solution to have a non-unique value

(d) adding penalties to both B1 and B2

(e)

Discussion

1. These estimates and predictors are in the different scale parametrization
2. This implies that penalization (equation) would have different impact in the predictors
3. Thus, we always make calculations with use of standardized version of the obtained prediction
4. So, in particular, when there is a high collinearity (high correlation between the predictors) or the number of predictors (p) is of similar magnitude to the number of observation(n)
5. Note: that lambda is a tuning parameter that is controlling the amount of penalisation