

Testing – 6.4 Likelihood ratio test

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Solution to the practice quiz

- Models 1 and 2 can be compared using the likelihood ratio test: the linear restrictions are $\beta_{tt,car} = \beta_{tt,pt}$ and $\beta_{tc,car} = \beta_{tc,pt}$.
- Models 1 and 3 can be compared using the likelihood ratio test: the linear restriction is $\beta_{tc,squared} = 0$.
- Models 1 and 4 can be compared using the likelihood ratio test: the linear restriction is $\lambda = 1$.
- Models 1 and 6 can be compared using the likelihood ratio test: the linear restrictions are $\beta_{tt,<15} = \beta_{tt,[15,60)} = \beta_{tt,\geq 60}$.

No other pair of models can be compared using a likelihood ratio test, as none of them can be obtained from the other one using linear restrictions.