## **Exercise 2**

We have used the data in FERTIL2.GDT when we analyzed fertility determinants in Botswana.

- a) We have estimated the effect of education on fertility. Are you convinced that all the OLS assumptions are satisfied? Think about the exogeneity assumption, in particular.
- b) Think about factors that influence both, education and fertility, however, they are not included in the model.
- c) Think about possible instrumental variable (IV) for the endogenous variable. Argue why this variable(s) satisfy the requirements.
- d) Use the IV variable for the endogenous variable to eliminate potential bias and estimate the true effect.