

Re: Proportion in multiple regression

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- *From:* Brett Magill <magillb@*nomail*.sbcglobal.net>
 - *Date:* Fri, 21 Apr 2006 14:07:05 GMT
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Mohammad Ehsanul Karim wrote:

Dear list,

Is it legitimate to use proportions as predictor along with other frequency and dummy variable in a multiple regression?

For example, for the data (tab delimited form uploaded at <http://www.angelfire.com/planet/stata/v1.txt>), i am trying to use predictors
hh.size., m.adult, proporti, hh.sex, calori1, land.per, d.asset,
per.capi, yr.schoo, hhcrisis
for dependent variable log(food.exp)
where proporti is a proportion.

If i use it, will the interpretation still be the same for the proporti variable like others?

Mohammad,

Yes, the interpretation will be the same. The coefficient for proporti would be the expected change in log(food.exp) given a 1 unit change in proporti, net the effects of all of the other variables in the model.

Of course this is probably not very meaningful, assuming that by proportion you do mean a variable with a minimum of 0 and a maximum of 1. This is because a 1 unit change is the entire range of the variable. There is nothing wrong with that, but it probably makes more sense to rescale proporti into a percentage, so that the coefficient represents a 1% change in proporti. Or some other meaningful change in scale.

Brett

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