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Subject: Re: Correlation on log-log? -or- Easy way of removing 0's?

Posted by [noymer](#) on Fri, 26 May 2000 07:00:00 GMT

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In article <392E7F7C.9CDEDD62@mathstat.dal.ca>,  
Simon de Vet <simon@mathstat.dal.ca> wrote:

>  
> I think that this may be because some of the values are 0, and this  
> makes my computer explode (metaphorically speaking, of course). Is  
>

I am not sure I have "the answer" to your question, but I have a few  
vague suggestions:

- 1) Often people do  $\log(1+Y)$  rather than  $\log(Y)$  to avoid FP errors.
- 2) If you think in terms of the regression hyperplane rather than the correlation coefficient, then the square of your correlation coefficient  $r$  (called, well,  $r^2$ ) is the percent of the variance explained by the hyperplane (in this case (?) a line). Now, think of the slope of the hyperplane let's call it  $B$ . For raw data  $B$  gives change in  $Y$  for unit change in  $X$ . For  $\log(Y)$ ,  $B$  gives proportional change in  $Y$  for unit change in  $X$ , and for log-log,  $B$  is an elasticity. So you are not measuring exactly the same thing every time.

HTH,  
Andrew

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