

Re: Stationary means

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- *From:* dave@xxxxxxxxxxxx
 - *Date:* 5 Sep 2006 05:51:56 -0700
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Jason Foster wrote:

I don't think that this is a FAQ, but if it is I apologize for the noise...

Discussions about "regression to the mean" tend to focus on fallacies relating to heights, grades, sickness, etc. Something I have not seen discussed is when/whether it is appropriate to assume a stationary mean (or, I think alternatively, a fixed distribution)?

Assuming a constant distribution and repeated sampling, I can intuitively understand regression to the mean. However, I can imagine situations where the distribution is changing over time. For example (and here I'm talking outside of my area of expertise) the mean height in North America is increasing over time (ostensibly due to dietary and health factors). If this is the case, then what would "regression to the mean" mean? Towards which mean would the regression take place? How would an observer know that a regression analysis is appropriate?

Any thoughts (or pointers to resources) on the issues would be gratefully appreciated.

Jason

Jason ..

Any time (pun intended !) that you have time series data , immediately look beyond regression methodology/textbooks ..The complications (opportunities) that time series data bring to the table are many and far beyond this simple response. If you wish you might go to <http://www.autobox.com> and enroll at AFS University and pursue Intro to Time Series/Forecasting and review some material ...particularly <http://www.autobox.com/pdfs/regvsbox.pdf>

Academics and practitioners who know Regression Analysis often misapply these methods (founded on cross-sectional data where you have n independent readings each with p characteristics) to

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chronological/correlated over time data.

If you wish to pursue this ...please feel free to call...

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