
Note: Further Notes on Lagging Forecasts

Author(s): Everette S. Gardner, Jr.

Reviewed work(s):

Source: *Interfaces*, Vol. 15, No. 5 (Sep. - Oct., 1985), p. 63

Published by: [INFORMS](#)

Stable URL: <http://www.jstor.org/stable/25060744>

Accessed: 14/11/2011 15:05

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



INFORMS is collaborating with JSTOR to digitize, preserve and extend access to *Interfaces*.

Note:

Further Notes on Lagging Forecasts

In Gardner [1984], I pointed out that erroneous versions of exponential smoothing models have been repeated in the literature for the last 20 years. Some 23 errors were cited in journal articles and textbooks. All of the errors were in linear-trend models and caused the forecasts to lag the data.

I mentioned only one case in which an erroneous model had actually been used in practice, that of a statistics program for the IBM PC. Here is another case of lagging forecasts, this time on a rather grand scale. I discovered the problem in a set of notes on forecasting distributed at a 1984 conference on inventory management.

The notes discussed the forecasting model used to provide input to inventory models in a large physical distribution system — more than 500,000 inventory items. The model was double exponential smoothing except that the slope had been omitted from the one-step-ahead forecast (see Gardner [1984] for details).

I contacted the company and learned that the erroneous model had been in use for several years to generate quarterly forecasts for the entire inventory. Most of the 500,000 time series were in fact subject to trends. Apparently, the missing term in the model had never been discovered because there was no formal forecast monitoring system.

Identification of the company in this note would serve no purpose. However, I did provide particulars to the editor so

that he could verify the facts.

Once again, I urge practitioners to check model formulations, especially those used in large mainframe inventory control systems where it is difficult to review the forecasts in detail.

Since Gardner [1984] appeared, I have received a number of letters requesting information on other model formulations for exponential smoothing. Gardner [1985] is my attempt to provide a complete reference on the subject. This paper includes 29 models along with details on starting values, parameter choice, and forecast monitoring.

References

- Gardner, E. S. 1984, "The strange case of the lagging forecasts," *Interfaces*, Vol. 14, No. 3, pp. 47-50.
Gardner, E. S. 1985, "Exponential smoothing: The state of the art," *Journal of Forecasting*, Vol. 4, No. 1, pp. 1-38.

Everette S. Gardner, Jr.
Operations Analysis Department
US Navy Fleet Material Support Office
Mechanicsburg, Pennsylvania 17055