Forecasting River Traffic

Start Date: Oct 2003

Projected End Date: Sep 2004

POC:

POC

Problem Addressed:

Forecasting anticipated river traffic over long time horizons is critical to the Corps ability to determine the potential benefits of waterway projects designed to increase the volume of traffic over time. Most previous attempts to forecast river traffic have relied heavily upon "structural modeling". These models often forecast future demand for river transportation by assessing demand for products that utilize river transportation such as grains and industrial products. Determining demand for these products requires researchers to develop a forecast for each of the determinants of demand for each of the products that is transported on the river. This is a large and complicated task that often requires questionable simplifying assumptions. The task is further complicated by the lack of available data on each of the many influences on the demand for each of the products transported on the river.

Objective:

This study will examine an alternative approach to forecasting anticipated river traffic that avoids structural modeling of complicated real-world behavioral relationships. The study will use "time series" techniques to characterize the relationship between river traffic and "co-integrated" economic variables. With co-integrated variables there is a long-term relationship that ties the variables together over time. For instance the study will examine the link between growth in lock capacity and growth in the Gross Domestic Product .

Benefits:

If successful, this model will allow researchers to more accurately and completely forecast anticipated river traffic over long-time periods.

Status:

Completed

Contract Data:

IWR 2004

Progress:

Report by Mark Thoma and Wesley Wilson, November 14 2004 *(166 KB, pdf)*

Report: Appendix A, December 2004 *(347 KB, pdf)*

Report by Mark Thoma and Wesley Wilson, December 2004 *(125 KB, pdf)*

Report by Mark Thoma and Wesley Wilson, December 2004 *(166 KB, pdf)*

Products (Bookshelf/Toolbox):

Paper by Mark Thoma and Wesley Wilson, July 2004 *(413 KB, pdf)*

Report by Mark Thoma and Wesley Wilson, Aug 21,2005 *(612 KB, pdf)*

Paper by Mark Thoma and Wesley Wilson, Aug 21,2005 *(98 KB, pdf)*

Reviewer Comments by Reviewers, August

21,2005 *(59 KB, pdf)*

Related Links:

Revised 15 Sep 2008