BASING RATE ADJUSTMENTS FOR MOTOR CARRIERS ON STATISTICAL EVIDENCE

L. Douglas Smith
University of Missouri–St. Louis

James F. Campbell
University of Missouri–St. Louis

Ray Mundy
University of Missouri–St. Louis

ABSTRACT

Pricing services of motor carriers is a dynamic process, with continuous pressure from customers to offer competitive rates and discounts. This can lead to a profusion of special arrangements with rates that poorly reflect the services rendered. This article shows how standard database systems and statistical models can be used to extract useful information from bills of lading to assist in the pricing of freight services. Summaries of business performance are produced according to terminal facility, shipping origin, shipping destination, individual shipping lane and individual customer. User-friendly statistical models are constructed to produce benchmarks for rates and revenues considering the services rendered. Differences between actual and benchmark levels of performance help to identify situations that may call for managerial reinforcement or corrective intervention. With illustrations from a major motor carrier, the authors discuss how even small motor carriers can develop such models and use them for planning their rate adjustments and managing customer relationships.

DEPOT REPAIR CAPACITY AS A CRITERION FOR TRANSPORTATION MODE SELECTION IN THE RETROGRADE MOVEMENT OF REPARABLE ASSETS

William A. Cunningham
Air Force Institute of Technology

Stephen Swartz
Air Force Institute of Technology

Harold M. Kahler
Headquarters, Air Education and Training Command USAF

The views expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the Air Force, the Department of Defense (DoD) or the U.S. Government.

ABSTRACT

To support smaller reparable asset inventories, current Air Force logistics policies direct the "expedited evacuation of reparables ... to the source of repair." Mode selection is based on the asset. Focusing on the asset is an efficient and effective method of getting assets to where they are needed in a timely manner in the forward portion of the supply pipeline. However, in the reverse portion of the pipeline, the demand for an asset may no longer be critical to how it is transported. The quantity of the asset at the depot may already exceed repair capacity. In this instance, rapid movement results in the asset being added to the backlog already awaiting repair, thus retrograde modal selection focus should shift to repair capacity. Since the depots face budget and manning constraints and do not operate on a continuous basis, their repair capacity is limited. With finite repair resources, the question of when an asset can be repaired should be involved in mode determination. A stock-point modeling approach was used, with depot production requirements as a surrogate for demand in calculating shipping priority. Using Warner Robins Air Logistics Center reparable asset production data, this article illustrates potential savings in transportation that are possible utilizing an alternative factor in modal choice decision for the retrograde or reverse portion of the pipeline.

AN EXPLORATORY STUDY INTO THE USE OF HYPER-INTERACTIVE TEACHING TECHNOLOGY IN THE LOGISTICS AND TRANSPORTATION CLASSROOM

Stephen M. Rutner
Georgia Southern University

ABSTRACT

New technologies are being developed that can assist professors in the classroom. One is the Hyper-Interactive Teaching Technology or H-ITT. This is a system that allows instructors to gather instantaneous feedback from students for a variety of topics. The article examines the benefits and disadvantages of using H-ITT in the classroom and presents some initial findings.

USING LIFE-CYCLE COSTING AND THE STRATEGIC PROFIT MODEL TO ENHANCE MOTOR CARRIER CAPITAL EQUIPMENT MANAGEMENT

Joe B. Hanna
Auburn University

Andrew Stapleton
University of Wisconsin–LaCrosse

Brian R. Zoll
Schneider National, Inc.

ABSTRACT

Participants in the increasingly competitive motor carrier industry are constantly trying to identify ways to enhance customer service levels and/or reduce costs. This research summarized case-based data from three large carriers to examine the use of life-cycle costing as a method to enhance motor carrier equipment management. The financial results of applying the technique are then examined by applying the Strategic Profit Model.

CARRIER SCORECARDING: PURPOSES, PROCESSES, AND BENEFITS

Brian J. Gibson
Auburn University

Jerry W. Wilson
Georgia Southern University

ABSTRACT

Carrier scorecarding programs (CSP's) provide a formal, quantitative mechanism for use in assessing carrier performance. Such programs provide valuable input for carrier rationalization and contract development initiatives and can also serve as a key component of a Six Sigma program.

In this study, the overall goal was to address three research questions. First, why are organizations adopting CSP's? Second, how are organizations using carrier scorecarding to select and manage carriers? Finally, how does carrier scorecarding impact organizational performance? These questions were used to develop the set of research propositions that formed the basis for the investigation. In-depth case studies of six organizations were conducted to generate the evidence necessary to support or refute the research propositions.

Carrier scorecarding was found to be an objective, process-oriented approach that improves the ability of the transportation buyer to realize significant improvements in customer service while strengthening internal cost control. In the current industry environment of intense competition, narrow margins, pressure for shorter cycle times and improved supply chain efficiency, carrier scorecarding is rapidly gaining recognition as a valuable tool for use in carrier selection, evaluation and retention.