DRIVER SAFETY AND MOTOR CARRIER PROFITABILITY: IDENTIFYING AND UNDERSTANDING DRIVERS IN THE FLEET

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ABSTRACT

The objective of the study was to quantitatively explore truck driver safety records in an effort to determine and classify various types of drivers. Six safety variables relating to the number of safety points each driver had accumulated were analyzed using a cluster analysis procedure on 368 active drivers. The results of the study identified three clusters of drivers. Over 49.3 percent of the drivers were identified in a cluster labeled as the "Best Drivers." The label "Ticket Magnets" was given to 23.6 percent of the drivers, and 27.1 percent of the sample was given the label "Accident Prone." The individual clusters were also profiled on additional variables. The study findings indicate that most drivers are very good in all aspects of driver safety. Other drivers have some deficiencies which are addressed as managerial implications in the manuscript.

LOGISTICS SERVICE ORIENTATION: AN INTEGRATED STRATEGY TO BUILD LOGISTICS SERVICE COMPETENCY

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ABSTRACT

While the importance of logistics service competency is widely acknowledged, more research is needed to investigate its antecedents. In this conceptual paper, we synthesize extant marketing and logistics/supply chain literature and propose a new concept – logistics service orientation, which consists of both logistics service's internal and external market orientation. It is argued that a firm's logistics service orientation has direct impacts on its logistics service performance. In addition, it is also proposed that this impact can be indirectly achieved through enhanced internal integration. This research contributes to existing knowledge by offering new insights on the development of logistics service competency.

THE SELECTION OF TRANSSHIPMENT PORTS USING A HYBRID DATA ENVELOPMENT ANALYSIS/ANALYTIC HIERARCHY PROCESS

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ABSTRACT

The accelerated globalization of logistics activities over the last several decades has spurred a rapid expansion of port facilities all cross the world. However, the recent slowdown of international trade, coupled with a global financial crisis, has created an on-going glut of international port facilities throughout the world. Although the abundance of port facilities provides more transshipment options for carriers and shippers, it makes the port selection decision more complex and difficult. To cope with this new set of challenges, this paper proposes a hybrid data envelopment analysis (DEA)/analytic hierarchy process (AHP) model that is designed to identify factors specifically influencing transshipment port selection, evaluates the extent of influence of those factors on a transshipment port selection decision, and then determines the most critical ones among various factors. To illustrate the usefulness of the proposed hybrid DEA/AHP model, major container hub ports in Far-East Asia were analyzed.

MICHIGAN PASSENGER RAIL BENEFITS:
AN ANALYSIS OF COMMUNITY BENEFITS

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ABSTRACT

Passenger rail service is perceived to provide important benefits to Michigan communities. However, the extent of these benefits has never been quantified in a systematic way. The study reported on here involved the performance of a broad based assessment of the community level benefits of passenger rail service. The main objective of the research project was to estimate the full range of these benefits at the community level, as opposed to at the state level. Benefits were estimated for individual travelers, Amtrak expenditures, and local businesses. This research indicates local communities currently realize $62.0 million annually in benefits. Additional benefits accrue to the region, state, and nation in the form of congestion relief, air quality improvement, energy conservation, and safety.

IDENTIFYING TRAFF IC COUNT POSTS FOR ORIGIN-DESTINATION MATRIX ADJUSTMENTS: AN APPROACH TO ACTUAL SIZE NETWORKS

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ABSTRACT

For transportation planners, the use of Origin-Destination (OD) matrix adjustment, is receiving considerable attention. However, there are concerns about the validity of results, primarily related to the number and location of traffic count posts. This leads to the question "What would be the best set of traffic count posts to use in OD matrix adjustment modules?" It has been proved that solving this problem is cumbersome. There have been several attempts (either exact or heuristic approaches) to address this problem. But due to the inherent complexities, there is no efficient and easy-to-use methodology able to address situations on the scale of actual cases. This study demonstrates a simple way of identifying traffic count posts tailored to deal with real-size cases. The proposed methodology is based on a maximum matrix coverage criterion. Using a limited number of incremental trials, a set of links whose traffic flows give maximum coverage of the demand and maximum fitness to the corresponding traffic count rates are identified as traffic count posts. The results show that more traffic count posts do not necessarily yield a better result. This article reports on a project conducted for the public works ministry of the UAE city of Sharjah.