A Vehicle Assignment Problem to Improve Logistics Operations in a Mexican Freight Transport Company

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Abstract

The purpose of this paper is to apply the vehicle assignment model to a Mexican freight transport company, whose costs elements were analyzed through factor analysis and ANOVA. Main factors identified help to minimize logistics costs, because the company can manage them, through the daily program of units. The model helps not only to assign the vehicles to one route, but to identify the movements they must do when the units are empty and they must be moved between routes, improving the assignment, maintenance, penalty, idle time, and general logistics costs. This research not only covers the mathematical problem, but also the statistical analysis carried out to obtain the main factors to be included as part of the costing model to assign units and minimize the overall costs incurred by the company.

Keywords
Logistics, Freight Transport, Assignment, Factor Analysis, Vehicle Assignment.

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Descripción de la Presentación	Presentación de uno de los productos de la investigación enfocada a la identificación de principales factores del costo que intervienen en las operaciones logísticas de una organización, de tal forma que puedan ser considerados para poder utilizar un modelo de asignación que ayude a generar el programa diario a través de un modelo matemático, con variables identificadas estadísticamente como relevantes, lo cual ayuda a minimizar los costos de operación y a mejorar la productividad de las

	unidades.
Ponente	Félix Eduardo Bueno Pascual
Modalidad	Presencial
Puesto o Referencia Profesional	Doctor
Requerimientos Especiales	Ninguno