



RISK IN FUEL ECONOMY AND EFFECTIVE MAINTENANCE OF BUSES IN TRANSPORT – A CONCEPTUAL LINKAGE

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ABSTRACT

This research article examines the association between effective maintenance and fuel economy with variables like maintenance, vehicle usage, weather conditions and preventive maintenance. Fuel Economy is the major objective of any transport industry with vehicles' role in functioning and planning it properly. Transport industry in otherwise quality services, and reliability to have high profitability with fuel consumption. As an industry, the whole concept of fuel consumption and efficiency with maintenance of major and minor in proportionate with vehicle usage would yield the anticipated results. Effective maintenance of buses demands the user to have fuel economy & efficiency knowledge and techniques. This paper concludes the attainment of fuel economy by effective maintenance by relating it with vehicle usage and users with weather conditions.

KEYWORDS : Maintenance, Vehicle Usage, User, Quality Service, Reduction Of Fuel Consumption.

INTRODUCTION:

Buses in a transport industry functions on a daily basis to earn a profit after the deduction of all direct & indirect expenses. Profit on transport business calculated on a daily basis with the expenses incurred by way of maintenance and fuel consumption. With fuel, the bus acts for the transport of goods from one place to another which depreciate the condition and value of the bus which would demand regular maintenance. The condition of the road, the fuel used to run the buses, preventive maintenance to eliminate malfunctions and so on. Bus is not a single machine to act to earn profit regularly by just making them to function on transporting. It comprises of various peripherals inside and techniques to make it move from one place to another with goods. It is not uncommon to see a bus which runs on a daily and depreciate from its performance and efficiency consequently.

Performance of the vehicle depends on the usage and user, and his experience and knowledge on the vehicle driving techniques and the exposure to technology. The various elements account to fuel consumption and reduction in association with maintenance are discussed below:

Effects of maintenance:

The maintenance of bus is an important part in transport industry is to fuel efficiency and profitability. The frequency of maintenance scheduled in the organization is linear to the age years of the bus.

The maintenance scheduling of daily, weekly and monthly in vary of ineffective, minor and major can be fruitful to eliminate malfunction of buses which running.

Major maintenance would normally take time and can be done with less frequency which would cover every corner of the vehicle from top to bottom.

Minor maintenance in the sense would normally have a routine and monitoring of main parts which would help the vehicle to function efficiently.

Effective maintenance in a daily basis which can be routine and may effective, wherein vehicle may lead a prompt and regular service.

Maintenance on a regular basis will always have an impact on the business performance in which the quality of service based on the functioning of buses without failures or malfunction.

And the maintenance has its own benefits and effects on the profitability of the business by eliminating the fuel expenses by educating the user about the vehicle usage and performance.

Fuel Efficiency

Fuel efficiency is an important variable to act upon transport industry to attain high profit and business performance. Transport industry's performance depends on the performance of the vehicles used in the business. The relationship between fuel efficiency and maintenance is easily understood that regular maintenance leads to efficient use of fuel and efficient use of fuel leads to profitability of the business as fuel is the main source of expenditure in the transport industry. As fuel consumption decreases profit increases – which is made possible with maintenance.

As said earlier, major maintenance is less-frequency scheduled in transport industry. Planning of maintenance schedule with appropriate record maintenance of previous failures and individual responsibility to mention the malfunction in the maintenance period is appropriate to avoid failures.

Vehicle usage:

Vehicle usage is something depends on the user and requirements of the vehicle in the industry yet again fuel efficiency and major maintenance is a part of the industry and the user knowledge on the technology and the techniques of the vehicle. Major maintenance normally help the vehicle to be ready for the usage. The purpose of the vehicle and its usage are the important roles played in the profitability of the business in the transport industry. Again vehicle usage is depends on the basis of the frequency on daily, monthly and the weekly. Another variable which is associated with vehicle is the user's psychological condition and his behavioral pattern towards the driving techniques and cognitive state of the user while driving the bus. Psychological behavior of the user of the bus is associated with the condition of the vehicle too. Weather condition is another variable to be discussed in this research article which would result in depreciation of the

vehicle and value. Preventive maintenance is another factor to be discussed in terms of quality service and high profitability in the transport industry when associated. Preventive maintenance is a part from major, minor and irregular maintenance of the vehicle to business.

Malfunction:

Malfunction or breakdown is not uncommon in the transport industry. Though maintenance is regular and prompt for all the vehicles used, external or savage factors would lead to malfunction of vehicles. This should be avoided with crisis management and expecting the troubles when using the similar roads and routes for the transport. This is also in the role of supervision of the anticipated occupational failures.

Reduction of Fuel consumption

Reduction of Fuel consumption is not a mere statement in the transport industry. It comprises of the vehicle, user, and maintenance of the vehicle and weather conditions. Overtaking all the other factors would help them to keep the vehicle in good condition and yield profit in the present.

Transport Economics

All the factors above discussed would help in an industry with application of the measures in the vehicles.

“Transport economics is a branch of economics founded in 1959 by American economist John R. Meyer that deals with the allocation of resources within the transport sector”.

It implies that “People and goods flow over networks at certain speeds. The networks themselves may or may not be competitive. Although transport systems follow the same supply and demand theory as other industries, the complications of network effects and choices between dissimilar goods (e.g. car and bus travel) make estimating the demand for transportation facilities difficult. In transport, demand can be measured in number of journeys made or in total distance traveled across all journeys (e.g. passenger-kilometers for public transport or vehicle-kilometers of travel (VKT) for private transport). Supply is considered to be a measure of capacity. The price of the good (travel) is measured using the generalised cost of travel, which includes both money and time expenditure.”

“The effect of increases in supply (i.e. capacity) are of particular interest in transport economics (see induced demand), as the potential environmental consequences are significant”.

CONCLUSION:

The research concluded with a view to associate the factors and its relationship with risk of fuel economy and effective maintenance of buses in the transport industry. The variables is linked with one another on the effect of one variable on the other with the theory “Transport Economy” which is explained with the economic concept of demand and supply by using the variables used in the transport research area. The existing variables used in any transport industry research is used in this research by associating the concept of “Transport Economics” has given a different dimension in this research.

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