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**ELECTRIC VEHICLES IN LOGISTIC OPERATIONS AND IMPACT ON
ENVIRONMENTAL SUSTAINABILITY**

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Abstract:

The goal of fully or partially electrifying their car fleets has already been proclaimed by a number of western nations. Both the logistics and transportation sectors stand to benefit greatly from the electrification of these processes. In modern economy logistical operations play a major role in driving both monetary and social development. Developing country like India, there has been recent interest from many logistic sectors in exploring the possibility of using electric vehicles (EVs) for logistical purposes. Therefore, it is crucial to get the opinion of logistic workers who have felt the effects of EVs before adopting them on a big scale in enterprises. Because of this, it is essential to investigate the perspectives of logisticians about EVs in the workplace. The purpose of this research is to examine logisticians' (Inventory managers, Warehouse managers, Logistic network managers) perspectives on the sustainability effects of using electric vehicles (EVs) in logistic operations. Qualitative and quantitative methodologies are both used in this examination.

Logistic workers in the manufacturing sectors in Mysore, Karnataka, were surveyed using structured and objective questionnaires. Data analysis and interpretation were carried out using descriptive statistics, percentage technique, and t-test. As the results showed, using EVs in logistic operations has a major effect on logistic cost and also has a major effect on environmental sustainability. Consequently, there are several advantages to incorporating EVs into logistic operations that manufacturing concerns may reap. These include reduced logistic costs, more environmentally friendly operations, the possibility of receiving government subsidies, low carbon emissions, and overall benefits to environmental sustainability.

Keywords:

Electric vehicles, Environmental sustainability, Logistic cost, Logistic operations

1. Introduction:

On a global scale, logistical operations play an essential role and are a major driver of societal and economic development. Consistent expansion and significant influence on GDP are the reasons for the logistic sector's prominence. The global effect is more than the GDP of all nations combined due to its severity (Aronson & Huge Broden, 2006). Using "Electric Vehicles" is a crucial strategy for accomplishing a number of goals, including reduction of the negative influence on raw material transportation, enhancing logistical operations, reducing costs, and attaining environmental sustainability (Pernestal et al, 2020). According to Ao Dos Santos et al. (2014) and Dias D. (2022), the term "environmental sustainability" refers to an approach to business that seeks a middle ground between the needs of the earth, its inhabitants (the workers), and the bottom line. The main way to achieve this equilibrium is by encouraging the use of electric vehicles (EVs) or alternative fuel vehicles.

Transportation of freight play vital role in economic development, but it is also harmful for the human health and nature. With concern of environment the business houses have started paying more attention on negative externalities of their operations companies should take precautions to reduce the likelihood of accidents involving their big commercial logistic trucks and the damage they cause harm to the employees during operations and impact of emission of carbon gases on health of employees (Abhishek et al, 2023) Profit is the main motto of the organization. The cost of logistic operation should be minimized and profit must be maximized. These EVs help the business concern