

Derived Demand for Different Modes of Passenger and Freight Transportation in India with respect to Increasing Energy Price Levels

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This paper brings out the price elasticity estimates of different modes of transportation for both passenger and freight (with aggregate data) and freight segments (with disaggregate data) for the Indian Economy with respect to the increasing energy price levels from 1980-1981 to 2006-2007. With aggregate data own-cross price elasticities of air, rail, road, water, other surface transport and inventory levels were estimated. Since rail and road transportation modes are prominent in freight segment, estimations were made for them with disaggregate data. The tracks the transport mode demand shifts that are taking place owing to increasing energy price. Though the railways occupy a dominant role in the passenger segment, in the freight transport industry, road freight is taking over slowly.

I Introduction

Transportation sector is a major consumer of liquid fuels in India. With growing environmental concerns on the extended use of hydrocarbons, it has been felt that there is a need for further research, focusing on the energy consumption pattern of the transportation sector in total and freight segment in specific. A substantial literature is available on the transportation sector across countries. However, research is often confined either to end user satisfaction in the passenger segment or to cost minimization or revenue maximization of players in freight segment. With growing environmental concern, a study focusing on the fuel consumption pattern of the transportation sector would be in order. The present work aims to estimate and analyze the fuel consumption pattern of the Indian transportation sector. Often in developing countries fuel efficient mode of road transportation is visualized as a boon in terms of costs and environment. The present day innovations in vehicle manufacturing like energy efficient technologies bring in new challenges for the environment in terms of induced demand. This fact

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