

## **Disaggregated Behavioural Models of Length of Haul in Freight Movements.**

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### **1. LENGTH OF HAUL AND FREIGHT FLOWS**

In almost all dynamic economies there is a persistent increase in demand over time for goods and services at the existing market locations and new consumption centres come into existence almost continuously. Typically, in the short-run in particular, such increases in demand do not bring about an equivalent growth of new firms and/or location of branches of existing units. The process of adaptation involves considerable time lags. The comparison between incremental production costs with the marginal cost of shipments from existing locations primarily account for this observed behavioural pattern. However, over a conceptual medium run of time horizon the producers will prefer to increase the length of haul and quantum of shipments from plants already in operation (Conroy, 1974, pp. 234-42).

Increases in the length of haul in freight movements have also been caused by a different economic mechanism. The manufacturing industry attempts to exploit economies of scale in the process of industrialization and thereby gives rise to increasing industrial concentration. The persistent expansion of the existing industrial centers results in increases in the quantum of freight shipments as well as the length of haul.

The augmentation in the length of haul may itself contribute to an increase on the demands of the transportation network. Firstly, an increase in the length of haul would mean that a ton of goods travels a longer distance than it used to. Such an increase in transit time creates problems for the consignee if there is an unanticipated increase in the demand. To deal with such problems the shipper maintains a safety stock. Consequently, the longer and more uncertain the length of haul the greater will be the level of safety stock held in the warehouse at the destination. Secondly, increases in the length of haul imply an augmentation of the inventory on wheels and consequently the volume of freight in transit. It is therefore