

ADDENDUM B

GRAPHICAL REPRESENTATION OF COST EFFICIENCY OF SUPPLY CHAIN INTEGRATION

In Figures B1 and B2, the long-term average and marginal cost (LT AC and LT MC) curves of adjacent links with different design capacities in a bulk supply chain are shown. The curves remain degressive and are typical of a bulk railway and a loading appliance in a port. Short-term average and marginal costs (ST AC and LT MC) for each link according to their designed capacities are also shown. Capacities for both links is expressed in units of tonnes handled.

As shown in Figures B1 and B2, one of the links will carry the costs of the unused capacity t_2-t_1 when the output of the other is limited to its minimum short-term average unit costs (i.e. point A at which average and marginal unit costs are equal). That will occur as long as the expansion of the capacities of the links are uncoordinated. The combined average unit cost of the links will then exceed the minimum that could be achieved through coordinated investment.

As the demand for the use of each of the links is derived from the demand for the product in world markets, it is obvious that the producers should be the supply chain leaders and coordinate the investment in the capacities of the links in order to minimise the combined unit costs.

Figure B1: Link in supply chain

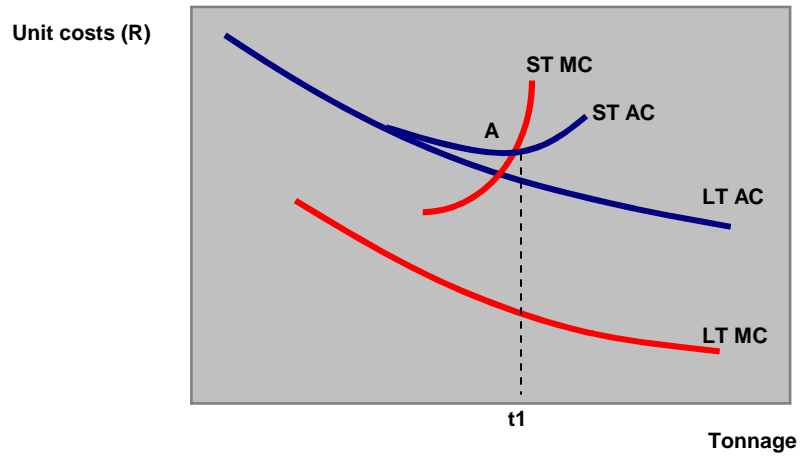


Figure B2: Adjacent link in supply chain

