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God must have been a shipowner. He placed the raw materials far from where they were needed and covered two thirds of the earth with water."

- Erling Naess

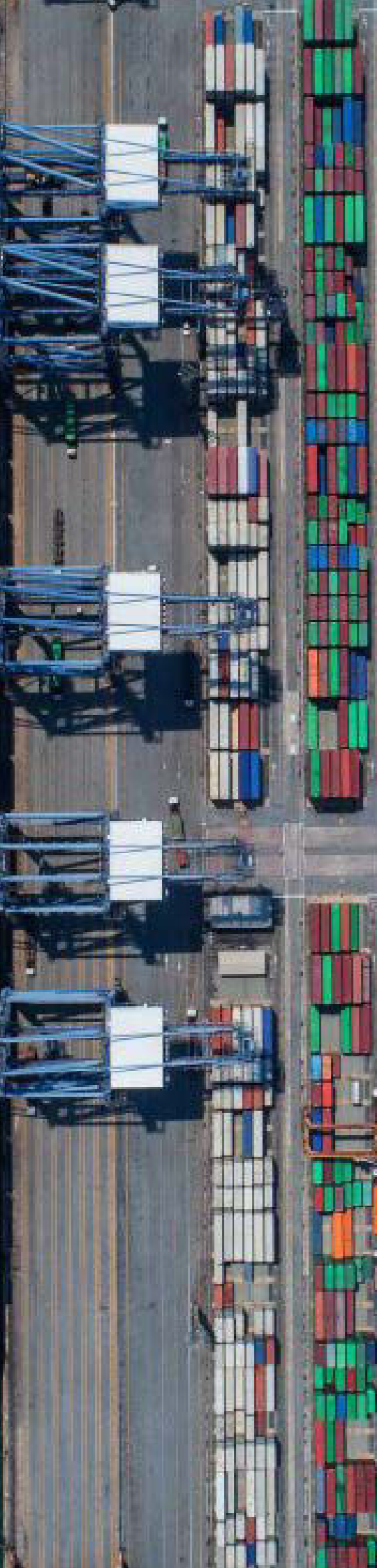
A Review of **DEMAND AND SUPPLY** *of* **SHIPPING**



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Unlike demand and supply of physical goods the shipping industry reflects very complicated demand and supply characteristics. On one hand demand for shipping (except for passenger ships) is a derived demand under the economic theory. On the other hand, supply of shipping is not straight forward like physical goods. For example, if a manufacturer wants to increase the supply of computers he should increase the production capacity and manufacture more computers. There is no other option to increase the supply. However, shipping that contains more service characteristics (in terms of Marketing theory) may increase its supply in numerous ways apart from just increasing numbers as in the case of physical goods. This article briefly explains how the shipping industry balance the global demand and supply to sustain in a competitive market.

Demand for shipping

Transportation of goods is an important function as manufacturers initially need to get all the required raw materials to their factories to convert them to finished goods. Thereafter, in the second phase they should deliver the finished goods to the customers worldwide in a timely and efficient manner. This pattern is the ultimate result of sustainable trading between countries at global level. When there is more trading between countries the demand for transport (shipping, in this case) is created between the buyer and the seller. Therefore, shipping is termed (in economic theory) as a derived demand, and not a direct demand. It helps increase the sales of the business and if the goods are delivered to the consumer properly and in a timely manner, they will be satisfied and will ask for more. When more demand for goods is generated, manufacturers may strategically focus on scale of economies and reduce cost of production. This leads to competition and price reduction of finished goods and as per basic economics theory more goods will be demanded when the

price is low. This cycle keeps continuing and more demand for shipping will be derived.

However, shipping is a competitive market. Shipping customers have special needs that should be met by shipping companies. In general, these prerequisites include, price; speed; reliability; security; and most importantly legality in form of operation. Shippers pay more attention to freight transport as a percentage of CIF costs. Transit times are more important for shippers of high value goods and perishable cargo. The average speed of deep-sea container vessels increased from 17 knots in 1985 to 24 knots as of now. And then during the height of the fuel price hike the speeds came down to the original, with slow steaming, saving on fuel costs. It is cheaper to ship the required quantity and smaller quantity compared to the cost of keeping the goods in the warehouse. Despite the high freight rates, it is still small compared to the total cost of inventory. Reliability of delivery time, keeping up to carrying capacities, services quality is very crucial in a supply chain because one party in the chain acts as a customer of another and vice versa. Ship piracy and terrorism are making frequent












Initial capacity	After the extra capacity added to supply		How the extra capacity is derived
5000 		5,000 X 3 = 15,000	Originally one ship with 5,000 containers. Three such ships later supply 15,000 containers
5000 	15,000 	15,000 X 1 = 15,000	Originally one ship of 5,000 containers. Then one ship of 15,000 containers
5000 	 10 Knots = 30 days	 20 Knots = 15 days	At first the ship sails slowly. Then sail faster and finish the voyage early and get ready for the next voyage
5000 	 30 days	 15 days	Initially sailing without using a canal. Later the voyage completed 15 days in advance using a canal and ready for the next voyage
5000 	On the way to destination 5 ports @ 3 days stay in port = 45 days	5 ports @ 1 day stay = 35 days	Initially, ship stayed 3 days in each port. Later the port stay is reduced to 1 day and voyage is completed 10 days earlier and ready for the next voyage

Figure 1: An analysis of adding shipping capacity to global supply

problems in international trade. Border management is a very important factor in global transportation business. The carriers should be highly adaptive to the legal framework in every country they operate. This includes customs and many other legal compliances.

Supply and demand are the driving forces behind market economies. The shipping industry has always been part and parcel with international trade. After the world war II emphasis was made to establish collaboration among nations for a peaceful world. The GATT (General Agreement of Trade and Tariff) which later formed the WTO (World Trade Organization) provide leadership to sustainable international trading environment. Since shipping is a derived demand of the trading between countries the overall impact of these activities helps shipping industry to expand. From an economist point of view factors such as Absolute advantage and Relative advantage, however, create complicated and volatile situation in shipping demand. Also, factors related to services marketing, as explained previously, make it more unpredictable and

forecasting is highly unrealistic in most cases. For example, physical goods (say computers or televisions) can be stored for future use when there is a drop in demand. But in liner trade if a ship sails with empty space from a port that space can never be used again (Perishability factor in services marketing theory). Take an example of an Airline industry. An unsold seat on an aircraft or unused cargo capacity on the same aircraft cannot be sold and can then be brought back as extra capacity like in the case of physical goods.

It is believed that more than 85 percent of cargo is transported by sea. It is mainly due to Lower cost of maritime transport. For certain goods there are no real substitutes for shipping. Shipping is the cheapest mode and it is believed that it usually 15 percent of the cost of road transport. There are no space limits or other constraints on cargo handling as ships come in different sizes and different types. Shipping is the least corrupt mode as far as the carbon Footprints are concerned. Except for landlocked countries shipping is accessible to many people in the world.

The Supply of Shipping

Like in any other business, shipping revenue is the most important factor pushing the supply side. By analysing the statistics over time, there seems to be a clear correlation between earnings in the shipping sector and the amount of investment made in a market.

Ships come in different type and sizes. Here we talk mostly of Container ships. But there are Bulk carriers, Tankers, Car Carriers, Heavy lift Carriers, Livestock carriers etc. depending on what specialised cargo you want to transport.

Similarly ships built sizes also vary according to the trading areas. Whether the load & discharge ports can safely accommodate them. Some sizes are called Suezmax, Malaccamax, Panamax meaning the maximum size of vessel that can transit Suez canal, Malacca Straits & Panama canal respectively.