

LIBRARY GUIDE

Economics of Shipping: General Study Guide

For Shipping & Logistics Students – Caribbean Maritime University

Module Overview

This course applies microeconomic and macroeconomic principles to the shipping industry. You will learn how freight rates are determined, how shipowners make investment and operating decisions, and how global trade drives shipping demand.

Core Topics (5 main areas)

1. Demand & Supply in Shipping

- Derived demand – shipping demand comes from trade, not direct consumer desire
- Short-run supply – fixed fleet, speed changes, lay-up
- Long-run supply – newbuildings, scrapping, second-hand market
- Freight rate determination – interaction of demand and supply

2. Elasticity Concepts

- Price elasticity of demand (PED) – how passenger/cargo volume changes with freight rate
- Price elasticity of supply (PES) – how tonnage changes with rate
- Total revenue test – relationship between PED, price change, and revenue
- *Real example: a cruise line raising prices – will revenue rise or fall?*

3. Shipping Costs

Cost type	Examples	Controllable?
Capital	Loan repayment, depreciation	Long-term
Operating	Crew, insurance, stores, maintenance	Mostly yes
Voyage	Fuel, port charges, canal tolls	Partially

Controllable costs – speed (fuel), route planning, maintenance scheduling, procurement

4. Market Structures in Shipping

- Perfect competition – tramp dry bulk market (many small players, homogenous cargo, price takers)
- Oligopoly – liner container shipping (few large alliances, differentiated service)
- Monopolistic competition – specialised shipping (e.g., car carriers, chemical tankers)

5. Shipping Market Cycles

- Four stages: Trough → Recovery → Peak → Collapse
- Driven by GDP growth, fleet supply lags, speculative newbuilding orders
- *Example:* COVID-19 trough (2020) → container peak (2021-2022) → normalisation (2023-)

Key Economic Principles to Remember

1. Shipping is cyclical and volatile – because shipbuilding takes 2-3 years.
2. Freight rates are set at the margin – last ship needed determines the rate.
3. Cost control is survival – fuel is 30-50% of voyage costs.
4. National fleets exist for strategic reasons (food/energy security, foreign exchange, sovereignty), not pure profit.
5. Seaborne trade moves ~80% of world trade volume – it enables global specialisation and economic development.

Sample General Questions (for self-testing)

These are not from any exam paper – they test your understanding of the module.

Short answer (5 marks each)

1. Why is the demand for shipping called “derived demand”?
2. Give two reasons why the supply of tonnage is more elastic in the long run.
3. List three operating costs a shipowner can reduce immediately.
4. What stage of the shipping cycle usually follows a “peak”?

Essay (15-20 marks)

- *“The dry bulk tramp market is a good example of perfect competition.” Discuss.*
- *Explain how a shipping company can use knowledge of price elasticity to maximise revenue on a passenger ferry route.*
- *Describe the main categories of shipping costs and explain which are most controllable in the short term.*

Tips for Exam Success

- Use diagrams – supply/demand curves, cycle diagrams, elasticity graphs
- Show calculations – PED, revenue changes, percentage changes
- Give real examples – iron ore, grain, containers, cruise passengers
- Link theory to practice – don’t just define elasticity; explain what a shipowner should do

- Know current events – fuel transition (LNG/methanol), Red Sea diversions, Panama Canal drought

One-Page Revision Sheet


Topic	Key formula / idea
PED	$\% \Delta Q / \% \Delta P$ (negative for demand)
Total revenue	Price \times Quantity
PED < 1 (inelastic)	Price $\uparrow \rightarrow$ Revenue \uparrow
PED > 1 (elastic)	Price $\downarrow \rightarrow$ Revenue \uparrow
Short-run supply	Fixed fleet, change speed/lay-up
Long-run supply	New buildings, scrapping
Market cycle	Trough \rightarrow Recovery \rightarrow Peak \rightarrow Collapse
Perfect competition	Many firms, homogenous product, price takers
Operating cost	Crew, insurance, spares, lube oil
Voyage cost	Bunker fuel, port dues, canals

Use this guide with your lecture slides, textbook (eg. Maritime Economics or Economics of Shipping), and UNCTAD's annual Review of Maritime Transport. **Good luck!**


ADDITIONAL SUPPORT

For assistance with research or accessing resources such as past papers, visit the CMU Library or contact:

 **Email:** library@cmu.edu.jm;

 **WhatsApp:** (876) 564-4274

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