



EXAMINER'S REPORT NOVEMBER 2018

LOGISTICS AND MULTIMODAL TRANSPORT

General comments.

Students needed to prepare on topics which are fundamental to the subject, and clearly set out in the syllabus, read questions properly and answer the questions completely.

1. A multimodal operator may decide to own or lease/charter the equipment needed to transport goods, or may buy capacity as required using services provided by other operators. Explain the advantages and disadvantages of the THREE approaches, choosing TWO different modes of transport.

The answer should first set out the types of equipment and modes of transport which the student has chosen to cover. The detailed points made should then specifically relate to the choices made.

The answer should include reference to the following points:

Advantages of Owning

- Control over the assets for their lifetime
- Equipment can be procured to owner's specifications
- Opportunities for displaying company branding
- Cheaper in long term (as long as finance available at reasonable rate)

Disadvantages of Owning

- Limited opportunity to dispose of assets if they are no longer required (2nd hand values generally low)
- Uses up borrowing capacity
- There may be a lead time to procure assets if generally built to order (e.g. containers, ships)

Advantages of Chartering/Leasing

- Flexibility over the term for which they are procured
- Subject to the terms of the lease, can be returned if no longer required
- No upfront capital needed
- Equipment may be available at short notice
- Terms of lease may leave the responsibility for maintenance/repair with the owner
- Some leases allow pick up and drop off of equipment at different locations

Disadvantage of Chartering/Leasing

- Likely to be more expensive, as the owner of equipment will expect a return on investment – short term leasing is especially expensive
- No control over specification of equipment
- Operator is dependent on equipment availability on the lease market – if none available, may lead to loss of business
- Dependent on type of lease, may be dependent on others to operate/maintain the asset (e.g. a time charter) which could result in unplanned downtime

Advantages of Buying in Capacity

- This has the least risk – capacity can be bought on short timescales (e.g. NVOCC purchasing space from carrier)
- Capacity can be utilised from different sources – more flexibility, and may improve buying power, through competition
- Greater flexibility to deal with peaks, short term requirements

Disadvantages of Buying in Capacity

- Likely to be the most expensive solution – the asset provider takes most of the risk
- Capacity cannot be guaranteed at peak times
- Lack of control over service levels – e.g. for NVOCC using liner services

2. Fuel represents one of the most significant costs for operators of multi-modal transport services.

What steps might an operator of multimodal transport services, which include transport both by sea and on land, take to reduce fuel costs, and how might these impact the operator's customers?

The student needs to show an understanding of the different ways in which fuel is used by operators, and the factors/choices which determine the costs incurred in a multimodal transport movement. The answer should include an explanation of how savings can be made, and what impact the savings may have on the service to customers. Note that the question refers to transport by both sea and land.

The following are examples of steps which might be taken:

Sea leg

- Reduce service speed (slow steaming); the answer needs to cover how this may impact on capacity (which can be mitigated by introducing an extra vessel on a loop) and the impact on transit times
- Larger vessels bring economies of scale, which can reduced fuel cost per unit carried
- Improve vessel utilisation – this can be achieved in a number of ways, and reduces fuel cost per unit carried; however higher vessel utilisation may result in less choice of sailings for customers and/or roll over of cargo
- Routing of vessels

Land leg

- Switch from road to rail or barge (more energy efficient modes) – may be slower, though rail/barge can be more reliable
- Reduce deadheading of vehicles – better planning/load matching – no negative impact on customers
- Smart route planning (avoid congestion)
- Improved maintenance can reduce fuel costs

Multi-modal

- Plan container stocks, so as to minimise the movement of empty containers (reduces fuel costs of moving empties)
- Improve supply chain efficiency – optimise routes, consolidate loads etc.

All modes

- Invest in new technology for ships/vehicles. – more fuel efficient, use of alternative fuels

3. Answer ALL parts of the questions:

a) Explain how e-commerce products have changed the way in which business is carried out between providers and users of logistics services.

b) Give two examples of these products, explaining how the provider and the user have each benefited from them.

c) Suggest an e-commerce product which a logistics provider might develop, and the benefits which would follow.

The answer to this question requires detailed explanations of how e Commerce operates in the logistics and multi modal transport business, and the specific products which are offered by providers. While there are many general developments which have changed how business is carried out, e.g. email, internet, use of websites, it is important that the answer relates specifically to logistics/multi-modal services.

Part (a)

This should provide an overview of how e commerce has changed the way logistics business is conducted, and should include references to

- shared/transparent information
- real time/global information availability
- 24/7 access
- speed/accuracy of transfer of data
- smart systems – the ability to test multiple alternative solutions to logistics challenges.

Part (b)

The student should provide **two** examples of specific products. Products can be wide ranging through the logistics industry – for example

- On line/automated booking or rate-quoting systems
- On line/automated shipping instructions

- Remote printing of B/Ls/Invoices
- Track and Trace access for individual consignments
- Stock control systems/logistics planning systems etc.

Answers should include a thorough description of the product, and information on how both parties (providers and users) have benefited from the product.

Part (c)

This requires a proposal for a specific e Commerce product which a logistics provider might develop – the student could either propose a product which is already being trialled by some providers or a brand new product. What was important was that it should be related to the logistics business with a description of how the product would function, and an explanation of the benefits for the provider and the user.

4. You are the manager of a logistics company, providing a multimodal transport service for an importer of consumer goods which are moving from Hong Kong to New York. Describe the modes of transport and different routes which are available from Hong Kong to New York, using examples, and provide advice to the importer on the advantages and disadvantages of each route. Use the map provided to support your answer.

The main routes and modes from Hong Kong to New York which should be covered in the answer are

- Air transport (could include Sea/Air)
- Sea/Rail via WCNA ports
- All water services via Panama and Suez canals

For each route, the student was expected to describe the route, the advantages/disadvantages to the customer, and to provide examples e.g. specific ports and carriers. The routes and ports should be clearly shown on the map.

The advantages and disadvantages should compare the following features between the different routes:

- Transit times
- Cost
- Reliability – risks of delay, with specific causes
- Capacity
- Suitability for particular types of cargo/commercial requirements
- Availability of premium services

5. You are the pricing manager for a global NVOCC.

Explain how you would decide what price to quote for a regular door-to-door shipment of FCL containers of machinery, with sea as the main leg, indicating where you might offer alternatives to the customer. Support your answer with reference to a specific cargo on a trade route of your choice.

It was important that the answer should cover the various different factors which go towards a decision on what price to quote. These factors include:

- Establish the physical requirements for the cargo (e.g. container type, loading/unloading requirements)
- Route from origin to destination (including exit/entry port, mode of transport, and any transshipment required)
- Identifying the carrier for the various legs (An NVOCC may use its own transport for inland legs, or contract with the carrier, or with a third party)
- Establish costs for each leg (need to know validity and whether subject to surcharges etc.)
- Consider competitors' quotes and service parameters in comparison to your own
- Decide on the final quote, based on above, and including contractual terms (e.g. period of validity, notice period for changes, volume guarantee or volume rebate etc.)

There are a number of different service alternatives which could be included in the quote, and which should be described in the answer:

- Using different carriers
- Using different types of equipment
- Using different modes for inland leg
- Using different entry/exit ports and/or different routes
- Offering value added services (documentation, customs clearance, cargo insurance etc.)

6. Answer BOTH parts of the question:

a) Compare and contrast a Bill of Lading and a Waybill. Explain the reasons for choosing each of them when shipping a multimodal consignment.

b) Give TWO examples from INCOTERMS 2010, and for each of your examples, explain the reasons why you would choose to use them in a contract of sale.

Part (a)

Students were expected to show a thorough understanding of the functions of bills of lading and of waybills, and their practical application. It was important to present these so as to highlight both the similarities between the documents, and the differences.

The question asks for the reasons why merchants may choose one or other document, and there are a number of reasons, including:

- Bills of lading are generally used for shipments under letters of credit

- A bill of lading is required if a shipper wants to be able to sell the cargo to third parties while in transit, or otherwise wishes to trade the goods
- Even if no transfer of title involved, the shipper may wish to use a bill of lading so as to be able to control release of cargo at destination
- Waybills are most suited to in house shipments, open account trading and/or where there is a high degree of trust between shipper and consignee
- Waybills are particularly useful for short transits, where there is a serious risk that a bill of lading would not be available in time for release of the cargo at destination
- Waybills are also used for non maritime shipments

Part (b)

Students needed to demonstrate in their answers a thorough understanding of the role of Incoterms in contracts of sale.

For the two chosen Incoterms, a full description was needed of the responsibilities of the two parties for the different elements of the transport chain, the payment of costs, and where risk passes from seller to buyer.

When explaining the reason for choosing a particular Incoterm, it is important to look further than the fact that a party may think it is avoiding costs by choosing a particular Incoterm – for example, a buyer with DDP terms in the contract does not pay directly for any of the transport chain costs, but it is certain that those costs will have been built into the DDP price quoted by the seller.

Of greater importance is the commercial reason why one party or the other may wish to have control of the supply chain – even though this involves undertaking greater responsibility. Ultimately the decision cannot be one sided, and buyer and seller will have to agree what is the most appropriate term if they are to conclude their business.

7. Answer BOTH parts of the question.

A manufacturer of cars assembled from imported parts uses a supply chain based on ‘just in time’ principles.

a) Explain what is meant by a ‘Just in Time’ supply chain, and the advantages and disadvantages for the manufacturer in adopting this approach.

b) What different factors (other than price) should the manufacturer look for when choosing a multimodal transport operator to provide the transport services as part of the supply chain?

This question provided an opportunity for students to display their knowledge of how supply chains need to be proactively managed in order to be able to meet business objectives while minimising total logistics costs.

Part (a)

It was important that the student could show a full understanding of how a supply chain operating under ‘just in time’ principles should be managed. This required more than a single sentence definition. Points to be covered should include:

- Logistics principles – right goods, at right place, right time and right cost

- The need to manage inventory throughout supply chain – a continuous pipeline
- Objective of minimising static inventory (in some cases, reducing it to zero)
- How Just in Time is applied in practice

In describing the advantages and disadvantages of a 'just in time' approach, it was important that these be related to the manufacture of cars, using imported parts, as set out in the question. Points which should be covered include:

Advantages

- Minimises 'wasted' inventory holding costs, including capital/financing cost of stock, and costs of providing/operating warehousing space
- Avoids risk of damage to and loss of warehoused stock
- Avoids risk of obsolescence; in the context of car assembly it avoids holding stocks of parts for many different models, where customer preferences may change rapidly

Disadvantages

- Risk of running out of stock – financial and reputational consequences
- Consequences of unforeseen demand change – explain the importance of forecasting
- Consequences of delays in supply chain and at point of manufacture – and the need to have alternative plans, including alternative suppliers, alternative modes/routes (resilience in the supply chain)

Part (b)

In this part of the question, the student was expected to discuss the importance of service factors in the supply chain which will be particularly relevant to businesses relying on a 'just in time' supply chain, and why these are important

The following are the main service factors which should be covered:

- Speed
- Frequency
- Reliability
- Transparency of data on cargo movement (including appropriate routine and exception reports to the customer)

However there are a large number of additional factors which may determine how a customer may assess the quality of the service of a multi-modal service operator, including:

- Global coverage (of markets important to the manufacturer)
- To what extent the operator owns/controls the key parts of the supply chain
- Expert assistance/advice with cargo transport and related issues
- Timeliness/Quality of documentation
- Range/quality of E Commerce products (ease of access to information/time saving)
- Guaranteed space availability per sailing
- Environmental credentials (e.g. demonstrating approach to minimising pollution, carbon emissions etc.)

8. Mergers and acquisitions in the last few years have resulted in fewer larger container lines and providers of logistics services and less choice for the customer. How has this consolidation benefited the customers of their services, and have there also been disadvantages for the user?

What are the advantages and disadvantages for the user between contracting with one of the major global operators, or with a smaller operator having a limited range of services?

The subject of mergers and acquisitions in the logistics industry (between carriers, and between logistics providers) continues to be highly topical, and this question enabled student to demonstrate that they were up to date with current developments as well as to explain how these transactions are likely to affect customers of these businesses.

With the ongoing trend to market concentration with these larger operators, customers are often faced with a limited choice of using one of these dominant global operators, or supporting one of the remaining small or 'niche' operators which concentrate on a limited market, either geographically, or by type of goods etc. The second part of the question expected students to set out the advantages and disadvantage of using these two types of operators.

The following issues related to the impact of consolidation on users, and the choice between global and niche operators should have been discussed in the answer, together with examples referring to particular carriers/providers of services, in order to secure a good mark on this question:

Benefits of consolidation to users

- Individual operators have more space to cater for large shippers
- Individual operators have the scale to invest in extra services (e.g. IT/E commerce, value added services such as warehousing etc.) so improving service levels
- Larger operators will offer a greater range of services (e.g. geographical coverage, more direct ports covered , increased frequency)
- Greater economies of scale result in cost savings which are normally passed on to customers over time
- Consolidation should produce more financially stable companies

Disadvantages of consolidation to users

- Less choice of carriers/operators
- Carriers and NVOCCs with greater market power may be more successful in maintaining and increasing rates
- Fewer carriers has led to fewer services offered (e.g. reduction from four to three Alliances) so reducing the choice of services available to the customer (even though there may be more than one line offering that service)
- Reduced capacity may impact the customer's supply chain (difficulty in obtaining bookings, risk of shut outs)

Advantages of global operators/Disadvantages of smaller/niche operators

- Individual operators have greater route/port coverage, and more frequent services
- Logistics providers have greater country coverage with more individual offices, depots, warehousing facilities etc.
- One stop shopping
- Greater range of value added services
- Possibility of multi trade/volume discounts

- Niche operators cannot offer these benefits, and may have higher cost structures, so unable to offer similar prices and levels of customer service

Advantages of niche operators/Disadvantages of global operators

- Niche carriers provide specialised services in particular trades – with expert market knowledge
- Niche logistics providers can specialise in particular commodity supply chains as well as in particular trades (e.g. motor vehicles, uncontainerised/project cargo, refrigerated cargo, hanging garments etc.)
- Better personal service from a small organisation
- Tailor made packages which suit the customer, rather than just a 'standard' service