

Ports in Today's Transport Philosophy

Günümüz Ulaştırma Felsefesinde Limanlar

Güler Bilen Alkan

Istanbul University, Engineering Faculty, Department of Maritime Transport and Management Engineering

Abstract

The two traditional and primary users of seaports are the shipping companies and traders. Shipping companies are mostly concerned with reliable, competitive and quickest possible turn-round of their vessels; whereas the traders' concern is for the safe and due delivery of their goods. Ports provide many numbers of services for their customers in the form of handling of and supplying for ships; shipment, storage, discharging and forwarding operations for cargoes, embarking and disembarking for passengers. Ports earn income by charging port users for the use of their facilities and services. Port users are, inter alia, ship owners (or ship managers), shipping and forwarding agents, cargo owners and passengers. Ports are subject to fierce competition of other neighbouring or regional ports, domestic or foreign in character, depending upon of course the management philosophy. In this study the ports are examined ports in view of present transport philosophy.

Keywords: Maritime transportation, seaports, shipping service, international shipping, multimodal transport.

Introduction

1. Seaports: functions and structural transformations

International trade is one of the driving elements of economic growth and such growth exists when and where trade is created. Transport services exist however to serve and to foster the trade, be it domestic or international, and without the inclusion of the said

services the trade cannot be fulfilled properly. Shipping at this stage is the fundamental as well as the dominant means of transport for the World trade as the Earth is almost covered by the sea - in terms of rounded figure 4/5th of the total. Depending upon the development in maritime transport, international trade also allows cargoes to be transported from areas of low utility to areas of high utility. (Güner, İ. and Bilican, 2001)

The demand for shipping services arises from the existence of shipping trade; being ships and seaports (or seaport terminals) the intimate elements. Services for ships, cargoes or cargo groups, passengers and - in more general terms port users - are rendered at such purpose-built commercial establishments - namely ports. Seaports are geographical areas, acting as link in the transport chain and at the same time play important functions as distribution centres for national as well as regional economies by way of hinterland networks. They are also dependent elements of the chain within which they operate - mainly because ports exist for ships and ships are the servants of cargoes. Seaports are the ultimate points for ships; whereas the intermediate points for cargoes in the transport chain, i.e. door-to-door delivery. A seaport is defined by several authors as: "a terminal and an area within which ships are loaded with and/or discharged of cargo and includes the usual places where ships wait for their turn or are ordered or obliged to wait for their turn no matter the distance from that area. Usually it has an interface with other forms of transport and in so doing provides connecting services." (Branch, 1986), "a ship / shore interface on a maritime intermodal interface." (Alderton, 1995), "a gateway between land and water; One side of the gateway is used by ships, coasters and sometimes aircraft; the other by railways, motor lorries, and perhaps barges. Through every such gateway there constantly passes some part of the traffic of the World - that is, goods, passengers, or both." (Bown and Flere, 1967), "a place where each-way exchanges between land and sea transport regularly take place" (Bird, 1971), "The port is the installation that enables water-borne cargo to be transferred to land carriage."

(Oram and Baker, 1971), “Seaport is a commercial establishment, where physical means such as berths, storage facilities, and handling equipment are available and services for port-users are generated” (Akten, 1999), “Seaports are purpose-built and commercial establishments where services for ships, cargoes or cargo groups, passengers and – in more general terms port users - are rendered. (Birgun and Akten, 2004)

All commercial seaports are open for international shipping traffic; freedom of access to the port, the use of the port and the full enjoyment of the benefits as regards navigation and commercial operations based on the principle of equal treatment, are granted for commercial ships as per the Geneva Convention, 1923.^{1 2}

Ports form as an important as well as primary part of the overall pattern of trade and transport. The main roles of a port can be summarised as follows: (Bird, 1971)

- a. provision of shelter from the elements; especially for ships seeking safe anchorage arising when due to heavy seas and prevailing storm conditions,
- b. cargo and passenger handling,
- c. support services for ships, such as victualling, stores, bunkering, ship repair and maintenance etc.
- d. a base for industrial development; to facilitate the development of trade passing through the port,
- e. a terminal forming part of transport chain; i.e. an interchange point linking the shipping service with other transport modes to provide an overall international or local trade distribution network, involving rail, road or inland waterways / canal transport.

Ports are nodal points exposed to unexpected cost increase in the eyes of their users. They play however considerably important part

¹ Convention and Statute on the international regime of maritime ports, Geneva, December 9, 1923, Statute article 2.

² Within the meaning of the Statute, seaports are taken as “maritime ports”.

in reducing sea transport (shipping) costs, if they deliver rational service(s) for the customers. Several obstacles in ports such as low productivity, failure to streamline documentation, seasonal concentration of ship arrivals as well as of cargo take-off etc. may ultimately end up with either congestion or delays in service(s) and may tend the service(s) charges to increase. Ports have undergone changes and developments as shipowners' seeked solutions in many ways for rational shipping services. As the ships developed in types, in size and in whatever forms, ports have faced the problems of matching continuously with changes in ships in order to cope with providing adequate services for ships. Ports however have faced the following quadruple challenges to provide proper and rational service(s) for their customers: (Akten, 1999)

- a. handling the growing maritime trade and traffic to and fro,
- b. meeting the demands of changing ship technology,
- c. offering quicker, rational as well as reliable and timely service(s),
- d. staying always competitive, bettering up the service quality and cargo security.

Ships increased in size over the years have forced ports to serve for deeper draught vessels. Not only the water depth and increase in mechanisation ratio with the advent of containerisation, but also the management style have changed in ports; and in most of the countries ports have become autonomous bodies, standing on their own feet and free from Government intervention of any sort.

Types of port administration vary widely - the dominant form being the autonomous body. Autonomous ports have the characteristic of independent, non-political administration, jurisdiction over an area regardless of local government boundaries, and a constitution that can be varied to suit different local conditions. The advantages are unity of administration within the port, and an independent financial status which gives no financial chance of a financial being confounded with a political policy or of one port being favoured at the expense of another, as is

possible when a group of widely separated ports are under one umbrella. (Branch, 1986)

Ports are faced with an interport competition at national or regional levels, as well as in their hinterlands, in order to attract new ships or shipping lines thus more cargo to the port. Seaport is a commercial establishment where services for port-users are generated. It is a gateway between land and water transport, and mostly of international or regional character. It is also the place where consignments delivered by land transports are consolidated for a single sea shipment. (Akten, 1999) (Gray and Kim, 2001)

Ports in certain countries have got the free-port status to attract as well as to promote international re-export trade by cutting the disadvantages of customs tariffs and procedures down to a possibly minimum. Basic purpose of the free-port form is to facilitate re-exports and thus to enhance the port capacity and to enlarge the port hinterland. In most of the leading seaports of Northern Europe, the service mechanism is enriched by free-port status.³

Beside the free-port mechanism, there are also free trade zones. Free trade zones are specified areas, adjacent to or within ports, where trade is based on the unrestricted international exchange of goods to attract overseas traders and manufacturers to set up businesses. Overall there are 400 free trade zones in the World and some 9 percent of World trade passes through those areas (Branch, 1986). Seaports have gone through a fundamental change in operational methods, physical layouts, organisational structure and range of activities for deployment in order to cope with the market

³ There is a slight difference of service between the free-port and the free trade zone in the way that they treat the trade. Both serve for international trade; but while a free-port handles solely the re-export trade, a free trade zone may serve for re-export trade of the port, as well as the foreign trade of the country in which the free trade zone is located.

requirements. One of the important outcomes of such ongoing process for quite some time is seaport terminal(s).

Seaport terminal is a specialised port unit to cater for specific ship(s) and their cargoes to obtain maximum efficiency in cargo handling - thus to reduce or minimise ship's port time - and comprised of terminal berth and adjoining storage area. Container terminal, passenger terminal, ro / ro terminal etc. are the typical examples of the current terminal system.

Seaport terminals aim to maximise the service throughput by way of specialisation in cargo handling and, moreover, to sustain and develop service quality they provide for port-users. They are also collection and connection points between modes of service. (Goetz and Rodrigue, 1999). A seaport terminal, container terminal in particular, accommodates the needs of physical distribution from supplier to final destination eliminating costly and complicated transshipment operations at port. Quality and quantity of the services provided by the port for port-users are the key factors and are of much importance to improve the port's captive area.

2. Ports / seaport terminals in the logistics age

Seaports are geographical areas, acting as link in the transport chain and at the same time play important functions as distribution centres for national as well as regional economies by way of hinterland networks.

The primary objective of a port is to maintain an efficient and speedy flow of both goods and ships. It forms a vital link between the national economy and the world markets. It connects producers, manufacturers, distributors, retailers and consumers who are often separated by thousands of miles. (Gray and Kim, 2001) Ports also establish a vital link in the overall trading chain, and consequently, port efficiency is an important contributor to a nation's or a region's international competitiveness. (Tongzon, 1999)

With the advent and rapid growth of containerisation, combined and multimodal (or intermodal) transport system emerged. The traditional methods of port / terminal operation have changed at the outset; and conventional port functions have undergone modification. Seaport terminals and freight stations have replaced the conventional ports as handling medium, and ultimately seaport terminals turned into intermediate points for cargoes in the door-to-door delivery. Similarly, containerisation has significantly sorted out the handling difficulties and irregularities of transferring from one mode to another. (Birgun and Akten, 2004)

Container has been the key instrument accepted worldwide for international general cargo trade as compared with other similar means of carriage like unit load, roll-on / roll-off or barge-on / barge-off systems, though the others could have certain advantages on certain points and for certain areas.

Containerisation has drastically caused port facility requirements as well as the methods of operation to change. Most of the World's ports went through an extensive and expensive transformation from break-bulk to container handling. The changeover has had a considerable impact not only on port operations but also port developments in connection with labour and staff as well as land and investment requirements. Containerisation is the key element for multimodal transport operations. Multimodal transport covers the carriage of goods by at least two different modes of transport under a single contract and may either be national or international in character. ^[1]⁴

⁴ "The terms multimodal, intermodal and combined transport are sometimes assumed to be the same. EMCT however has provided the following definitions:

- intermodal transport is the movement of goods in one and the same loading unit or vehicle, which successively uses several modes of transport without handling of the goods themselves in changing modes.

In today's logistics world, shipping industry is an integral part of logistics -so is the ports as its integral link. "Logistics is that part of the supply chain process that plans, implements and controls the efficient, effective flow and storage of goods, services, and related information from the point of origin to the point of consumption in order to meet customers' requirements" (CLM) ⁵. (Bowersox, 2004) Shippers are eager to reduce total cost in supply chain rather than minimising transport costs. "They often seek more from ports than just the facilitation of transport. They may want control of their goods en route to the market, making use of logistics services offered by third parties, which they do not wish to undertake themselves because it is not their core business. Many modern integrated supply chains require shippers to be responsible for their products until they reach the market" (Gray and Kim, 2001). The ongoing approach has flourished the transport organizers both to act as the counterpart to shippers in the consultation machinery and to be responsible for transport services all the way through from producer to consumer. (Birgun and Akten, 2004)

Prior the containerisation, manufactured goods were transported in their own packaging. Many different products carried by ships were heterogeneous in terms of weight, size and shape. The irregularity of cargo configurations, which mostly required a separate handling techniques and procedures, led to the development of the unit load concept, and eventually containerisation. By means of containerisation the laborious operations of loading and discharging, as well as labour-intensive

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- Combined transport is the intermodal transport where part of the journey is by rail, inland waterway or sea and any initial and/or final leg carried out by road is as short as possible.
 - Through transport is the door-to-door delivery of goods from supplier to customer." (Dr. Richard Grey, Dr. Gilsoo Kim, Logistics and international shipping, Institute of International Maritime Affairs, Korea Maritime University, 2001, ISBN 89-89409-01-2-93320, p.184-185.

⁵ Council of Logistics Management .

stevedoring, were replaced with faster shore-based container handling equipment and more productive terminal operations. The container handling equipment that is capital-intensive and using new techniques cut down manpower utilization considerably.

Since 1980s many companies have focused their attention only on their core business and have pursued a policy of outsourcing. Logistics has been one of the main areas applicable for outsourcing, i.e., the transfer of certain business functions to third parties. In certain areas of port operations, particularly stevedoring, terminal operations, equipment maintenance and pilotage, there have been a substantial growth in outsourcing to third party operators or independent companies. Stevedoring, terminal operations and equipment maintenance are cargo-related services; whereas pilotage and tugging are ship-related. However, all the services provided by the seaport / seaport terminal are under the sole responsibility of the port authority.

As with the autonomous port, which has been the prevalent type of port management in many parts of the World since the 2nd World War, port services such as stevedoring, pilotage and tugging were outsourced for a better yield in throughput. At the container terminals stevedoring was replaced by the terminal operations, which was also outsourced by the terminal authority. Recently, equipment maintenance as well has been subject to outsourcing by several terminal operators to improve cost control. As will be realized, terminals cannot afford to reduce cost at the expense of service. Poor maintenance, or poor equipment availability rather, is likely to lead to customer dissatisfaction and hence a significant loss of business. (Birgun and Akten, 2004)

3. Port integration and co-operation at regional level

The ownership, organisation, management (or administration) and service pattern of ports differ from one another - not only within regional countries but also in the same country. Such differences

may lead to diversity in the port industry at national and regional level.

European Union (EU) is one of the groups of countries in the World, established its fundamental Community rules, and based on the fair competition - objective being to achieve a single market by way of strengthening economic and social cohesion.

Treaty of Rome shaping the Community's way of life, governs the developments of trans-European transport network (TEN-T), requiring the EU to promote the interconnection and interoperability of national networks. Later on, the rules regarding the establishment of trans-European transport network were laid down fully by Maastricht Treaty to accord the system with the integrated transport philosophy, with the consideration that inclusion of seaports in the TEN-T strategy was consistent with the concept of a multimodal network.

Although ports have not been so far at the centre of the development of the common transport policy, their roles and importance in the transport system was reflected by their inclusion in a significant number of Community policies.

The European Commission has considered the full integration of ports into the TEN-T system for the establishment of multimodal network (CEC, 1999) and at the same time emphasised supports to be given for any action to improve the ports' position as intermodal transfer points, recognising that: (European Commission, 1998)

- a. proper infrastructure is vital in order to optimise the role of ports in the door-to-door transport chain,
- b. other measures such as standardisation of loading units, integration of telematics etc. are equally important,
- c. an appropriate framework for ports to develop a more uniform approach to port charges (or on port tariff regime) should be elaborated,

d. port infrastructure should be priced in such a way that users should bear the real costs of the port services and facilities they consume.

Integration philosophy for ports may either be in the form of:

- a. Service integration (uniform port charges, standardisation of handling units etc.) or,
- b. capital integration (port consortium, joint venture, etc).

Ports in the multimodal transport era

With the advent and rapid growth of containerisation multimodal (or integrated) transport system emerged. The traditional methods of port / terminal operation have changed at the outset and conventional port functions have undergone for modification. Hence:

- seaport terminals and freight stations have replaced the conventional ports as handling medium; and ultimately turned into intermediate points for cargoes in the door-to-door delivery,
- the area considered as a port's hinterland disappeared;
- ports have improved intermodal facilities to minimise the ships' port time, and increased the storage area available to terminal operators to allow carriers to concentrate operations,
- seaports / seaport terminals have dredged their basins should carriers deploy larger vessels.

Containerisation is seen as a means of countering the steadily rising costs and of achieving faster and safer carriage of cargo from shipper to consignee (Birgun and Akten, 2004). Intermodalism is the integration of two or more modes of transportation in moving passengers or freight through seamless connections from origin to destination. (Goetz and Rodrigue, 1999) It includes intermodal transport, combined transport and multimodal transport regimes. Multimodal transport (MT) can be defined as "the carriage of goods from consignor to consignee by more than one mode of transport, on the basis of a single contract issued by the person

organising such service". In the case that it is implemented from one country to another it is then called as international multimodal transport.

It uses modern transport technologies in solving unitization of cargoes – in containerisation - and permit door-to-door transport of goods. It also enables speedy transport of goods, reducing the handling operations at the interface points, as well as the risks of loss of and damage to cargo.

International multimodal transport operation is organised by what we call the MTO on the basis of a MT contract and at least two different means of transport, inter alia, shipping, rail and / or road transport systems are used for smooth and timely delivery. International multimodal transport system works with fast and efficient intermodal handling, providing free exchange of container units between all intermodal transportation companies. Proper port and terminal facilities with integrated land / river transport network are essential for such achievement. (UNCTAD, 1975)

As with the door-to-door transport philosophy, the conventional hinterland relations of ports also changed and new dimensions of port competition came out. While in the early days, pre-container era, ports basically competed on intra-regional level, such competition turned into inter-regional character as with the multimodal transport concept.

International multimodal transport system seems to be the dominant type of service for the World trade in this millennium. The ongoing developments have revealed the said approach.

Conclusion

Ports were looked upon as strategic bases and accordingly treated like a military facility prior to the Second World War ended. Then after, however, several shipping nations in the Western World

noticed the port being an infrastructure for commercial shipping and thus turned it into a typical commercial house. (Birgun and Akten, 2004)

“There are more than 2.000 ports around the world, from single berth locations handling a few hundreds tons a year to multipurpose facilities handling up to 300 million tons a year.”⁶

Ports are indispensable link in the transport chain. As the transport system develops, prudent ports take proper measures in due time and in line with such developments - by either improving (sometimes upgrading, too) or enlarging their seaports and seaport terminals.

In today's competitive and global environment seaports are vital not only for the countries concerned; but also for regional economies / states unions for the sake an efficient and cost-effective transport service (and port system).

Seaports are seen as important centres of regional, economic and social developments - acting as essential interface between sea-borne and land-based modes of transport, were often used as instruments of regional planning. (European Commission, 1998)

The door-to-door philosophy has transformed most shipping lines into multimodal logistics organisations. Shipping companies are increasingly investing in their own dedicated port facilities, rail facilities and trucking fleets. One major containership operator has reported that some 70 percent of its cost is in inland transport, much more than it spends on running ships. (IMO News, 2001)

Seaports act as a logistics centre. Logistics centres perform a number of functions, inter alia, storage and stacking, handling, consolidation, breaking bulk, stuffing, most of which are already carried out at seaports.

⁶ The World Bank Group (2002) Ports and logistics overview, 1.

In today's integrated transport philosophy exact port locations are becoming less important as transportation companies apply more grease in the logistics chain. It is certainly no longer the case that ports can expect to attract cargo simply because their geographical position makes them the natural gateway to a large hinterland. Improvements in onward transport links mean shippers have a wider choice of which ports they use, and it is not uncommon for the major liner operators to switch their allegiances between countries to take advantage of the most favourable conditions and circumstances. (IMO News, 2001)

Transportation and logistics systems facilitate huge volume flows of goods and people and allow innovative practices, such as just-in-time production systems to be utilised.

Modern ports are not simply the places where goods are stored and prepared to continue their journey by sea. They are gateways through which goods pass in the quickest, safest and most efficient way.

Seaports, from the simple physical sea/land interface they once used to be, have successively turned into commerce and industrial central, then into logistics and distribution platforms, and are now becoming intermodal nodes in international supply chains networks, the efficiency of which now drives trade competitiveness.

Özet

Limanların ilk ve geleneksel iki adet kullanıcısı; denizcilik şirketleri ve deniz ticareti ile ilgili olanlardır. Denizcilik şirketleri çoğunlukla güven, rekabet ve geminin geri dönüş hızının mümkün olduğunca en hızlı olduğuyla ilgiliyken, deniz ticareti ile ilgili olanlar güvenlik ve malların taşınması ile ilgilidirler. Limanlar müşterilerine gemilerin sağlanması ve yükleme boşaltma hizmetleri formunda birçok hizmetler sağlar. Bu hizmetler; yükler

için nakliye, depolama, tahliye ve aracılık işlemleri, yolcu için; indirme ve bindirme işlemleridir. Limanlar liman kullanıcıları sayesinde liman tesisleri ve hizmetlerinin kullanımıyla gelir kazanır. Liman kullanıcıları diğerlerine ilaveten gemi sahipleri (veya gemi işletenleri), sevkıyat acenteleri, yük sahipleri ve yolculardır. Limanlar yönetim felsefesine dayalı olarak yurt içi ve yabancı karakterdeki diğer komşu ve bölgesel limanların çok fazla etkisi altındadır. Bu nedenle bu çalışmada, günümüzde ulaştırma felsefesinde limanların konumu incelenmiştir.

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