

Summary:

Freight Transport and Logistics in Norway

Structures, Driving Forces and Competitiveness

Freight transport and logistics is a changing industry of major importance to general industrial activity and national welfare. It counts heavily as a cost factor, and provides services that are instrumental to developing rational distribution systems.

In spite of the industry's overall importance, statistics and general descriptions provide little information to students of transportation and logistics in Norway. Focusing on physical means on transportation, grouping large forwarding networks together with customs clearance agents may be satisfactory for the planning of infrastructure, but not for studies of market structure, conduct and performance. The Research Council of Norway (NFR) together with the Norwegian Industrial and Regional Development Fund (SND) therefore commissioned a study to be carried out by three research institutes in co-operation, i.e. the Institute of Transport Economics, the Norwegian School of Management and ECON Centre for Economic Analysis. The main objective has been to describe the industry and identify driving forces for future structure, conduct and economic performance.

The conclusions may be summarised as follows:

A diversified industry

The cargo transportation and logistics industry in Norway is composed of a great variety of agents. The report identifies and describes different sectors. The following features appear:

- *Cargo characteristics determine market segmentation:* The main explanatory factor for market segmentation and service differentiation is cargo characteristics.
- *One important distinction may be drawn between bulk and general cargo.* The two large sectors use different transport equipment, service characteristics and transport agents. In bulk trades volumes are high, whereas the value per ton or cubic meter is relatively low. The bulk segment is mainly covered by a fragmented group of hauliers and operators on own account.

- *Within general cargo, consolidated shipments form a segment distinct from full or part loads*, where the latter type is characterised by more than 2.5 tons per shipment carried directly from shipper to destination. Suppliers vary between the following segments of general cargo; parcels (less than 20 kg per shipment), small shipments (between 20 and 100 kg), larger consolidated shipments and part/full loads (more than 2.5 tons). The general cargo segment is partly highly concentrated. Domestically, four major companies control the market for consolidated shipments, while external trade in this category is handled by a more fragmented group of forwarders.
- *In addition to the bulk and general cargo segments, several important special niches may be identified*. In Norway, transportation of temperature controlled cargo forms a very important niche due to the role of the fishing industry. In addition, specialists have developed advanced technologies for combination of petrochemical products and other bulk cargoes demanding high quality treatment due to severe costs arising from cargo contamination.
- *Third party logistics, meaning that important elements in firm logistics are spun off and carried out by external contractors, is gaining territory in Norwegian industry and distribution*. Nevertheless, it still seems that the development is lagging behind similar trends in other advanced industrial nations.
- *The modality mix in Norwegian cargo transportation is mainly explained by Norwegian geography*. The lorry is Norway's number one mode of cargo transportation on short as well as long domestic hauls. A scattered population, expensive infrastructure favour road transports compared to railway. The long coastline means that bulk cargoes to a large extent are carried on small coasters. External trade is to an increasing extent carried by sea with ro-ro ferries, playing a growing role.
- *A large share of cargo transportation is still carried out by internal company resources as opposed to common services*. This means that the productivity of transport resources suffers because companies prioritise internal flexibility. Especially in central areas, new policies may enhance the scope for common transport services. Attempts to reduce the traffic of nearly empty vans and lorries in the cities, have so far failed to change this pattern significantly.

This pattern of cargo transportation and logistics has developed over a long period of time and seems robust in face of challenges arising from the need to protect the environment and to continuously upgrade infrastructure. Road transports will continue to hold the main share of cargo transportation in Norway.

Strategies in cargo transportation and logistics

The physical movement of cargo from point a to b may be regarded as a homogeneous kind of service implying that service providers have to rely on cost competitiveness and comparable freight tariffs. One potential objective of the transport agent is therefore to differentiate services implying some

shelter from direct price competition with other service providers. Alternatively, the agent may depend on low costs or the strict focus on one particular market niche.

- **Strategic features of alternative sectors:** The segregation of the market into four distinct subsectors according to Delany (1991) indicates that service providers may differentiate their activities according to degree of customisation and of market focus. Four groups of service providers thereby identified, may be described as follows:

Strong customer orientation: Focused operators providing customised services to a focused market segment plays an important role in Norway. Export industries like paper, metal and chemical products are concentrated with close connections to some few providers of tailored logistics services.

Segment focus: Services may be standardised while operators focus on particular segments. Due to a dispersed population and industry, locally focused transport agents may have particular competitive advantages compared to national operators. With growing importance of additional logistical services in connection to the transportation, there are expanding possibilities for service providers with particular knowledge of specific segment characteristics.

Operators of specialised services in the general market: Some shipments require specialised equipment or competence giving room for service specialisation but not necessarily focused market strategies. Examples may be heavy lifts, waste disposal, cargoes, hanging garments and cargoes requiring special temperatures (thermo cargo) all to some degree requiring equipment with features exclusively developed to carry a relatively narrow range of cargoes for a wider range of customers.

Homogenous segments: Most trucking companies operate standardised equipment to offer services of homogenous characteristics to a broad base of customers. In Norway, this sector is highly fragmented with many, small companies renting their capacity to larger forwarders or industrial clients, or marketing their capacities through transport brokers. For these operators, differentiation may often seem an attractive way of reducing price sensitivity and cost pressure.

- **The scope for service differentiation and market segmentation:** Differentiation of services may help agents to achieve a somewhat less elastic demand curve with respect to freight tariffs. Real differentiation is, however, not easily achieved. Reliable services is a necessity in most segments. Personal service and attention may be important as long as it provides extra value to customers. Transport routes, location of terminals and most kinds of transport equipment may all be copied by competitors. Nevertheless, personal relations with cargo owners still play an important role in providing business to small forwarders and carriers in the Norwegian market.
- **Achieving economies of scale:** Scale economies are important in some of the sectors in the transports- and logistics industry. Terminal-network based forwarding in the parcel, express and general cargo segments all require scale to be cost effective. At the other end of the scale, truck

owners operating more than 30 trucks may experience difficulties. Single truck family companies may in fact compete rather effectively with the larger competitors. In other words, economies of scale may be overrated. There is normally no strong relationship between profitability and scale of operations, and attempts to benefit from scale through acquisition have often resulted in adjustment costs overshadowing potential gains from increased scale.

Economic performance and competitiveness

Profitability varies over time, between sectors, and, not least, between companies within each sector. For all subsectors investigated, there was more intra-sector variation between firms than between sectors.

Due to factors which are likely to be of temporary nature, the profitability of termo transportation and consolidated general cargoes has been very poor between 1993 and 1995. The termo segment is undergoing a major transition from being a specialised sector (ref. above) to becoming an integrated element of consolidated general cargo networks. Simultaneously, new companies have been established and foreign competitors have been able to establish themselves in the hitherto attractive trade with fresh salmon from rural Norway to continental Europe. The growing importance of north-east Europe has played an important role in attracting international carriers to the northern areas of Norway.

The structure of the consolidated cargo segment seems rather well developed, with four competitors controlling the domestic market. Integration of operations in Norway, Sweden and Finland is expanding, giving rise to trans-Nordic terminal networks. So far no Norwegian operators have been able to compete effectively with the major Swedish operators on a Nordic level.

Paradoxically, there seems to be a positive relation between industry fragmentation and profitability. Sectors with large units have during the last years seen meagre profits, while trucking companies and small niche operators have performed better. The explanation may be rather common to transport markets, large units often fight for market shares. In liner shipping, this form of industry dynamics was traditionally met by cartellisation, or liner conferences, that were exempted from laws on competition. For consolidated cargo networks, there is no such protection. The poor results may however be of temporary nature, as the few remaining operators some day may prefer to enjoy their current strong positions rather than to grab market shares from competitors.