



EU transport and logistics sector: Location decisions

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Introduction

This report aims to provide an overview of the factors influencing the location strategies of companies within the European transport sector, including a description of different internal and external expansion strategies chosen by companies. The literature on location decisions of transport companies is relatively limited and a detailed analysis would require a significant number of interviews with important actors in the transport sector. However, transport is a highly important factor in business location strategies; therefore, it is possible to analyse the factors affecting companies' location choices and identify patterns of locations from an indirect perspective and through analysis of hubs and gateways in the transport and logistics sector.

Role of transport in location decisions

Transport has always been a crucial factor in business location theories, both for general businesses, and transport and logistics companies. The focus of transport in previous location theories was on the costs involved. Today, transport costs are still an important element, but the role of transport in business location strategies has changed focus. In fact, transport is both a factor which shapes economic activities and is also shaped by them.

The determinants of general business location strategies are complex. Within a regional or national context, companies will locate where they have the best access to markets and factors of production. Access to markets and inputs – such as workers, suppliers, knowledge of the business, as well as market knowledge – and their availability, quality and costs will be influenced by transport infrastructure and increasingly by information and communication technologies (ICT).

When faced with international location decisions, companies are also likely to take into account external factors which will shape company policy, such as current and expected political stability, regulations, exchange rates, taxation and freedom from restrictive legislation.

A further factor, which may explain a company's degree of responsiveness to transport, is the recent expansion in the logistics market. The increased speed and complexity of distribution networks has in recent years led to a significant increase in the number of companies outsourcing many of their transport functions to specialist firms. Therefore, direct transport considerations have become less important for businesses as specialist logistics companies have increasingly taken on this role.

As logistics companies develop their distribution networks to incorporate practices such as the so-called 'just-in-time' deliveries, the reliability of the transport network becomes of vital importance. It is also no longer the amount of time taken for delivery that is essential to logistics firms, but rather the ability to complete a delivery when scheduled. Just-in-time delivery systems mean that transport companies are now part of the pre-assembly process.

ICT and the expansion of companies in the sector allow businesses to have a wider geographical focus and become more dispersed as different elements of a company's operations can be outsourced or relocated. In this case, it is increasingly important for a company to consider the transport system as a whole and its connectivity with the rest of the world.

It is widely accepted that good air connectivity is vital to companies operating on an international scale and for the development of 'world cities' as potential business locations. It has been suggested that air transport is not a necessary business condition for companies, but what is important is the extent to which this mode of transport is connected directly into other major international hubs and gateways – for example, availability and efficiency of routes, costs and the level of competition in the global transport market, as well as perceived and actual interchange efficiencies, should be considered.

It comes as no surprise, therefore, that air transport has a greater influence on the location of foreign investors and business services, whereas road transport has a larger influence on domestic investment.

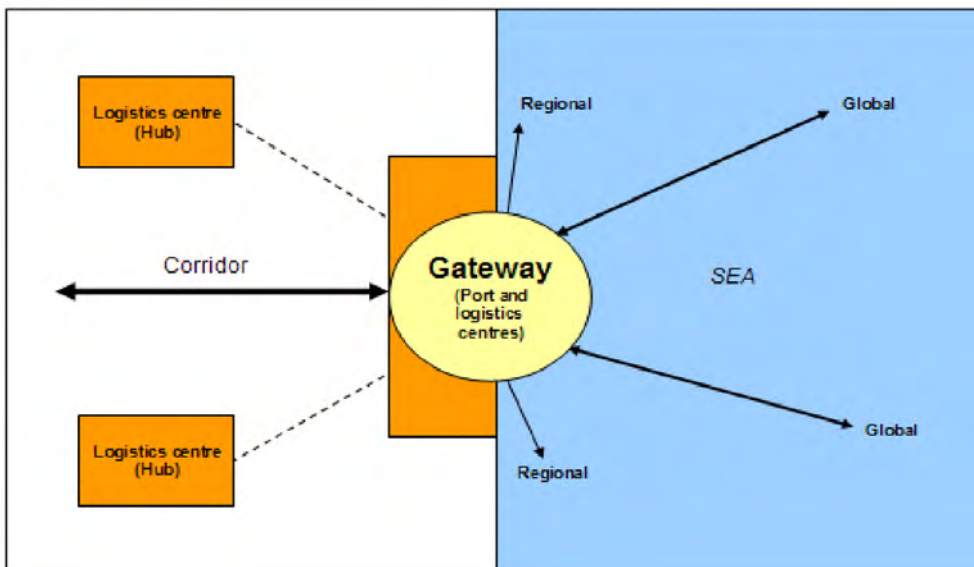
Evidence suggests that transport becomes an increasingly crucial factor for companies as the geographical scale is reduced from a supranational to the local level (Department for Transport UK, 2004).

Gateways and hubs

A study undertaken by the Department for Transport (DfT) in the United Kingdom shows that transport networks are becoming broader and the importance of being located near transport hubs and gateways – air, sea, road or rail – is crucial for companies in the sector. The main factor affecting business location is not primarily transport costs, but rather the reliability and connectivity of the transport system.

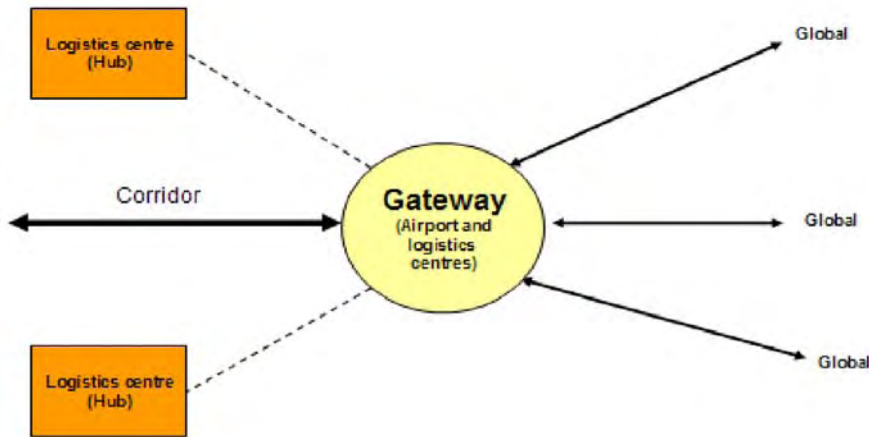
Figures 1 and 2 below provide examples of two types of gateways in the transport system.

Figure 1: *Example of gateway for port and logistic centres*



Source: *Danish Technological Institute, 2007*

Figure 2: Example of gateway for airport and logistic centres



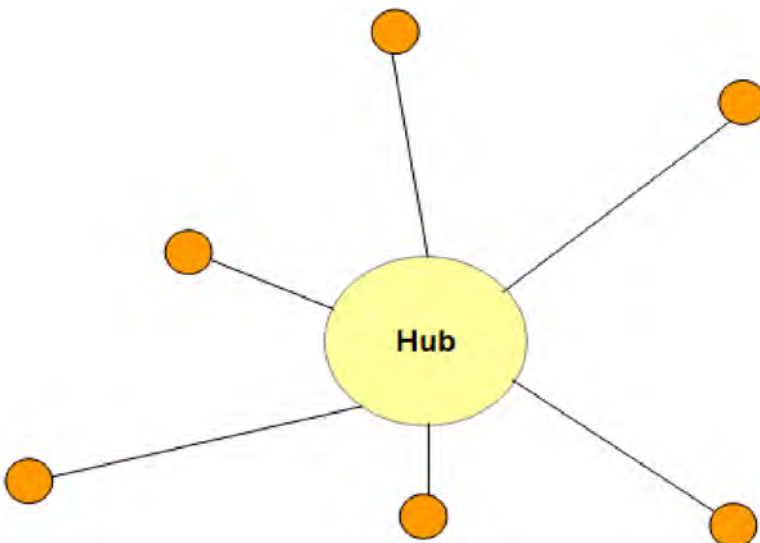
Source: Danish Technological Institute, 2007

Gateways represent major location bases for several types of transport and service-related companies, as well as general businesses. A study undertaken by researchers at Hofstra University in New York defines a ‘gateway’ as ‘a location that promotes the continuity of circulation in a transportation system servicing supply chains. It is the interface between different systems of circulation and includes terminal facilities, but also the numerous linked activities such as distribution centres, warehouses and even insurance and finance’ (Rodrigue et al, 2006).

A gateway could be a major port or airport linked to all other major global and regional transport nodes and corridors. Logistics centres will be located in near proximity to the gateways and distribution centres will often be located along the corridors linked to the gateway. Examples of gateways in Europe are those within ports (such as Rotterdam in the west of the Netherlands, Le Havre in northwest France, Marseille in southeast France and Hamburg in northern Germany) and airports (such as London in the UK, Amsterdam in the Netherlands, Frankfurt am Main in Germany, Copenhagen in Denmark and Madrid in Spain).

Rodrigue et al defines a hub as ‘a central point for the collection, sorting, transshipment and distribution of goods for a particular area’. It is a central location in a transport system with the same type of inbound and outbound connections.

Figure 3: Example of hub connections



Source: Danish Technological Institute, 2007

An airport will also act as a transport hub with passengers and goods arriving and departing on planes, but a hub is mainly a cluster of distribution centres – such as that at Padborg located on the border between Denmark and Germany – or major rail freight terminals.

However, the spatial dimension and type of transport systems play a significant role in the location decision of all companies within the transport sector.

Spatial organisation of transport systems

Table 1 below is one of many examples of the division of the spatial organisation of transport systems.

Table 1: *Spatial organisation of transport systems*

Scale	Link	Nodes	Function
Local	Roads and transit systems	Employment and commercial activities	Commuting and distributing
Regional	Corridors (railways, major roads, canals, regional airports)	Cities	Urban system
Global	Air and maritime lanes	Gateways and hubs (airports and ports)	Investment, trade and production

Source: *Rodrigue et al, 2006*

The scale of the spatial organisation of transport systems can be divided into link, nodes and function. The scale dimensions provide an overview of the type of transport activities taking place at various geographical levels and thereby describe the type of companies locating in these areas. Scale in this context refers to the scale of the transport system and its geographical reach.

Local level

At the local level, transport systems are defined as roads and transit systems used for commuting and distributing activities. Transport companies deciding to operate from local areas include those involved in road haulage and minor distribution centres. Connectivity to other modes of transport are limited and transport activities include mainly the movement of products to and from local companies such as local retail outlets and supermarkets. Passenger transport at the local level consists of rail and bus transport.

Regional level

The spatial organisation at the regional level serves the urban transport system. The link is a corridor for major roads, railways and regional airports. Proximity to national borders, the sea and other cities can help smaller cities to develop into transport hubs and gateways. The regional transport system serves the local, regional and often national levels. Moreover, large national distribution centres and road haulage companies will be located along the main transport corridor and near national borders. At this level, access to regional markets on a cross-border scale, proximity to major corridors and industry, as well as access to labour are key location factors at regional level. At this level, access to labour is a problem for both private and public transport companies and several examples can be mentioned of companies using foreign labour to satisfy their workforce requirements. Examples of this type of activity can be found in Copenhagen in Denmark where German bus drivers are attracted by higher wages and in Glasgow in Scotland where Polish bus drivers are a major source of labour for private bus companies.

Transport centres are located at regional level near main corridors. The European initiative ‘Europlatforms’ is an example of a network of transport centres called ‘freight villages’ (<http://www.freight-village.com>). A freight village is

defined as ‘a defined area within which all activities relating to transport, logistics and distribution of goods, both for national and international transit, are carried out by various operators’. Freight villages aim to support integrated transport and the communication network. The freight village is an example of a transport cluster at a regional level, but with a European outlook. Passenger transport at the regional level will consist of buses, national railway lines and regional airports.

Global level

The global level is where the major gateways and hubs are located. At this level, investment, trade and production take place. Major airports and maritime lanes are well connected to the global transport system, which makes accessibility to global markets the key decision factor for businesses locating in these areas. All types of transport companies will aim to set up at these locations, as they are the key nodal points and the home of major distribution centres and just-in-time production companies.

A clear picture of a cluster of ports can be found in Rotterdam in the Netherlands, Antwerp in Belgium, Hamburg in Germany and Le Havre in France. These North Sea ports are the only geographical location in Europe where there is a clear cluster of commercial ports. One reason for this location is the proximity to other types of gateways and hubs within the transport system, such as airports like Amsterdam, London and Paris, major railway lines such as the Paris-Brussels-Amsterdam-London square and inland waterways such as the river Rhine.

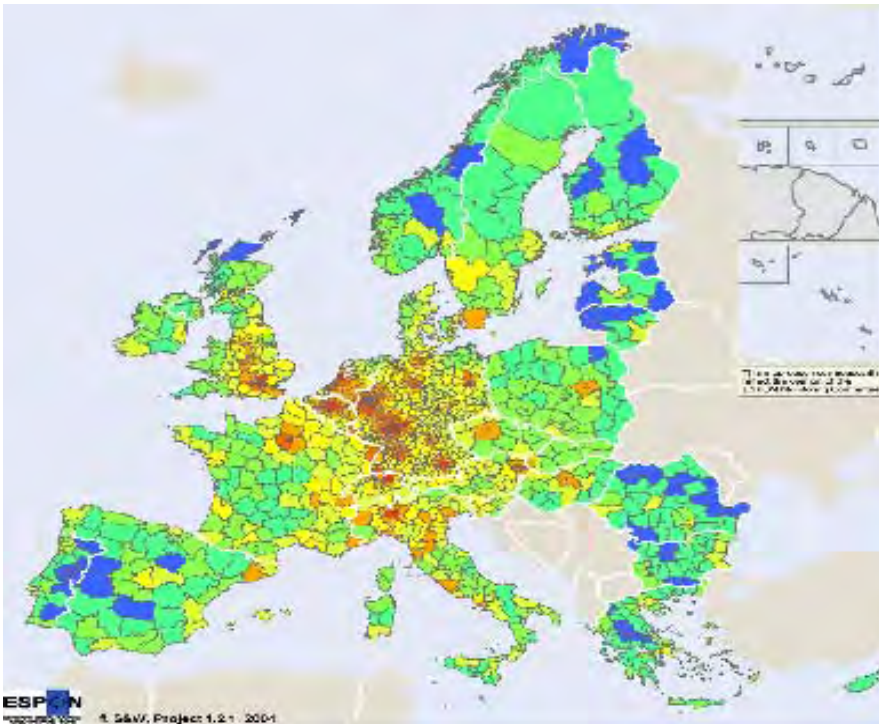
Business clusters

An example of logistics clusters at regional level has already been presented above. Airports are frequently the focus of clusters of businesses serving the aviation industry directly or requiring easy access to air services. Companies in many clusters have a direct association with air-dependent services or industries dependent on frequent air transport, such as business services and high-end technology manufacturing.

Rail, road, air and sea transport, as well as support functions are integrated at the main transport gateways and a number of support functions can also be found around the gateways. The gateways are therefore often the location chosen for transport clusters with access to all four transport modes.

The map presented in Figure 4 shows the level of accessibility of the four transport modes in Europe, which also indicate the location of transport clusters.

Figure 4: Potential accessibility to transport, multimodal, 2001



Notes: The map shows the multimodal potential accessibility indicator, calculated for all NUTS 3 regions of the European Spatial Planning Observation Network (ESPON) space. Regions coloured in blue and green have a below-average multimodal potential accessibility, while regions in yellow, orange and red have an above-average accessibility.

Source: ESPON project 1.2.1, Transport services and networks, ESPON, 2004

The highest accessibility in terms of transport modes (orange and red on the map) is found in more dense urban areas and their metropolitan regions. These are located in an arc stretching from Liverpool and London in the UK via Paris and Lyon in France and the Benelux region (Belgium, Luxembourg and the Netherlands) along the river Rhine to northern Italy. Cities in more remote geographical locations – such as Dublin in Ireland, Glasgow in Scotland, Copenhagen in Denmark, Malmö and Gothenburg in Sweden, Oslo in Norway, Rome and Naples in Italy, and Thessaloniki and Athens in Greece – are also classified as being central locations as their international airports improve their accessibility. Many regions in Finland, Greece, Ireland, Italy, Norway, Portugal, Scotland, Spain, Sweden and Wales, as well as in the 12 new Member States that joined the EU in 2004 and 2007 and the current EU candidate countries (Croatia, Turkey and the former Yugoslav Republic of Macedonia) have relatively low accessibility values.

The existence of clusters of freight companies is becoming more influential in business location decisions, with hub locations of such companies – for example, in the East Midlands in the UK – becoming more attractive. As a result, the competition between countries and regions to host such hubs may increase (Department for Transport UK, 2004).

Internal and external expansion strategies

Alliances

Some of the major airlines, usually national airlines, often maintain a network of offices at the destinations that they operate, frequently in expensive city centre locations. However, the number of these offices is declining. One option used by the major airlines is to form strategic airline alliances – such as Star Alliance – where one of the benefits is that airlines can use common customer service staff at airports and planes. Moreover, the airlines can access information

through the alliance and consequently it is not necessary to have a physical presence at every destination. Low-cost airlines often have no staff at all at the destinations they serve – in some cases not even at the airport. These airlines often use third-party customer service staff to provide the required service at the local airport.

Both the third-party model and the strategic alliances provide easy access to new destinations and are both a common expansion model in aviation and shipping.

Takeovers and mergers

A common expansion strategy for major companies within the transport sector is takeovers and mergers. Within the shipping industry, the 2005 takeover of the integrated British-Dutch shipping company P&O Nedlloyd by the Danish conglomerate Moller-Maersk is an example of a takeover expansion strategy. Several examples of takeovers can be seen across all four modes of transport. For instance, in 2006, the Danish logistics company DSV acquired the Dutch logistics company Frans Maas. In the rail industry, the Swiss rail transport company Crossrail was taken over by the Australian private equity company Babcock & Brown in 2006. In 2007, Dillen & Le Jeune Cargo (DLC), a Dutch cargo company, announced its intention to merge with Crossrail to create a new pan-European independent traction provider, with operations in Belgium, Germany, Italy, the Netherlands and Switzerland.

Third-party model and subcontractors

The third-party model or subcontractors are often used by companies in the transport sector. Examples of companies using such options include the low-cost airlines described above, but also companies operating in the logistics sector. Freight forwarding agencies tend to ‘outsource’ the regular transport activities and make use of subcontractors as road hauliers (Weiler, 2000).

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