



Leading European Transport and Logistics Markets



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Introduction

At the end of 2017, the economic situation in Europe appears to be relatively healthy. The IMF forecasts that EU economic growth in 2017 will be 2.3%, up slightly from growth of 2.0% in 2016. These figures are a marked improvement on market conditions in 2012 and 2013, when economic growth was -0.4% and 0.3% respectively. Back then, the policy of the day was austerity, but governments collectively have since adopted looser fiscal policy stances.

Looking ahead, the IMF expects real GDP growth rates in each year from 2018 to 2022 to be between 2.1% and 1.6%, with growth gradually slowing down over the period. Over the next five years then, general market conditions are expected to be less favourable for logistics providers than in 2017, although one must bear in mind that the story is different for each particular logistics market.

The fortunes of all logistics markets in Europe are linked to economic growth to one extent or another. Road freight and contract logistics seem to have the tightest link. Freight forwarding is somewhat removed as trade volume growth matters most, leaving it relatively more vulnerable to changing market conditions outside of Europe. Elsewhere,

growth in the express and small parcels sector is primarily powered by the structural shift towards online retail, seeing it achieve considerably higher growth rates than other logistics sectors.

All in all, Europe's logistics industry currently appears to be enjoying something of an upturn. Logistics service providers ought to be doing well.

In this report, detailed country profiles for 26 European markets are provided. They include qualitative and quantitative summaries of the state of each country's logistics market, measures of logistics performance and infrastructure quality, market sizing data, rankings of the largest logistics providers, infrastructure maps highlighting core logistics hubs, infrastructure summaries (road, rail, ports and airports) and charts revealing each country's largest import and export road freight partners.

To put this all into context, a chapter featuring European-level data and data comparing all European countries is also provided. Market sizes and forecasts for the express and small parcels, road freight, contract logistics and freight forwarding sectors are presented, in addition to road, air and sea volume data.

Fundamentally, this report provides a comprehensive overview of logistics in Europe.



European Logistics Market Data

CONTRACT LOGISTICS MARKET SIZE AND FORECAST

Europe’s contract logistics market is estimated to have grown by 2.0% in real terms in 2016, down from the 2.3% growth recorded in 2015. Contract logistics in Western Europe grew 1.8% in real terms, whilst Central & Eastern Europe grew at 4.8%.

IMF data asserts that real GDP growth for the European Union was 1.9% in 2016. Although down on 2015, the European Union continued to show resilience over the year, even with significant political events (such as Brexit and the Italian government’s referendum defeat) providing uncertainty.

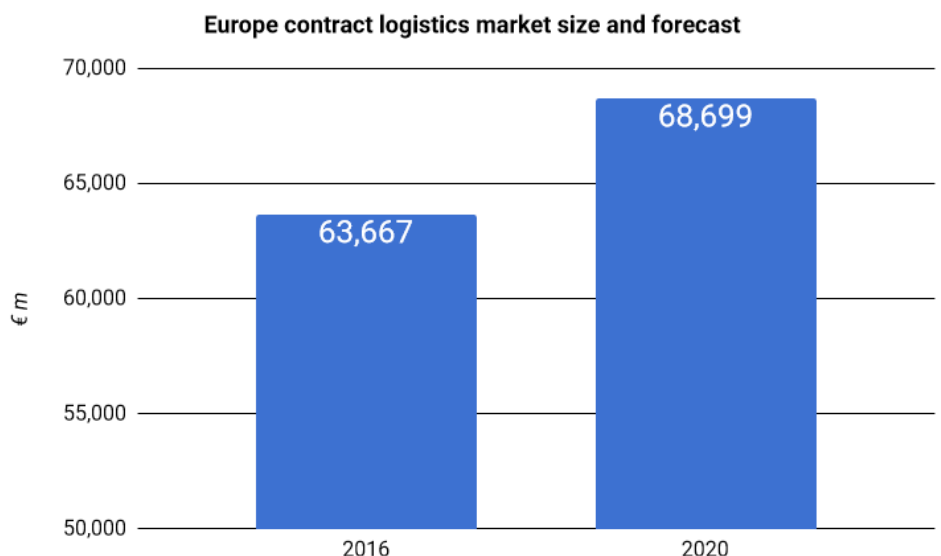
Real retail sales growth in the EU was recorded by the OECD at 2.8% in 2016, compared to 3.4% the previous year, while growth in the construction sector was put at 1.4% (2015: 0.6%). The OECD also recorded weaker manufacturing production growth in the Euro area at 1.5%, down from 2.3% in 2015. All in all, the upshot was that overall market conditions across Europe for contract logistics providers were weaker than in the previous year, with demand from the consumer/retail and manufacturing sectors slowing, even though demand from construction improved.

Europe’s real CAGR from 2016-2020 is forecast at 1.9%. This is down slightly from the 2015-2019 CAGR forecast last year, which was 2.1%.

Western Europe will continue to dominate the contract logistics market in the region, with a share of over 90% of the market. However, Central and Eastern European nations will show higher future growth rates. The five largest Western European markets will grow at a real 2016-2020 CAGR of 1.6%, whilst the top five Central and Eastern European nations will grow at

a real 2016-2020 CAGR of 4.8%.

Macroeconomic trends appear not to suggest any particular added impetus for contract logistics. One of the major growth markets in logistics has been e-commerce and this will continue to provide opportunities for European 3PLs. The transition to omnichannel retailing presents new challenges to retailers in highly formalised markets. Those 3PLs that can adapt to provide solutions in omnichannel retailing will see themselves gaining an advantage on their rivals.



FREIGHT FORWARDING MARKET SIZE AND FORECAST

Europe's freight forwarding market is estimated to have expanded by 3.6% in real terms in 2016, up from 2.4% in 2015. The air forwarding market grew by 3.6% (up from 1.4% in 2015), whilst the sea forwarding market grew by 3.5% (up from 3.3% in 2015).

According to IATA, European airlines boasted the fastest calendar-year FTK (freight tonne km) growth rate of 7.6% in 2016, accounting for around half of the industry-wide increase. Growth in the French, German and UK forwarding markets stood at 1.2%, 3.4% and 5.0% respectively. Germany ended 2016 as the world's fastest growing advanced economy, with exports continuing to rise and higher consumer spending. Growth was seen at major airports including Frankfurt, Cologne and Leipzig. The UK saw impressive growth despite uncertainty around Brexit. This actually increased the attractiveness of UK exports as the pound depreciated in value. French forwarders also saw improved volumes against 2015, though growth remained low.

Elsewhere in Western Europe, Belgium and the Netherlands produced moderate air freight forwarding growth of 1.7% and 1.3% respectively. Meanwhile, Spain's produced double-digit growth after a difficult 2015 and Italy also had a strong year, as its market grew by 5.9%. Eastern European nations generally saw higher volume growth than Western European nations. The Turkish market expanded by 4.6% in 2016.

The sea freight market expanded by slightly more than in 2015. Amongst major markets the UK, France and Spain saw growth rates fall to 1.2%, 3.1% and 2.4%, respectively. Belgium (+5.7%), Germany

(+3.2%), Italy (+2.6%) and the Netherlands (+4.2%) witnessed the reverse. Eastern European nations generally saw higher growth, with Hungary (+9.7%), Serbia (+10.6%) and Romania (+9.4%) experiencing particularly good years. Scandinavian countries saw mixed results, with growth levels between -0.5% and 4.0%.

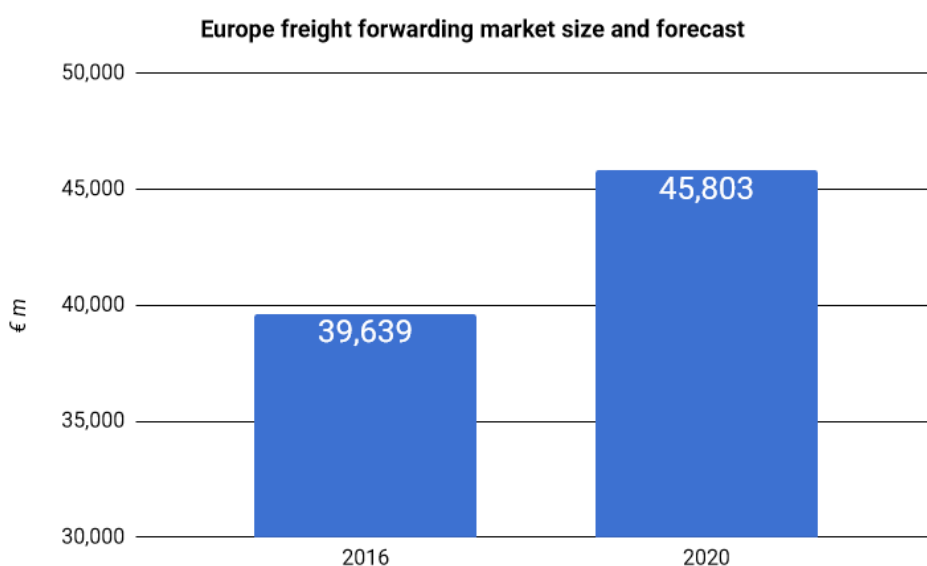
Looking to the medium term, Europe's freight forwarding market is forecast a real 2016-2020 CAGR of 3.7% (air: +3.0%, sea +4.2%).

The IMF expects real import and export growth in the Eurozone to average 3.6% and 3.3% respectively, from 2017 to 2020. Economic growth is anticipated to average 2.6% over the same period, marking no significant difference from growth in 2016.

Ti expects the German and French markets to grow at a real 2016-2020 CAGR of 3.0% and 3.3% respectively. Germany has had a successful year for exports and the IMF recently revised up its GDP growth expectations. In France, the OECD's most recent economic

forecast is strong, amidst a boost to investment and consumption. In light of the uncertainty around the UK economy, in part caused by Brexit, the UK's forecast has been reduced to 3.2%, down from 3.9% in last year's report for 2015-2019. The aforementioned countries, as well as Italy and Belgium are forecast to lose market share by 2020.

Higher growth rates are generally seen in Eastern Europe. Romania and Serbia, for example, are expected to see the highest levels of growth at around 7.5% each. Turkey's growth rate of 6.6% (air: +5.2%, sea: +7.6%) is also impressive. DP World recently opened its 1.3m annual capacity container terminal in Yarimca, in the hope that Turkey could offer this sort of expansion. All other Eastern European nations featured in the report are expected to produce growth of close to 5.0% or more.



EXPRESS AND SMALL PARCELS MARKET SIZE AND FORECAST

Europe's express and small parcels market is estimated to have grown by 5.8% in real terms in 2016. It is forecast a real 2016-2020 CAGR of 5.5%.

The domestic market is estimated to have grown 5.8% in 2016, a fall from 6.4% in 2015. The international market meanwhile is estimated to have grown 5.7% up from 4.5% in 2015. The corresponding CAGRs for the domestic and international markets are 5.9% and 4.3% respectively.

According to the IMF, GDP growth in the European Union in 2016 was 2.0% in 2016, down from 2.4% in 2015. B2B volumes are most directly affected by economic growth rates. Although lower in volumes, these are a higher value product than B2C parcels and therefore slow economic growth dampens the market size overall by a significant proportion. However, e-commerce sales figures remain strong. E-marketer estimated online retail sales growth at 8-12% for eight of the most developed nations in the region.

The growth rate of the international market was the strongest it has been since 2010 and a number of key players in the European market took advantage. DHL for example noted its time definite international volumes grew 10.3% in 2016, its highest growth rate on a regional basis. La Poste saw a 24.5% rise in parcel volumes in its international business and Poste Italiane noted an 11.8% increase. Royal Mail meanwhile saw volume growth in its UK segment of around 3%, whereas its pan-European segment, GLS, saw 9% volume growth.

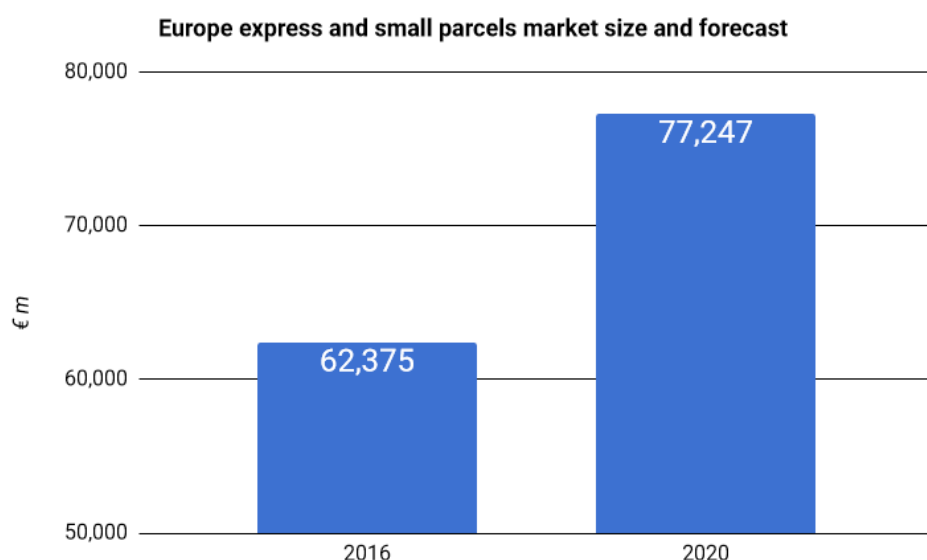
Investment in facilities and network expansion continues throughout the region. For example, in September 2016,

DPD Romania opened a new facility in Bucharest which can handle 70,000 parcels a day. The company was also expanding capacity at its hub in Sibiu to handle 50,000 parcels a day. In the same month DHL announced that it had expanded its European parcel network in Hungary and Slovenia by partnering with the country's post offices. DHL Parcel Europe's network has extended to 22 European markets. UPS stated in their annual report that it had made enhancements to its ground network to help reduce transit time for cross-border shipments by one to two days. This was due to what it saw as Europe's "strong growth potential" and is part of its commitment to invest nearly €2.4bn in European infrastructure by 2019.

Although increasing capacity has remained important, many businesses in the region have been forced to restructure. e-retail has brought a surge in volumes over the past few years, but the operating model required to deliver these shipments (B2C rather than B2B) has left many companies struggling for profitability. We are likely to see more consolidation: more companies will go out of business and there will be further mergers. Home delivery will come to be dominated by a few companies which have the dense networks in place to make it cost effective. Others will focus on high value services where information technology is a USP. The rest will be squeezed and struggle to find their role in the market. These dynamics should alleviate a degree of competitive pressure in the market. However, if B2C delivery increasingly turns into deliveries to commercial premises through models such as 'Click & Collect', this may allow general haulage companies to enter the

market, moving consolidated shipments to centrally located drop off points, potentially worsening the situation for traditional players.

The EU meanwhile has stepped in recently to try to promote cross-border commerce and competition. In May 2016, the EU commission adopted a package of measures to improve cross-border e-commerce parcel deliveries. According to research from the EU, in 2016, only around 15% of consumers bought products from another EU country. Currently, some companies enforce geoblocking, whereby customers in other countries are blocked from accessing deals in other countries. Furthermore, higher delivery charges that are two to three times higher than domestic delivery still exist for cross-border delivery. The EU is looking to regulate geoblocking and stop unfair charges, which may provide a boost in the years to come for the international parcels market.



ROAD FREIGHT MARKET SIZE AND FORECAST

In 2016 the European road freight market is estimated to have grown by 2.1% in nominal terms, below the 2.5% growth seen in 2015. In real terms, the market expanded by 2.4% in 2016 (2015: 2.6%). Market growth has been driven overwhelmingly by volume growth in the year, whereas the impact of changing transport prices was negative overall.

The international market showed particularly strong growth in 2016, with real terms volume growth of 4.5% outpacing the rates seen in each of the preceding five years. This was despite slower growth in Germany (2.8%), France (2.4%), Italy (2.5%) and Spain (2.7%). IMF import and export volume growth estimates show that 2016 was indeed a weaker year than 2015 for the Euro area. Stronger comparative growth rates were instead experienced in non-Euro markets such as Poland, Hungary, Switzerland and the UK. Furthermore, across Europe, tonne-kilometre (TKM) growth was solid at just over 4%. Negative price growth meant the market only grew by 3.3% in nominal

terms, below the 3.6% growth rate seen in 2015.

In contrast, the domestic market growth rate was slower in 2016 than in 2015. It grew by 2.0% in real terms in 2016, down from 2.2% in 2015. EU domestic demand growth was virtually flat, whilst GDP growth fell 0.4pp to 2.0% in 2016. In nominal terms, the market grew 1.6%, down from 2.1% in 2015. The French and German markets showed solid real growth of 2.0% and 2.3% respectively. Meanwhile, the Italian, Spanish and UK markets all saw growth slow to 1.0%, 2.9% and 1.5% respectively.

Eurostat’s service producer price index for road freight states that overall EU road freight prices contracted by 0.4% in 2016. This was even lower than in 2015, when the global oil price collapse occurred. So it is perhaps surprising that the decrease is larger. However, research suggests diesel prices only make up 20-40% of total costs, dependent on the country in question. Demand side factors also play their part.

The comments of major market players suggested marginally stronger growth in the market in 2016. DHL said the market “market grew again slightly in the reporting year, after being virtually stagnant in the prior year.” DB Schenker similarly said the market witnessed “solid growth in demand compared to the previous year”. DSV estimated that the market grew in the range of 2-3% in real terms, with their own volumes up 5%.

Looking further ahead, it is expected that the total European road freight market will grow at a compound annual growth rate (CAGR) of 3.0% from 2016 to 2020. This shows no change from the medium-term outlook presented in previous iterations of this report.

Note that these are real term forecasts. It is not possible to forecast road freight prices with any degree of confidence over the period.

The reasonably consistent CAGR, as with previous years, is not surprising given the broadly consistent macroeconomic

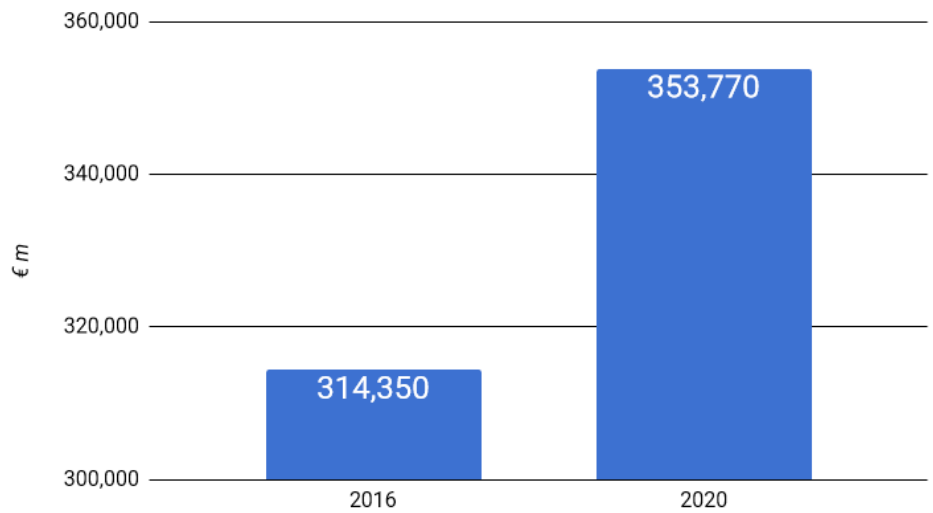
background from 2017 onwards. For example, according to the IMF’s April 2017 World Economic Outlook Database, EU real GDP growth is expected to be in the range of 1.8% to 1.9% each year between 2017 and 2020. For Euro area import volume growth, the range over the same period is larger (4.0% to 4.2%), as is the case for export volume growth (3.8% to 4.0%).

Over the forecast horizon, the most relevant risks to the European road freight market include further fluctuations in the oil price, though of course this would not impact volume growth directly. One could argue that Brexit may be a significant risk, though much uncertainty surrounds the size of that risk to the European road freight market. Furthermore, the UK is set

to leave in March 2019, with a transitional arrangement between the UK and the EU looking likely to run until 2021. Operational disruption is likely to be minimal until

2019. After this, it is difficult to tell. EU regulations on worker’s rights may also impact the market, although this will primarily be a supply side issue.

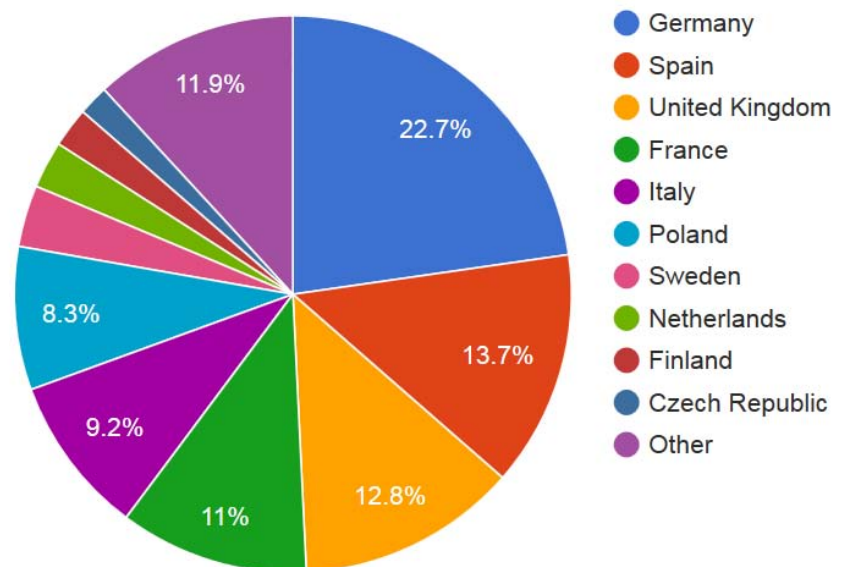
Europe road freight market size and forecast



TOP 10 EUROPEAN ROAD FREIGHT DOMESTIC MARKETS (EXC. CABOTAGE)

Domestic European road freight is dominated by the region’s five major economies: Germany, Spain, United Kingdom, France and Italy. Together, they account for almost 70% of domestic traffic. Poland is now also a very important market, accounting for 8.3% of traffic. There is then a sharp drop to the next market, Sweden, which accounts for just 3.6% of European traffic. The Netherlands (2.7%), Finland (2.3%) and Czech Republic (1.8%) account for the rest of the top 10.

Top 10: European Road Freight Domestic Markets (tonne km, excl. cabotage)(2016)



TOP 10 EUROPEAN ROAD FREIGHT CABOTAGE MARKETS

Cabotage involves national road freight movements by a non-domestic operator, after that operator has delivered an international load in that country.

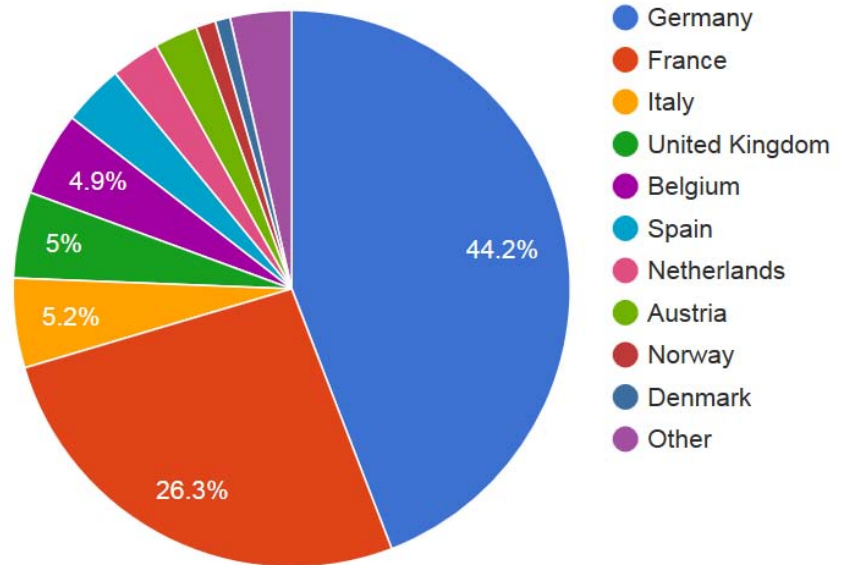
Cabotage is a relatively small activity, comprising only 4% of national tonne kilometres in the EU. However, it is perhaps a more important activity than this suggests, because it supports the economics of international road freight transport.

Much cabotage is carried out by Central European drivers exploiting their lower costs in the domestic markets of Western Europe. It is therefore unsurprising that Germany has the largest cabotage market, in terms of traffic. Smaller economies, such as Belgium, also offer opportunities, due to the level of transit

cargo. Despite the UK's open market and level of international traffic, its geography

mitigates against a high level of cabotage. This is also the case for Spain.

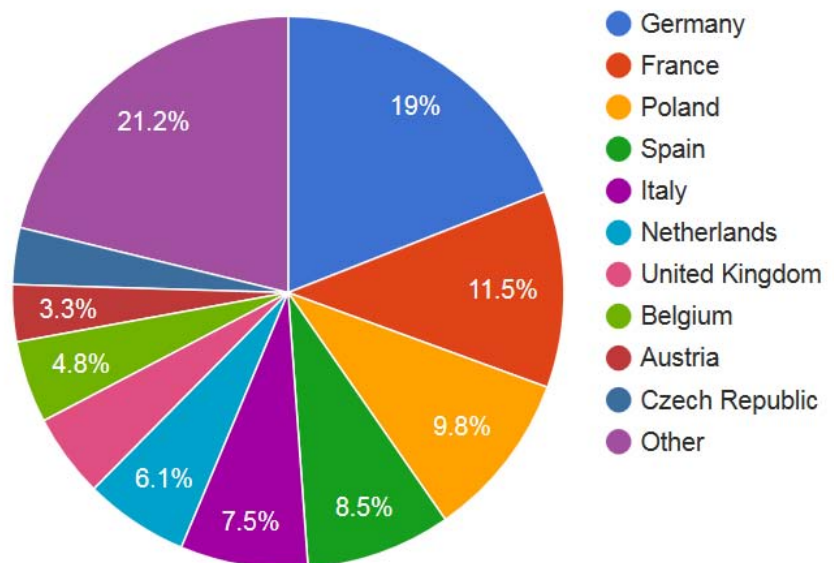
Top 10: European Road Freight Cabotage Markets (tonne km)(2016)



TOP 10 EUROPEAN ROAD FREIGHT IMPORTING COUNTRIES

Germany is the largest importer of road freight in Europe, accounting for almost 20% of import traffic. France accounts for just over 10%, while perhaps surprisingly Poland sits third at just under 10%, beating out far bigger economies such as Spain, Italy and the UK. The Netherlands and Belgium have disproportionately high shares relative to their economic size because of their positions as European sea freight gateways.

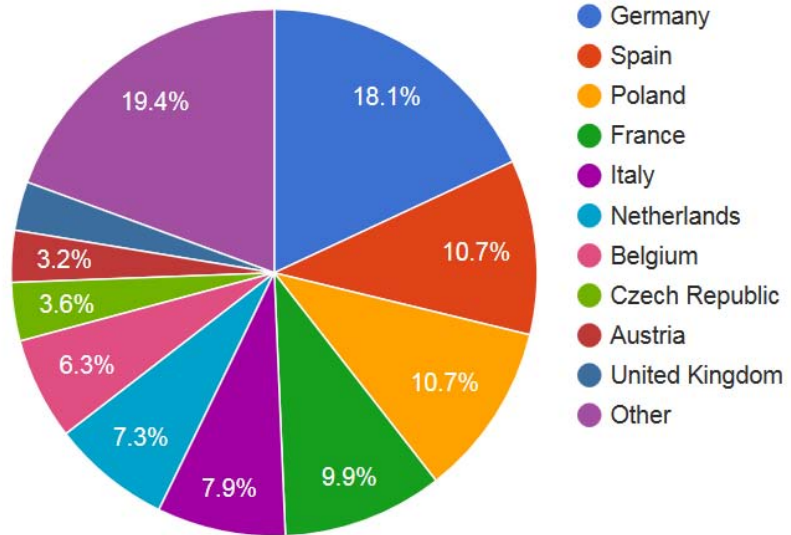
Top 10: European Road Freight Importing Countries (tonne km)(2016)



TOP 10 EUROPEAN ROAD FREIGHT EXPORTING COUNTRIES

Germany is also the largest exporter of road freight in Europe, accounting for almost 20% of export traffic. Spain is second, accounting for just over 10%, with its figures flattered by accounting for a very large share of Portugal's imports. Poland sits third, also with a share of just over 10%, beating out far bigger economies such as France, Italy and the UK. As with imports, the Netherlands and Belgium have disproportionately high shares relative to their economic size because of their positions as European sea freight gateways.

Top 10: European Road Freight Exporting Countries (tonne km)(2016)



TOP 10 EUROPEAN ROAD FREIGHT TRADE LANES

Of the 870 trade lanes covered, involving all possible lanes between the EU28 countries, Norway and Switzerland, the 10 largest country-to-country trade lanes account for 23.1% of Europe's international road freight traffic.

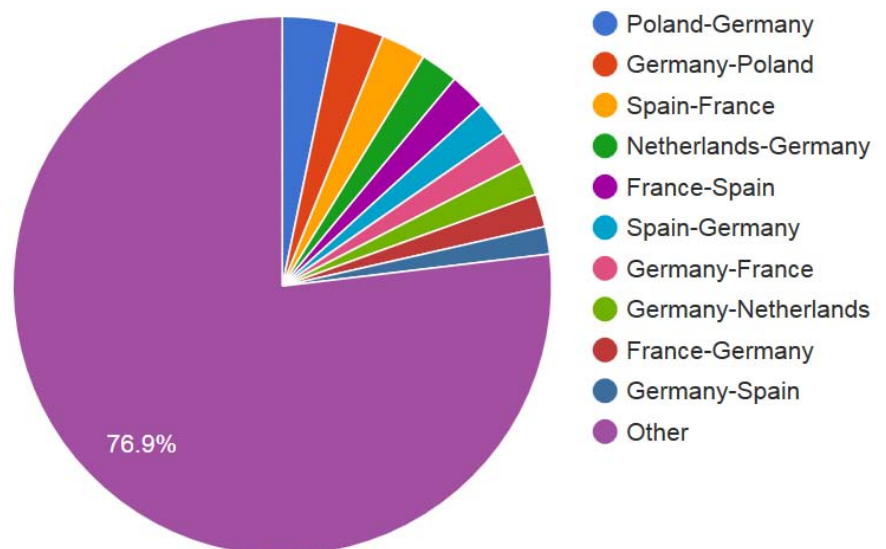
Five pairs account for these top ten lanes. Poland-Germany (3.3%) and Germany-Poland (2.9%) sit atop the list, together accounting for 6.2% of freight. Another pair, Spain-France (2.7%) and France-Spain (2.2%) are the 3rd and 5th largest lanes. Netherlands-Germany (2.3%) and Germany-Netherlands (2.0%) are the 4th and 8th largest lanes, with the Port of Rotterdam playing a substantial role. Spain-Germany (2.1%) and Germany-Spain (1.6%) are 6th and 10th, while Germany-France (2.1%) and France-Germany (2.0%) are 7th and 10th.

The top 100 lanes account for almost 75% of traffic alone. Within the top 100, Germany appears most frequently as an

origin (18 times), followed by Poland (13), Italy (10), France (8) and Spain (8). As for destination markets, the picture is very similar: Germany (17), Poland (11), Italy (11), France (8) and Spain (8). In line with

the gravity model of trade, a trade lane's tonne kilometres tend to be greater as the economies in question are larger and the distance between the two countries decrease.

Top 10: European Road Freight Trade Lanes (tonne km)(2016)



ROAD FREIGHT PRICE GROWTH BY COUNTRY

The table below details road freight price growth across countries over the last decade. All countries have a base year of 2010. The prices are an average of both domestic and international road freight services sold in any given country. Prices can't be compared across countries, in the sense that if Poland's figure is 90 and Hungary's figure is 100, that does not mean Poland's freight rates are 10% lower than Hungary's.

What can be compared however is which

countries' freight rates have grown most over time. Since 2010, Poland leads the pack with freight rate growth of just over 20%. On the same basis, Hungary and Norway are the only other countries to see rates increase by more than 10%. At the bottom of the table, Greece and Latvia have seen rates fall by around 10%.

Above all, the data reveals that wild swings in freight rates do not take place year-on-year. This accords with the relatively stable cost structures of

European road freight providers. Although diesel costs (which account for about 20-40% of total costs) can be quite variable, they are much less variable than one might think as taxes mean their price fluctuates nowhere near as much as the price of oil. Labour costs also tend to grow slowly, as do other costs. Allied to a highly competitive market which only offers razor thin margins year-on-year, there really is little scope for severe price swings.

Road freight price/rate growth by country (2010=100)										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Poland	90.4	95.9	98.7	100.0	103.6	105.4	109.3	112.7	117.0	120.1
Hungary	93.6	97.9	100.2	100.0	104.1	108.9	112.9	117.5	117.1	116.0
Norway	90.2	97.7	99.4	100.0	103.3	107.0	109.1	111.3	113.4	113.8
Luxembourg	99.4	105.3	100.8	100.0	103.8	107.6	109.7	109.6	108.6	109.4
Denmark	97.6	101.9	100.1	100.0	103.7	105.7	106.6	108.1	108.3	109.0
Belgium	99.0	104.7	99.8	100.0	105.9	108.6	108.3	107.3	107.1	108.7
Austria	97.5	102.4	100.5	100.0	103.0	106.5	108.1	110.1	110.1	108.7
Sweden	91.4	98.8	99.1	100.0	103.6	106.6	107.2	107.4	108.3	108.4
Lithuania	99.0	101.8	91.3	100.0	109.6	110.9	109.9	109.2	107.5	106.7
Netherlands	97.0	101.3	100.0	100.0	103.6	105.5	106.3	106.5	106.0	106.2
Germany	97.8	101.6	99.8	100.0	103.0	104.7	105.8	106.2	106.4	106.0
EU28	97.0	101.0	98.9	100.0	102.8	104.2	105.0	105.9	105.8	105.4
Ireland	102.7	103.8	100.5	100.0	100.1	102.4	102.8	103.0	104.6	104.8
United Kingdom	103.7	107.4	99.0	100.0	103.2	104.5	104.6	104.8	104.7	104.8
Slovenia	98.6	100.1	99.9	100.0	103.0	104.9	106.0	106.6	106.0	104.6
France	96.7	101.9	100.1	100.0	103.0	104.8	105.6	105.9	104.5	104.3
Bulgaria	99.3	111.4	102.5	100.0	103.6	105.4	106.4	106.4	105.1	103.8
Finland	90.7	101.7	98.3	100.0	106.6	111.7	111.5	111.3	106.4	103.8
Czech Republic	103.4	107.2	100.3	100.0	102.4	103.4	101.7	104.4	103.5	103.7
Spain	98.5	99.9	96.5	100.0	102.4	101.3	102.7	104.5	103.8	102.5
Italy	n/a	n/a	n/a	100.0	100.6	101.2	101.6	103.2	103.8	101.9
Croatia	n/a	n/a	n/a	100.0	100.4	101.7	101.6	100.8	99.1	97.4
Cyprus	95.9	100.5	99.8	100.0	100.9	100.3	98.8	99.3	95.8	94.9
Greece	97.6	102.7	103.1	100.0	99.0	94.7	93.7	92.4	91.0	90.7
Latvia	104.7	103.9	90.6	100.0	103.3	104.4	102.8	99.3	94.2	90.5

Source: Ti, based on Eurostat output price data for road freight services

AIR FREIGHT TONNAGE BY COUNTRY

Total tonnage of intra-EU freight and mail transported by air grew by 7.4% in 2016. Extra-EU tonnage growth was flat. This contrasts with the trends of the last five years. Since 2012, intra-EU tonnage has grown by 16.5% whilst extra-EU tonnage has grown by 45.1%.

European imports from Asia have traditionally been one of the stronger sources of extra-EU freight tonnage. Over the past few years, there has been a re-balancing on this trade lane. Whilst Asian goods imported to Europe have remained strong, European exports to the growing middle class in Asia have expanded even more impressively. In 2016, growth in Germany, Spain and France was offset by

decreases in France, the Netherlands and the rest of Europe.

As the world's third largest exporting nation, it is no surprise that Germany is comfortably top of both lists. It is responsible for 27.6% of intra-EU volumes, and 29.1% of the extra-EU volumes. For both intra-EU and extra-EU volumes, the three largest countries make up over 50% of total volumes.

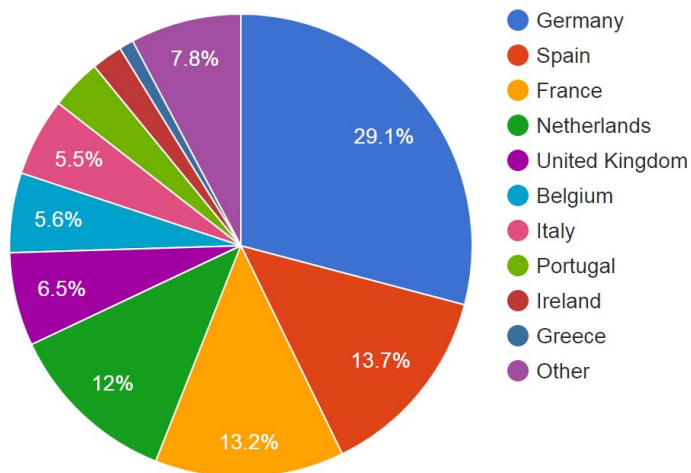
Out of the 10 largest countries for extra-EU volumes, Spain produced the strongest growth rate (7.3%). The improving Spanish economy led to a healthy expansion of international trade. Madrid's airport throughput was up 9%,

with Barcelona's up 13%.

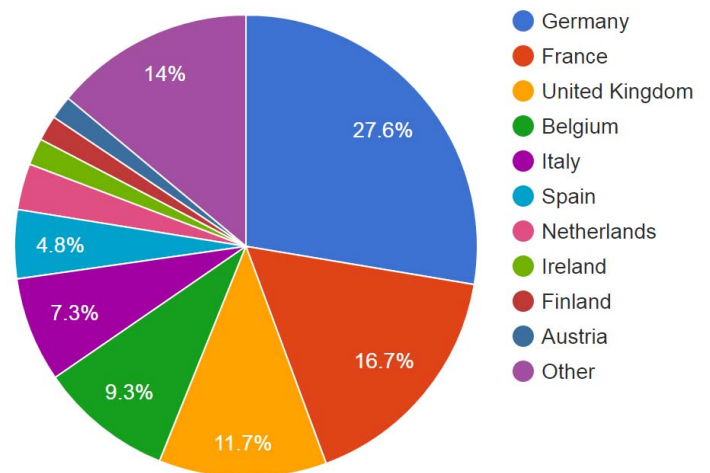
Due to alignment of EU laws within its member states and the compact geographical nature of the continent, air freight carriers have seen volumes switch to overland transport for intra-EU freight in the long term. On the other hand, international e-commerce volumes have provided a boost for the market.

Intra-EU growth was strongest in the Netherlands in 2016 (95.9%). Amsterdam Schiphol's European tonnage grew by 74% in the year. Reportedly, transit freight within Europe from Asia provided this boost.

Extra-EU air freight tonnage(2016)



Europe: Intra-EU tonnage(2016)



SEA FREIGHT THROUGHPUT BY PORT

Annual container throughput grew by 2.8% in the 20 largest ports in Europe in 2016.

Rotterdam remains by far the largest port in Europe, with throughput of 12.385m TEUs in 2016. It has shown impressive growth in 2017 so far, with 9-month TEU throughput up 10.1%. Its port authority said this was due to its “favourable position within new sailing schedules recently adopted by major alliances”. However, its closest rival Antwerp has had higher growth rates for each of the past five years and in 2016 it passed 10m TEUs for the first time. This has in part been due to a shift of operations away from the port of Zeebrugge. Reportedly, €650m of investments are expected in the port over the next few years, and its port authority hopes to increase capacity by 2022. The German ports of Hamburg

and Bremerhaven sit next in the list. Hamburg’s throughput peaked in 2014 with 9.775m TEUs making it the second largest container port at that time.

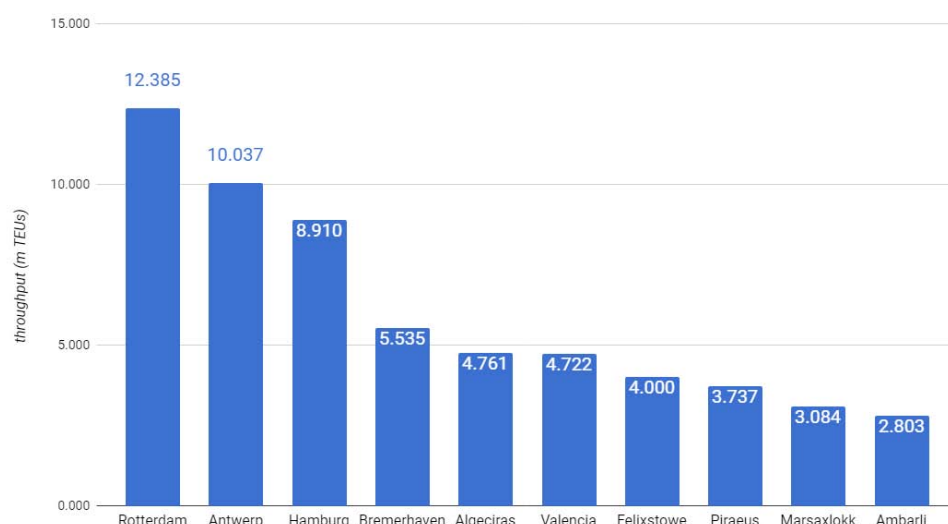
After growing by 5.4%, Algeciras overtook Valencia as the largest Mediterranean port. However, 2017 has seen a wave of industrial action take place in Spain, and both are likely to lose market share. Algeciras has had to delay bidding for its proposed new container terminal. Barcelona’s throughput grew by 14.4% in the year. This was partly due to growth in transshipment containers of 47% in 2016. It has continued to show strong growth into 2017, with a throughput increase of 28.0% seen in the first half of the year.

Further East in the Mediterranean, Piraeus has increased its volumes fourfold since 2010. COSCO purchased 51%

of the port in 2016 as part of the Greek government’s privatisation plans. Over the next five years it aims to increase capacity to 7m TEU by building a second container terminal at the port and marketing it as a transshipment hub. Its fortunes contrast with the Turkish port of Ambarli. Despite its geographically important location, near to the Suez canal, it saw a 9.3% decline in throughput. The continued sanctions against Russia were partly to blame for this decline. Mersin has also experienced declines in volumes (-0.9%), but not to the same extent as Ambarli.

The three UK ports in the top 20 all saw gains in volume. Port of London produced growth of 14.4% after picking up new business from The Alliance, ONE and Yang Ming. Growth was lower in Felixstowe and Southampton.

Top 10 Ports by annual throughput (TEUs)





Country Profiles

Austria



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> • Austria is the world's 29th largest economy, with GDP of €350bn. • Austria has the world's 15th highest standard of living, with GDP per capita of €40,271bn. • Austria is the world's 28th largest exporter, with exports of €138bn. • It is the world's 27th largest importer, with imports of €142bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> • For the period 2016-2020, real GDP growth, on average, is predicted at 1.2%. • On the same basis, real import growth is predicted at 2.4%. • Real export growth is predicted at 2.6%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> • The increase in government debt and fiscal consolidation requirements mean that public budgets are fiscally constrained. On the other hand, taxes are already high and can hardly be raised further without having a negative impact on economic activity and Austria's attractiveness as a business location • High trade dependency on Germany. • Unemployment rates are rising particularly among the over 50's and amongst non-Austrians. • Banking sector vulnerabilities due to large exposure to Central and Eastern Europe, including Russia. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> • Ranks 7th in World Bank's Logistics Performance Index, scoring 4.10 out of 5. • Austria ranks 9th on the quality of its roads according to the World Economic Forum, scoring 6.0 out of 7. • Its railroads rank 13th globally, scoring 5.3 out of 7. • Its ports rank 76th globally, scoring 3.9 out of 7. • Its airports rank 38th globally, scoring 5.2 out of 7.

Source: TI

Analysis

Due to its central geographical position Austria is an attractive location for logistics companies to operate. The country serves as a distribution centre and logistics interface between Central and Eastern Europe and Western European markets, ranking 7th globally in the World Bank's Logistics Performance Index.

As a member state of the EU, Austria exploits the benefits of the single market and the country's role as a crossroads between North, South, East and West provides strategic advantages for companies involved in international trade.

The express market in Austria is larger than both the contract logistics and freight forwarding markets. Within

this, domestic express is the largest sub-sector, accounting for 69% of the express market's total revenues. Domestic express is also the sector which shows the strongest growth in the country.

Road freight is the dominant mode of transport and road haulage companies account for two thirds of the total transport revenues in the country. The main product categories transported via road are minerals and building materials.

Illegal cabotage traffic has been a major concern for Austrian road haulage companies. The relaxation of cabotage traffic proposed with the EU mobility package means that a large proportion of the currently illegally undertaken cabotage will not be prevented but legalised.

Rail freight is also an important mode of transport with the country, ranking among the European frontrunners when it comes to investments in its railway infrastructure. The country's inland ports on the Danube with a connection to

Austria



the North Sea and the Black Sea make inland waterways an important transport mode for the country. Vienna Airport is a

key East-West interface in European air traffic, making it an attractive location to logistics companies.

Infrastructure



Road

Austria has a network of 1,645 km motorways and 354 km express roads. These roadways link the country's political and economic centres to minor areas and holiday regions. Road is the most important transport mode for cargo in Austria: According to

Statistics Austria, in 2016, the transport volume carried out by Austrian and foreign road freight vehicles on Austrian roads amounted to 488m tonnes, which is an increase of 5.7% compared to 2015. Austrian road vehicles accounted for 76% of the total transport

volume (372.9m tonnes).

While national transport was carried out primarily by Austrian vehicles (98.5% and 350.2m tonnes, respectively), the share of domestic road freight vehicles in international receipt and dispatch reached only 23.6% (10.7m tonnes) and 26.4% (10.4m tonnes).

Austria's government has given top priority to the motorways and expressways linking to the Czech Republic, Slovakia, Hungary and the "Regional Ring" around Vienna. For example, a €2.6m project to improve the A5 North motorway between Poysbrunn and the Czech border is due to be completed in late 2017. There are also plans for the key road connecting Austria and Slovenia to be improved by the construction of a second tunnel. The €150m project could start in 2018 and be completed by 2021.

Rail

Austria has 5,800 km of rail track nationwide. The country has 5,267 km of standard gauge track, of which 3,556 km is electrified.

15 rail border crossings provide quick access to seven markets directly bordering on Austria.

In 2016, 99.8m tonnes of freight were

transported on Austria's railway network, which represents an increase of 2.2% compared to 2015.

In 2012, Austria introduced Target Network 2025+, an expansion strategy for developing the rail infrastructure in Austria. The Austrian Federal Railways' (OBB) framework plan for the years 2017-2022 provides for €15.2bn investments

in rail infrastructure projects. Key objective of the OBB framework plan is the modal shift of freight from road to rail.

Three railway tunnel projects are currently underway: the Brenner, Koralm and Semmering base tunnels. These are intended to eliminate bottlenecks in Austria's alpine regions and form part

Austria



of the trans-European network that will link Scandinavia with the Mediterranean. The 64km Brenner tunnel between Austria and Italy, which is the longest

underground rail link in the world, is intended to replace the 70km/h, 140-year-old Brenner railway. Work on this began in 2006 and is due to finish

in 2025. The government hopes that the tunnels will help to transfer traffic from road to rail.

Air

Austria has 52 airports, of which 25 have paved runways. It has six international airports: Vienna, Innsbruck, Graz, Klagenfurt, Linz and Salzburg.

Vienna International Airport is the country's main air transport hub. In 2015 the airport handled 272,575 tonnes of cargo, which was a 1.8% decline on the previous year. The cargo business at

Vienna Airport developed positively in 2016, reporting a total cargo volume of 282,726 tonnes. This represents a rise of 3.7% from the previous year.

In January 2017, Vienna Airport started construction work on enlarging its Air Cargo Centre and adding one-third more space (15,000 sq m). The new addition should be ready for operation by the end

of 2017 and should improve its position as a transshipment point for air cargo. In March 2017, construction works started on Vienna Airport Industrial Logistics Campus. The 170,000 sq m logistics campus will be the largest logistics park in Austria. The new logistics park is expected to particularly appeal to food processing and industrial companies.

Inland Waterways

Austria has 358 km of inland waterways. Its four main ports are located in Enns, Krems, Linz and Vienna, all of which are accessed through the Danube River. According to Statistics Austria, a total of

9.1m tonnes of goods were transported on the Austrian section of the Danube in 2016, an increase of 5.5% compared to 2015. Linz handled 4.0m tonnes, growth of 4.7%. Vienna reported an increase

of 10.1% to 1.1m tonnes. In the Port of Krems, 0.5m tonnes were loaded and unloaded, a drop of 12.8%, while at the Port of Enns, transshipments fell by 16.9% to 0.6m tonnes.

Market Size

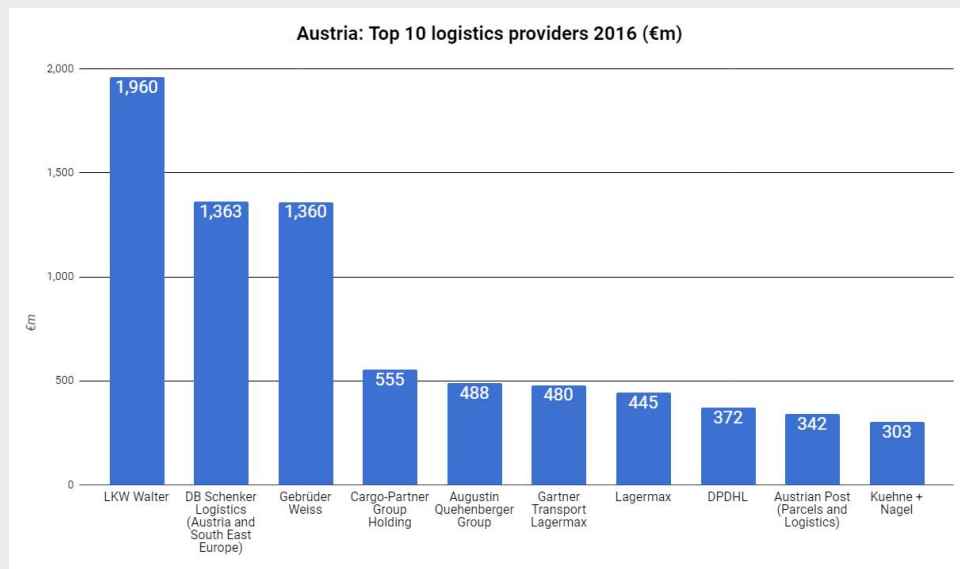
Austria: Logistics Market Sizing Data (2016)

Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	1.4%	951	1.3%	1,001
Express	4.0%	1,194	4.7%	1,434
Freight Forwarding	3.0%	993	2.0%	1,102
Road Freight	0.8%	7,260	2.6%	7,759

Source: Ti



Logistics Providers



Note: Revenues for LKW Walter, Gebrüder Weiss, cargo-partner, Augustin Quehenberger Group, Gartner Transport and Lagermax are at the Group level and are all recorded in Austria. However, these revenues are in fact generated from operations conducted across Europe. Country-specific figures for these companies are not available. DB Schenker Logistics' revenue figure is for Austria and South East Europe, a country-specific figure is not available. DP DHL and Kuehne + Nagel revenues are country-specific. Austrian Post revenues are country-specific and relate to parcels and logistics activities only.

Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Austria

1. LKW Walter Internationale Transportorganisation AG is a land transportation company headquartered in Austria. It utilises a combination of owned and subcontracted assets. The company operates throughout the European continent and, though its services primarily consist of FTL shipments, it also utilises intermodal solutions which incorporate rail and short-sea shipping into its operations.

2. DB Schenker Logistics is represented in Austria by Schenker & Co AG. Headquartered in Vienna, it serves as the company's Regional Head Office for South East Europe, one of the largest regions in the DB Schenker global network.

3. Gebrüder Weiss, headquartered in Austria, provides transport and logistics services internationally. Through its subsidiaries it provides software solutions for transportation networks, logistics consulting services, call centre services and rail transportation, as well as customs handling, air and sea freight, and express logistics. In August 2017, GW acquired the Tyrolean freight forwarding company, Kapeller Internationale Spedition, which has two locations in Innsbruck and Wörgl.

4. cargo-partner, founded in 1983, is a family-owned provider of transportation and logistics services in Europe. Headquartered in Vienna, it has 2,365 employees and operates on a network covering Europe and parts of

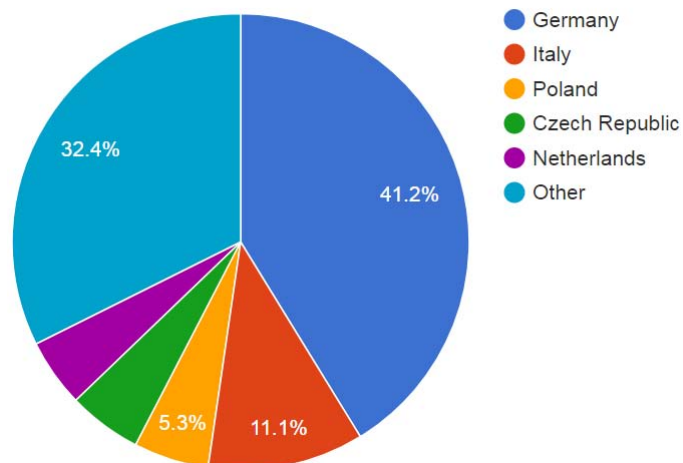
Asia Pacific. It also has a presence in North America. In June 2017, cargo-partner began with the construction of its iLogistics Centre near Vienna Airport. The centre will provide 24,500 pallet spaces in a 7,800 sq m high bay warehouse as well as 2,000 sq m of block storage.

5. Augustin Quehenberger Group is formed of two service providers, Augustin Network and Quehenberger Logistics. Through these, the group can offer logistics services across Europe, from transport management to contract logistics and value-added services. Quehenberger Logistics logistics site in Enns is one of the most important hubs for the company.

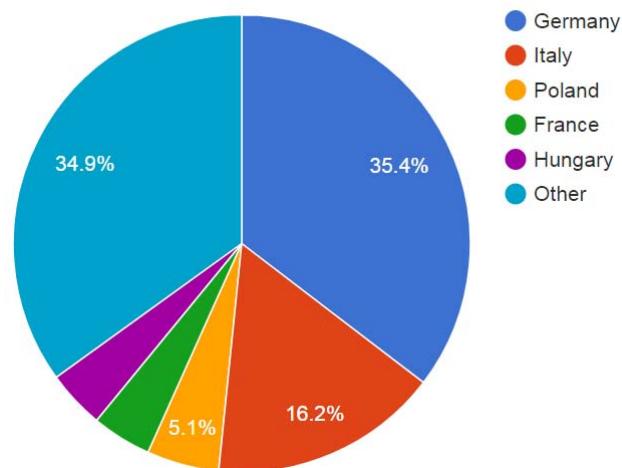


Origins and destinations of international road freight

Austria: Key destinations of international road freight(2016)



Austria: Key origins of international road freight(2016)



Key destinations and origins of international road freight in Austria (2016)

Loaded in Austria			Unloaded in Austria		
	m tkm	%		m tkm	%
Germany	6,811	35%	Germany	8,147	41%
Italy	3,123	16%	Italy	2,184	11%
Poland	983	5%	Poland	1,050	5%
France	812	4%	Czech Republic	1,031	5%
Hungary	794	4%	Netherlands	953	5%
Other	6,725	35%	Other	6,395	32%
All countries	19,248	100%	All countries	19,760	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Austria to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Belgium



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Belgium is the world's 24th largest economy, with GDP of €425bn. Belgium has the world's 20th highest standard of living, with GDP per capita of €37,496. Belgium is the world's 11th largest exporter, with export of €360bn. Belgium is the world's 13th largest importer, with imports of €337bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.4%. On the same basis, real import growth is predicted at 3.7%. Real export growth is predicted at 3.6%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Highly dependent on the Western European economic cycle for exports of goods and services. Belgium's position as one of Europe's hubs for air and sea freight leaves it exposed to global economic fluctuations more than most. Terrorist attacks in March 2016 resulted in the decline in the tourism industry and shut down of Belgium's major airports. Tourism income will struggle to return to pre-terrorist attack levels. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 6th in World Bank's Logistics Performance Index, scoring 4.11 out of 5. The World Economic Forum ranks the quality of its roads as the 35th best globally, scoring 4.9 out of 7. Its railroads rank 17th best globally, scoring 4.9 out of 7. Its ports rank 6th best globally, scoring 6.1 out of 7. Its airports rank 19th best globally, scoring 5.27 out of 7.

Source: TI

Analysis

Belgium is situated in north-west Europe, bordering the North Sea. It is positioned within a significant Northern European logistics corridor and benefits from land borders with France (to the west), and the Netherlands, Luxembourg and Germany (to the east). It also has a direct rail connection to the UK. Its capital, Brussels, is home to numerous international organisations including the EU and NATO.

Belgium has a modern, open and private enterprise-based economy. It has capitalised on its central geographic location, highly developed transport network and diversified industrial and commercial base. Industry is concentrated in the more heavily-populated northern region of Flanders. With few natural resources, Belgium is dependent on international trade, making its economy vulnerable to shifts in foreign demand. In particular, Belgium is one of the EU member states

most exposed to a downturn in British demand, which could occur depending on the nature of the latter's eventual departure from the EU.

Belgium claims to be the most 'global' country in the world. Its openness to foreign companies has attracted over 1,400 international non-governmental organisations, in addition to a number of global and regional governance organisations and businesses. This, combined with its central location (80% of Europe's purchasing power lies within a radius of 500 miles of Brussels), has made it a renowned consumer test market.

It has therefore been vital for Belgium to constantly improve its infrastructure to meet Europe's needs. Its port in Antwerp is a key transit hub for the rest of Europe. In 2016, Antwerp handled over 10m TEUs. Whilst second only to Rotterdam, its annual throughput growth has been stronger than its Dutch rival for each of the last five years. In 2016, it

did in part benefit from the decline of the Port of Zeebrugge, where PSA closed an 800,000 container terminal at the end of 2015. Overall though, container volumes in Belgian ports grew by 2.0% in 2016.

Liège airport is another key infrastructure asset to Belgium, handling over 660,000 tonnes of freight in 2016. Liège benefits from its position in the heart of the European "golden triangle" between Paris, Frankfurt and Amsterdam, where approximately two thirds of European freight passes through. Its nearby logistics facility, Flexport City, has 85 ha of land to facilitate freight handling at the airport. Meanwhile Brussels airport handled 495,000 tonnes in 2016.

It is these key infrastructure assets that help make Belgium a major hub and key logistics base for the rest of Europe. Belgium is at a critical point on the European supply chain. In Flanders, a region with an area of 13,522 sq km, there are over 800 European distribution centres, which gives it the highest density of European distribution centres on the continent. It is telling that major global logistics providers are amongst the largest in its market. Recently, GEFCO opened a freight forwarding office in Antwerp and DHL extended its temperate controlled area at Brussels airport from 1,750 sq m to 5,300 sq m. However, there is more than enough room for home-grown players such as Bpost, H. Essers, Fockedeij and Ziegler to command a strong share of the market.

Belgium



Infrastructure



international motorways with a combined length of 1,763 km connecting to France, Germany, and the Netherlands, an extensive regional road of 12,585 km and the provincial road of 1,349 km network.

The Brussels Ring Road is among the primary transport axes in Belgium. It serves as the main route to the national airport, connecting to the capital of Belgium and the European organisations' headquarters, and the widely stretched economic region around Brussels. In 2016, a redevelopment project on the Brussels Ring Road comprising the reconstruction of the motorway R0 over a distance of 20 km and the creation of three new public transport lines and bicycle connections to and from Brussels was announced. With an investment of €2bn, the project is scheduled to start in August 2019.

Road

Belgium has a highly developed transport infrastructure. The road network consists of highways, national and regional roads, and communal roads (streets). Regional authorities

manage the road network in Belgium. The Flemish Region, the Walloon Region, and the Brussels-Capital Region, each manage their respective road network. It consists of seven

At the end of 2017, a new highway A11 linking Bruges to Knokke-Heist will open to traffic. It includes a 12 km motorway and 15 km of new cycle lanes; the routes will be used by approximately 3,000,000 vehicles.

Rail

With a density of 11.8 km per 100 sq km, Belgium has the second largest rail network in the EU (European Union), carrying over 62m tonnes of freight each year. This is crucial for its intermodal facilities from key ports in Antwerp and Zeebrugge. It has international links with the Netherlands, Germany, Luxembourg, France and the UK. It also has one of the highest densities of electrified rail infrastructure.

In 2016, as part of the strategic linkup between Brussels and Denderleeuw, the Belgian railway infrastructure authorised two new tracks; the two-track Line 50A of the Brussels–Denderleeuw railway line forms a part of the Regional Express Network (GEN) for expansion. Through GEN, the capacity of the main railway lines to the Brussels has been increased to four tracks.

Many other expansion projects are underway such as electrification of the cross-border railway line 19 between Belgium and Netherlands and construction of 465 m of railway track on the Athus-Meuse railway line these are currently in proposed stage and scheduled to be started by the end of 2017.

In 2017, Ekol announced the launch

Belgium



of a new block train connecting the North Sea and Mediterranean Sea. The

service between Zeebrugge and Trieste, Italy, it is expected to carry around 5,000

shipments per year for Ekol.

Air

The major airports of Belgium include Antwerp, Brussels, Charleroi, Kortrijk, Liège, and Ostend. Brussels and Liège Airport are Belgium's biggest airports in terms cargo traffic. Both of these airports are the fastest growing airports in terms of value-added services and employment.

In 2016, Brussels airport handled transported 495,000 tonnes of air cargo volume whereas Liège Airport transported 660,665 tonnes of cargo volume. TNT operates a 75,000 sq m facility from Liège, one of the largest

sorting hubs in Europe.

In 2016, the Brussels Airport announced "Strategic Vision 2040" to increase airport's capacity to meet the growing market demand. This plan will include improvement of runway infrastructure, building of the additional piers and top-tier logistics centre to support the key sectors of the economy, such as the pharmaceutical and the biotechnology industries. It is planned to begin in 2025, while an initial optimisation phase of the existing infrastructure will be completed 2020. By 2040, Brussels

Airport seeks to establish a progressive business centre to accommodate further companies interested in setting up an office in the vicinity of the airport.

In 2017, L'Escale Liège announced plans to invest €18m in a major real estate project at Liège airport. Whilst the majority of the investment is mainly aimed at developments in the business park away from the 85 ha dedicated logistics centre, around 10 ha of land is set to be developed in the logistics centre.

Inland Waterways

Belgium offers world class water transport facilities with the port of Antwerp (the second largest seaport in Europe), the deep sea container port of Zeebrugge, the port of Ghent, and the inland ports of Liège and Brussels, Liège being the second European inland port.

The Belgian port system saw a modest traffic increase from 11.23m TEUs in 2015 to 11.45m TEUs in 2016. As of 2016, the port of Antwerp handled 208.4m tonnes of maritime freight

volume, 10.0m tonnes of conventional general cargo volume, 66.7m tonnes of liquid bulk volume and 4.7m tonnes of total roll-on/roll-off volume.

Responding to increased storage demand, Port of Zeebrugge in 2016 put forward plans to expand automotive capacity by 40%. The expansion will include construction of a new 1,070 m quay wall, 70 hectares at the Boudewijn Canal, and 1,130 m quay wall to be built to allow the mooring of sea vessels. The inner port currently uses 390 hectares

for car logistics; this project will add 156 hectares in total. With the new capacity in use, the port expects to reach a turnover of 3.4m vehicles by 2020.

In the coming few years, the port of Antwerp will transform with various investments received from a Belgian Shipping company, The SEA-Invest group. The company plans to invest €250m for the construction of a new tanker terminal in the Delwaide dock, in an area of 465,342 sq m.

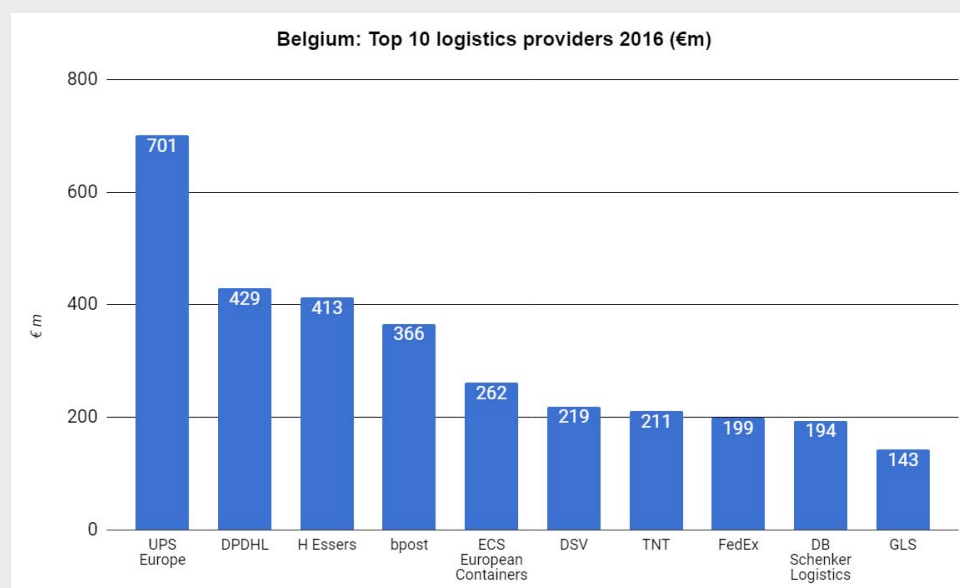


Market Size

Belgium: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	0.8%	3,020	1.5%	3,211
Express	7.2%	1,519	5.3%	2,405
Freight Forwarding	4.4%	1,889	3.2%	2,147
Road Freight	2.3%	9,181	3.2%	10,420

Source: Ti

Logistics Providers



Note: Revenues for UPS Europe and ECS European Containers are not specific to Belgium. Country-specific figures are not available. Revenues for all other companies are country-specific.

Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Belgium

1. UPS Europe has its regional headquarters located in Brussels, Belgium. Its operations are divided between package and non-package activities. In Belgium it offers import, export and domestic shipping.

2. DPDHL provides its full suite of services across Belgium via its Global Forwarding, Supply Chain, Express and Freight divisions. The majority of its

facilities are located in the north-west of the country, along the Dutch border. DPDHL boasts more than 369,200 sq m of floor space in Belgium.

3. H. Essers is a contract logistics company, headquartered in Belgium, with operations across Europe. It provides air and sea freight, road and rail logistics, contract logistics, project and bulk logistics, cold chain logistics,

intermodal transport, freight forwarding and distribution services.

4. bpost provides national and international mail services comprising the collection, transportation, sortation and distribution of mail, printed documents, newspapers and parcels, as well as addressed and non-addressed documents. Through its subsidiaries and business units it also sells a range of

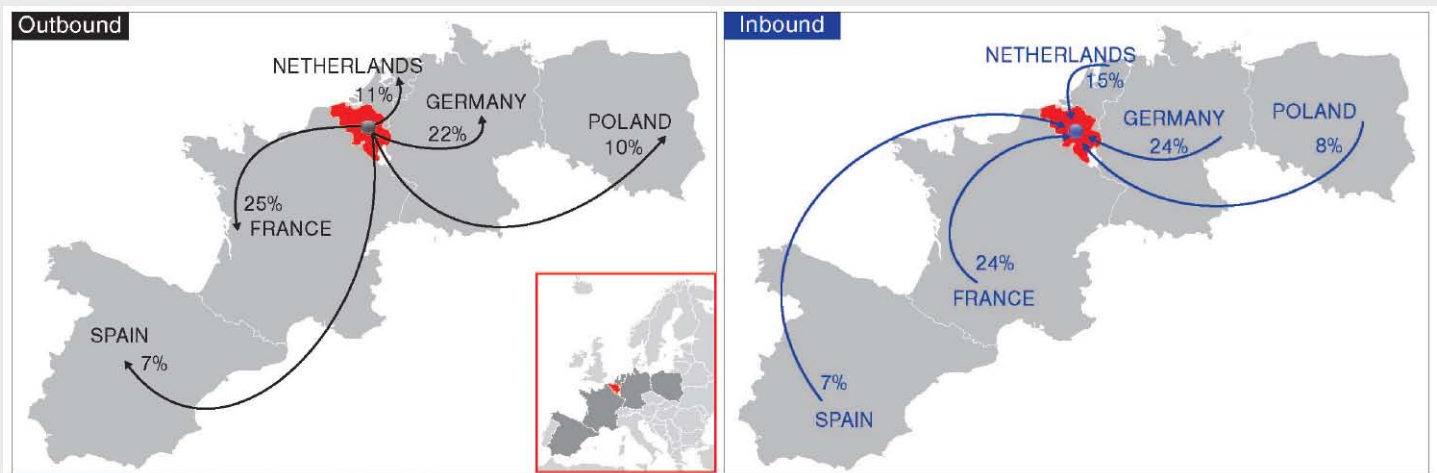
Belgium



other products and services, including postal, banking and financial products, express delivery services, document management services and related activities.

5. ECS European Containers is an intermodal logistics operator based in Zeebrugge, Belgium. It specialises in the transport of containers between the UK & Ireland and mainland Europe.

Origins and destinations of international road freight



Key destinations and origins of international road freight in Belgium (2016)					
Loaded in Belgium			Unloaded in Belgium		
	m tkm	%		m tkm	%
France	9,271	25%	France	6,907	24%
Germany	8,215	22%	Germany	6,899	24%
Netherlands	3,939	11%	Netherlands	4,323	15%
Poland	3,738	10%	Poland	2,343	8%
Spain	2,722	7%	Spain	2,062	7%
Other	9,001	24%	Other	5,997	21%
All countries	36,886	100%	All countries	28,531	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Belgium to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Bulgaria



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> • Bulgaria is the world's 80th largest economy, with GDP of €46bn. • It has the world's 80th highest standard of living, with GDP per capita of €6,409. • Bulgaria is the world's 62nd largest exporter, with export of €24bn. • Bulgaria is the world's 61st largest importer, with imports of €26bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> • For the period 2016-2020, real GDP growth, on average, is predicted at 2.6%. • On the same basis, real import growth is predicted at 3.9%. • Real export growth is predicted at 3.9%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> • The country's high external debt burden remains a weak spot. • The banking sector weaknesses remain evident, including banks' heavy reliance on funding from EU parent banks, which makes them vulnerable to financial contagion from banking crises in the Euro-zone. • The country's tight credit market hinders private consumption. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> • Ranks 72nd in World Bank's Logistics Performance Index, scoring 2.81 out of 5. • The World Economic Forum ranks the quality of its roads as the 93rd best globally, scoring 3.4 out of 7. • Its railroads rank 58th globally, scoring 3.0 out of 7. • Its ports rank 68th globally, scoring 4.1 out of 7. • Its airports rank 73rd globally, scoring 4.3 out of 7.

Source: TI

ambition to bolster its foothold in Europe as the Chinese e-commerce group announced it is considering setting up a European logistics centre in Bulgaria. Overall, Bulgaria's infrastructure and logistics sector can take advantage of China's plans to expand its presence in the Balkans under its 'Balkan Silk Road' strategy to carve out new export markets between Asia and Europe.

Analysis

Bulgaria's ranking just outside the global top 60 import and export nations shows its medium importance in terms of world trade. The country scores moderately in the World Bank's Logistics Performance Index. Its overall global rank of 72 means it is in the middle of the pack in terms of being an attractive place for logistics companies to operate. However, its ranking of 81st for the quality of its transport infrastructure and 91st for the efficiency of customs clearance show that there are clearly issues that need to be addressed before the country's potential for international trade can be maximised. On a more positive note, Bulgaria's trading processes, characterised by low costs of imports and exports are the country's key strength.

Bulgaria's biggest logistics risk comes from its transport network. Although the country's roads, railways and inland waterways provide some

diversification in freight transport options, the country's transport sectors suffer from delays owing to inadequate infrastructure. Despite the increased investments in infrastructure, ratings for Bulgaria's transport infrastructure remain relatively low for all modes of transport, with however a slight positive tendency for road, port and airport infrastructure. The timeliness of shipments has declined between 2014 and 2016, with Bulgaria now ranking second last in the EU. This poses significant risks for investors due to supply chain delays. Completion rates for the trans-European transport core network are below EU average for all modes except for inland waterways, which are 100% complete.

The domestic express market in Bulgaria shows the strongest growth, with a number of express and parcel companies expanding their networks in the country, including TNT, GeoPost and Palletways.

Bulgaria could benefit from Alibaba's

Bulgaria



Infrastructure



Russia, Asia Minor and the Black Sea. Access to EU infrastructure funds has resulted in rapid improvements to the entire Bulgarian road network. EU funding remains crucial to Bulgaria's infrastructure growth. In 2014, as part of Bulgaria's 'Transport and Transport Infrastructure 2014 to 2020' programme, €2.5bn was allocated to improving Bulgaria's transport sector over the following six years.

One major road project within the programme is the completion of lot 3 of the Struma Highway, which will ultimately stretch from Pernik (south west of Sofia) to the Greek border. Another project is stage 1 of the Hemus highway extension, a 433 km route which will run from the Sofia to Varna, on the Black Sea. Meanwhile, the Shipka Pass tunnel is a 3.4 km, €150m tunnel being constructed under the Shipka peak which forms part of a bypass around the town of Gabrovo in central Bulgaria. There are also plans to develop a Public Private Partnership (PPP) scheme to build a new highway connecting Ruse (on the Danube river) with Turkey.

Road

In 2016, 146.78m tonnes of road freight was transported on Bulgaria's roads. 59% of road freight traffic journeys in Bulgaria are domestic.

Bulgaria's national road network consists of 19,512 km of roads (not

including local roads), 99% of which are paved. It includes 734 km of motorways. Five Pan-European Transport Corridors cross Bulgaria and a network of eight motorways connects Bulgaria to Western Europe,

Rail

Bulgaria's rail network is 5,493 km long. This includes 2,861 km of electrified lines. The country takes 11th place among the EU according to the total length of the railway lines. A significant part of the railway lines were built more than 50 years ago and their geometry parameters, construction and structures are suitable for speeds up to 100 km/h.

In 2015, 14.64m tonnes of freight was

transported on Bulgaria's railways. 70% of this was domestic freight. The main goods transported on the railways were metals, scrap, chemicals, cement, coal and timber.

Two Trans-European corridors run through Bulgaria, the Orient and the Rhine-Danube corridor. The Orient runs from the Romanian border to the Greek border via Sofia. The Rhine-Danube

corridor stretches along the Romanian border.

Parallel to the liberalisation of railway freight in Bulgaria, new private railway companies for railway freight have gradually entered the market. An increase in the share of international freight transport has been observed, mainly around the Serbian-Turkish border. This share is expected to rise

Bulgaria



as a result of the freight traffic passing through the new bridge over the Danube River at Vidin-Kalafat.

In 2016, Bulgaria received over €151m of funding for upgrades to a 24.4 km rail section between Kostenets and Septemvri on the Orient-East Med Core

Network Corridor. The Kostenetz-Septemvri railway section is part of the line connecting the Serbian border with the Turkish and Greek borders, as well as the Black Sea port of Bourgas. These two railway lines are due to be completed by 2022.

Bulgaria's 2014-2020 transport strategy budget includes the €500m rehabilitation and upgrade of the Sofia – Burgas railway line, as well as the €400m construction of Sofia underground's third line.

Air

Bulgaria has four international airports, the largest of which are Sofia Airport and Plovdiv Airport.

Sofia Airport is the main airport in Bulgaria and is located 10 km east of the city. In 2016, it handled 21,157 tonnes of cargo and mail shipments. The Government presently operates the airport. However, in May 2017, the Bulgarian government re-launched the concession tender to operate Sofia airport. The tender is expected to earn the government €695m over 35 years and has attracted interest from

the operators of airports in Munich, Frankfurt, Zurich, Lyon, Dublin and London Heathrow, as well as companies from Qatar, Turkey and China.

Plovdiv Airport is located 12 km south east of Bulgaria's second largest city. It does not service regular flights or carriers, as it still functions primarily as a reserve airport for Sofia Airport, which re-directs its flights there in case of bad weather over the Bulgarian capital. However, in March 2016 the government launched a 35-year tender to operate Plovdiv Airport. The main targets of the

concession include the construction of a modern cargo terminal and the further development of airport infrastructure, which would allow the airport to be used by large cargo jets. Prospective investors include the operator of the nearby Pamporovo winter resort, as well as bidders from China, Hong Kong and Turkey.

Bulgaria's two other main airports, in the Black Sea cities of Varna and Burgas, are managed by Germany's Fraport.

Sea

Bulgaria has two main sea ports located on the Black Sea: Varna and Burgas. Both act as east-west transport corridor gateways within Bulgaria and play an important part in the Trans-European Transport Corridor VIII, as well on the route of TRACECA (Transport Corridor Europe-Caucasus-Asia).

The Port of Varna is the largest seaport complex in Bulgaria and also comprises the outlying Port of Balchik. It handles all types of cargo, including containers, general cargo, and dry and liquid bulks. It is the national leader for container and grain traffic. The Port of Varna West is

30 km west of Varna city and is adjacent to the chemical factories of Devnya.

The port has modern technological lines for the handling of soda, fertilizers, cement, coal, ores, phosphates, silica and liquid chemicals. It also exports grain. The existing depths of the ship berths and the approaches to them allow the handling of vessels of capacity up to 50,000 tonnes. The structure of the port includes two component port units, Varna East and Varna West. Varna East is situated deep into the Bay of Varna, 1 km from the city centre and 10 km from the airport. It handles general and bulk cargoes, as well as edible liquid bulks.

In 2016, the Port of Varna handled 9.5m tonnes of cargo. Grain exports amounted to 2.8m tonnes.

Burgas is the second-largest city on the Bulgarian Black Sea Coast. It is an important industrial centre with the largest oil refinery in South East Europe and the largest manufacturing plant in the Balkans. Surrounded by the coastal Burgas Lakes, Burgas Port is the largest and most important Bulgarian port. Burgas West handles general, bulk, grain cargo and containers, whilst Burgas East handles bulk, general, liquid and grain cargo.

Bulgaria



Inland Waterways

The Danube River covers a total distance of 472 km in Bulgaria and forms the border with Romania. Bulgaria's significant commercial ports on the river include Ruse, Lom and Vidin. All three are situated on the European transport corridors VII and IX and offer connections between the countries of Western Europe - South Eastern Europe - Asia and the countries in the Caucasus region of Eurasia.

The ports handle bulk and general cargoes and serve transit cargoes and passenger transport as well as having open and covered storage areas. There are several ferry lines crossing the Danube, mainly in Ruse and Vidin.

The port of Ruse is the biggest Bulgarian river port on the Danube. It is a multimodal transport centre directly connected to the national rail and road

network of Bulgaria. The Port Complex Ruse (which includes the ports of Ruse, Toutrakan and Silistra) handles a variety of cargo types, including fertilizers, grain, machinery and equipment, and coal. New intermodal services to and from Romania, Serbia and Germany boost cargo volumes. In addition, a new ro-ro line from Passau, Germany, started in July 2015.

*Note: Due to a lack of reliable data and visibility on the Bulgarian market, top 10s are not provided.

Market Size

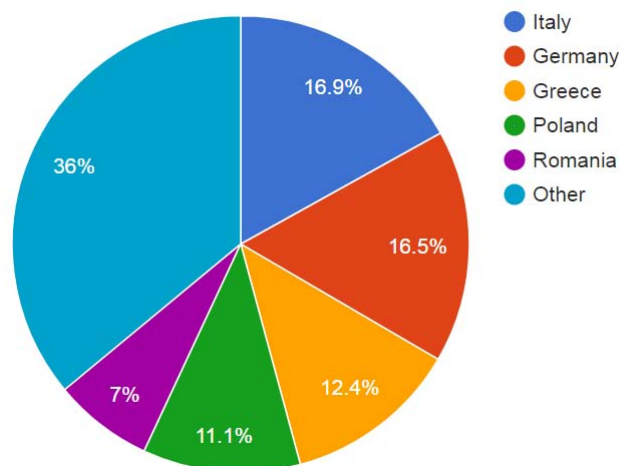
Bulgaria: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	4.2%	102	3.6%	118
Express	6.5%	252	6.7%	327
Freight Forwarding	3.6%	190	4.9%	230
Road Freight	0.8%	1,704	4.1%	2,003

Source: Ti

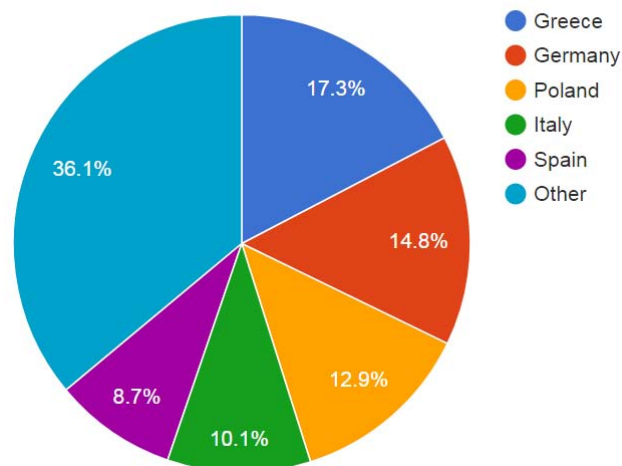


Origins and destinations of international road freight

Bulgaria: Key destinations of international road freight (2016)



Bulgaria: Key origins of international road freight(2016)



Key destinations and origins of international road freight in Bulgaria (2016)

Loaded in Bulgaria			Unloaded in Bulgaria		
	m tkm	%		m tkm	%
Greece	1,164	17%	Italy	1,057	17%
Germany	996	15%	Germany	1,030	16%
Poland	868	13%	Greece	773	12%
Italy	679	10%	Poland	696	11%
Spain	583	9%	Romania	440	7%
Other	2,419	36%	Other	2,249	36%
All countries	6,709	100%	All countries	6,245	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Bulgaria to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Czech Republic



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Czech Republic is the world's 50th largest economy, with GDP of €175bn. Czech Republic has the world's 41th highest standard of living, with GDP per capita of €16,561. Czech Republic is the world's 27th largest exporter, with export of €146bn. Czech Republic is the world's 29th largest importer, with imports of €127bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 2.4%. On the same basis, real import growth is predicted at 5.3%. Real export growth is predicted at 4.6%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Economy exposed to external demand shocks, especially in the auto sector, given the open nature of the economy and that it is closely entwined into EU manufacturing supply chains. Domestic and foreign political risks involve uncertainty over the impact of the UK's departure from the EU which potentially poses particular risks to export demand, both directly and through other EU countries. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 26th in World Bank's Logistics Performance Index, scoring 3.67 out of 5. The World Economic Forum ranks the quality of its roads as the 74th best globally, scoring 4.0 out of 7. Its railroads rank 26th best globally, scoring 4.4 out of 7. Its ports rank 94th best globally, scoring 3.5 out of 7. Its airports rank 35th best globally, scoring 5.3 out of 7.

Source: TI

vacancy rates of industrial space now sit at around 3%.

Prague is the country's key logistics centre, but other cities such as Plzen, Brno and Ostrava are growing in importance. These are strong for R&D, and have well-qualified young workforces.

Due to the nature of Czech trade (heavy goods and industrial), its airports are less important to its overall infrastructure. Its road and rail networks have received EU investment as they form part of the Baltic Adriatic, Rhine-Danube and Orient/East-Med TEN-T networks. Its inland waterways connect with the Port of Hamburg, which is vital for the country's international trade. Approximately 3m tonnes are transported between Hamburg and the Czech republic each year, including motor vehicles and spare parts.

Analysis

The Czech Republic is a landlocked country in Central Europe, located between Poland and Slovakia to the east, and Germany and Austria to the west. It became a separate country in 1993 after Czechoslovakia was split into two countries. Its central geographical position makes it a natural crossroads for many major transit corridors.

The Czech Republic is a stable and prosperous market economy that is closely integrated with the EU. However, its economy remains very sensitive to changes in the economic performance of its main export markets.

Services only account for around 60% of the Czech Republic's GDP; industry accounts for a substantial 37%, whilst agriculture contributes 3%. The auto industry is the largest single industry in the country, employing more than 150,000 people and accounting for more than 20% of both Czech manufacturing output and Czech exports. The country

is one of the top 15 car producers by volume, producing 107.5 vehicles per 1,000 people. It is home to Skoda, now part of the VW group. As with the rest of the logistics sector in the Czech Republic, foreign companies are mainly responsible for providing high-end, value-adding logistics services in the country, whilst local companies typically specialise in the commoditised transport of goods.

With a stable economic and political situation, the Czech real estate market is buoyant. Previous Czech governments have been keen to promote industrial zones, brownfield regeneration and development of speculative buildings, premises for R&D and shared-services centres. Warehousing space for retail, e-commerce and auto sectors are in strong demand. In Q1-Q3 of 2017, the Czech Republic received more commercial real estate investment volumes than any other of its CEE neighbours, and was up 12% year-over-year. Due to the uptake in recent years,

Czech Republic



Infrastructure



Road

The Czech Republic has, in total, 55,653 km of road, of which, 690.25 km are motorways. The most preferred and most used type of transportation is road transport. Currently, there are seven highways crossing the country,

and more are being constructed. Road transport not only facilitates linking the bordering cities in the structure of the entire country but also connects with the other European cities effortlessly, hence proving to be among the most flexible

means of transportation.

To extend transportation by road, the Czech Republic planned two projects on the D4 motorway in December 2016; the sections between Pribram and Pisek, and Haje-Mirovice.

Out of the 230 km under construction, the Czech Republic will complete 80 km of highways in 2017. Another 152 km of highways construction began in 2017; the ministry earmarked around €380.5m for road construction and repair. Earlier in 2017, the state-owned road management firm RSD introduced a contract, the biggest road tender in the Czech Republic during 2017 so far, for around €255m of work on the D1 motorway which attracted bids from 10 firms; the work comprises a 10 km construction to connect Prerov with Rikovice. The foreign construction companies include businesses based out of Italy, Kazakhstan, Turkey, Poland, and Spain.

Rail

Railways in the Czech Republic, linking Prague with Kutná Hora, Plzen, and Brno, stretch across 9,444 km. A vast majority of 9,350 km is standard gauge and 94 km of track is the narrow gauge. Electrified railways have voltages of three kV DC or 25 kV AC.

The Czech Republic hosts a dense

network of transnational railways, having 120 km of tracks for every 1,000 sq km of land.

In the 2014-2020 budgets, the EU allocated €24bn to the Czech Republic, the largest sum being granted to the Operational Programme Transport worth €4.7bn, the programme's total budget

amounting to €5.4bn. For the railway sector, the programme specifies the modernisation of 140 km of railway, construction of 8 km of new or upgraded metro and tram railways, 140 new (or upgraded) mobile rail assets and seeks an increase of 12% in the combined transport performance.

Air

The Czech Republic has 91 civil airports in total, which can be categorised into three groups: regional airports of minor importance (the so-called aeroclub

and sports airports), regional airports of major importance (Brno, Ostrava, Pardubice, and Karlovy Vary), and airports of nationwide importance

(Prague-Ruzyně Airport). The biggest international airports of the country are built in Prague, Brno, Karlovy Vary, Ostrava, and Pardubice.

Czech Republic



In 2017, €1.0bn of investments were announced to expand airports. This includes the enlargement of terminal two at Prague airport and the building

of new runway. Small investments will be made during the first few years and major investments are planned after 2020. The terminal expansion will allow

an increased number of planes, from the current 50 to 75.

Inland Waterways

The Czech Republic has two main joining inland waterways which run north: the Vlatva and the Elbe. The Elbe rises in the North West of the Republic and flows through Germany via Hamburg to join the North Sea at Cuxhaven.

The main river ports are Prague (on the Vlatva river) and Decin, in Ústí Nad Labem, (on the Elbe river.) The Vlatva/Elbe waterway provides a commercial

waterway from Prague for heavy goods and minerals produced in the Czech Republic.

As a landlocked nation, the Czech Republic is dependent on the maritime infrastructure of other nations for most of its trade. Germany's port of Hamburg is the most significant such facility for the Czech Republic. Approximately 3m tonnes are transported between Hamburg and the Czech Republic, with

exports primarily consisting of motor vehicles, motor vehicle parts, machinery, electronics, and chemical products.

Transport between the port of Hamburg and Czech container terminals exceeded over 470,000 containers in 2016. Since the seaport traffic is forecast to increase by approximately 54% by the year 2030, the port of Hamburg is keen on alternatives to freight transport on the rail and by road.

Market Size

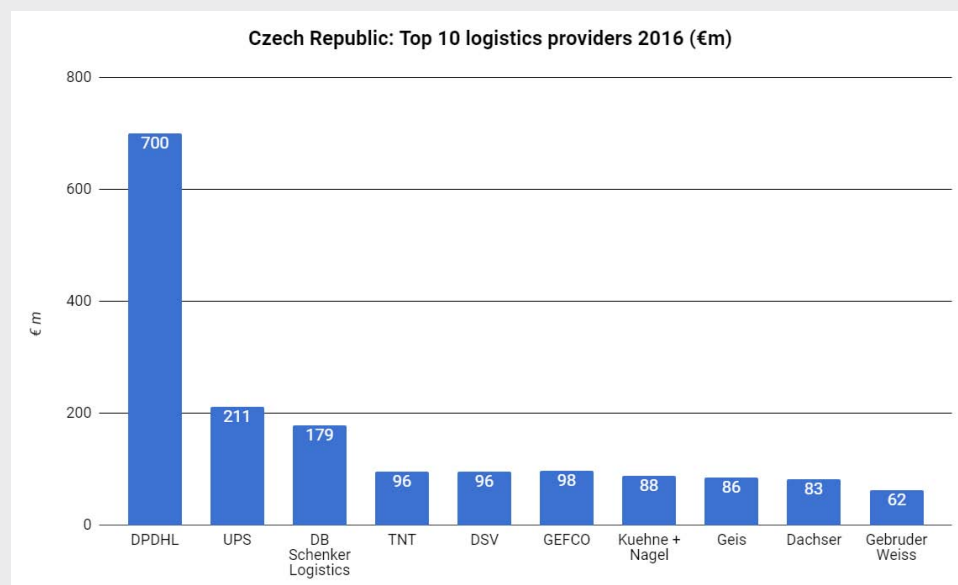
Czech Republic: Logistics Market Sizing Data

Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	3.9%	637	3.3%	726
Express	5.9%	714	6.6%	920
Freight Forwarding	5.4%	607	5.0%	737
Road Freight	3.5%	4,575	4.8%	5,515

Source: Ti



Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix.

Brief summaries of the activities of the top 5 logistics companies in Czech Republic

1. DPDHL is the largest logistics provider in the Czech Republic by revenue. DHL Supply Chain has 250,000 sq m of storage space in the country, which also hosts the Global Forwarding, Supply Chain and Express businesses.

2. UPS offers import, export and domestic shipping across the Czech Republic. In January 2016 UPS announced that it had increased its air express volume capacity into and out of the Czech Republic, in response to the growth it had experienced in the country.

3. DB Schenker Logistics has been present in the Czech Republic since 1991 when Schenker-Rhenus AG, the Schenker&Co AG and Čechofrachtit, established Schenker CS Interlogistik. In 2016 the business, headquartered in Prague, operated 20 sites across the country and employed 1,200 workers.

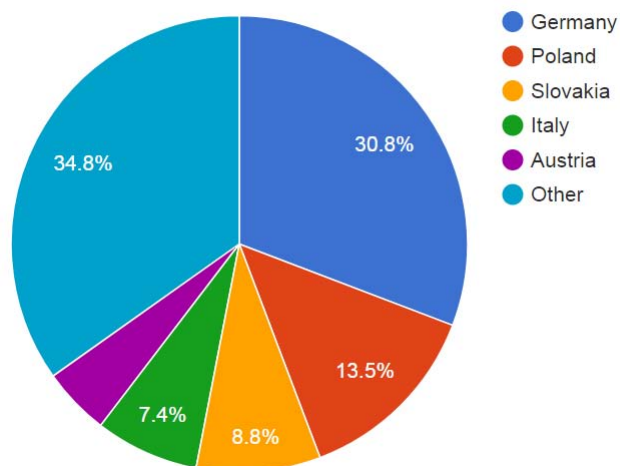
4. Gefco was established in the Czech Republic on 26 February 2003, when the business launched in support of Toyota Peugeot Citroën Automobile (TPCA). The company primarily serves automotive clients within the Czech Republic, which is a major production centre for the industry.

5. TNT provides on-demand, door-to-door, express delivery services for customers sending documents, parcels and freight, by land and air. It offers national, regional and global express delivery services, mainly for business-to-business customers in the automotive, industrial, healthcare and high-tech sectors.

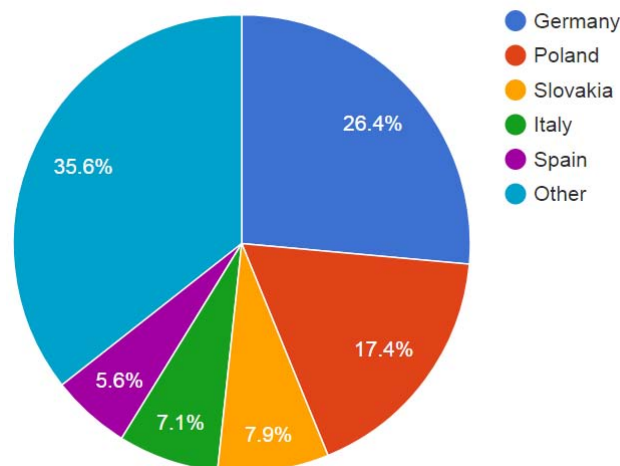


Origins and destinations of international road freight

Czech Republic: Key destinations of international road freight(2016)



Czech Republic: Key origins of international road freight(2016)



Key destinations and origins of international road freight in Czech Republic (2016)

Loaded in Czech Republic			Unloaded in Czech Republic		
	m tkm	%		m tkm	%
Germany	6,610	31%	Germany	5,317	26%
Poland	2,888	13%	Poland	3,499	17%
Slovakia	1,888	9%	Slovakia	1,579	8%
Italy	1,579	7%	Italy	1,429	7%
Austria	1,031	5%	Spain	1,125	6%
Other	7,473	35%	Other	7,161	36%
All countries	21,469	100%	All countries	20,110	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Czech Republic to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Denmark



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Denmark is the world's 39th largest economy, with GDP of €273bn. Denmark has the world's 9th highest standard of living, with GDP per capita of €48,117. Denmark is the world's 35th largest exporter, with exports of €85bn. Denmark is the world's 35th largest importer, with imports of €77bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.7%. On the same basis, real import growth is predicted at 6.0%. Real export growth is predicted at 5.2%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> With a long political tradition that is in support of its human rights activities, Denmark has no major business and human rights issues. Crime levels too are relatively low in Denmark. The exports and consumption recorded a slow growth rate in 2016, letting down the expected acceleration in growth. In 2017, domestic factors are likely to upturn this activity moderately. The overall economy is witnessing a period of constant improvement with increasing consumer confidence; property market beyond the cities is also improving. Growth is expected to be around 1.5% in 2017 and slightly higher in 2018. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 17th in World Bank's Logistics Performance Index, scoring 3.82 out of 5. The World Economic Forum ranks the quality of its roads as the 13th best globally, scoring 5.5 out of 7. Its railroads rank 22nd best globally, scoring 4.6 out of 7. Its ports rank 10th best globally, scoring 5.7 out of 7. Its airports rank 8th best globally, scoring 6.1 out of 7.

Source: TI

Analysis

Denmark has a well-developed transport system, offering good links to Scandinavia, the Baltic Sea Region and Northern Europe.

The Danish market has been transformed over the past decade by investment in infrastructure. The Great Belt link connected Eastern and Western regions in 1998 and the Oresund Bridge, connecting Denmark and Sweden, was opened two years later. A further project, the Femern Belt is due to be finished in 2018. The infrastructure schemes have led to the increased integration of the Danish domestic market as well as creating a regional economy comprising Southern Sweden, Denmark and Northern Germany.

From Denmark, it is possible to reach a population of more than 100m consumers with next day delivery, utilising an efficient infrastructure

allowing effective distribution within the region.

Road freight dominates the logistics market in Denmark. Correspondingly, Denmark has an advanced and well-maintained road network which was ranked 13th in the World Economic Forum's 2017/18 Global Competitiveness Report. The high-quality motorway network allows access to all markets in the Northern European region. Through the opening of the Øresund Bridge, Denmark has become a gateway to the Scandinavian countries and the Baltic area.

The road freight industry in Denmark benefits from Copenhagen Airport's role as a hub for the Nordic and Baltic countries. It is SAS's (Scandinavian Airlines) principal airport and DHL's Northern European hub. Billund Airport is the country's second largest airport. Goods are cleared around the clock at

both airports and customs authorities work with a minimum of 'red tape'.

With approximately 75% of its exports being shipped by sea, Denmark has developed a comprehensive port system with the major industrial ports offering daily connections to overseas destinations and regular connections to major ports in Europe, as well as freeport and bonded warehousing facilities and ro-ro / lo-lo facilities. The Danish shipping market is dominated by A.P. Moller-Maersk which is headquartered in Copenhagen and is the largest company in Denmark.

The European rail network passes through Denmark, resulting in frequent rail departures from and arrivals to Denmark. Ferry operations are also important and link Denmark to Sweden, Norway, Germany and the UK.

The Danish logistics market is dominated by DSV, which grew up originally as a consortium of Danish road freight companies and is now a global logistics player. Other Danish logistics companies with a strong foothold in the market include Scan Global Logistics, Frode Laursen and Leman International. Global logistics providers such as DHL, Kuehne + Nagel, DB Schenker, FedEx, PostNord, UPS and TNT also operate in Denmark.



Infrastructure



Road

Danish roads measure approximately 90,000 km in length, of which around 72,000 km are public roads, while the remaining are privately owned. National roads, operated by the Road Directorate and Sound and Belt Holding Limited, are 2% of the total public road network in Denmark and have a length of 1,660 km. They handle 27% of all the Danish road traffic. Among the 1,660 km roads, there are 918 km motorways, 150 km expressways, and 512 km other national

roads. The national roads construction works involve 1,350 bridges and tunnels. Overall, roadways handle around 84% of the total national goods transport.

In 2016, the Roskilde Fjord Link construction project was started with a budget of €269m and is expected to finish by the end of 2019. It involves building a 10 km long four-way expressway, south of Frederikssund, and a 1.4 km bridge between Marbæk

and Tørslev Hage. Another project was planned in 2016 which will start in 2018. The objective of the project is to construct a 4 km long two-way bridge with electrified railroad for 200 km, and to establish a bridge link between Sealand and Falster via Masnedø which will be the third largest bridge in Denmark.

In 2017, construction project of 39 km four-lane motorway from Holstebro N (route 11) to Snejbjerg has been started which aims at opening the stretch between Snejbjerg and the link to the new acute care hospital in Gødstrup. The project cost is €506m and the motorway is expected to complete by the end of 2018.

Currently, the country has seven major ongoing construction projects - Haderup Bypass (7.5 km), E45 Skanderborg S – Aarhus S (Expansion four to six lanes, 15 km), Kalundborg Motorway (South of Regstrup, 6 km four-way motorway), Holstebro Motorway (Snejbjerg-Sinding and Sinding-Holstebro N), Ribe Bypass (2.8 km, Expansion two to four lanes), Roskilde Fjord Link (South of Frederikssund, 10 km four-way expressway and 1.4 km bridge), Storstrøm Bridge (4 km, new bridge will connect Zealand and Falster via Masnedø) which are expected to complete between 2017-2022.

Rail

The rail network in Denmark measures 2,859 km, of which only the Copenhagen S-train network and the main line Helsingør-Copenhagen-Padborg (at the German border) are electrified; around 508 km of the network is privately

owned, while the rest is state-owned. Rail Net Denmark (Banedanmark) manages 81% of railways. It manages over 2,000 km of railway tracks. 2,700 train departures occur every day which amounts to nearly 1m trains a year.

In 2017, Banedanmark electrified the 57 km Lunderskov – Esbjerg railway line completely; the project began in 2014 and involved the installation of 1614 masts and 200 km of wire. The electrification will allow electric

Denmark



trains to run from Copenhagen to Esbjerg and on the already electrified Padborg-Flensburg route. Next electrification projects in line are the new Copenhagen-Ringsted lines, Køge North - Næstved, and Næstved - Ringsted-Rødby.

The Copenhagen-Ringsted High-Speed Railway line is the first high-speed railway in Denmark. The line is being

built with an estimated investment of approximately €1.7bn. The project commenced in October 2012 and is expected to be completed in 2018.

In 2016, leading consulting group COWI, with its French cooperation partner Systra, began work on electrifying the Danish Rail Network. The project is among the largest and most complex rail projects in Denmark;

network electrification covers nine sections - Esbjerg-Lunderskov (114 km), Copenhagen-Ringsted (120 km), Køge N-æstved (45 km), Ringsted-Holeby (258 km), Fredericia-Aarhus (218 km), Aarhus-Aalborg (280 km), Roskilde-Kalundborg (112 km), Aalborg-Frederikshavn (85 km), and Vejle-Struer (130 km).

Air

Denmark has over 21 airports spread across the country, with many accepting international and European flights. Denmark's Copenhagen International Airport is one of Europe's major airports. Over the past 12 years, the airport has been rated the most efficient airport 10 times; the latest was in 2016. Three other international airports, besides Copenhagen, are located in Aalborg, Aarhus, and Billund, all on the peninsula of Jutland.

In 2016, more than 32,000 tonnes of air cargo were transported between Danish airports and the airports in Istanbul, Doha, Dubai, and Abu Dhabi. The Middle East and Turkey accounted for more than 12% of air cargo to and from Denmark in 2016.

Atlantic Airways has succeeded in stimulating the demand for flights to the Faroe Islands by lowering fares, although this has challenged the

profitability of the service. In March 2017, SAS also opened a route between Copenhagen and the Faroe Islands and this could challenge Atlantic Airways' route and earnings. In 2017, Copenhagen began the expansion of Copenhagen Airport. The project will cost €814m, and will initially add 22,000 sq m and seven aircraft gates to the airport. The project is scheduled for completion in 2019.

Sea

Over 130 commercial ports of different sizes in Denmark offer expertise across areas from large-scale shipping terminals engaged in international trade to small municipal ports serving the local industries. Denmark's ports handle 109m tonnes of cargo per year. More than 1m tonnes of fish worth almost €400m are landed every year in Danish ports.

With 75% of its exports being shipped by sea, Denmark has developed

a comprehensive port system of approximately 25 ports with frequent international shipments. More than 64m tonnes of international goods are loaded and unloaded at Danish ports every year.

In 2017, The Port of Aalborg became the first CO₂-neutral port in Denmark, and is among the few CO₂-neutral ports in the world. By the end of 2016, The Danish Port of Kalundborg took a decisive step toward its vision of growth with a €26m

port expansion which will make it a new container and industrial hub. The port will begin the project by year-end 2017 and is expected to go operational in Autumn 2018. This project is involving in the construction of 330,000 extra sq m (to add to its existing 800,000 sq m), with 500 m of dock and 15 m of water depth, aims at increasing both feeder and container traffic and attracting new trade.

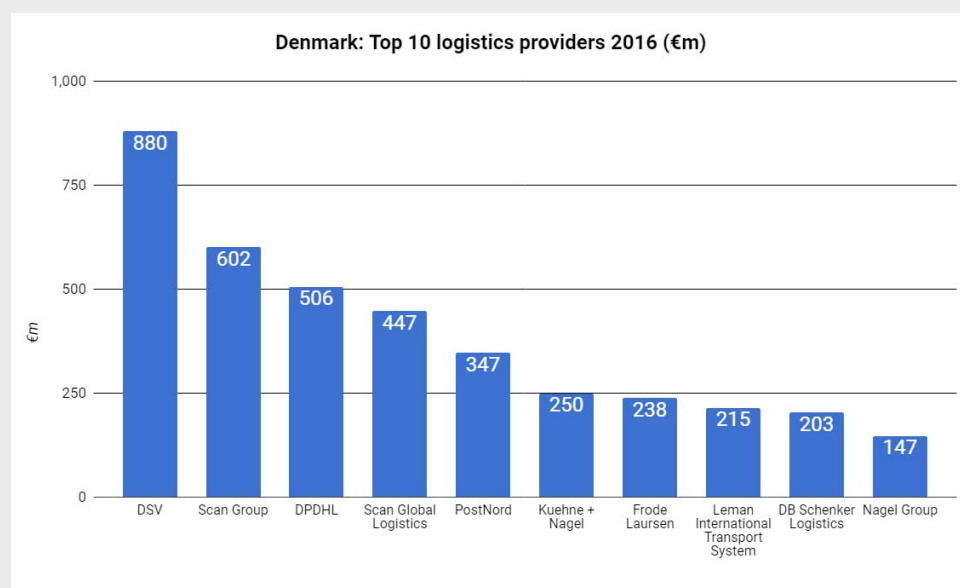


Market Size

Denmark: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	1.8%	304	2.0%	329
Express	4.2%	615	5.0%	749
Freight Forwarding	2.7%	866	3.5%	994
Road Freight	2.1%	5,176	2.9%	5,810

Source: Ti

Logistics Providers



Note: Revenues for Scan Group, Scan Global Logistics, Frode Laursen and Leman International Transport are not specific to Denmark. Country-specific figures are not available. Revenues for all other companies are country-specific

Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Denmark

1. DSV is a global provider of transport and logistics services. It is based in Denmark and primarily serves the European market. Its activities include FTL and LTL transportation, freight forwarding and contract logistics. These operations are carried out through three divisions: Road, Air & Sea, and Solutions.

2. Scan Group, headquartered in

Copenhagen, is an international shipping and logistics company. It offers a range of services, including project forwarding, logistics and NVOCC, as well as food and beverage transportation.

3. DPDHL operates road terminals, warehouses, hubs, distribution centres and gateways in Denmark. Its service offerings are available via its Global

Forwarding, Express and Freight divisions.

4. Scan Global Logistics offers air, land and sea transport, as well as warehousing, distribution and project logistics. In addition, it offers value-added services, such as quality control, labelling, consolidation, the handling of customs formalities, certificate applications and bonded warehousing.

Denmark



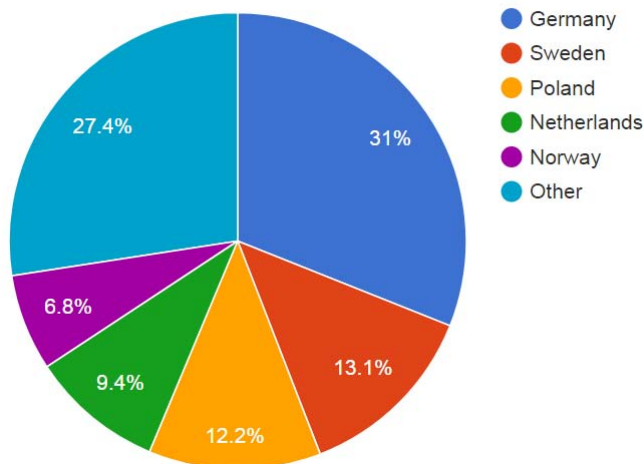
In Europe it primarily serves the Scandinavian markets. It also has an international network, however, serving locations in Asia Pacific and the Americas.

5. PostNord in Denmark provides courier, pallet, groupage and 3PL services. In 2016 it had approximately 1,600 distribution points in the country. The headquarters for the Danish

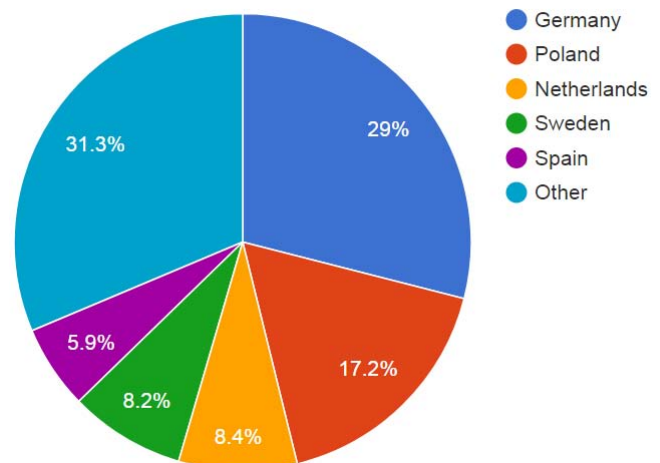
business of PostNord are located in Copenhagen.

Origins and destinations of international road freight

Denmark: Key destinations of international road freight(2016)



Denmark: Key origins of international road freight(2016)



Key destinations and origins of international road freight in Denmark (2016)

Loaded in Denmark			Unloaded in Denmark		
	m tkm	%		m tkm	%
Germany	2,517	31%	Germany	2,859	29%
Sweden	1,060	13%	Poland	1,694	17%
Poland	987	12%	Netherlands	825	8%
Netherlands	764	9%	Sweden	808	8%
Norway	555	7%	Spain	586	6%
Other	2,224	27%	Other	3,092	31%
All countries	8,107	100%	All countries	9,877	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Denmark to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Estonia



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Estonia is the world's 104th largest economy, with GDP of €21bn. Estonia has the world's 61st highest standard of living, with GDP per capita of €16,173. Estonia is the world's 71st largest exporter, with exports of €13bn. Estonia is the world's 80th largest importer, with imports of €14bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 2.9%. On the same basis, real import growth is predicted at 4.7%. Real export growth is predicted at 3.7%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Total external debt of Estonia amounts to more than 95% of GDP. Increase in ageing and emigration of working population of Estonia. Trade and energy dependence on Russia. In the first half of 2017, Estonian economy faced sharp acceleration due to increasing fixed investment, strong private consumption, and low unemployment. Economic growth is projected to exceed by 3% in 2018 due to increase in domestic demand sustained by public and private investment. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 38th in World Bank's Logistics Performance Index, scoring 3.36 out of 5. The World Economic Forum ranks the quality of its roads as the 38th best globally, scoring 4.7 out of 7. Its railroads rank 33rd best globally, scoring 4.1 out of 7. Its ports rank 11th best globally, scoring 5.6 out of 7. Its airports rank 41st best globally, scoring 5.1 out of 7.

Source: TI

operation. As Estonia's dependence on Russia declines, it is projects like this that will be key to its economic and logistics growth.

Analysis

Estonia is the most northerly of the three Baltic states, bordering Russia to the east, and Latvia to the south. The country has a population of around 1.3m people, of whom, roughly a third reside in the capital city of Tallinn. Since regaining its independence with the collapse of the Soviet Union in 1991, Estonia has become one of the most economically successful of the European Union's newer eastern European members and has developed a reputation for innovation and extensive digitisation.

Estonia evolved into a transit centre for Russian freight. However, since its eastern neighbour has chosen to develop its own infrastructure, and after EU sanctions were imposed on it, Estonia has had to diversify its international trade and develop its infrastructure to remain competitive in the region.

The quality of its ports, which rank particularly highly in the World Economic Forum's global competitiveness index, are testament to Estonia's ambitions. Capacity at the port of Tallinn has more than doubled since 2009. The port is 100% navigable all year round and due to its free zone status, it has no customs procedures and has simplified measures for transit.

Rail is key to its cargo sector, carrying around 80% of all freight. Its state-run railway company is beginning to show signs of weakness though. It made a €10m loss in 2016 and its network is suffering after receiving smaller support payments from the EU. Furthermore, Russia is finding new ways for its freight to bypass the Baltic states. Despite this, the country is involved in a highly significant European infrastructure project. The Baltica railway, which will connect Tallinn, Riga, Kaunas, Vilnius, Warsaw and Berlin via high speed



Infrastructure



In 2016, the Estonian government announced plans to invest an additional €1.5bn in road construction for Estonia over the next 15 years, aiming to turn all of the country’s major roads into four-lane highways. The government has charted a thorough plan for the period until 2035 which involves a financial scheme for expanding the roads from Tallinn to Tartu, Pärnu, and Narva to four lanes in the future.

The Estonian government granted a €19.8m tender to Nordecon, an Estonian Construction Company for reconstruction of the Haabersti road intersection in April 2017. Phase one of the project comprises a 277 m road bridge in the direction of Paldiski Road and phase two will include construction of a roundabout with traffic lights.

In August 2017, Estonia’s Road Administration and infrastructure company TREV-2 Grupp signed a €51m contract for construction of a new four-lane section of highway between Kose and Ardu. The construction is scheduled for completion in 2020 and will shorten the length of the Tallinn-Tartu highway by around 5 km.

Road

The Estonian road network has a total length of 16,489 km and its strength lies in the country’s national roads. The Ministry of Economy is responsible for the activities of the road transport and communications falls within the jurisdiction of administration of the Estonian Road Administration, ERA.

Numerous county-based maintenance procurements for the development and

maintenance of road infrastructure have been carried out by the Estonian Road Administration over the past few years. In 2015, the country started work on 421 projects funded by the EU (European Union). The total value of these 421 projects was €1,082m. Around €108.6m of this EU funding was used for road construction, with €45.7m used to rebuild the Vão-Jüri section of Tallinn’s ring road.

Rail

Estonia has a total of 2,146 km of railways, including 1,510 km public and 636 km non-public railway, of which, 133 km is electrified. The system is based on a 1,520 mm gauge, attuned with the railway networks in Eastern Europe as well as Russia. The Estonian

Technical Surveillance Authority regulates and surveys the infrastructure of the railway network which is mostly owned by the state.

In 2016, Estonian and Finnish ministers signed a memorandum of understanding

for the construction of rail tunnel between Helsinki and Tallinn. The Construction of the tunnel will start between 2025 and 2030, with work lasting between eight to ten years, while the total cost of the project is estimated to be between €9,000m and €13,000m.

Estonia



The Estonian railway company Eesti Raudtee announced in April 2017 to invest approximately €75m in track reconstruction and the erection of new structures in the western part of Harju County over a period of five years. In 2018, track works will be executed on the Tallinn-Paaskula railway and at the sections of Paaskula-Laagri and Laagri-Udra, the two principal tracks. In 2019, works at the stations of Klooga,

Keila, and Paaskula will be performed. In the subsequent year construction works on the bridge of Paldiski Road, Tallinn will be executed, and in 2021 new tracks and platforms will be constructed at the main railway station of Tallinn. Alongside, a new rail traffic control system for western Harju County will also be installed.

In January 2017, the Baltic States

entered the contract for implementation of the Rail Baltica project, one of the biggest rail projects with standard 1435 mm gauge railway connecting Tallinn – Riga – Kaunas – Vilnius – Warsaw – Berlin with extensions to other European cities such as Venice. The project will also allow for high-speed train operation. Originally inaugurated in 2015, the project is expected to be operational by the end of 2026.

Air

Tallinn International Airport is Estonia's largest airport, located 4 km south-east of Tallinn's city centre. Operated by state-owned company AS Tallinna Lennujaam, the airport handles approximately 2.2m passengers. A total of 569,500 passengers were carried by the Estonian air transport enterprises in 2016, 9,500 passengers in domestic

air traffic and 560,000 passengers in international air traffic. The passenger traffic volume of air transport enterprises crossed 1bn passenger km mark in 2016.

In 2016, a project to expand and update the airside traffic area and the passenger terminal was initiated

to improve the Tallinn airport's infrastructure capacity. Airport runway was extended to 3,480 m for €34m in 2016. Further, an investment of approximately €127m in the development project is expected between 2016 and 2020.

Sea

The major ports of Estonia are Kuivastu, Kunda, Muuga, Parnu Reid, Sillamae, and Tallinn. The Port of Tallinn is the biggest port authority in Estonia with a cargo volume of 5.9m tonnes. As of 2016, the total cargo volume of Estonia was approximately 33.6m tonnes. The average gross tonnage of cargo vessels totalled about 11,000 tonnes. The transit

goods were loaded and unloaded in ports in the amount of 18.1m tonnes. The container transportation throughput amounted to 204,400 TEUs (twenty-foot equivalent units) in 2016. The number of containers shipped out of Estonian ports on vessels was about 100,300 TEUs, and the number received at Estonian ports was 104,100 TEUs.

The Estonian government declared expansion projects for the Port of Tallinn in 2016. Over the next 15 years, it will include reconstruction in the vicinity of the capital's Old City Harbor, build new entertainment and retail areas near the planned Reidi Road, expand the port's A and D terminals, and work to ease traffic congestion in the area.

*Due to a lack of reliable data, Ti is not able to provide information on Estonia's key logistics providers.

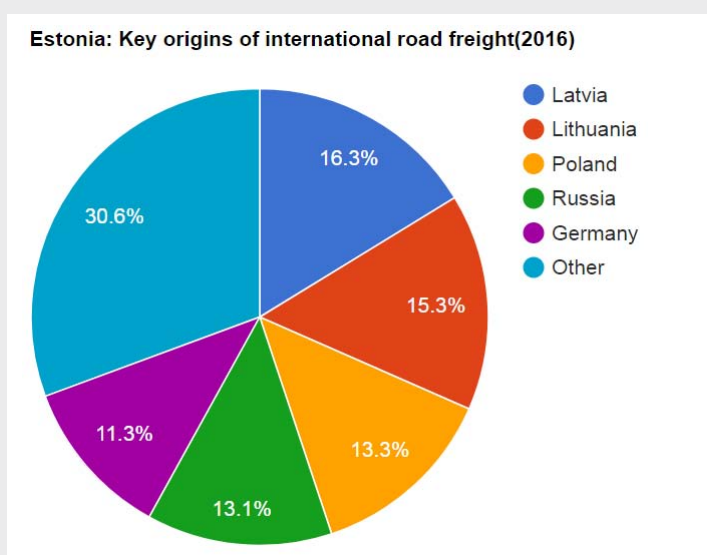
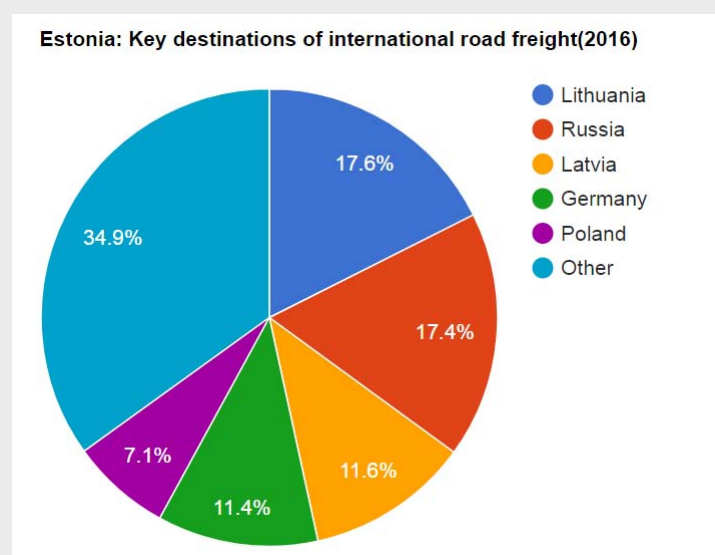


Market Size

Estonia: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	2.5%	47	4.4%	55
Express	5.9%	103	6.6%	133
Freight Forwarding	1.3%	101	5.0%	122
Road Freight	0.7%	1,318	4.9%	1,597

Source: Ti

Origins and destinations of international road freight



Key destinations and origins of international road freight in Estonia(2016)					
Loaded in Estonia			Unloaded in Estonia		
	m tkm	%		m tkm	%
Lithuania	414	18%	Latvia	410	16%
Russia	410	17%	Lithuania	387	15%
Latvia	272	12%	Poland	336	13%
Germany	268	11%	Russia	331	13%
Poland	167	7%	Germany	286	11%
Other	822	35%	Other	773	31%
All countries	2,353	100%	All countries	2,523	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Estonia to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Finland



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Finland is the world's 44th largest economy, with GDP of €216bn. Finland has the world's 17th highest standard of living, with GDP per capita of €39,296. Finland is the world's 42nd largest exporter, with exports of €52bn. Finland is the world's 43rd largest importer, with imports of €55bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.4%. On the same basis, real import growth is predicted at 2.4%. Real export growth is predicted at 2.5%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Sanctions on neighbouring Russia have hampered Finnish trade, with the country maintaining extensive import and export relationships with its neighbour. Finland is currently experimenting with a Universal Basic Income, which proponents argue will reduce the overall welfare burden of the state. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 15th in World Bank's Logistics Performance Index, scoring 3.92 out of 5. The World Economic Forum ranks the quality of its roads as the 21st best globally, scoring 5.4 out of 7. Its railroads rank 8th best globally, scoring 5.6 out of 7. Its ports rank 5th best globally, scoring 6.2 out of 7. Its airports rank 5th best globally, scoring 6.3 out of 7.
<i>Source: TI</i>	

third largest logistics provider in Finland (excluding mail revenues). On the same basis, the post office of Sweden and Denmark, PostNord, is also among the top 10 logistics providers. Other local heroes in the top 10 include Suomen Kaukokiito, Freja Transport & Logistics and Helsingen KTK.

Analysis

Like in other Scandinavian markets, Finland's logistics industry is concentrated in the south of the country, close to its economic and demographic centres.

Finland's largest ports are Kilpilahti (Sköldvik), HaminaKotka and Helsinki. Its main export ports are HaminaKotka (forestry and chemical products), Sköldvik (oil), Kokkola (ores and concentrates), Helsinki (general cargo) and Rauma (forestry products). Its primary import terminals are Sköldvik and Naantali for oil, and Helsinki, HaminaKotka and Raahe for steel. Bulk logistics is disproportionately important in Finland relative to most other European markets.

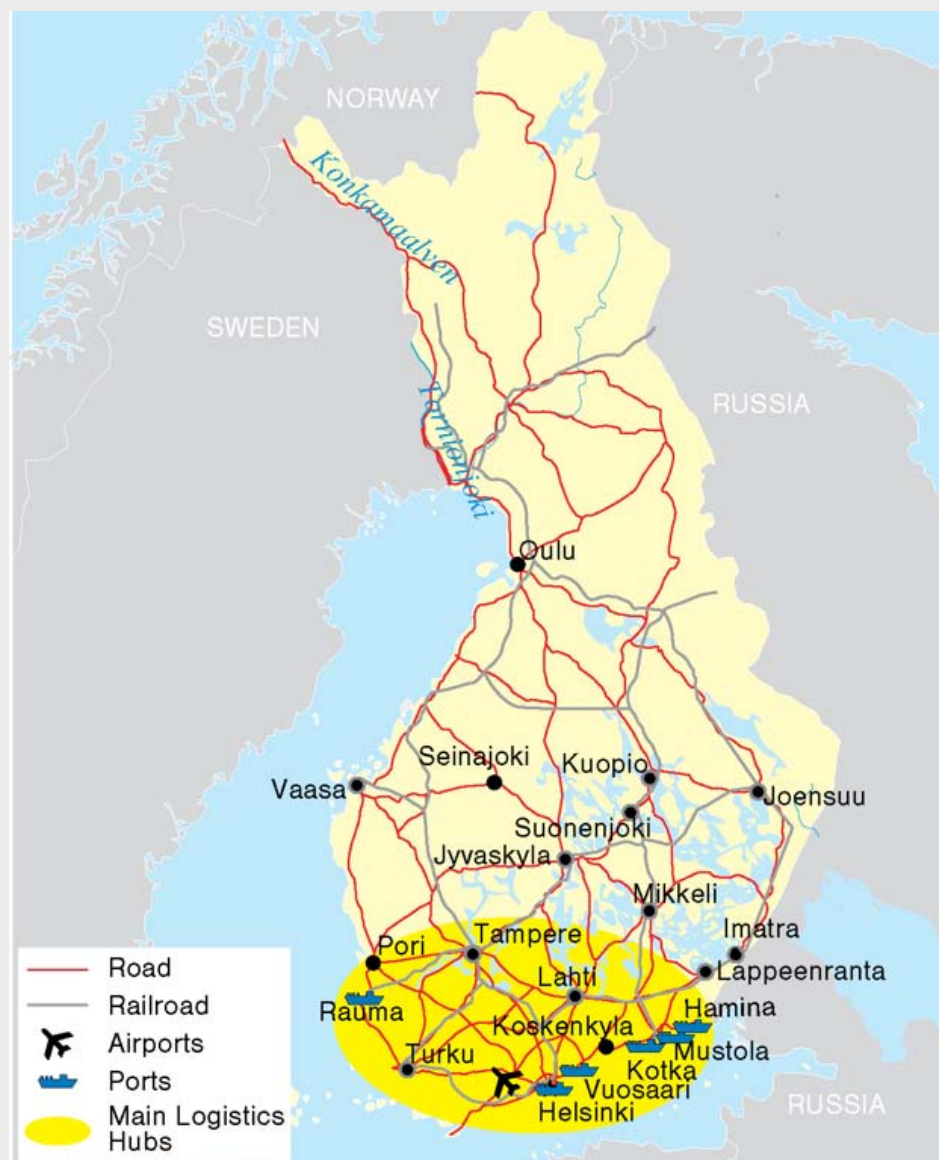
As for container traffic, the Port of HaminaKotka handled 631,334 TEUs in 2016, while the Port of Helsinki handled 451,266 TEUs.

Finland's primary air freight hub is Helsinki-Vantaa airport, which handled 177,000 tonnes in 2016. Over 90% was international freight. In total, Finland's international air freight amounted to 186,000 tonnes in the year.

While the usual global LSPs are present at the top of the market, such as DB Schenker Logistics, Deutsche Post DHL, DSV, Kuehne + Nagel and UPS, they compete against several serious 'local heroes', which seem to play a larger role in logistics in Scandinavian markets than elsewhere in Europe. One such local hero is the postal operator, Posti Group. In common with other post offices across Scandinavia, Finland's Posti Group has successfully diversified into other areas of logistics besides its core mail and parcels business. This is no token effort. Posti Group claims to be the market leader in warehousing services in Finland as well as one of the three largest transport operators. Overall, Posti Group is ranked as the



Infrastructure



Road

Road transport is the most important mode of transport within Finland. According to the Finnish Transport Agency the total volume of goods transported by lorries in Finland in 2014 was 274m tonnes. Road transport amounted to 20.3bn tonne kilometres (tkm) and accounted for 70% of domestic freight traffic. Most of the transported goods were generated by construction (soil and products for the

construction industry), the food cluster (agricultural products and foodstuffs) and the forest industry (wood-based raw materials and forest products). In addition, 11m tonnes of international trade in 2014 was road transports.

The Finnish road network is approximately 454,000 km long in total. This includes around 350,000 km of private and forest roads, and 26,000 km of municipal streets. It also includes

78,000 km of state-owned roads, including two international highways: the E4 European highway in the north-south direction and the E18 European highway in the east-west direction. Approximately 65% of highways are paved. Motorways in Finland are still comparatively rare due to the fact that traffic volumes are not large enough to motivate construction. There is some concern amongst logistics providers about Finland’s road infrastructure. In South Finland the biggest concern is road capacity, whilst in North and East Finland it is the condition of the roads.

In early 2016 the Finnish government granted €325m to be spent on repairing road surfaces, structures and bridges between 2016 and 2018. It also allocated €364m to transport infrastructure development projects between 2017 and 2019. This includes €163m allocated to public roads for road improvements, as well as the building of overtaking lanes and truck parking. €30m has been allocated to private roads in the form of government grants, whilst €70m has been allocated to improving transport in the urban regions of Helsinki, Turku, Tampere and Oulu.

In November 2016, Finland saw the opening of the Tampere road tunnel, a 2.3 km tunnel under one of the country’s largest cities. The four-year project has improved both long-distance east-west traffic links and local congestion in the city. In late 2015 the construction of the Hamina–Vaalimaa motorway began. The projects consists of 32 km of motorway which will form a key part of the E18, Finland’s most important international road connection. It is expected to be completed in 2018, on a public-private partnership basis.

Finland



Rail

Due to Finland's production locations and structures, railways are a more important transport mode for domestic freight than in other EU countries. In 2015 the total volume of goods transported by rail was 33m tonnes, while the transport performance amounted to 9.6bn tonne-kilometres. The railways serve the forest, metal and chemicals industry, as well as the transit traffic. The upturn in the mining industry has had a visible impact on transports. The key types of goods transported are forest products and wood-based raw materials.

Finland has 5,944 km of railways in use, of which 3,256 km are electrified lines. This includes 5,342 km of single-track railways. Nearly €200m a year is spent on track maintenance. The rail width of the Finnish rail network is 1524 mm, which differs from the rail width of 1435 mm in use in most parts of Europe. The network interconnects the major Finnish cities such as Helsinki, Turku, Pori, Tampere, Jyväskylä, Rovaniemi, Lisalmi and Joensuu. It also connects Finland to Sweden via Tornio, and to Russia via Vainikkala, Imatrankoski, Niirala and Vartius.

In 2016 the government allocated €101m to railway improvements between 2017 and 2019, including being able to enable an increased axle load of freight trains on the line sections from Tampere to Seinäjoki and Tuomioja to Raahe, repairing the coastal rail line, and replacing safety devices and electrical equipment. In addition, €223m was allocated to improving the maintenance of the railways between 2016 and 2018.

Air

In 2016 the total volume of goods transported by air internationally was 186,000 tonnes. The total volume of domestic air transports was 2,864 tonnes.

Finland operates 21 airports which handle both air freight and passenger traffic. The busiest airport in Finland is

Helsinki-Vantaa Airport, which handled 177 284 tonnes of freight and mail in 2016. International freight accounted for 93% of these volumes.

As part of Helsinki Airport's expansion plan, started in 2013, Finnair opened a new cargo terminal at the airport in March 2017. Work on the 35,000 sq

m terminal began in March 2015 and cost €80m. It accommodates Finnair's new Airbus A350 XWB fleet and includes specific freight processing areas for pharmaceuticals and life science products, as well as perishable products, such as fish and shellfish.

Sea

The Finnish Transport Agency maintains 8,300 km of coastal fairways and 8,000 km of inland waterways, including nearly 4,000 km of fairways used for merchant shipping. In 2016 domestic freight traffic on water transport amounted to 103m tkm. The total volume of goods transported domestically via waterborne transport was 412,000 tonnes.

Finland's largest ports, by the amount

of goods transported, are those of Kilpilahti (Sköldvik), HaminaKotka and Helsinki. The main ports for exports are HaminaKotka (forest industry, chemicals and transit traffic), Sköldvik (oil), Kokkola (ores and concentrates), Helsinki (general) and Rauma (forest industry). The main ports for imports are Sköldvik (oil), Helsinki, HaminaKotka, Raahe (steel industry) and Naantali (oil). In

2016 the Port of Helsinki alone handled 11.6m tonnes of cargo and 451,266 TEUs, whilst the Port of HaminaKotka handled 13.4m tonnes and 631,334 TEUs.

In addition to the Saimaa Canal, which connects the Saimaa Lake District to the sea, Finland's waterway network has 31 other lock canals.

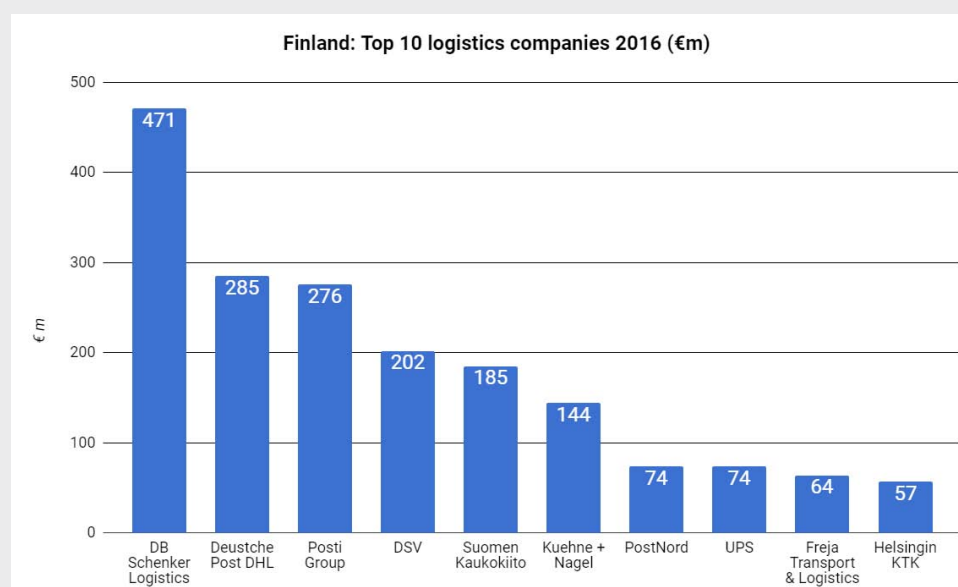


Market Size

Finland: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	1.4%	236	1.6%	251
Express	3.9%	467	5.0%	567
Freight Forwarding	1.0%	635	2.9%	713
Road Freight	-0.4%	4,580	2.0%	4,960

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Finland

1. DB Schenker is represented in Finland by Schenker Oy. It provides domestic land transport, parcel deliveries, home delivery services, domestic warehousing services and other contract logistics services. Headquartered close to Helsinki airport, it has around 1,325 employees.

2. DPDHL provides services across Finland through its Global Forwarding,

Supply Chain, Express and Freight divisions. It operates a number of facilities, most concentrated to the South of the country, with a total floor space of over 121,000 sq m. In March 2016 DHL, together with Posti and Bring, began to jointly offer a dedicated B2C infrastructure for parcel deliveries across Scandinavia, Finland and the Baltic states.

3. Posti Group, formerly known as Itella Group until January 2015, is the corporate branding of Finland Post Group. Its parcel and logistics services division provides solutions for freight, transportation and warehousing needs. It operates in Northern Europe and Russia, and also runs global operations through its partners.

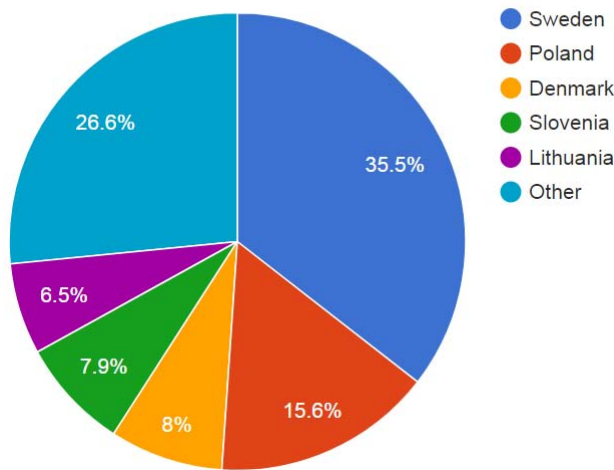


4. DSV operates from 13 offices in Finland, serving the country through air, road and sea freight, express, project logistics and contract logistics. The company has 70,000 sq m of warehousing space in Finland.

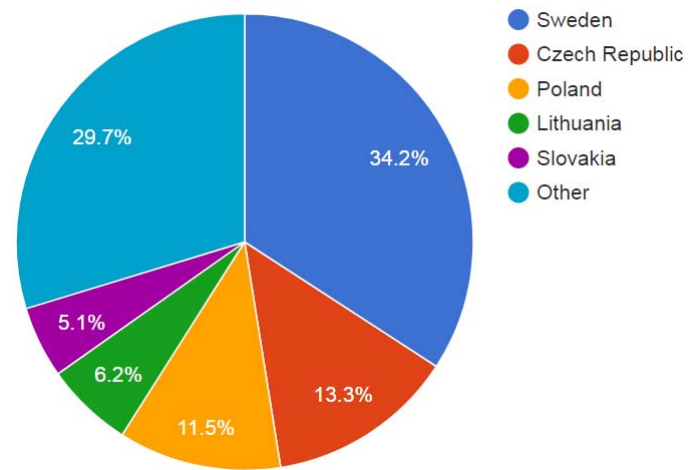
5. Suomen Kaukokiito is a private transport business offering nationwide road freight services across Finland. It employs around 2,000 people, has a network of 29 terminals and operates a fleet of more than 1,000 vehicles.

Origins and destinations of international road freight

Finland: Key destinations of international road freight(2016)



Finland: Key origins of international road freight(2016)



Key destinations and origins of international road freight in Finland (2016)

Loaded in Finland			Unloaded in Finland		
	m tkm	%		m tkm	%
Sweden	853	36%	Sweden	760	34%
Poland	374	16%	Czech Republic	296	13%
Denmark	193	8%	Poland	256	12%
Slovenia	189	8%	Lithuania	138	6%
Lithuania	155	6%	Slovakia	113	5%
Other	638	27%	Other	661	30%
All countries	2,402	100%	All countries	2,224	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Finland to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

France



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> France is the world's 6th largest economy, with GDP of €2,249bn. France has the world's 22nd highest standard of living, with GDP per capita of €34,826. France is the world's 8th largest exporter, with export of €442bn. France is the world's 6th largest importer, with imports of €507bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.6%. On the same basis, real import growth is predicted at 4.0%. Real export growth is predicted at 4.3%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> France is struggling to bring down its unemployment rate, which stands at roughly 10%. Tourist arrivals to France dropped 8% in the first quarter of 2016 due to terrorist attacks. This trend threatens the €40bn generated in revenue by tourism each year. Presidential and legislative elections were held in France between April and June 2017. President Emmanuel Macron's programme included reforms to develop a more flexible labour market and reduce the burden on companies. France has become more price-competitive compared with its neighbours. French exports appear ready to stagnate in 2017. However, a slowdown in business growth among France's main trading partners will counterbalance this beneficial effect. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 16th in World Bank's Logistics Performance Index, scoring 3.90 out of 5. The World Economic Forum ranks the quality of its roads as the 6th best globally, scoring 5.1 out of 7. Its railroads rank 26th best globally, scoring 6.0 out of 7. Its ports rank 23rd best globally, scoring 5.3 out of 7. Its airports rank 13th best globally, scoring 5.9 out of 7.

Source: TI

Analysis

France hosts one of the world's most developed logistics markets, as befits a nation positioned adjacent to the strongest economies in Europe; Germany, the UK, Spain and Italy. Strong national champions such as La Poste, SNCF and CMA-CGM compete with regional and global giants such as FedEx and DP DHL Group, and a large portion of SMEs. The country also hosts a number of start-up companies experimenting with new technologies, such as Convargo and Stuart.

French road and rail infrastructure is well developed and maintained, with the World Economic Forum ranking the country as number six and number seven in the world for each of these, respectively. The country established the first high-speed rail network in

Europe during the 1980s, and has since expanded its connections to other European countries, such as Spain and Belgium.

The French road network is highly developed, with much of the financing for major motorway arteries extracted through tolls. One of the unfortunate consequences of this funding method is that it incentivises companies to route road freight through non-toll 'routes nationales' roads (N-roads), which are typically of a lower capacity and quality. As such, traffic is increased in certain areas.

Rail transport is mostly operated by SNCF, the French national railway company. Over the past few years, France has continued to invest substantially in railways. Today, the high-speed rail lines link Paris and

other major French cities to many destinations outside of France, including the UK, Belgium, The Netherlands and Germany.

Paris-Charles de Gaulle Airport is France's largest airport and the global hub of the airline Air France-KLM and the main European hub of the SkyTeam alliance. It is also the European hub of FedEx and La Poste and serves all the main international cargo companies.

With a processing capacity of 3.6m tonnes of cargo per year, Charles de Gaulle Airport is one of the most efficient European hubs.

France operates a number of large maritime ports, including Marseille and Le Havre, two of the largest ports in Europe. The Port of Marseille, the largest port in France, has become a major player in the Euro-Mediterranean zone because of its land and maritime infrastructures which allow it to accommodate the latest generation of ships. Le Havre is the number one French hub for import and export of vehicles as well as the second biggest French port for the crude oil supply of France.

Labour relations are one of the most crucial aspects of operating a logistics business in France. The country has an extensive list of protections designed to empower workers, though these legislative requirements have been criticised for limiting the flexibility of business. There have been a few significant developments in this area over recent years.

In 2015, as Economy Minister, France's

France



current President Emmanuel Macron led the implementation of legislation allocating a French minimum wage to all commercial drivers conducting cabotage or international transport through French territory. Introduced in July 2016, the law was intended to prevent foreign companies from engaging in a process of ‘social dumping’, using Eastern European drivers on low wages

to outcompete domestic drivers. Whilst the law has prevented the erosion of market share from French companies, it has also had the effect of raising the cost of international services, with the difference largely extracted from customers.

Since winning the Presidential elections in May 2017, Macron has launched a

decisive effort to reform France’s labour laws, issuing five decrees in August 2017 to overhaul and simplify the Code du Travail; the document containing the majority of French labour legislation. The reforms chiefly target small and medium-sized businesses, empowering company management to hire and dismiss workers with greater flexibility.

Infrastructure



Road

France has the densest road network in Europe, exceeding 1m km (620,000 miles) in length and features more than

11,000 km of motorways as of 2016. French roads are divided into three main categories: municipal, departmental, and

national. The national road system is part of the state’s domain further divided into two subcategories: highways and national roads. Departmental roads belong to the departments in which they lie and the local municipal roads belong to the municipalities.

France has initiated various financing deals for the refurbishment of roads. In 2016, it commenced work on a new road link that will connect the A89 and A6 Autoroutes in France’s Rhône Department. The work, expected to complete in 2018, will help reduce journey times between Bordeaux and Geneva. Recently in February 2017, The French government signed an agreement with infrastructure groups Vinci, APRR, and Sanef for a major €800m motorway investment plan. The agreement includes 32 upgrading projects for highway interchanges and 25 construction projects to provide motorway service stops devoted to car-pooling. These projects are expected to start by the end of 2017. In addition, the oldest road tunnel Col de Tende linking France and Italy is also being modernised with an overall cost of €280m. This new Col de Tende Road Tunnel is due for

France



completion in 2020.

The French city of Bordeaux awarded French construction company Razel-Bec a contract for construction of a new bridge across the Garonne River in July 2017. The 550 m bridge over the

River Garonne will be 45 m wide and lie between Bordeaux and the city of Floriac. This €83.9m construction will start in September 2017 and will finish by the end of 2019.

In addition to upgrading and

modernising its existing infrastructure, France also plans to cover 1,000 km (621 miles) of roads with solar panels, facilitating power provision to as much as 8% of the French population. The installation is expected to complete in 2021.

Rail

France has a total of 29,901 km of railway network. Rail transport is mostly operated by SNCF, the French national railway company. Since the past few years, France has continued to invest substantially in railways, with its overall road and rail project pipeline having a value of €19.13bn. Today, the high-speed rail lines link Paris and other major French cities to many destinations outside of France, including London, England; Brussels, Belgium; Amsterdam, The Netherlands; and Cologne, Germany. In 2015, France launched the €25bn multi-phased project - "The Grand Paris Express project", to improve connectivity in the country's suburban districts. This project is designed to cover 205 km

of the transport network comprising the extension of two lines of the Paris Metro and the construction of four new automated lines; it is projected to benefit approximately 2m passengers a day.

As part of major national railway projects programmes carried out by SNCF, France designed a new mixed traffic rail line with an estimated cost of €5.5bn, to fill in the gap between the Nîmes-Montpellier bypass to the north and the Perpignan-Figueras (Spain) to the south in June 2017. The 155 km new line between Montpellier and Perpignan will connect 55 cities and three state departments and support the creation of a high-speed Trans-European and interregional network. The work on this rail line is expected to commence after

2020.

On July 2017, France launched two new high-speed rail lines, linking Paris to the western cities of Bordeaux and Rennes. The country invested approximately €8bn in the stretch to Bordeaux and €3.4bn in Rennes line. This new 60 km high-speed stretch is due to open by the end of the year 2017 in the south of France. In addition, SNCF confirmed that the 22 km long Belfort-Delle line would become operational again in December 2018, thus facilitating the creation of a high-speed rail link between France and Switzerland. The reconstruction work and electrification of the railway line is already under progress and is expected to be completed by the summer of 2018.

Air

Despite a vast airport infrastructure, the majority of the airports in France receive relatively few passengers. There are around 170 airports in France. The principal international airports of France are located in Roissy-Charles de Gaulle, Orly, Nice, Lyon, Marseille, Toulouse, Bâle-Mulhouse, Bordeaux, Nantes, Beauvais, Lille, Montpellier, Ajaccio, Bastia, Strasbourg, Biarritz, and Brest; Paris Charles de Gaulle is the largest, catering around 66m passengers a year.

It is followed by Paris Orly (31m), Nice (12m), and Lyon (9m).

In 2016, France's air freight traffic volume reached 3.3m tonnes. The cargo traffic volume in Paris-Charles-de-Gaulle Airport amounted to nearly 2m tonnes, compared to more than 65,000 tonnes in Toulouse-Blagnac Airport.

In 2015, expansion plans for the airport infrastructure were announced, including the Toulouse-Blagnac International

Airport expansion project. This project started its second phase development with the launch of terminal expansion and reconfiguration. Modernisation of the arrivals area, including the ground floor of the terminal building was the first development and was completed in 2015; it transformed the area to a more functional set-up. Works on the further expansion began in 2016 and the renovated terminal will become operational in 2018.



Sea

France possesses a number of large maritime ports, including Marseille and Le Havre, two of the largest ports in Europe; other major ports are Bordeaux, Dunkirk, La Rochelle, Maritime Le Havre, Saint-Nazaire, Maritime Guyane, Brest, Calais, Sud de France, Ports Normands Associés and Ports Toulon Provence. Marseille, Rouen, and Le Havre serve as entry points for imported crude oil in bulk quantities. A substantial volume of English Channel traffic is handled by Calais, nation's major passenger port.

French overseas ports in the Indian Ocean, Polynesia, New-Caledonia, the Caribbean, and South America are entry points into the EU (European Union). All these ports accommodate the largest vessels to serve the hubs, such as 18,000 TEU container ships, 400,000-tonne tankers and large LNG

(Liquefied natural gas) carriers of 270,000 cu m, as well as flagship cruise liners.

The Port of Marseille-Fos had a total throughput of 81m tonnes of cargo for the year in 2016. The French Mediterranean port container traffic reached at 1.25m TEUs, helping general cargo to grow 3% overall to 18.5m. The Saint Nazaire Port recorded a total traffic volume of 25.5m tonnes.

Significant investments, expansion of existing terminals and construction of new port terminals, and public/private partnerships have been implemented so far to enhance the port infrastructure in France. In 2016, a €675m two-phase expansion project for the Port of Calais, the largest passenger port in France connecting with the Port of Dover in the UK, was announced by the

French government. This project will increase the port capacity and allow it to accommodate the newer 240m long ships; it will also provide three new service berths and ground infrastructure, such as buildings, roads, and yards. The project is scheduled to complete by the end of 2021.

Recently in January 2017, the fourth liquefied natural gas import terminal in France, Dunkirk LNG, located in Dunkirk harbour, started commercial operations. The facility is the second largest in mainland Europe and is the only one in Europe connected directly to the two markets, France and Belgium; it can receive up to 150 LNG carriers per year, with capacities ranging from 65,000 cu m up to Q-Max vessels and a transport capacity of 267,000 cu m of LNG. The terminal includes three 200,000 cu m LNG storage tanks.

Channel Tunnel

The Channel Tunnel is the longest undersea tunnel in the world. It provides a transport link for passengers and freight from Folkestone (Kent) in the UK to Coquelles (Pas-de-Calais) in France.

It consists of three tunnels, two single track rail tunnels and a service tunnel all bored 40 m below the Channel seabed. The total length of the Tunnel is 50 km, of which 30 km is below the sea.

Groupe Eurotunnel is responsible for the management and operation of the Channel Tunnel. It coordinates operations through two terminals, located at either end of the tunnel, in Folkestone (Kent) and Coquelles (Pas-de-Calais) which provide access to the

Channel Tunnel. It also controls a fleet of 27 shuttles which transport passenger vehicles or trucks through the Tunnel.

In each of the two rail tunnels, there are two cross-overs located a third of the way along each tunnel, allowing traffic to pass from one tunnel to the other.

The transportation of trucks along the Channel Tunnel is carried out by dedicated "truck shuttles", different to "Le Shuttle" which is responsible for all vehicle transport other than trucks. Truck shuttles occur every 10 minutes.

The Channel Tunnel also provides paid access to rail freight and passenger trains from all interested railway operators. Amongst those customers

Eurotunnel counts principally are Eurostar, SNCF and its subsidiaries, DB Schenker and Europorte.

Groupe Eurotunnel has two major subsidiaries that are responsible for its operations outside the Channel Tunnel, Europorte which operates a rail freight network in France, and its subsidiary, GB Railfreight (GBRf) which operates a rail freight network in the UK.

In 2016, the Channel Tunnel traffic volumes reached record highs. Over 1.64m trucks transited the tunnel in 2016, transporting around 21.3m tonnes of freight. Rail traffic volumes amounted to 1,797 freight trains carrying 1.04m tonnes of cargo.

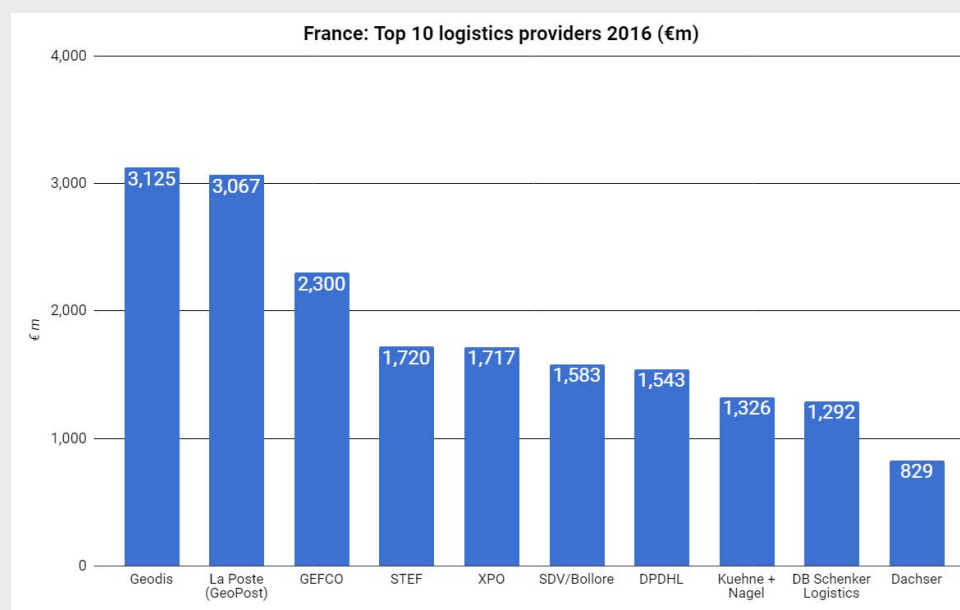


Market Size

France: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	1.8%	8,125	1.8%	8,714
Express	5.3%	7,152	5.3%	8,790
Freight Forwarding	2.2%	4,102	3.3%	4,677
Road Freight	1.8%	34,849	2.5%	38,446

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in France

1. Geodis lies within SNCF Logistics' Global Offerings segment. It is a global multi-modal logistics provider that is based in Europe. It offers the following solutions: Supply Chain Optimisation, Freight Forwarding, Contract Logistics, Distribution and Express, and Road Transport.

2. La Poste is France's leading postal operator and Europe's second-largest

mail and express parcel specialist. The multi-business group structure is organised around three major business lines: Mail, Parcels-Express and Banking. La Poste operates in the parcels market through ColiPoste in France and in the express market through GeoPost, which comprises all express subsidiaries in Europe and worldwide.

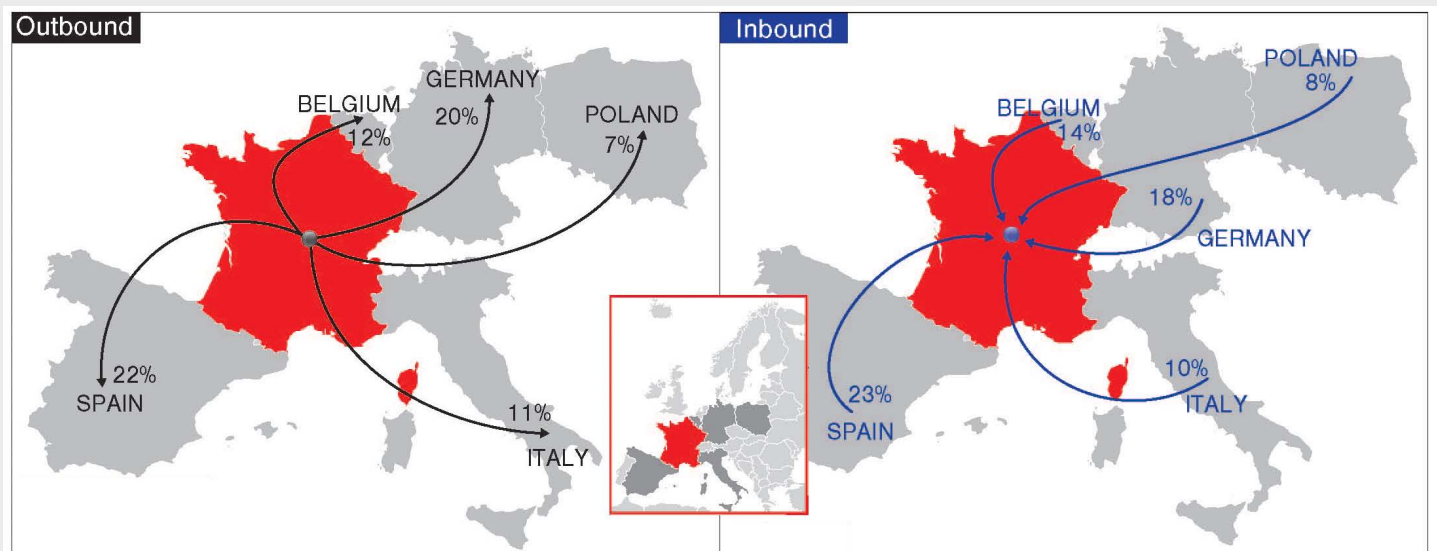
3. GEFCO was founded in France in 1949, with the original purpose of providing finished vehicle transportation and logistics services to auto manufacturers. Since then, it has expanded its range of services to include general contract logistics and road freight, as well as freight forwarding services.



4. STEF is a leading temperature-controlled transport and logistics provider in France. It provides a range of services, predominantly in the food sector, related to the distribution of chilled, frozen or ambient goods. It operates a network of distribution centres linked by its shared user refrigerated transport services.

5. XPO Logistics Europe acquired French logistics and freight forwarding company Norbert Dentressangle in April 2015. France represented the source of 31.8% of XPO Logistics Europe's total revenues in 2015.

Origins and destinations of international road freight



Key destinations and origins of international road freight in France (2016)					
Loaded in France			Unloaded in France		
	m tkm	%		m tkm	%
Spain	13,064	22%	Spain	15,858	23%
Germany	11,657	20%	Germany	12,341	18%
Belgium	6,907	12%	Belgium	9,271	14%
Italy	6,346	11%	Italy	7,052	10%
Poland	4,174	7%	Poland	5,587	8%
Other	16,481	28%	Other	17,898	26%
All countries	58,629	100%	All countries	68,007	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for France to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Germany



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Germany is the world's 4th largest economy, with GDP of €3,158bn. It has the world's 18th highest standard of living, with GDP per capita of €38,251. Germany is the world's 3rd largest exporter, with export of €1,212bn. It is the world's 3rd largest importer, with imports of €959bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.3%. On the same basis, real import growth is predicted at 5.3%. Real export growth is predicted at 4.1%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> High dependence on exports. Vulnerable to slowdown in Chinese demand. Brexit poses risk to German exports. Germany's ageing population will put a strain on government finances and growth perspectives in the medium-term. Significant wage increases in German industries are likely, including the metal and electrical industry, the public sector and the construction industry, which will negatively affect the country's competitiveness. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 1st in World Bank's Logistics Performance Index, scoring 4.23 out of 5. The quality of its roads ranks 16th globally according to the World Economic Forum, scoring 5.6 out of 7. Its railroads rank 11th globally, scoring 4.4 out of 7. Its ports rank 11th globally, scoring 5.6 out of 7. Its airports rank 12th globally, scoring 5.9 out of 7.

Source: TI

Analysis

With an annual turnover of €260bn, Germany is the largest logistics market in Europe. The country's reputation as one of the world's top logistics locations is also confirmed by the World Bank's Logistics Performance Index which put Germany at the top for the second year running. The country's central location within Europe, combined with a developed transportation infrastructure, a large well-trained workforce and a strong emphasis on innovation, has led many companies to use it as a European-wide distribution hub. In Germany the road, rail and inland waterway infrastructure is mainly publicly funded.

The logistics industry itself is the third largest sector of the German economy behind the automotive and the retail sectors. Approximately 60,000 logistics companies operate in Germany employing around 2.97m people, with

the Mittelstand a key feature of the logistics industry.

The market environment has grown more competitive with the entry of the Central and Eastern European economies to the EU, with low cost suppliers from Poland, Hungary and several other countries undercutting existing transport providers in Germany. However, as a whole, the EU's eastward shift has given Germany's logistics sector a significant boost, characterized by new high-density logistics clusters in the Eastern states of Germany.

Accounting for 40% of Germany's entire logistics market, contract logistics is the industry's largest single segment, with significant possibilities for further growth. Due to the importance of the chemical and automotive manufacturing sectors, the industrial segment is vital and accounts for 73% of the total contract logistics turnover.

Road freight is the dominant mode of transport in almost all industry sectors with approximately 80% of all tonnage of goods transported on Germany's roads and highways. The road freight market accounts for 27% of Germany's entire logistics market and is dominated by domestic companies. Continuous investment in the road network is a high priority for the German government. To address the state of the country's infrastructure, in 2016 the government announced a €265bn infrastructure plan covering the next 14 years.

The German express and parcels' business, as with many others throughout the world, has been driven by online shopping. The sector, especially the international express segment, has good prospects driven by the strength of the German economy. The German parcel market is dominated by DPDHL which has a market share of 45%.

Germany is the largest rail freight market in Europe, however it is faced with intensifying competition coming from the European expansion of incumbents such as SNCF, PKP Cargo, Rail Cargo Group, etc. Rail transport covers about 10% of the market for hauled goods in Germany. DB Cargo dominates the German rail freight market occupying around 62% of the total market share. It also has a leading position in Europe, occupying around 23% of the total market share. Germany experiences a modal shift from road to rail driven by the change in demand patterns which sees demand for low-value, high-volume bulk goods like coal and iron ore move towards high-value goods and small

Germany



consignments of e-commerce products or automotive parts for example.

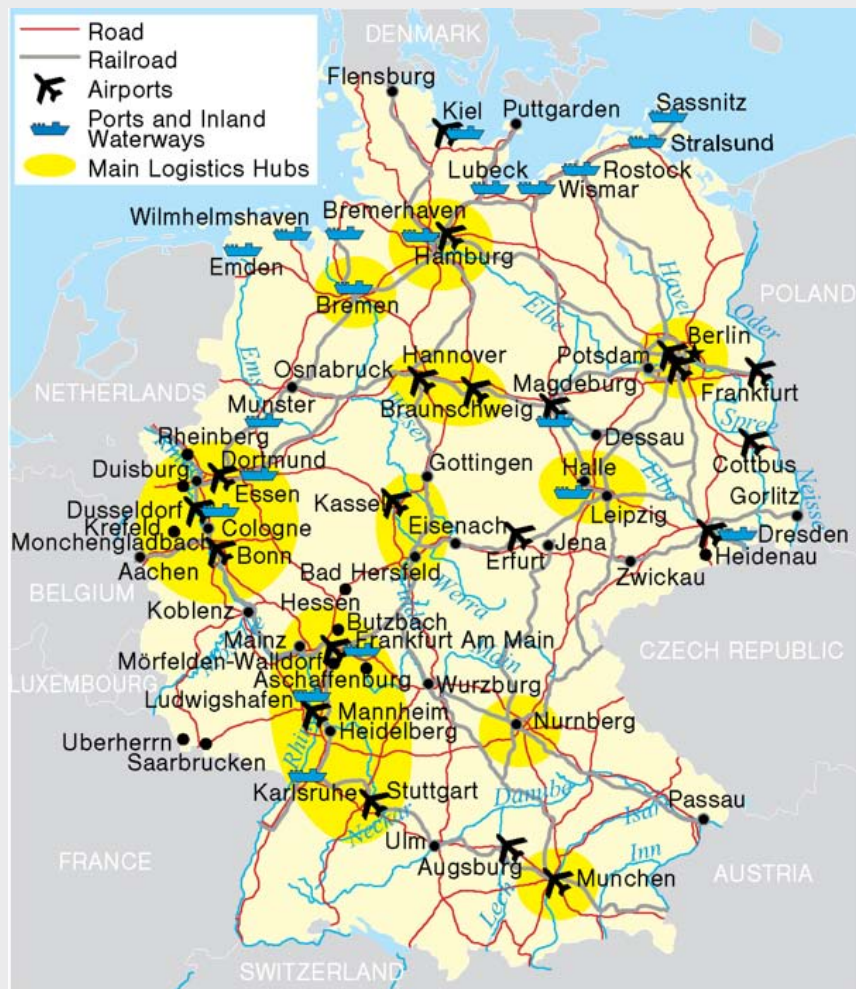
Germany's seaports, which handle over 220m tonnes of goods per year, have remained competitive by investing heavily in infrastructure and port facilities. Together with over 250 additional inland ports, Germany's port infrastructure facilitates the efficient delivery of goods. German ports are "fast ports" in which large seagoing vessels can be unloaded and reloaded in a short time. In the north, Germany's

seaports are an important conduit for trade with the United Kingdom, Scandinavia and the Baltic States.

Germany has positioned itself as a key market for logistics real estate on the continent, particularly due to the accession of the Central and Eastern economies to the EU in 2004. The German property development market delivers around 330m sq m of logistics space. Three business sectors dominate the letting market for warehouse and logistics space,

retail, manufacturing and e-commerce. The Ruhr area records the highest logistics space take-up. The rapid growth in online retail remains the central driver of demand for logistics space in Germany. This requires not only large central warehouses but with delivery times becoming ever shorter, also an increasing number of smaller warehouses as close as possible to end customers. Against this background, logistics property is likely to remain one of the fastest growing sectors over the coming years in the country.

Infrastructure



Road

Germany's road network is 645,000 km long and includes 12,500 km of highways (the Autobahn). Roads form the backbone of Germany's transport industry with approximately 80% of the volumes transported on its roads.

The German Institute of Urban Affairs estimates that 15% of Germany's municipal road bridges need to be completely rebuilt. An example of this, is that trucks over 3.5 tonnes are now being prevented from using a crucial bridge on the A1 at Leverkusen, as it is no longer to fit to carry their weight. A new bridge is expected to be completed in 2020.

To address the state of the country's infrastructure, in March 2016, the German government announced a €265bn infrastructure investment plan covering the next 14 years. The plan prioritises repairing existing systems, with 70% of funds allocated toward maintenance. It has stated that 49.4% of this investment should be spent on the country's roads. This will include

Germany



€1.3bn to be spent on upgrading the A8 Autobahn between Munich and Traunstein, €500m on the construction of the A94 Autobahn between eastern Munich and Pocking, €2.5bn on upgrading and widening the A7 and

A1 Autobahn routes near to Hamburg, and €272m on improving the A661 Autobahn linking Bad Homburg and Offenbach-Kaiserlei. A €330m project to widen the A59 link near Duisburg is also planned. The national A92 highway

is set to be expanded to an eight-lane structure. The 301 federal roads will also be expanded to four lanes and further connected to Freising's northern bypass.

Rail

Germany's rail network is 37,860 km long and includes 20,052 km of electrified lines. Rail is the second most important mode of freight transport within Germany, accounting for 17% of domestic cargo volumes.

Deutsche Bahn is the operator of Germany's railways, as well as being the main user in itself. In 2015 its rail freight division, DB Cargo, accounted for 62% of freight volumes transported by Germany's railways. It handled 300m tonnes of cargo (an 8% decrease from 2014), involving over 4,500 freight trains per day. DB Cargo is focused on the automotive, building materials, industrial and consumer goods, chemicals, iron, coal and steel industries. It is trying to defend its position as the leading rail freight transport company in Europe by introducing a strong quality network with an annual timetable and fixed frequencies for transports that can be planned over the long term. It is also in the process of refitting its freight cars to reduce the noise. However, the performance of the division suffered

from strikes by workers in 2015 over pay and working hours.

The government has allocated 41.3% of its 2016 infrastructure investment plan to be spent on railways.

In addition, a national digital railway strategy was also announced, with federal investment of €5bn a year until 2020. In July 2016, Germany also completed the expansion of the rail terminal at its Container Terminal Altenwerder (CTA). The expansion increased the capacity of the terminals by 140,000 TEUs to 930,000 TEUs per year.

In addition, in December 2016, Berlin announced "BerlinStrategie 2030" which includes expanding the city's light-rail network and re-open existing lines.

In June 2017, the government announced €350m investment plan for the expansion of the infrastructure, which will include a 740 m network for longer trains, digitalisation and automation of transport and loading

processes, and cutting track access charges for operators. It also comprises new and expanded routes of the Rhine Valley, NBS Rhine/Main-Rhine/Neckar, East Corridor & Ruhr-Sieg regions; major corridors connecting Hamburg, Cologne, Frankfurt, Ludwigshafen/Mannheim/Heidelberg/Karlsruhe, Munich and Hanover which are expected to become more efficient as a result of this plan.

By the end of 2017, most of the work on the German Unity Transport Project (VDE 8) will be completed. The German Unity Transport Project 8 (VDE 8) enables high-speed trains at up to 300km/h. The new railway track will connect south and east Germany as well as Italy and Scandinavia. The double-track upgraded and new lines Nuremberg–Erfurt–Leipzig/Halle–Berlin are expected to start operating by the end of the year. The project will basically close the gaps in the German high-speed rail network and will also allow freight trains to take this route.

Air

With its central European location, Germany is a hub for international air transport. The country's largest airport is Frankfurt, which processes nearly 50% of Germany's total air freight volumes.

In 2015 it was the second busiest cargo airport in Europe, handling 2.08m tonnes of freight. It is home to 250 airlines, freight forwarders, cargo handlers and other logistics service providers, and

freight and logistics service providers occupy about 150 hectares at the airport. The airport's facilities for special cargo include Europe's largest perishables centre, the world's most

Germany



modern animal station, and storage facilities for dangerous and valuable goods. Infrastructure improvements in 2015 included the widening of the access road to CargoCity South in order to improve traffic flow and a new truck parking area with more than 70 parking spaces, which has significantly reduced traffic congestion.

Other important cargo airports in Germany include Leipzig Halle, which was the fifth busiest cargo airport in Europe in 2015 (handling 0.98m tonnes). Cologne Bonn (which is home to UPS' European hub) was the 7th busiest European cargo airport, handling 0.74m tonnes. Other significant

airports include Berlin-Tegel, Berlin-Tempelhof, Berlin-Schönefeld, Bremen, Dresden, Dusseldorf, Erfurt, Hamburg, Hanover, Munich, Münster-Osnabrück, Nuremberg, Saarbrücken and Stuttgart.

In June 2016 DHL Express Germany opened a new site at Hanover Airport. The 30,000 sq m, €32.5m site consolidated the operations of two previous facilities and is able to process 6,000 parcels per hour.

In 2016, the government announced €2.2bn funding to construct the new terminal at Berlin Brandenburg Airport. In addition, Germany expanded Terminal 1 and added a new satellite facility for

Terminal 2 in Munich airport in April 2016. These terminals added new services to Hong Kong, Guangzhou, Taipei, Manila, and Hanoi.

The Hamburg Airport, Germany's fifth largest airport, plans to invest a total of around €120m by 2020 for the renewal of its main airport apron. The first phase of the project began in March 2016, involving an area of 59,000 sq m. In addition, the new Hamburg Airport Cargo Centre, with an area of around 20,000 sq m, also began freight-handling operations in May 2016. The airport has invested around €50m in this logistics centre.

Sea

Germany's largest seaports include Hamburg, Bremen, Bremerhaven, Wilhelmshaven, Lübeck and Rostock. Other German ports include Berlin, Bonn, Brake, Cologne, Dresden, Duisburg, Emden, Karlsruhe, Kiel, Magdeburg, Mannheim and Stuttgart. Most of the ports are connected to the intercontinental airfreight networks via nearby international airports.

Hamburg was the third busiest cargo port in Europe in 2014, handling 145.7m tonnes of cargo. It was also the second largest container port in Europe, handling 9.73m TEUs. As a deep-sea

port, it fulfils an important role as a transshipment hub, distributing cargo to the North Sea and Baltic Sea regions. The port receives around 1,100 freight trains per week. It has four container terminals and 50 facilities specialised in handling project shipments and bulk cargoes. The Hamburg Port Authority invested €227.7m in infrastructure in 2015. Projects included a traffic connection Burchardkai, a new railway bridge at Kattwyk, the adjustment of the outer port entry and work on the Rethebrücke bascule bridge. In 2016 Airbus and STUTE Logistics (a fully-owned subsidiary of Kuehne + Nagel) leased space at the newly completed

port-based Goodman Interlink Hamburg logistics centre.

Bremerhaven was the eighth busiest port in Europe in 2014, handling 78.3m tonnes of cargo. It was also the fourth largest container port, handling 5.8m TEUs.

In 2015, Germany adopted national ports strategy which focuses on the optimisation of cargo handling operations through the development of innovative technologies in its ports. The Government backed the initiative by allocating €64m in the period between 2016 and 2020.

Inland Waterways

The Federal waterway network in Germany comprises 7,467 km of inland waterways, of which roughly 75% are rivers and 25% canals. The majority

of cities and the most important industrial centres have access to these waterways.

The main network with a length of approximately 4,800 km includes the Rhine and its tributaries, the Danube, the Weser, and the Elbe as well as the

Germany



grid of canals linking these major rivers plus the Oder. The Rhine provides large parts of the industry of Central Europe with an efficient infrastructure and access to the seaports in the Rhine's estuary area. Another important transport artery is the West-East waterway link from the Rhine via the

West German canal network to Berlin which also allows access to the North and Baltic Seas via the rivers Weser, Elbe and Oder

In 2015, 221.4m tonnes of goods were transported on German inland waterways. This represented a 3.1% decrease on 2014 volumes. One

reason for this decrease was the low water levels of important waterways (for example the Rhine), some of which persisted for longer periods.

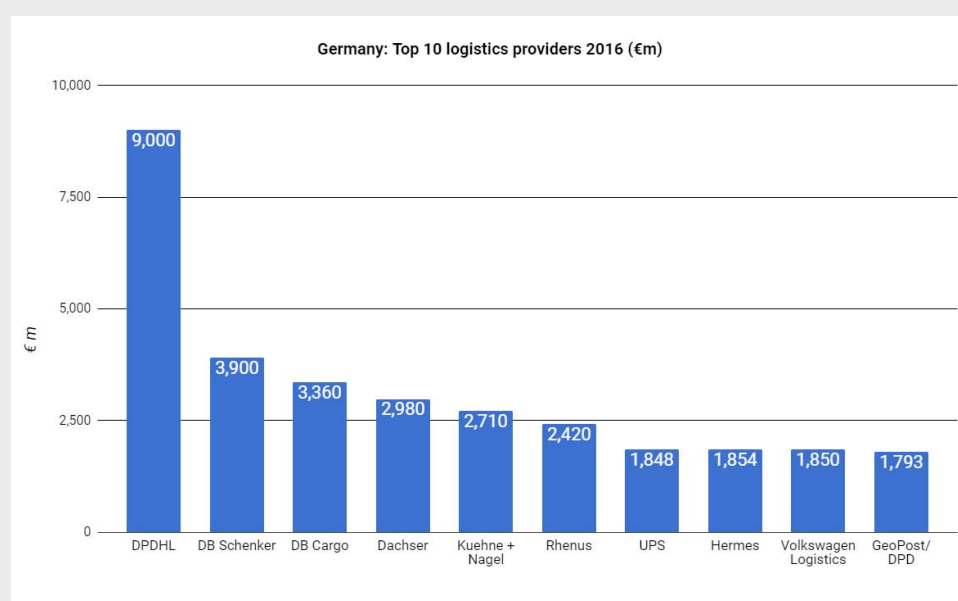
The government has allocated 9.3% of its 2016 infrastructure investment plan to be spent on its waterways.

Market Size

Germany: Logistics Market Sizing Data (2016)				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	1.60%	15,626	1.5%	16,571
Express	5.9%	13,668	5.2%	16,767
Freight Forwarding	3.3%	8,332	3.0%	9,375
Road Freight	2.0%	61,462	2.7%	68,415

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix



Brief summaries of the activities of the top 5 logistics companies in Germany

1. DPDHL headquartered in Bonn, Germany, is the country's largest logistics provider. It offers Express services, including domestic and international timed and day-definite options. In addition, it offers logistics services, including road and rail transport, air and ocean freight, as well as warehousing, distribution and supply chain solutions.

2. DB Schenker Logistics is one of the business units that operates under the DB Mobility Logistics sub-group of Deutsche Bahn. It offers Europe-wide land transport, and worldwide air and ocean freight forwarding, as well as logistics solutions and global supply

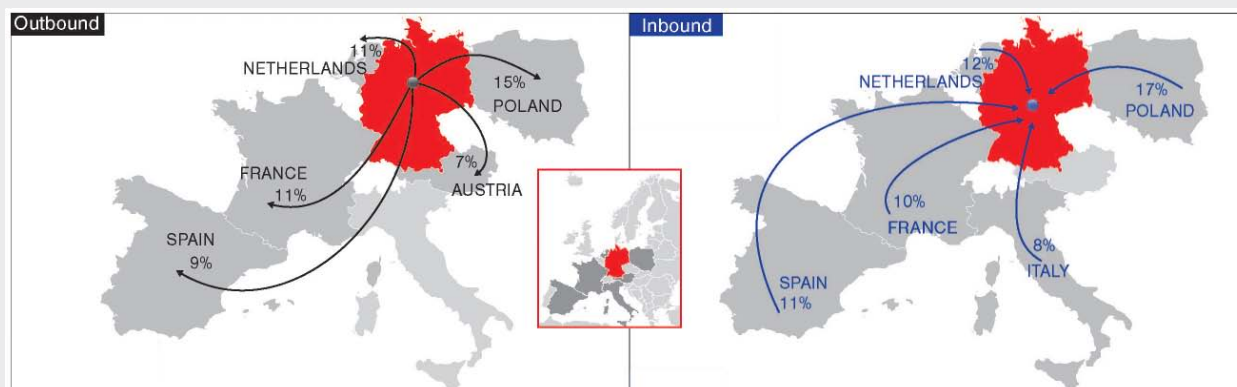
chain management. It provides services for the automotive, high-tech and consumer products industries.

3. Dachser operates 69 facilities in Germany, which are run by 14,316 employees. It processes 37.2m consignments per year, with a weight of approximately 23.9m tonnes. In 2016 it sourced €3.5bn of its revenue from Germany.

4. Kuehne + Nagel in Germany has 13,500 employees working at more than 100 locations. Its national headquarters are located in Hamburg. It provides sea and air freight services, and overland solutions, as well as contract and integrated logistics solutions.

5. Rhenus is a privately-owned German logistics company. The company provides contract, freight and port logistics, as well as public transport. Whilst the majority of its infrastructure is based in Europe, Germany is the company's main market. In 2017, Rhenus Warehousing Solutions introduced a large-scale expansion programme at three business units in Germany in order to respond to sustained growth in the e-commerce sector. In May 2015, Rhenus, through its subsidiary Rhenus Transport SAS, acquired the inland waterway activities of Compagnie Francaise de Navigation Rhenane.

Origins and destinations of international road freight



Key destinations and origins of international road freight in Germany (2016)					
Loaded in Germany			Unloaded in Germany		
	m tkm	%		m tkm	%
Poland	16,909	15%	Poland	19,343	17%
France	12,341	11%	Netherlands	13,358	12%
Netherlands	12,077	11%	Spain	12,477	11%
Spain	9,749	9%	France	11,657	10%
Austria	8,147	7%	Italy	9,286	8%
Other	50,779	46%	Other	48,079	42%
All countries	110,002	100%	All countries	114,200	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Germany to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Greece



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Greece is the world's 49th largest economy, with GDP of €177bn. Greece has the world's 42nd highest standard of living, with GDP per capita of €16,337. Greece is the world's 60th largest exporter, with exports of €25bn. Greece is the world's 47th largest importer, with imports of €43bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 2.8%. On the same basis, real import growth is predicted at 3.5%. Real export growth is predicted at 2.9%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Greece is still recovering from a devastating economic crash and its economy is remains fragile. Government debt is around 170% of GDP and substantial repayments are due to the IMF and EU for bailouts over the next few years. The government was forced into a strict austerity programme in accordance with the IMF and EU's bailout package, which has severely weakened public expenditure. The unemployment rate is over 20%, with youth unemployment close to 50%. The migrant crisis has been particularly difficult for Greece to deal with, both due to its geographical location and its own economic problems. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 47th best in World Bank's Logistics Performance Index, scoring 3.42 out of 5. The World Economic Forum ranks the quality of its roads as the 44th best globally, scoring 4.5 out of 7. Its railroads rank 66th best globally, scoring 8 out of 7. Its ports rank 52nd best globally, scoring 4.5 out of 7. Its airports rank 53rd best globally, scoring 4.8 out of 7.

Source: TI

significant Mediterranean and European transshipment hub. COSCO has plans to double its capacity to nearly 7m TEUs. In addition, the hub has developed close strategic links to Athens International Airport, as well as the Greek rail network.

Overall, the last decade has been bleak for Greek logistics providers, and while the situation is improving now, it faces a long road back just to get to where it was before the recession struck.

Analysis

Greece's logistics market is heavily focused around Athens, with the country's most important sea and air infrastructure, the Port of Piraeus (3.7m TEUs) and Athens International (80,000 tonnes in 2016), located there. Thessaloniki can be seen as Greece's northern logistics hub.

The Greek economy had the worst reaction to the global economic crash of 2007-08 of any European nation. Its debt crisis and austerity restrictions imposed by IMF and EU bailouts have produced deep seated changes to society as a whole. For the economy, it has meant liberalising markets, re-structuring its banking system and ensuring sound public finances.

The economic crash delayed or cancelled a number of long-term infrastructure projects. Some key

road improvements have only been completed in recent years, such as the Corinth-Patras highway, which connects Greece's second and third largest cities.

As public finances eroded, the focus has shifted to the private sector. The Greek government has had to privatise some of its key infrastructure assets. Its railway company, TrainOSE, was sold to Italian state railway group Ferrovie dello Stato Italiane who are reportedly intending to invest €500m in rolling stock and efforts to upgrade services. Fraport, the German airport operator, has just started a 40-year contract to manage 11 regional airports.

Perhaps the most ambitious plans come from COSCO, which holds a 51% stake in, and runs two of three port terminals at the Port of Piraeus. It is the country's primary import and export hub, and due to the port's proximity to the Suez Canal, it also serves as a



Infrastructure



but also inhibits cross-border movements. The PATHE axis is Greece’s main international road freight connection, and crosses into Bulgaria and Turkey. It forms part of the Trans European Transport Network (TEN-T) and thus represents the main transport corridor for Greek exports heading into the single market.

Political and economic uncertainty has affected the implementation and the completion dates of most long-term infrastructure projects. Whilst the Maliakos Motorway and part of the Northern highway of Crete has been completed, the axis road, Elefsina-Thiva-Iliki, was cancelled. Work on the Corinth-Patras highway route, which connects Greece’s second largest city, Corinth, with its third largest city, Patras, was completed in March 2017. Other projects recently completed include the Aegean Motorway (between Raches Fthiotida and Kleidi Imathias), Motorway Moreas (Korinthos-Tripoli-Kalamata & Leuktro-Sparti) and the partially completed Ionia highway (Ionnina – Rio).

Road

Greece’s road network consists of 117,533 km of roads, of which only 35% are paved, as well as 1,091 km of expressways. The country’s road

infrastructure is, however, somewhat constrained by its mountainous topography. This not only hinders transportation within the country,

Rail

Greece has 2,548 km of railway network. There is 1,565 km of standard gauge line, of which 764 km is electrified. The country also has 961 km of narrow gauge and 23 km of dual gauge track. In 2016, it carried approximately 1.1m tonnes of goods. Its railway network is divided into three major regions: Athens, Peloponnesus and Macedonia-Thrace.

TrainOSE operates freight and passenger services in Greece and was state-owned until recently. However, privatisation has been a necessary part of Greece’s international financial bailout. The Greek government has sold TrainOSE to the Italian state railway group Ferrovie dello Stato Italiane for €45m.

A rail connection with the Port of Thessaloniki enables the transportation of freight to and from the hinterland, whilst the rail connection to the Port of Ikonio enables multimodal transport to Central Europe, including Hungary, Slovakia and the Czech Republic. Further infrastructure investment means that the Port of Patras is expected to be linked to the

Greece



Greek railway network by 2020. The construction of the Thriasio Pedio rail hub, with a cluster of 80 rail tracks to service container and freight

trains, constitutes one of the largest commercial railway projects in Europe and the largest in the Balkans.

Air

Greece has a total of 81 airports, of which 66 have paved runways. The country also has nine heliports.

Athens International Airport has four cargo terminals. In 2016 the airport handled around 80,000 tonnes of cargo, which represented a 9.9% increase on 2015. DPDHL operates a 6,000 sq m transit centre at the airport where it is

licensed for exclusive self-handling and management of one of the four gates of entry / exit of the facility.

At the end of 2015 German airport operator Fraport AG agreed a 40-year contract, worth €1.23bn, to operate, manage, develop and maintain 14 regional airports in Greece. The mainland airports include Aktio, Kavala

and Thessaloniki, Greece's second largest city. The other eleven airports are located on the Greek islands of Corfu/Kerkyra, Crete/Chania, Kefalonia, Kos, Mitilini, Mykonos, Rhodes, Samos, Santorini, Skiathos and Zakynthos. Fraport is required to invest €330m in airport infrastructure up until 2020.

Sea

With 15,000 km of coastline, Greece has 123 cargo and passenger ports. The country's key ports are located in Agioi Theodoroi, Aspropyrgos, Pachi, Piraeus and Thessaloniki.

Athens' Port of Piraeus is one of quickest expanding and busiest container ports in the Mediterranean, handling around 3.6m TEUs a year. This

was up from just 880,000 in 2010. The port acts as a gateway to Asia, Eastern Europe and North Africa, and is the closest European deep-sea port to the Suez Canal. The China Ocean Shipping Company (COSCO) has a concession running to 2037 for two of the three port terminals and in April 2016 it formally acquired a 51% share in the port, as part of the Greek government's privatisation

plans for €311m. Plans are in place to increase its share to 67% over the next five years. COSCO announced it will invest €350m in the port over the next five years, increasing the port capacity to 7m TEUs. This would make it a top 30 global hub. It is also investing €230m to build a second container terminal at the port, which it plans to turn into a logistics hub for Chinese exports to Europe.

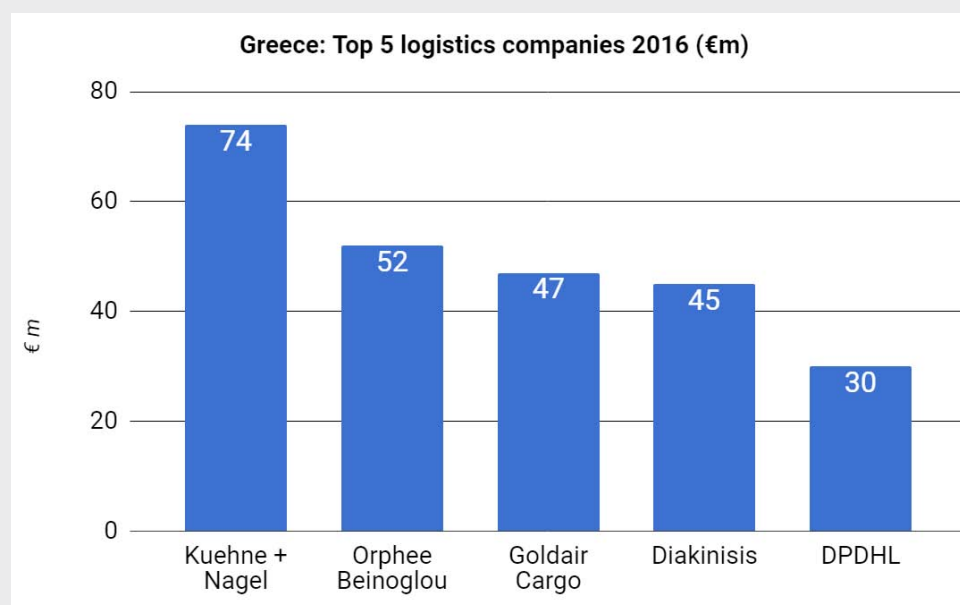


Market Size

Greece: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	0.8%	134	3.4%	153
Express	3.7%	416	5.5%	517
Freight Forwarding	3.8%	219	3.9%	256
Road Freight	0.1%	1,128	3.0%	1,271

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix.

Note: Due to a lack of visibility and reliable data, only a top 5 is provided

Brief summaries of the activities of the top 5 logistics companies in Greece

1. Kuehne + Nagel has operated in Greece since 1962, having started business there as a joint venture with PROODOS S.A. It provides logistics services and is headquartered in Athens. It also operates branches in Thessaloniki and the Attica region.

2. Orphee Beinoglou, headquartered in Athens, is a provider of logistics, freight forwarding, relocation and

transport services. In addition, it has specialised services focused on office removals, relocation services, fairs and exhibitions and international courier solutions. As part of its logistics offering, it offers cross-docking and value-added services, such as packaging, labelling, invoicing and reverse logistics.

3. Goldair Cargo, the international forwarding and logistics business, was

founded in 1987. Thanks to its network of forwarders, it claims to have the capacity to support all kinds of freight forwarding, to all continents.

4. Diakinisis, a member of the Elgeka Group, claims to be one of the largest 3PL companies in Greece. Across the country it operates 160,000 sq m of roofed warehousing, 240,000 sq m of open air facilities and 10,000 sq m of



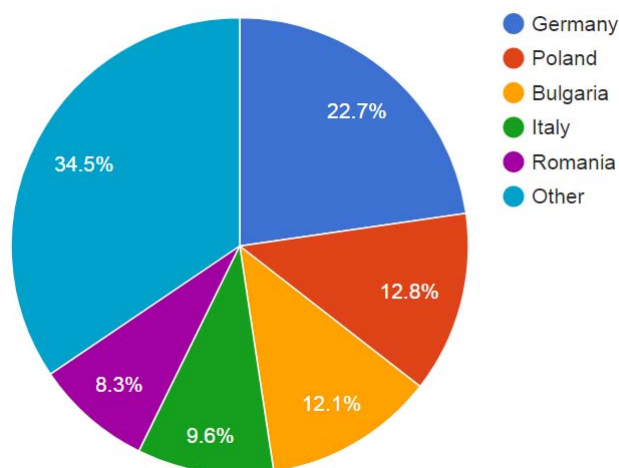
dedicated temperature-controlled space. Its warehouses are located in Athens, Thessaloniki, Patras and Heraklion.

5. DPDHL has been present in Greece since 1978 and provides specialised services that meet the import and export needs of all major commercial industries, including textiles, high-tech

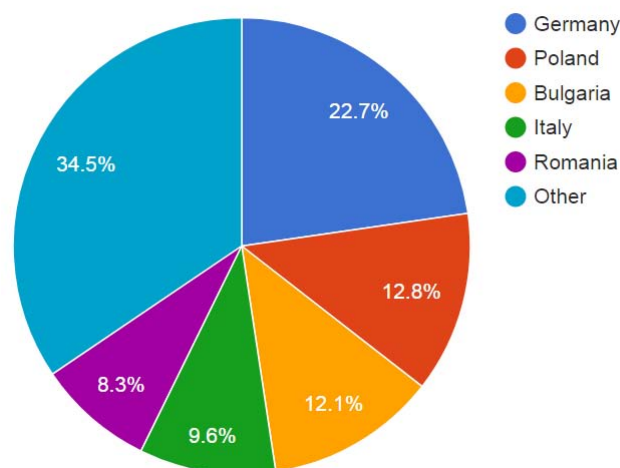
and pharmaceutical. The division's operating in the country include Global Forwarding, Express and Freight. It operates a 6,000 sq m transit centre at Athens International Airport.

Origins and destinations of international road freight

Greece: Key origins of international road freight (2016)



Greece: Key origins of international road freight (2016)



Key destinations and origins of international road freight in Greece (2016)					
Loaded in Greece			Unloaded in Greece		
	m tkm	%		m tkm	%
Germany	1,453	23%	Bulgaria	1,164	19%
Poland	820	13%	Germany	1,130	19%
Bulgaria	773	12%	Italy	682	11%
Italy	617	10%	Netherlands	551	9%
Romania	528	8%	Poland	522	9%
Other	2,206	34%	Other	1,926	32%
All countries	6,397	100%	All countries	5,975	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Greece to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Hungary



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Hungary is the world's 58th largest economy, with GDP of €106bn. Hungary has the world's 60th highest standard of living, with GDP per capita of €10,757. Hungary is the world's 34th largest exporter, with export of €93bn. Hungary is the world's 33rd largest importer, with imports of €83bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 2.3%. On the same basis, real import growth is predicted at 5.1%. Real export growth is predicted at 4.7%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Lower absorption of EU funds in 2016 correlated with a 1.1 percentage point drop in GDP growth to 2.0%. Tightening labour market may mean shortages for firms in the mid to long term. Wage growth could also increase costs for business. Inflation is expected to rise rapidly over the next few years Disruption to infrastructure projects and tax legislation is a cause for concern Increasing autocracy and claims of corruption at the top end of government, as well as increasing tensions with the European Union threaten to undermine Hungary's economic prosperity. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 31st in World Bank's Logistics Performance Index, scoring 3.43 out of 5. The World Economic Forum ranks the quality of its roads as the 62nd best globally, scoring 4.1 out of 7. Its railroads rank 44th best globally, scoring 3.6 out of 7. Its ports rank 103rd best globally, scoring 3.2 out of 7. Its airports rank 82nd best globally, scoring 4.1 out of 7.

Source: TI

Analysis

Hungary lies in a pivotal point within the CEE region. It has three major Trans-European Transport Network (TEN-T) core corridors running through it. It also has excellent railway links with Asia. In 2016, Hungary came 31st in the World Bank's Logistics Performance Index.

Hungary's has the third highest road density in Europe, after Belgium and the Netherlands and is one of few European countries where its international road freight market is larger than its domestic one. With lower driver costs, Hungarian hauliers have an advantage over their Western European rivals in this area.

Its rail network ranks as the 44th best in the world in the World Economic Forum Global Competitiveness Index. Hungary has utilised this to create a strong intermodal network, with international networks connecting to major Western

European and Adriatic ports, as well as its own inland ports and airports.

A well-qualified and productive work force, combined with competitive wages, makes Hungary a significant base of manufacturing for the electronics and the automotive industries, which constitute its largest source of international trade. For example, Chinese electronics company Huawei has its European Supply Centre in the south-west of the country, Nissan-Renault operates its European Distribution Centre in Győr and General Motors possesses significant production facilities in the country.

Despite numerous EU infrastructure investments in recent years, Hungarian Euroscepticism has grown. Major legislation and projects have been disrupted by the EU, such as the EKAER (Electronic Public Road Trade Control

System) which made it mandatory to report all goods transported by road and was designed to minimise VAT fraud. A new high-speed rail project to Serbia (outside the EU), funded by China, is being investigated for breaking EU competition rules.

Despite this, nearly 80% of its trade is with the European Union. Since it joined, a number of major retailers including Tesco, Spa and Auchan entered the Hungarian market, and have since revolutionised the country's supply chain sector.

Hungarian economic growth is robust, with employment growing and strong private consumption. Possible issues could arise as wages continue to grow and its labour market tightens.

Hungary



Infrastructure



Road

Hungary has one of the most developed road networks in Central and Eastern Europe. It has the third highest road density in Europe, after Belgium and the Netherlands, and its total road network is over 160,000 km, including over 1,100 km of expressways. 70% of the road network is either motorways or main routes through the country. The network centres around Budapest, with its major motorways and trunk roads originating at Budapest and reaching national borders to link up with the European road network.

As a result of its location, four European transport corridors pass through the country, providing access to all major

parts of Western Europe, including key ports and airports. This has made Hungary an attractive hub for several road freight providers in the region, such as DB Schenker and Gebrüder Weiss.

In January 2015 Hungary introduced the EKAER (Electronic Public Road Trade Control System) which made it mandatory to report all goods transported by road. It is designed to minimise VAT fraud. Although the Hungarian government has deemed this to be a success so far, and that other CEE countries have considered implementing the system, the European Commission has initiated an infringement procedure, claiming it

breaches the VAT directive.

The Hungarian government has made extending and reconstructing the road network a top priority. It is estimated to have spent over €218m on road renovations in 2015. In 2016 work began on a €54.74m project to build a new section of the M35 motorway, which is expected to be completed in 2018. Work on a new section of the 25.5 km M4 dual carriageway between Albertirsa and Cegled has restarted after it was halted in 2015 due to suspected price fixing amongst contractors. It is due for completion in late 2019.

In March 2016 the European Commission approved €100m in financing towards the construction of a €117m bridge over the River Danube between the Hungarian town of Komarom and Komarno in The Slovak Republic. Construction began in late 2016, with the bridge expected to be completed in the second quarter of 2019.

In June 2016 the Hungarian government announced that it will be receiving €795m in funding as part of the EU's Connecting Europe Facility (CEF). The money will be spent on 19 transport projects, including the widening of the M70 and M15 dual carriageways, with these routes also being upgraded to highway status.

Rail

Hungary has an extensive railway network, made up of 8,057 km of track. Several main express train lines connect Hungary with the main ports of Western

Europe (e.g. Hamburg, Bremerhaven and Rotterdam) and the Adriatic (Koper and Trieste). Záhony in eastern Hungary is the junction and reloading centre

for European standard-gauge railways and the wide-gauge system of the CIS states. There is a direct railway connection between China and Záhony,

Hungary



with the transfer taking approximately 19 to 22 days.

Over 20% of freight is transported by rail in Hungary, which is well above the European Union average. Key industrial operations, such as the VW-Audi plant in Győr, in the west of the country, depend on rail for logistics provision.

Hungary's rail network has been upgraded in recent years. The European Investment Bank (EIB) lent Hungary €250m to finance the implementation of its €550m 2013-2016 railway infrastructure rehabilitation programme, which was designed to improve the safety, capacity and performance of the country's railroads. In 2016, EU funds were earmarked to upgrade the

Budapest - Esztergom, Budapest - Miskolc, Budapest - Lokösháza, Szajol - Püspökladány, Gyoma - Békéscsaba and Budapest - Székesfehérvár routes. The improvements will increase line speeds and capacity for both passenger and freight trains, as well as improving safety levels and enhancing intermodal transport. The Budapest-Székesfehérvár route will improve international connections, link Hungary with Slovenia and the Western Mediterranean. Furthermore, in May 2016 the government announced plans to invest €3.92bn in its rail infrastructure by 2020, with the development of the TEN-T network (Trans-European Transport Network) a priority.

At the end of 2015 work began on the modernisation of the railway line between Budapest and Belgrade, in Serbia. The development is part of China's silk road project and would represent its largest rail infrastructure project outside Asia. By 2018 the track is due to be suitable for high-speed trains, thus reducing the trip from Belgrade to Budapest from eight hours, to three. A consortium led by the China Railway Group is funding and constructing the project which, when completed, will help create a fast lane for the import and export of products between China and Europe. However, the project has been plagued by delays, with the EU investigating whether it failed to put the project out for public tender.

Air

Hungary has five international airports: Budapest-Liszt Ferenc, Debrecen, Hévíz Balaton (previously known as Sármellék), Győr-Pér and Pécs-Pogány.

Budapest is Hungary's largest airport and is located 16 km to the south from the city. In 2016 the airport handled 112,143 tonnes of cargo, which represented a 22.7% increase on the previous year. As part of its €160m BUD:2020 Development programme, it is adding two express facilities as well as a dedicated freight centre. This will increase Budapest's cargo capacity to 250,000 tonnes per year. DHL Global

Forwarding and DHL Freight have their own terminal at the airport, which handles 18,000 tonnes of air freight a year. It also opened a new 6,000 sq m facility at one of the new express facilities.

A project that will connect Budapest-Arad railway line to the multi-modal hub at Budapest Airport is scheduled for completion in 2019. As well as extending and upgrading the tracks linking Budapest Airport to the trunk line, in order to shift cargo traffic from road to rail, the project will also involve the building of a rail cargo yard, with a

handling capacity of 148 TEUs per day and a storage capacity of 480 TEUs.

Debrecen Airport is located 5 km south-west of the city of Debrecen, in eastern Hungary. Xanga Group, Debrecen Airport's operator, and Austrian-Hungarian railways GYSEV Cargo operate freight container trains from the airport, through terminals in Törökbálint near Budapest, and through Vienna, to major European ports such as Koper, Rijeka, Hamburg, Bremerhaven and Rotterdam.

Sea and Inland Waterways

Despite being landlocked, Hungary still has access to the Black Sea and the North Sea, via the river Danube.

The Danube itself is the Pan-European corridor VII, part of the TEN-T network, and forms part of the trans-European

waterway from Rotterdam to Constanta.

Hungary has 1,622 km of inland waterways and the country's main ports

Hungary



are Budapest, Dunaujvaros, Győr-Gönyű, Csepel, Baja and Mohacs. Budapest is the largest, handling around 3.5m tonnes of freight per year. An EU project launched in 2016 is aiming to increase rail connections to and from the port.

Meanwhile, infrastructural developments

worth €253m were completed in mid-2016 at the Győr-Gönyű port in north-west Hungary. They included creating new ship berths and a direct railway-waterway transport link.

Development plans for Port of Baja include the extension of road links, the establishment of a green terminal

to handle waste, development of the northern area, increasing loading and storage capacity, and the development of a basin port.

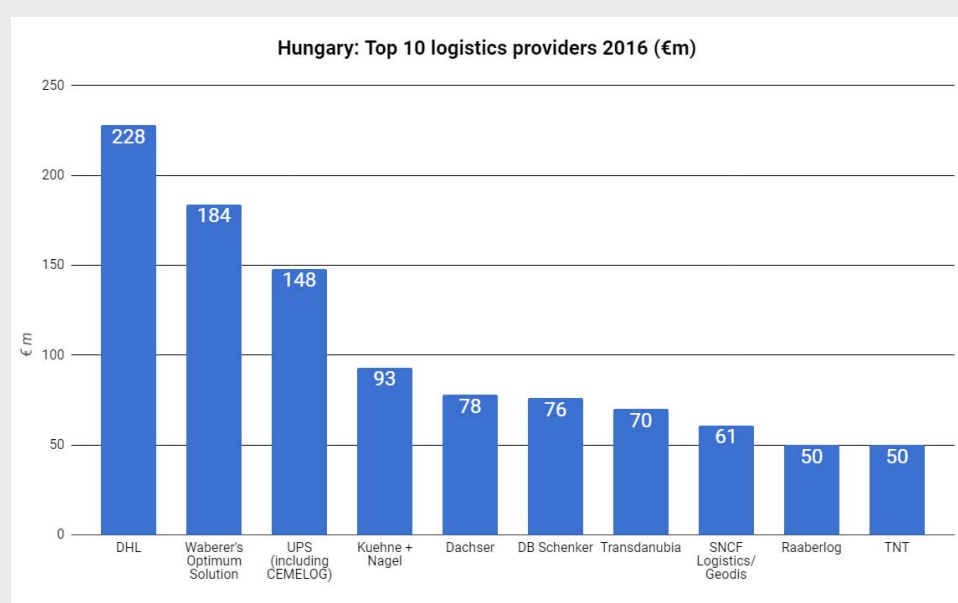
A border port at Szeged was opened recently linking Hungary and Serbia.

Market Size

Hungary: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	2.7%	264	3.2%	299
Express	6.5%	573	7.3%	760
Freight Forwarding	8.5%	660	5.7%	823
Road Freight	5.3%	5,290	5.8%	6,629

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Hungary



Brief summaries of the activities of the top 5 logistics companies in Hungary

1. DPDHL provides solutions across Hungary through its Global Forwarding, Supply Chain, Express and Freight divisions. DHL Supply Chain Hungary operates 11 locations and manages 140,000 sq m of warehousing capacity. In September 2016 DHL Parcel Europe, the Slovenian Pošta Slovenije and the Hungarian Magyar Posta began co-operating to provide a common B2C infrastructure for parcel delivery.

2. Waberer's Optimum Solution claims to be 'the market-leading logistics service

provider' in Hungary. It offers a range of logistics services, from transportation and freight management, to warehouse logistics and vehicle repair.

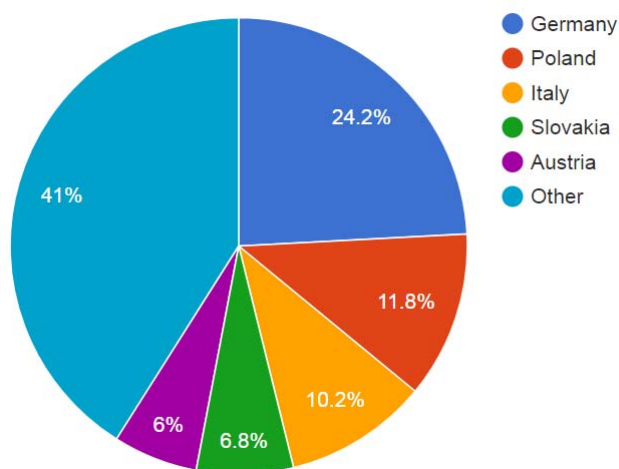
3. UPS offers import, export and domestic shipping across Hungary. It currently has seven locations in Hungary, including its Budapest Healthcare campus has three facilities with a total warehouse space of 24,132 sq m. In March 2017, it opened a new 5,200 sq m base near Budapest's Ferenc Liszt International airport.

4. Kuehne + Nagel Hungary was founded in 1992. It has three locations with warehouse space of nearly 61,000 sq. Within Hungary it provides contract logistics, overland, and air and sea freight services

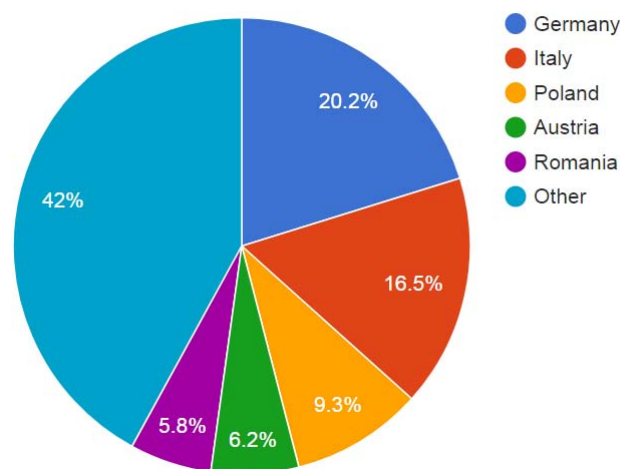
5. Dachser provides freight forwarding and logistics services from 10 locations in Hungary. Most recently, its increased its Food Logistics capabilities, via its joint venture Liegel & Daschser Transport and Logistics. It acquired nearly 38,000 sq m of warehousing in Budapest in October 2016.

Origins and destinations of international road freight

Hungary: Key destinations of international road freight (2016)



Hungary: Key origins of international road freight (2016)



Key destinations and origins of international road freight in Hungary (2016)

Loaded in Hungary			Unloaded in Hungary		
	m tkm	%		m tkm	%
Germany	2,653	20%	Germany	3,204	24%
Italy	2,162	16%	Poland	1,567	12%
Poland	1,224	9%	Italy	1,349	10%
Austria	813	6%	Slovakia	908	7%
Romania	762	6%	Austria	794	6%
Other	5,521	42%	Other	5,442	41%
All countries	13,135	100%	All countries	13,264	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Hungary to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Ireland



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Ireland is the world's 37th largest economy, with GDP of €278bn. Ireland has the world's 5th highest standard of living, with GDP per capita of €59,529. Ireland is the world's 33rd largest exporter, with export of €117bn. Ireland is the world's 36th largest importer, with imports of €70bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 3.0%. On the same basis, real import growth is predicted at 4.8%. Real export growth is predicted at 3.3%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> High levels of public and private debt, although both are falling. Growing wage pressures in the public sector. Increase in domestic demand growth and private consumption supported by an improving labour market, rising wages, and stronger growth in the Eurozone will boost the export performance and economic condition of Ireland. Ireland is highly dependent on the UK for exports. The decision of UK voters to leave the European Union has opened up new economic risks for Ireland. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 18th in World Bank's Logistics Performance Index, scoring 3.79 out of 5. The World Economic Forum ranks the quality of its roads as the 41st best globally, scoring 4.6 out of 7. Its railroads rank 43rd best globally, scoring 3.7 out of 7. Its ports rank 28th best globally, scoring 5.1 out of 7. Its airports rank 32nd best globally, scoring 5.4 out of 7.

Source: Ti

Ireland. DHL and CEVA both have set up substantial cold chain operations at Dublin airport in support of this sector.

Ireland saw some substantial consolidation and partnership agreements in 2017. Dachser purchased an 80% stake in 3PL Johnston Logistics and UPS announced plans to acquire Nightline Logistics Group, an express company. Meanwhile, struggling An Post, the national post office, signed an agreement with DHL to develop e-commerce parcel volumes.

These providers will be hoping for favourable market conditions in the years to come, but the key issue threatening the Irish market is Brexit. Both the Irish and UK governments are hoping for a “seamless and frictionless” border between the two countries. The reality is that this will be impossible to achieve if the UK leaves the single market and/or there is no EU-UK customs union. If there is no customs union, then rules of origin checks will be necessary. If the UK is outside the single market, even with complete regulatory convergence, conformity of standards checks would have to take place at the border rather than the point of production. Whilst the complications that arise may provide opportunities for forwarders, the majority of the market is likely to suffer from delays due to greater inefficiency and additional costs. Around 63% of Ireland’s international road freight tonne kilometres is direct trade between itself and the UK. Around 80% of Irish road freight that reaches Europe passes through the UK.

Analysis

Macroeconomic fundamentals suggest a boom for the Irish transport and logistics market in the last few years. Whilst these figures are inflated due to the presence of large multinationals, the Irish economy is looking healthier than it has done for some time. It struggled following the economic crash, but domestic demand has been strong and public and private debt levels (currently some of the highest in Europe) have been driven down. Exports and foreign direct investment have also flourished.

Ireland has four freight handling airports; Dublin, Shannon, Cork and Knock. Dublin handles around 90% of freight. Volumes at Dublin airport have been increasing since 2003, partly due to recently introduced services to the Middle East. Overall, the total tonnage of air freight to and from Ireland has increased relatively slowly over the

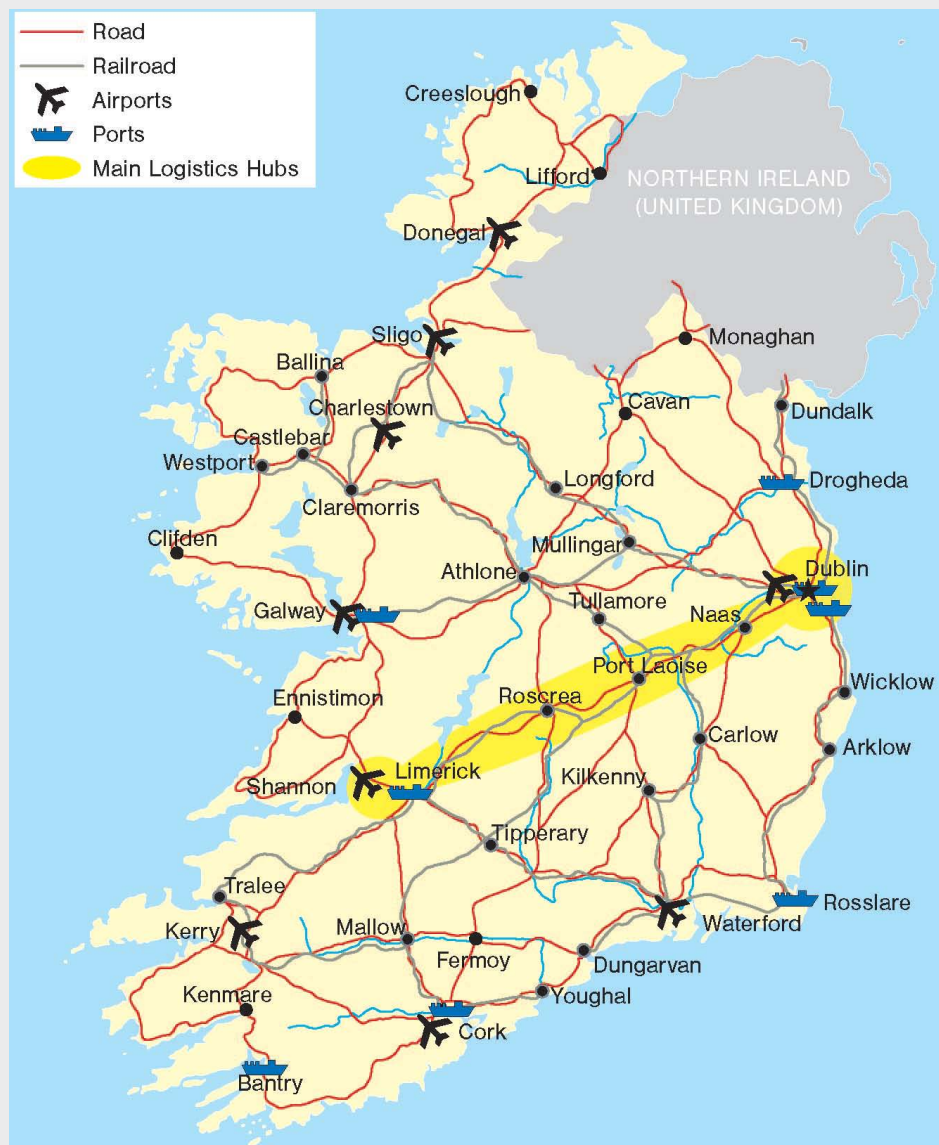
last decade.

With the exception of a very small tonnage of air freight, all international freight movements to and from Ireland are by sea. Most intercontinental container trade travels on feeder container ships across the Irish Sea to deep sea ports either in Great Britain or in mainland Europe. Ports in Ireland tend to specialise in handling different types of freight to suit their own facilities and customer requirements. For instance, Rosslare primarily deals with ro-ro traffic whereas Foynes (Shannon) with bulks. The largest port by volume is Dublin, which has facilities to handle all main types of commodities.

One of its fastest-growing industries in the country is chemicals and pharmaceuticals. Ireland is home to a number of US giants. Reportedly 24 out of the world’s largest 25 biotech and pharma firms have offices in



Infrastructure



Road

The Irish road network consists of approximately 98,898 km of road, including 1,224 km of expressways. The national roads; the primary links between cities and towns, account for 5,306 km or 5.4% of all roads. Of this, 897 km, or 16.6% of national roads, are motorways. The regional and local road networks total 13,120 km and 80,472 km, respectively.

Over the past few years, Ireland’s road network has become busier with steady expansion of its overall usage. In January 2017, the Irish ministry of transport announced the road projects that will be included in a €324m investment programme for 2017. The funding largely continued supporting maintenance works for the existing regional road network and a few larger road improvement projects. The overall funding will facilitate the maintenance of around 1,980 km of regional and local roads and strengthening of another 2,035 km. In addition to this, the government has planned extra spending worth €500m on infrastructure every year between 2019 and 2021.

Rail

Ireland has 3,237 km of railways with 1,872 km of broad gauge and 1,365 km narrow gauge lines. The railway is primarily single track, with 886 km of double track and 60 km of multiple track. Heavy Rail services in the Republic of Ireland are provided by Iarnród Éireann, a state-owned rail company.

The network includes the main lines, Dublin suburban and commuter

passenger routes and Cork Suburban routes, together with freight-only routes. The majority of the network includes the radial lines focused on Dublin. The network essentially strengthens the inter-urban connections, providing strategic national level transport links between the key cities of Dublin, Waterford, Galway, Limerick and Cork, as well as Belfast in Northern Ireland.

It also connects to smaller cities and large towns which have strong regional functions, in particular Tralee, Sligo, and Wexford.

In 2016, Irish Rail announced the development of a shortened version of its Dart Underground expansion project. The project includes constructing an 8.6 km tunnel from Inchicore to East Wall, shortening the overall tunnel length.

Ireland



Once approved, the construction work will commence in 2020.

In July 2017, Irish Rail announced plans

to provide an additional 17,000 trips a day by upgrading current diesel trains, with a further order of 41 new rail cars and an estimated total cost at €108m.

As part of the Dart network expansion, this initiative also includes the replacement of the existing Dart fleet.

Air

Ireland handles approximately 140,000 tonnes of air freight per year. Around 95% of this is international freight. Ireland only has four freight handling airports; Dublin, Shannon, Cork and Knock. Dublin handles around 90% of freight, with Shannon handling around 9%.

In 2016, the Dublin Airport Authority announced it would re-start construction of a 3.1 km second runway at Dublin airport for the cost of €320m. The project had been put on hold during the recession. Construction is scheduled to start by the end of 2017, to be completed by 2020. As well as providing obvious

capacity benefits, this will help support Ireland's fast-growing pharma industry. CEVA for example opened a new 15,000 sq m facility at the airport's industrial park in 2017.

Sea

Ireland handles approximately 223m tonnes of freight at ports and the total tonnage of freight handled at Ireland's primary ports is 47.5m tonnes. The major ports of Ireland are Dublin, Shannon Foynes, Port of Cork, Rosslare, and Port of Waterford. Dublin port handle around 21.1m tonnes of cargo whereas Shannon Foynes, Port of Cork, Rosslare, and Port of Waterford handle 10m tonnes, 8.7m tonnes, 2m tonnes, and 1.4m tonnes of cargo, respectively.

In 2016, the Port of Cork received €30m from the EIB (European Investment Bank) to develop the country's biggest

natural harbour. The project will allow the Port of Cork to relocate operations from the Upper Harbour by expanding the capacity of the deep-water port at Ringaskiddy.

In July 2017, Ireland reviewed its Dublin Port Masterplan project, a scheme aimed at providing additional capacity for future growth. This project is a 28-year plan (started in 2012) that focuses on re-developing current infrastructure, increasing the productivity of existing port lands, and maximising the port's operational efficiency to be able to handle 60m gross tonnes of cargo by 2040. Another ongoing project is the

Alexandra Basin Redevelopment (North dock of Dublin Port), which will construct 3 km of quay walls, deepen the harbour basin and accommodate larger vessels.

The bulk port company SFPC (Shannon Foynes Port Company) launched €50m capital investment programme at Foynes as part of the port company's Vision 2041 master plan. A seven-year programme in quayside infrastructure development will be launched by SFPC with a €12.5m investment to infill 3.45 acres on the port's East Jetty in the coming years. The first phase of the infill programme entails 65,000 cu m of infill and is forecast to be completed by 2018.

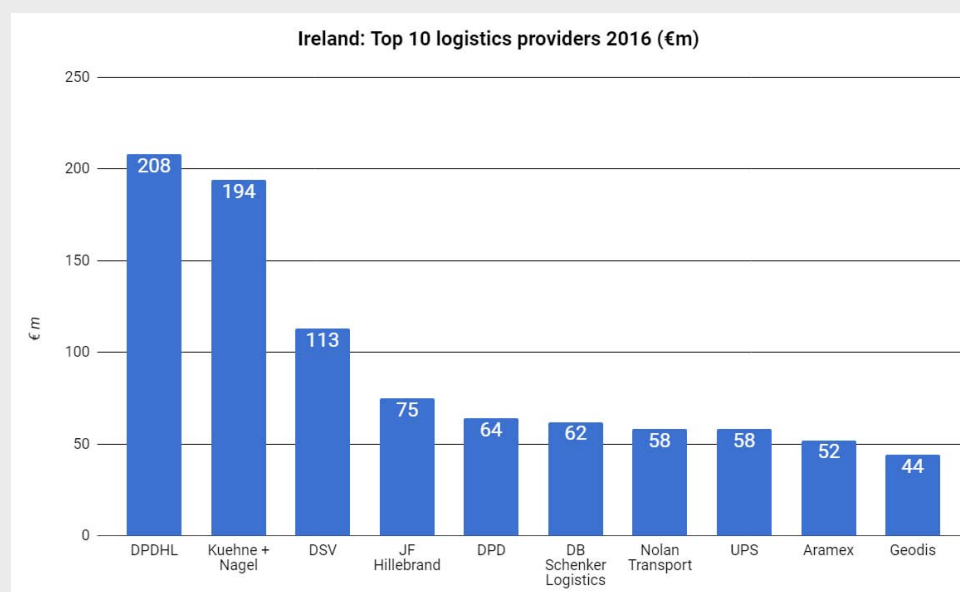


Market Size

Ireland: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	5.0%	840	3.7%	937
Express	6.1%	558	6.0%	785
Freight Forwarding	-1.7%	766	5.2%	937
Road Freight	0.4%	2,132	4.3%	2,522

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Ireland

1. DPDHL provides a range of services including International Express, Air and Ocean Freight, Same Day Courier Services, Supply Chain Management, Warehousing, Value Added Services and Global Business Mail. It opened a new life sciences facility near Dublin Airport in 2017 and signed an agreement with An Post to increase cross-border e-commerce volumes.

2. Kuehne + Nagel operates from eight locations in Ireland, including its head office at Dublin Airport.

3. DSV provides services across Ireland from its Air & Sea, Road and Solutions divisions. In 2016, it shipped approximately 542,000 consignments.

4. JF Hillebrand operates in the beverage logistics segment from office in Dublin. Services includes bulk,

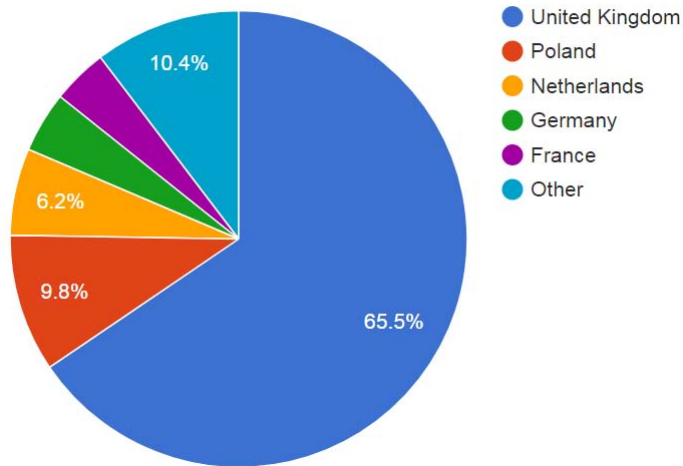
groupage, air freight, inland transport, integrated logistics solutions and specialist services.

5. DPD provides domestic and international shipping from 38 regional depots across Ireland. Also offers storage and fulfilment services, includes temperature controlled logistics services for food and life sciences.

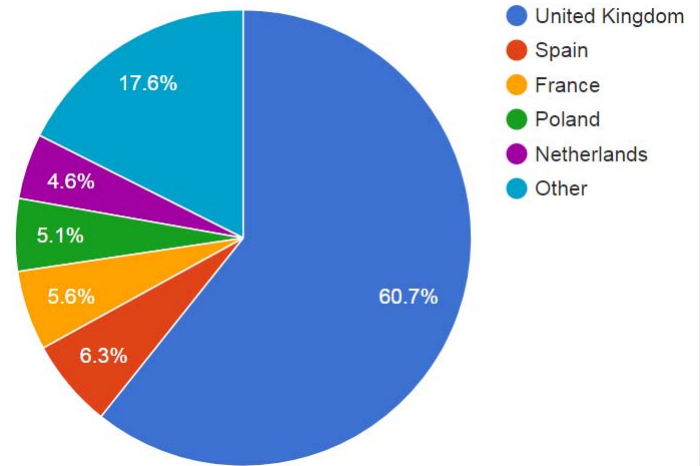


Origins and destinations of international road freight

Ireland: Key destinations of international road freight (2016)



Ireland: Key origins of international road freight(2016)



Key destinations and origins of international road freight in Ireland (2016)

Loaded in Ireland			Unloaded in Ireland		
	m tkm	%		m tkm	%
United Kingdom	1,205	61%	United Kingdom	1,234	65%
Spain	125	6%	Poland	184	10%
France	112	6%	Netherlands	116	6%
Poland	102	5%	Germany	81	4%
Netherlands	92	5%	France	74	4%
Other	349	18%	Other	195	10%
All countries	1,985	100%	All countries	1,884	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Ireland to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Italy



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Italy is the world's 8th largest economy, with GDP of €1,674bn. Italy has the world's 27th highest standard of living, with GDP per capita of €27,377. Italy is the world's 9th largest exporter, with export of €417bn. Italy is the world's 10th largest importer, with imports of €366bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 0.9%. On the same basis, real import growth is predicted at 3.5%. Real export growth is predicted at 3.9%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Low economic growth and high unemployment are a concern. Italy has one of the lowest literacy rates in Europe and the high unemployment rate highlights the weaknesses of the labour market and growing global competition. Low GDP, excessive public debt level and high tax burden leads to weak growth. By the end of 2017, Italian GDP growth will accelerate to 1.2% supported by favourable financing conditions, tax incentives aimed at boosting business investment, and solid employment growth. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 21st in World Bank's Logistics Performance Index, scoring 3.76 out of 5. The World Economic Forum ranks the quality of its roads as the 45th best globally, scoring 4.5 out of 7. Its railroads rank 34th best globally, scoring 4.1 out of 7. Its ports rank 60th best globally, scoring 4.4 out of 7. Its airports rank 60th best globally, scoring 4.4 out of 7.

Source: Ti

Analysis

Italy's transport and logistics markets ranks relatively highly on a global scale. However, according to the World Economic Forum's Global Competitiveness Index, it ranks poorly for quality of institutions, ethical behaviour of firms and restrictions on foreign direct investment, but performs well for time to start a business and its average tariff rate.

Since the financial crisis, investment in the country has been weak and has only started to grow again in recent years. The country is also struggling with a high unemployment rate and a weak banking sector. Economic growth has taken a hit, hovering at around 1%. However, there are signs of improvement; confidence in manufacturing is beginning to grow once again and external demand is picking up.

Road freight is particularly important for Italian logistics. The country has a highly developed and efficient network, particularly in the Northern and Central regions. As well as having a large domestic market, its international market is sizeable due to its strategic position in the centre of Europe. Its road freight market is the fourth largest in Europe.

Italy's railway network is the third longest in Europe and is a strong infrastructure asset according to the World Economic Forum's Global Competitiveness Index. It ranks 31st out of 138 countries for the quality of its railroads. Many important intermodal hubs lie in the north of the country, on important North-South routes in Europe and the Italian government is continuing to invest in improvements, particularly in the North of Italy. However, recently transport links have been disrupted, with a number accidents and engineering works in key

points in Germany. Furthermore, the migrant crisis has made it increasingly difficult to handle customs procedures.

Complaints in Italy's port infrastructure range from poor administration, political quarrelling, under funding and bureaucracy to a lack of strategic vision and government support. The Italian government has recently restructured its port authorities, in an attempt to improve operational efficiency, rather than competing with one another. Given its location, it aims to become a bigger player in the Mediterranean. Its ports in Genoa and Gioia Tauro already handle over 2m TEUs per year each and plans are in place to increase La Spezia's capacity to reach similar numbers. Its airports are less strategically important overall, but the government has made investments of €1.5bn in its infrastructure in the last decade.

The e-commerce market in Italy is worth around €20bn and is one of the fastest growing in Western Europe. The express and parcels market is growing alongside this boom, with increases mainly seen in B2C volume growth. Fashion, an industry which Italy is famous for, is one of its bestselling e-commerce product categories.

Due to economic factors, Italy's contract logistics market has suffered in recent years. Both manufacturing production growth and retail sales have been weak. However, the pharmaceutical sector is a growing segment. A number of 3PLs made acquisitions in the sector in recent years, including DHL and Kuehne + Nagel.



Infrastructure



Road

Italy has a highly developed and efficient network of interconnected highways and lesser roads, particularly in northern regions. The main routes at the hub of

the road system are Turin-Milan-Venice-Trieste, Milan-Bologna-Florence-Rome, Milan-Genoa, and Rome-Naples. There are 6,460 km of expressway, mostly

in the northern and central regions, and the system overall is comprised of 654,676 km of paved roads.

Since most goods in Italy are transported by road, the system is constantly upgraded and improved. A finance package worth €600m from the European Investment Bank (EIB) and the Italian bank Cassa Depositi e Prestiti was granted on March 2017 for the construction of third lanes for the A4 highway in either direction, helping boost capacity. The A4 route, amongst the most heavily used routes in the country, runs between Italy’s western and eastern borders in the north of the country and usually carries a high percentage of large trucks.

In June 2017, Italy announced its plans for the northern Emilia Romagna region of the country which involved the construction of a new 15 km road link. The project is expected to cost approximately €506m, with around €215m to be provided by public sources. The road link will feature two lanes in either direction and the project will include two tunnels, five junctions, and eight viaducts. In addition, with a costing of €280m, Italy is developing the new Col de Tende road tunnel, due for completion in 2020.

Rail

The Italian railway system is one of the most important parts of the Italian infrastructure, with a total length of 24,227 km of which 16,723 km are active lines. The network has recently grown with the construction of the 1,350 km high-speed rail network. Most Italian

rail infrastructure is administered by Italian state-owned company RFI (Rete Ferroviaria Italiana). The total length of RFI active lines is 16,723 km of which 7,505 km are double tracks.

The Ministry of Infrastructure &

Transport and RFI announced €17bn for capital investment in February 2016 to upgrade the existing rail network and add additional new railway infrastructure. This project will include three major projects: the Brescia - Padua section of the Milan - Venice



high-speed line, Terzo Valico dei Giovi project that includes a 53 km new line to the port of Genoa from Turin and Milan, and the Brenner Base Tunnel link to facilitate faster connections between Italy, Austria, and Central and Northern Europe for both passengers and freight. In addition, RFI has a €8.9bn project to upgrade and double sections of the Palermo-Catania -Messina line in Sicily. The work on this line will begin by the end of 2017 and will have the capacity to

carry 180-200 trains per day.

The Italian government announced an investment of €32bn in the expansion of its rail network and the renewal of its rolling stock in June 2017. The focus of this investment is the expansion of trans-European transportation networks. Italy is keen on expanding rail links connecting Trieste, Venice and Ravenna on the Adriatic coast with the Baltic Sea, and the Mediterranean with the North Sea via the port of Genoa and Milan.

In July 2017, Italy announced a project worth €2.5bn to link the cities of Brescia and Verona. The construction of this line will begin by the end of 2017 or the beginning of 2018. The new railway will start from Mazzano, near Brescia reaching Verona, following a 75 km route with two connections to the conventional rail network, both measuring 7 km. The authorities estimate the entire work to complete between 2022-2023.

Air

Italy has a complex and articulated airport system with 11 airports classified by the Italian Ministry of Transport as 'strategic', such as Milan, Venice, Rome, Bologna, Florence/Pisa, and Naples, and twenty-six other airports of national interest with lower volumes of traffic in terms of passengers per year.

During the past decade, Italy has seen investments of €1.5bn in airport infrastructure, initially utilising public and EU (European Union) funding, and recently through private investments by airport management companies. At the end of 2015, Italy approved the national airport plan to identify airports of

strategic value. The government initiated a review of its airport infrastructure with the objective of rationalising spending and expansion strategies, as well as improving intermodal accessibility to strengthen competitiveness and increase economic growth.

Sea

Italy's major ports include Genova, La Spezia, Livorno, Civitavecchia, Cagliari, Napoli, Palermo, Augusta, Gioia Tauro, Taranto, Bari, Ancona, Ravenna, Venezia, and Trieste. Italy handles approximately 186m tonnes of volumes of seaborne freight and 883 tonnes of liquid bulk. Its major seaports Genoa, Gioia Tauro and La Spezia have capacity of approximately 2.24m TEUs, 3.51m TEUs and 1.3m TEUs respectively.

The first major port construction in Italy in decades, with an investment of €300m, was initiated in 2015 for the expansion of Vado terminal on Italy's Ligurian coast. It is scheduled to be

operational in January 2018, with a total capacity of 800,000 TEUs. It will be able to handle vessels with capacities of up to 18,000 TEUs. In the same year, the Italian port of Livorno initiated plans to expand its capacity with a new €800m deep water container platform in 2015 that will enable it to accommodate larger ships and increase container traffic. The new facility with a terminal area of 72 ha, berths of more than 1,000m and water depth of up to 18m is expected to be operational by the end of 2020.

As of January 2016, Italian ports were reorganised into 15 PSA (Port System Authorities) based in strategic decision making centres in the Italian "core" ports

as set out by the EU. The new PSA will be in charge of 54 national ports and will have a strategic role in policy, programming, and coordinating the ports in their own area.

The Italian government launched Italy's biggest port expansion project in January 2017 that involves a 50-year concession to run, develop, and manage a new container terminal consisting of more than 1,000 m of quays and covering 72,000 sq m at Livorno Port. With a total investment of €800m, the terminal will have the capacity to handle up to three trains a day and provide a link to the national and European rail network.



In July 2017, La Spezia Container Terminal planned to further improve handling capacity from 1.4m to 2.5m TEUs. For this purpose, a new tender

procedure was opened for the extension of the Garibaldi dock in Italy's La Spezia Container Terminal, involving the development of new aprons for this

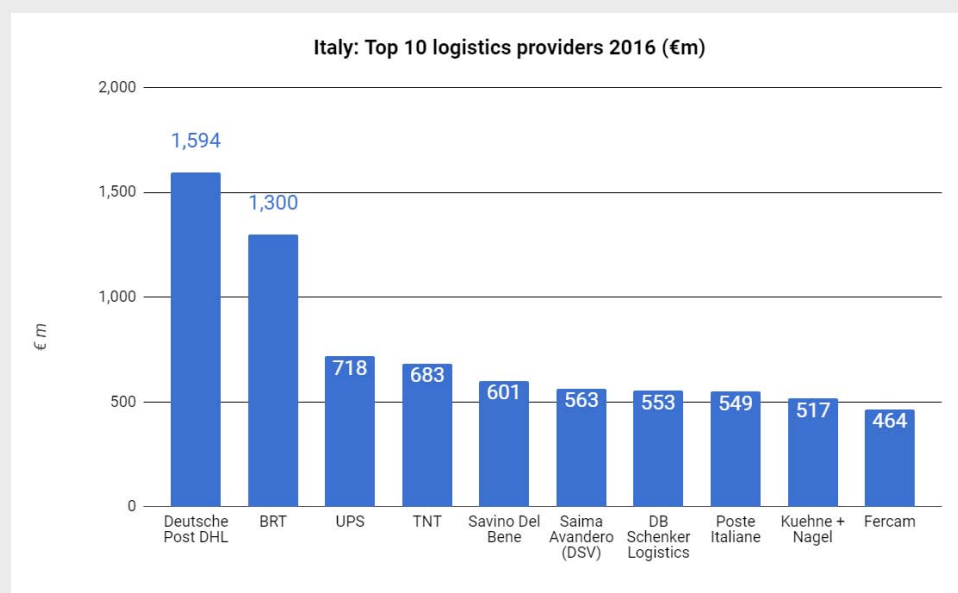
container and multi-purpose terminal's everyday operations.

Market Size

Italy: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	1.0%	4,494	1.0%	4,672
Express	7.0%	3,964	4.7%	4,758
Freight Forwarding	3.8%	3,452	1.7%	3,690
Road Freight	-0.6%	33,991	1.7%	36,418

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Italy

1. DPDHL has its regional office in Milan and operates five international hubs (Bergamo, Bologna, Roma, Carpiano, S.Giuliano), as well as gateways at

Treviso, Pisa and Ancona. Its hub at Bergamo has been operational since 1986 and houses the DHL Aviation Italy division.

2. BRT is a privately-owned Italian express freight operator founded in 1971 and headquartered in Bologna. It provides express delivery for documents



and parcels, as well as express freight services for heavy and bulky shipments, and pallets. It also offers logistics support services for the handling and distribution of goods.

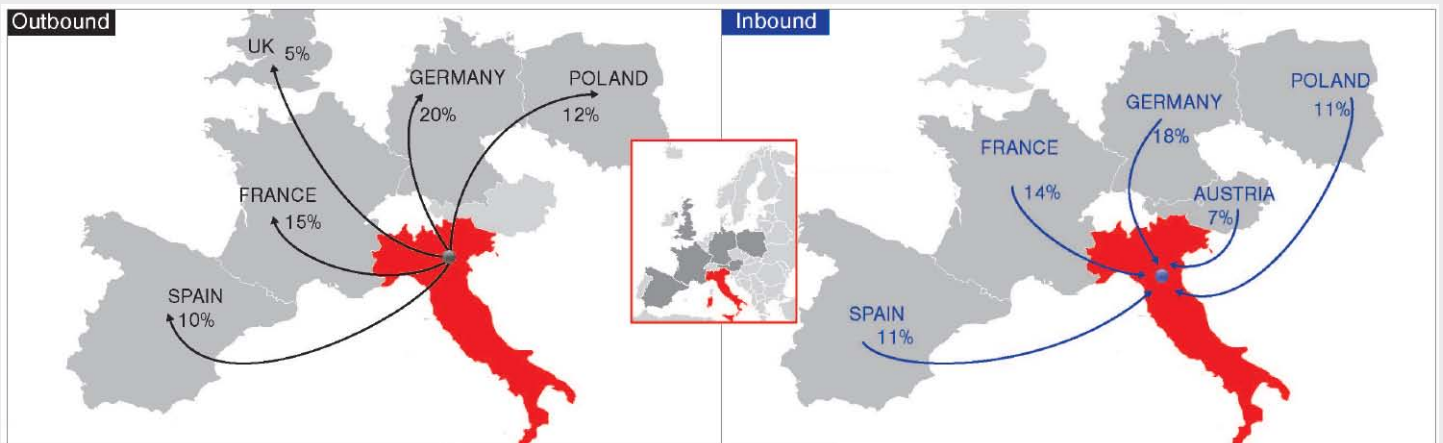
3. UPS expanded in Italy in 2011 through the acquisition of Pieffe Group, one of Italy's largest pharmaceutical logistics

companies. As well as a pharmaceutical offering, UPS provides import, export and domestic shipping services.

4. TNT derives between 5% and 10% of its revenues from Italy. It serves the automotive, high tech, healthcare, industrial and textile & fashion markets in Italy.

5. Savino Del Bene is an Italian freight forwarder with more than 200 offices worldwide. Its services include multi-mode transportation, in-house customs clearance and warehousing & distribution.

Origins and destinations of international road freight



Key destinations and origins of international road freight in Italy (2016)					
Loaded in Italy			Unloaded in Italy		
	m tkm	%		m tkm	%
Germany	9,286	20%	Germany	7,815	18%
France	7,052	15%	France	6,346	14%
Poland	5,912	12%	Spain	4,988	11%
Spain	4,794	10%	Poland	4,900	11%
United Kingdom	2,310	5%	Austria	3,123	7%
Other	17,978	38%	Other	17,136	39%
All countries	47,332	100%	All countries	44,308	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Italy to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Latvia



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Latvia is the world's 100th largest economy, with GDP of €25bn. Latvia has the world's 55th highest standard of living, with GDP per capita of €12,779. Latvia is the world's 78th largest exporter, with export of €10bn. Latvia is the world's 87th largest importer, with imports of €12bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 3.7%. On the same basis, real import growth is predicted at 4.2%. Real export growth is predicted at 4.2%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Unfavourable export structure, mainly dependent on Russia and other Baltic States. Vulnerable banking sector, with low loan quality and a high proportion of deposits by foreign citizens. Relatively high external debt burden. Temporary delay in absorption of EU structural funds, weak performance within the wider euro currency zone, and geopolitical tensions with Russia. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 43rd in World Bank's Logistics Performance Index, scoring 3.33 out of 5. The World Economic Forum ranks the quality of its roads as the 107th best globally, scoring 3.0 out of 7. Its railroads rank 29th best globally, scoring 4.2 out of 7. Its ports rank 29th best globally, scoring 5.1 out of 7. Its airports rank 37th best globally, scoring 5.2 out of 7.

Source: TI

and storage of containerised cargos and combined transportation with priority given to the construction and development of industrial, logistics and distribution parks.

Analysis

Situated between Lithuania and Estonia, Latvia provides a strategic location in the Baltics for business operations targeting developed economies of the EU as well as the emerging markets to its east. Access to the Trans-Siberian railway provides additional opportunities for freight distribution, enabling Latvia to be an important logistics hub servicing western European and Far East trade flows in both directions.

Latvia has the highest net trade in transport services among the Baltic states, mainly due to the transit flow of oil and related products by railways and pipeline with freight shipments from Russia and other CIS countries to the east at the core of its transit industry. Logistics companies in Latvia primarily specialise in the transportation of coal, oil and oil products, metal, timber, cotton as well as chemical and perishable goods.

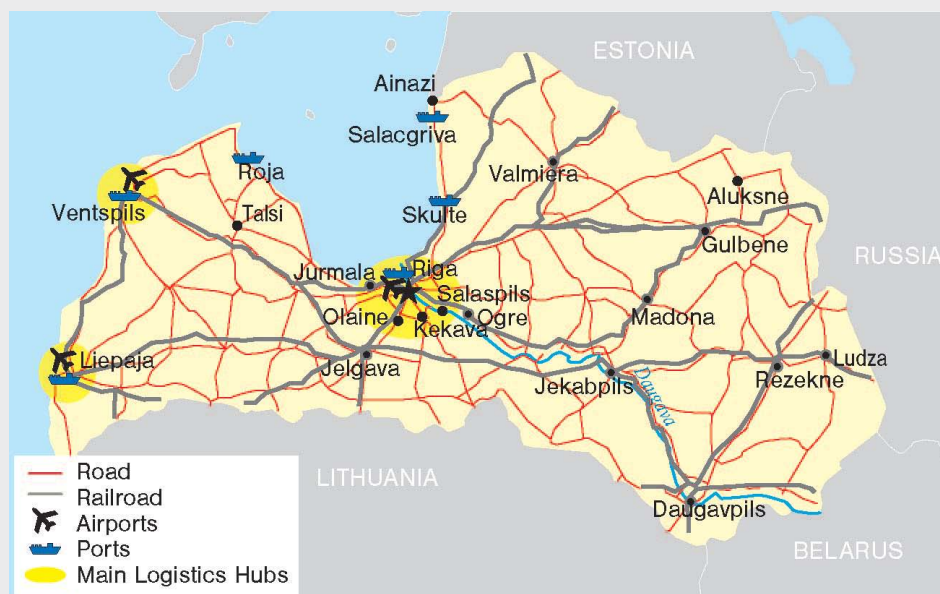
Latvia has been paying special attention to its integration with the Trans-European transport network through the development of short sea shipping across the Baltic Sea and multimodal transport infrastructure such as railways and logistics and distribution parks.

In addition to rail and sea transport, roads also play an important role for freight turnover, but truck transport is mainly seen in short hauls. Contributing almost 3% of GDP, Riga International Airport is the regional air hub in the Baltics for cargo. The three major ice-free ports, Ventspils, Riga and Liepaja, are also an important component of Latvia's multimodal transport infrastructure.

Latvia's main transport strategy is the sustainable development of a transport system that allows it to fully integrate with the Trans-European Networks for Transport (TEN-T) multi-modal transport system. Its other main focus is placed on the development of processing



Infrastructure



Road

Latvia has a road network of 72,440 km and is well-developed although improvements are still in progress.

The Via Baltica (European transport corridor called route E67) is the most important transport corridor, traversing Latvia in a north-south direction. It

connects the European cities of Helsinki, Tallinn, Riga, Kaunas and Warsaw, and Riga, Kaliningrad and Gdansk. With financial support from the EU, Latvia's major road infrastructure development project is the upgrade of the Latvian section of the Via Baltica — the first pan-European transport corridor,

connecting Finland and the Baltic States to Poland and Western Europe. Latvijas Valsts Celi, Latvia's state-owned road maintenance company, announced plans to invest €368.7m on 1,200 km of road repairs in 2016. A major part of the funds will be invested in repair works along the Liepaja, Valmiera, Daugavpils, and Ventspils highways and the Vecumnieki-Nereta-Subate and Cesis-Vecpiebalga-Madona roads. There are no tolls, fees or taxes for using roads, bridges or tunnels in Latvia.

The Latvian road system provides direct access to destinations in the east (Russia/CIS) and south west (Central/Western Europe), and is, through other countries, and/or RO-PAX-capable ports, well connected to northern Europe (Finland and Sweden).

Forwarding services are comparatively developed with a large number of actively competing operators, including international companies such as Schenker, DHL and DSV.

Rail

Latvia has 2,239 km of railway line, including 2,206 km of broad gauge track, of which 257 km is electrified, and 84 km of narrow gauge line.

Latvia is linked by rail with Russia, CIS, the neighbouring Baltic States, and through Poland with the rest of Europe. It has a dense railroad network wherever the former Soviet railway gauge standard is in operation, with further opportunities for trade connection with Japan and Southeast Asia. Currently state-owned operator Latvian Railways functions mostly as a transit trunk-line

with as much as 75% of total freight volumes being connected to Latvian ports and 24% of freight rolling-stock being tanker wagons. Movement in the opposite direction, to Moscow and other parts of Russia and CIS countries is dominated by container cargo.

Latvian Railways (LDz) is a 100% state-owned joint stock company. A small part of freight and passenger transportation on state owned infrastructure is performed by newly established private companies. However, the major concerns of railway operators are the

deterioration of railway infrastructure, decreases in the trains' technical speed, and ageing rolling stock. Insufficient funding for maintenance has led to obsolescence of the rolling stock and inability to renovate it.

In October 2017, Latvia, Lithuania and Estonia ratified the intergovernmental agreement for the development of the Rail Baltica 1,435 mm gauge route. With the ability to transport 16m tonnes of cargo and 5m passengers a year, Rail Baltica is set to be the largest infrastructure project ever undertaken

Latvia



in the Baltic nations. Completion is planned by 2025, with operations to commence by 2026.

In November 2016, Latvian Railways (LDZ) and the Latvian Ports Transport and Logistics Council have unveiled a plan to expand the electrified

network from 257 km to 839 km. The €1.3bn programme will be funded with the aid of €347m from the EU, with implementation divided into three phases. At present only 14% of the Latvian railway network is electrified, well below the EU average of 55%. The electrification programme will

increase this figure to 59% by the mid-2020s. Phase 1 will be implemented between 2019 and 2023 and involves electrification of the Rezekne – Krustpils – Ventspils and Daugavpils – Krustpils lines, creating an east-west electrified corridor through the centre of the country.

Air

There are three main operating airports in Latvia: Riga International Airport, Liepaja International Airport and Ventspils Airport. In addition, Latvia has some 40 other airports, of which 20 have paved runways. Latvia has developed Riga International Airport into the largest air transport centre in the Baltic States with regular direct flights to 61 international destinations in the USA, Asia and Europe, including Helsinki, Stockholm, Copenhagen, Berlin, Frankfurt and London, all of which provide further connections to transcontinental air routes.

Nearly 99% of all air passenger and freight transport in Latvia is carried from Riga International Airport. Latvia's flag carrier, airBaltic, is linked to the

Star Alliance through its shareholder, Scandinavian Airlines SAS, and European leaders such as KLM and Lufthansa. The airport handles approximately 5m passengers and transports approximately 18,000 tonnes of cargo each year.

The air cargo and/or express package services of international providers such as SAS Cargo, Lufthansa, DHL, UPS and TNT ensure one-day delivery within Europe or two days for the rest of the world.

In Latvia, aviation infrastructure and management remain the responsibility of the public sector although the provision of scheduled air transport services has been partially privatised, by transforming

the airlines to joint ventures with established international carriers and other investors. The State owns over 52% of airBaltic.

Over the past decade, the Latvian aviation industry has grown considerably, both in passenger traffic and cargo, developing a strong aviation sector relative to its size. The country continued to invest in its airport infrastructure during the last few years; the largest investment of €50m was made in 2014. The airports of Latvia are seeking to expand to offer long-distance flights. The Riga international airport recently completed Terminal expansion 2015-2016. For the coming years, the country has announced investment plans worth €416m.

Sea

Latvia has three major ice-free ports, Ventspils, Riga, and Liepaja, and seven minor ports, Salacgriva, Lielupe, Engure, Mersrags, Roja, Kolka and Pavilosta. Ventspils and Riga Ports are Free Ports whereas the entire city and port of Liepaja comprise a Special Economic Zone.

The Port of Riga has total terminal cargo handling capacity of 45m tonnes per

year whereas the Port of Ventspils and Port of Liepaja handle approximately 43m tonnes and 5.6m tonnes of cargo every year, respectively. The containerised cargo handled by Port of Riga, Port of Ventspils, and Port of Liepaja is around 355,242 TEUs, 845 TEUs, and 3,668 TEUs, respectively.

Crude oil and oil products have in the past accounted for around half of

cargo tonnage in Latvian ports, but this share has shown a declining trend. Connections to all other transport infrastructure, along with tax-free zone incentives, have resulted in the ports becoming regional centres of industrial activity.

Latvian ports are highly export-oriented, with the proportion of loaded-on cargo being about 95% of all cargo throughput,

Latvia



mostly shipping cargo for transit and export from Latvia. The leading port in terms of unloaded cargo volume is Riga. Ferry transport connections with Germany and Sweden are important.

The Freeport of Riga lies on the banks of the River Dvina about 15 km inland from the Gulf of Riga. The Latvian capital city is about 80 nautical miles west-southwest of the Port of Parnu in Estonia and about 235 km northeast of Lithuania's Klaipeda State Seaport. Icebreakers are necessary to open the

port from December until April. The port is an important part of the local economy, contributing about 50% of Latvia's industrial output.

The port covers both banks of the River Daugava for a length of some 15 km. It contains three core sectors: the container terminal, the bulk and general cargo regions of Exporta and Andreja, and the Riga Commercial Free Port Development Region. The port is linked to the nation's road and rail networks for access to markets in the EU,

Commonwealth of Independent States and Russia.

In March 2017, Latvia expanded its marine cargo terminal – the Riga Bulk Terminal. Construction of the base plate, walls, and coverings for the terminal's new loading point was included in this expansion project which also involved the construction of automated storage facilities for up to 60,000 tonnes of bulk cargo.

*Due to a lack of reliable data, Ti is not able to provide information on Latvia's key logistics providers.

Market Size

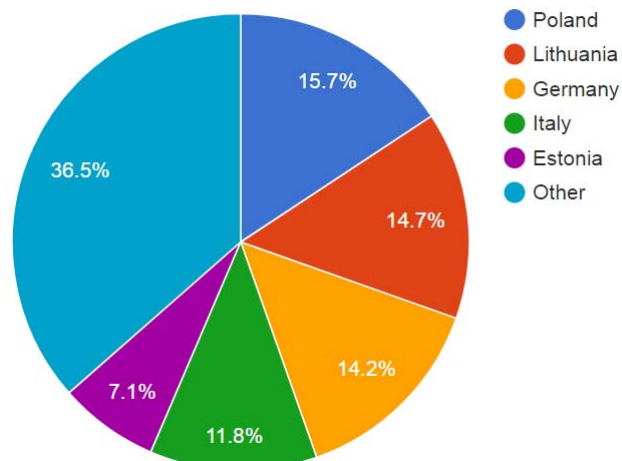
Latvia: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	3.6%	59	5.9%	75
Express	6.1%	136	7.0%	179
Freight Forwarding	3.9%	87	4.9%	105
Road Freight	-1.0%	766	5.3%	940

Source: Ti

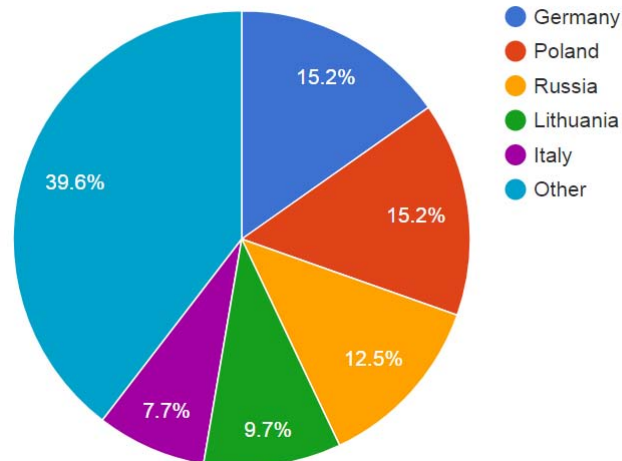


Origins and destinations of international road freight

Latvia: Key destinations of international road freight (2016)



Latvia: Key origins of international road freight(2016)



Key destinations and origins of international road freight in Latvia (2016)

Loaded in Latvia			Unloaded in Latvia		
	m tkm	%		m tkm	%
Germany	847	15%	Poland	603	16%
Poland	845	15%	Lithuania	565	15%
Russia	698	14%	Germany	545	14%
Lithuania	541	13%	Italy	454	12%
Italy	431	10%	Estonia	272	9%
Other	2,202	33%	Other	1,401	35%
All countries	5,564	100%	All countries	3,840	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Latvia to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Lithuania



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Lithuania is the world's 86th largest economy, with GDP of €39bn. Lithuania has the world's 52nd highest standard of living, with GDP per capita of €13,465. Lithuania is the world's 63rd largest exporter, with export of €23bn. Lithuania is the world's 63rd largest importer, with imports of €25bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 3.4%. On the same basis, real import growth is predicted at 0.3%. Real export growth is predicted at 1.5%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Lithuania's external debt continues to increase, thus burdening the economy with considerable debt servicing costs. Weak performance within the broader euro currency zone, temporary delay in engagement of EU structural funds, as well as geopolitical tensions with Russia are key concerns. High export and import dependence on Russia, especially on crude oil imports. High level of structural unemployment. Economy is dominated by one large refinery complex, Orlen Lietuva, which accounts for around 20% of total industrial output and 25% of total exports. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 29th in World Bank's Logistics Performance Index, scoring 3.63 out of 5. The World Economic Forum ranks the quality of its roads as the 37th best globally, scoring 4.7 out of 7. Its railroads rank 27th best globally, scoring 4.4 out of 7. Its ports rank 39th best globally, scoring 4.8 out of 7. Its airports rank 68th best globally, scoring 4.4 out of 7.

Source: TI

Analysis

Lithuania is located advantageously. It is in the midst of trade transiting between Western Europe, the Nordic countries, and the Eastern markets of Russia and the Commonwealth of Independent States. The country has become a key transport hub in the EU, linking the EU with the East.

Two strategic transportation lines cross Lithuania: the North-South highway and railway line connecting Scandinavia with Central Europe, and the East-West Transport Corridor between eastern markets and the EU. In addition to its advantageous geographic position, Lithuania is a convenient transport hub because there are two major types of railway track in its territory: the European standard narrow gauge and the broad gauge of the Russian standard.

Since its independence, Lithuania has developed and improved its transport services and railway system, creating an effective logistics sector specialising in long-distance transportation. For instance, Lithuania belongs to the Transport Corridor Europe-Caucasus-Asia (TRACECA), an international transit network that enables cargo containers from Lithuania to travel all the way to Central Asia and China.

The expansive network of central motorways and European railroads, along with the ice-free port of Klaipeda and four international airports comprise the key infrastructure of the Lithuanian transport network. 7,584 companies are active in the logistics sector, 99.4% of these are SMEs.

Infrastructure

Road

Lithuania is a transit country with a number of roads crossing it from west to east and from north to south. It has a road network of 84,166 km, including 72,297 km of paved roads and 312 km of expressways and compared with other economically stronger states, has a fairly well-developed road network. Six European motorways cross the country.

In 2016, Lithuania secured a loan of €40m from the European Investment Bank to upgrade the Vilnius-Utena highway. The project will include the reconstruction of 58 km highway, the main traffic artery between the capital and north-eastern regions of Lithuania. The upgrade will see the route being widened to three lanes enabling it to carry greater traffic volumes than at present. Around 7,000 vehicles per day currently use the route but traffic volumes are expected to increase once the upgrade has been carried out.

Lithuania



Rail

Lithuania has a total railway network of 1,768 km, of which 1,746 km is broad gauge and 22 km is standard gauge railway. Railways carry approximately 50m tonnes of cargo per annum with direct rail routes linking Lithuania with Russia, Belarus, Latvia, Poland, and Germany. The main transit route between Russia and Russia's Kaliningrad Region passes through Lithuania.

Lithuania is crossed by two European rail transport corridors:

1. North-South direction Corridor I Tallinn- Riga-Kaunas-Warsaw with its branch IA Siauliai-Kaliningrad-Gdansk
2. East-West direction Corridor IX with branches IXB Kiev-Minsk-Vilnius-Kaunas-Klaipėda and IXD Kaunas-Kaliningrad.

However the technical level of the Lithuanian rail sector infrastructure is still below the European standards so the modernisation and development of the Lithuanian railway sector infrastructure remains a priority if it is to successfully integrate into the European railway system with the priority given to the international transport corridors.

The country's most ambitious project Rail Baltica is in the second phase of development as of May 2017. Rail Baltica is a double, electrified, European-gauge railway (1,435 mm) network that will start from Tallinn (Estonia), cross Parnu (Estonia), Riga (Latvia), reach Lithuania through Panevezys and then extend to Kaunas (Lithuania) up to the Polish border. A connection between Kaunas and Vilnius, a segment part of Rail Baltica railway, will also be built in Lithuania. Designed for freight and passenger traffic, the total railway length will be 870 km. The project will involve €406m of investments until 2020 and €2bn from 2021 – 2025 in Lithuania. The amount also includes €140m for Lithuania's railway company, for the construction of 46.7 km of railway between Kaunas and Panevezys.

Air

The country has three international airports located in Eastern (in the capital city Vilnius), Central (in the second largest city, Kaunas) and Western (in the seaside resort Palanga) Lithuania. The first five months of 2017 set a record in Lithuanian airports in terms of the number of handled cargo. In May 2017,

the volume of handled cargo increased by 19% and reached 5,227 tonnes of cargo.

With the expectation to maintain growth rates at its key airports, the country initiates various plans to expand its airport infrastructure. In 2016, a law

consenting a concessionaire to develop three Lithuanian gateways – Vilnius Airport, Kaunas Airport, and Palanga Airport, was passed by the members of the Lithuanian Parliament. The plans include utilising the underused capacity and improving regional connectivity with the three airports, while cargo is set to

Lithuania



Air

play a major role in the expansion.

Vilnius International Airport is located south of Vilnius, 7 km from the centre of the capital. 15 airlines operate scheduled flights from Vilnius Airport, 14 of which carry passengers and one operates cargo flights with a few additional local and foreign airlines operating charter flights. Vilnius Airport maintains close cooperation with the EU airlines, especially those which have their representative offices based in Vilnius: Lufthansa, LOT Polish Airlines, CSA - Czech Airlines, Finnair, Austrian Airlines, and airBaltic.

In 2016, Vilnius Airport announced a

€7m investment towards the creation of an industrial zone designated for companies operating in the aviation sector. The 8-hectare territory is to be positioned within the Vilnius Airport territory, and will offer exclusive plots to companies providing air freight transport, aircraft maintenance, repair, and operations, and business and general aviation services. Work on the Industrial Area will begin at the end of 2017 and the first phase development is expected to be completed in 2018.

Kaunas is the second largest passenger airport in the country possessing one cargo terminal with a capacity

of 110,000 tonnes of cargo per year and a warehouse of 3,200 sq m. Kaunas Airport has begun a terminal reconstruction project starting 2017. Kaunas airport handles airlines such as Ryanair and Air Baltic, and logistics forwarders such as TNT and UPS have their distribution centres there.

Palanga International Airport is a small regional airport located in the west part of Lithuania, near the Baltic Sea. Its infrastructure allows it to handle medium and small sized aircraft. Regular scheduled flights from Palanga International Airport are operated by airlines airBaltic and SAS.

Sea

Klaipėda State Seaport is the only port in Lithuania, with 17.5 m natural depth and container handling capacity of 443,000 TEUs.

Klaipeda State Seaport is about 230 km southwest of the Port of Riga in Latvia and some 123 nautical miles southeast of Sweden's Port of Ronehamn. It is home to large shipbuilding yards that make floating docks and fishing trawlers.

Ferries connecting to Sweden and Germany operate from the port.

The northernmost and only ice-free seaport on the eastern shore of the Baltic, it is a regional transport hub connecting sea, land and railway routes from East to West. It is a leading port for container-handling in the Baltic States and specialises in intermodal transport of cargoes and passengers.

As part of the port's investment strategy, the Port of Klaipeda will invest around €23m in preparatory works, including minor improvement works, such as quay upgrades, deepening of the navigation channel and infrastructure projects planned to take place in 2017. The port authority expects around €399m to be invested in Klaipeda until 2024.

Inland Waterways

The total length of inland waterways in Lithuania is 843 km; of these 436 km are used for transportation of passengers and goods. The role of Lithuanian inland waterways in the overall transport system of Lithuania is limited. This is due to a number of reasons including, shallow waterways, seasonal change in water level, limited number of navigation routes, obsolete fleet of inland water

vessels not adjusted to carry different types of cargo and passengers, and lack of modern infrastructure.

The Nemunas River is navigable and used for commercial shipping between Kaunas and the Baltic seaport of Klaipeda, reached through a channel in the Kuronian Bay up to a point east of Kaunas, about 204 km inland from Klaipeda.

The Nemunas is accessible from the Polish waterway network through the Wislanian Bay, which becomes the Kaliningrad Bay in the Russian Federation, leading to the Pregel. Canals link the Pregel to the Kuronian Bay. There is some barge traffic on the river, mainly timber and construction materials.



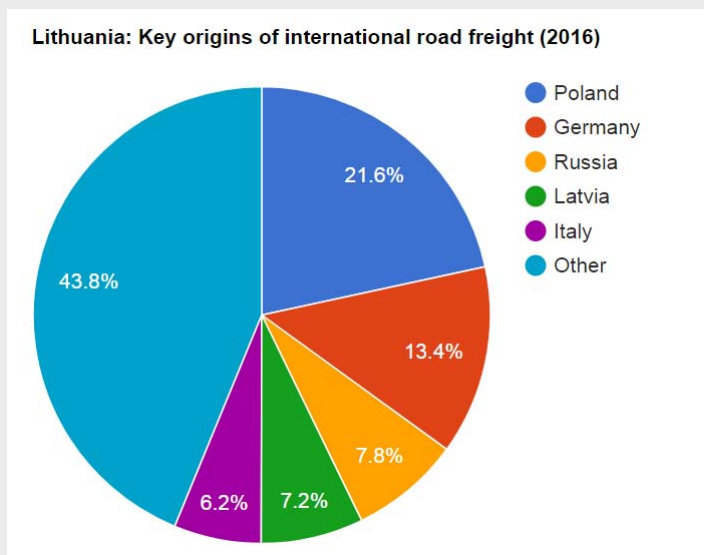
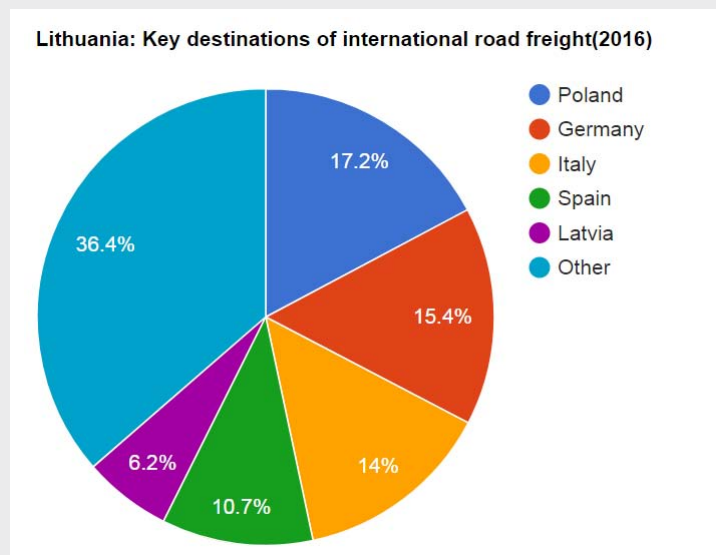
*Due to a lack of reliable data, Ti is not able to provide information on Lithuania's key logistics providers.

Market Size

Lithuania: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	3.6%	88	5.2%	108
Express	6.0%	224	6.4%	287
Freight Forwarding	6.0%	186	6.4%	239
Road Freight	1.8%	1,254	4.9%	1,519

Source: Ti

Origins and destinations of international road freight





Key destinations and origins of international road freight in Lithuania (2016)					
Loaded in Lithuania			Unloaded in Lithuania		
	m tkm	%		m tkm	%
Poland	1,687	22%	Poland	1,495	17%
Germany	1,046	13%	Germany	1,341	15%
Russia	609	13%	Italy	1,216	14%
Latvia	565	8%	Spain	929	11%
Italy	482	7%	Latvia	541	6%
Other	3,419	37%	Other	3,159	36%
All countries	7,808	100%	All countries	8,681	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Lithuania to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Netherlands



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> The Netherlands is the world's 17th largest economy, with GDP of €696bn. The Netherlands has the world's 14th highest standard of living, with GDP per capita of €40,857. The Netherlands is the world's 5th largest exporter, with exports of €515bn. The Netherlands is the world's 8th largest importer, with imports of €456bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.7%. On the same basis, real import growth is predicted at 3.4%. Real export growth is predicted at 2.5%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> High dependence on foreign trade. Populist, anti-globalisation sentiment. A decline in domestic demand, household consumption, and export volumes. An ageing population, high cost of healthcare, high taxation of labour and unemployment. Approximately half of the 28 parties in the 2017 election race were formed less than three years ago. Social conditions have improved due to wage increases and easier access to housing, and public debt has also lowered and is expected to decline to under 60% of GDP in 2017. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 4th in World Bank's Logistics Performance Index, scoring 4.19 out of 5. The World Economic Forum ranks the quality of its roads as the 5th best globally, scoring 6.1 out of 7. Its railroads rank 6th best globally, scoring 5.8 out of 7. Its ports rank 1st best globally, scoring 6.8 out of 7. Its airports rank 4th best globally, scoring 6.6 out of 7.

Source: Ti

Analysis

The Netherlands is Europe's primary 'gateway' for global trade. The Port of Rotterdam is Europe's largest container port, having handled 12.4m TEUs in 2016, comfortably ahead of Antwerp (10.0m TEUs). Globally, its container throughput ranked 12th, making it the largest port outside Asia. Its gateway role is so significant that the term 'Rotterdam effect' is used generally across trade literature to describe when a country's trade statistics have been artificially inflated, due to goods dispatched from or arriving in a port being counted incorrectly as the port country's exports or imports despite the ultimate destination or country of origin being located elsewhere.

Although the Port of Rotterdam is the Netherlands' single most important complex of infrastructure, Amsterdam Schiphol airport performs a similar role as a major European gateway for

air cargo. In 2016, it reported the third highest cargo volume (1.66m tonnes) in Europe, behind Paris Charles de Gaulle and Frankfurt.

As a hub of global trade, international road services are disproportionately large. The Netherlands is Europe's sixth largest import and export road freight market in terms of tonne kilometres. Haulage companies are concentrated around economic centres in the south-west of the country, usually in seaport hinterlands.

In total, the Netherlands has around 12,000 haulage companies, 40% of which have only one vehicle. Their core business is stop-gap local trips or last-minute jobs. They are generally self-employed drivers contracted out by big companies and are very familiar with the Port of Rotterdam's setting. Knowledge of the Dutch language is an advantage around the port and sometimes a requirement. These factors give Dutch

hauliers an important competitive advantage over cheaper Eastern European hauliers.

Overall, the complexity of the port environment clearly favours local LSPs. While any European haulier can turn up at a Dutch port to do a straightforward job with no extra services, this means the shipper is then obliged to handle all the port and customs formalities and other arrangements separately. Taking everything into consideration, the higher cost to the shipper of a coordinated operation is often offset by savings on time and skills.

As for other infrastructure, inland waterways are also highly developed, acting as a convenient means of transporting goods within the Port of Rotterdam, to and from other ports as well as logistics hubs in the hinterland. Goods moved by inland waterway account for approximately 40% of domestic tonne kilometres. The country's dense rail network also links the Port of Rotterdam smoothly to its hinterland, with services often running right up to warehouse doors.

Unsurprisingly, the Netherlands is Europe's primary hub for regional distribution centres for numerous manufacturers and retailers. It is estimated that more than 50% of Europe's regional distribution centres are located in the Netherlands, and over 600 multinationals supply their customers in Europe, Africa and the Middle East from the Netherlands. The country's main logistics hubs tend to be in the regions surrounding Schiphol, Rotterdam and Venlo. Other important

Netherlands



locations are Moerdijk, Breda, Tilburg and Eindhoven in the south near the Belgian border, Venray and Nijmegen to the east, close to the German border, Utrecht and the Port of Amsterdam.

In summary, the Netherlands is firmly entrenched as Europe's leading facilitator of global trade. While its domestic logistics market is of course important, it is probably more exposed

than any other country in Europe to economic conditions across the region and indeed globally.

Infrastructure



Road

The Netherlands has one of the densest road networks in the world. It has 14,000 km of roadways including 3,654 km of expressways. Its main highway network consists of most of its 5,200 km of national roads, comprising the most significant provincial roads. Only around 2,500 km is built completely to motorway standards while the outstanding network length comprises the expressways for fast motor vehicles only.

Because of its intensely used road network, the Netherlands has launched a series of upgrades. Roads in Netherlands are managed by authorities at different levels, including municipal, provincial, and national. In February 2017, The Dutch province of South Holland announced the contract for the construction of Rijnland Route with an estimated value of €492m. The project will include the restoration of

the Leiden West motorway junction and the construction of the 4 km N434, involving a 2.2 km bored tunnel and 12 km of motorway widening, expected to be completed in around six years; the contract comprises maintenance for 15 years.

In February 2017, the Netherlands began construction work on the first energy-neutral highway. This motorway widening project on the A6 will have 30 km of solar panels to supply energy for road and traffic lights. The Dutch Government plans to upgrade its road and water network to be fully energy neutral by 2030, with solar panels along roads and waterways, and the use of roadside grass cuttings for biofuel.

In addition, German Construction Company Hochtief and US-based Fluor were granted the preliminary construction contract for the Zuidasdok regeneration project in Amsterdam in February 2017. This contract comprises redevelopment of Amsterdam Zuid train and metro station and the nearby area, together with making major changes to the A10 motorway. The design and construction contract, including seven years of maintenance for the tunnels, is worth approximately €990m. The construction is expected to commence mid-2019 and complete by 2028.

In July 2017, Netherlands announced that Rijkswaterstaat will receive a grant

Netherlands



of €5.8m for the Via 15 road project in the province of Gelderland. In the following years, the motorway from the Ressen hub to the A12 between Duiven

and Zevenaar will be further extended by Rijkswaterstaat. In addition, a European grant of more than €11m will support tests for innovative traffic technologies

on roads accommodating substantial freight volumes.

Rail

The Netherlands has built a dense railway network, totalling 3,223 km in length, which connects almost all of the country's major cities and towns. Around one-third of the network is electrified. The Dutch rail network chiefly supports passenger transport. Nederlandse Spoorwegen or NS, which is the main passenger railway operator, provides rail services on the main national rail network. ProRail is the public tasks company that manages and maintains the national rail, while many other operators have concessions to run their trains. The entire network

is standard gauge.

The Netherlands government focuses on upgrading the network in terms of efficiency and capacity. In July 2017, Netherlands announced that it would receive a €24m grant from Brussels for the purpose of expanding and electrifying the railway between Aachen and Heerlen. Brussels has also set aside €5.2m to equip 63 freight train engines with the ERTMS railway security system. In the Rotterdam – Genoa freight railway connection, at least €300,000 will be invested in

systems enabling the earliest possible communication of expected arrival times between trains, railway managers, and terminals in various countries.

By 2018, NS plans to run all its domestic train services exclusively by wind-generated power. Eneco, a Dutch electricity company, won a tender offered by NS in 2014 and the two companies entered a ten-year contract, while agreeing upon January 2018 as the date by which all NS trains will be powered by wind energy.

Air

The Netherlands has one of the highest-ranking air transport infrastructures in the world. The major airports of Netherlands include Amsterdam Airport Schiphol, Rotterdam The Hague Airport, Groningen Airport Eelde, Eindhoven Airport, and Maastricht Aachen Airport. Amsterdam Schiphol Airport is the primary international airport in the Netherlands. It is Europe's fourth largest airport in terms of passenger traffic. As of 2016, the airport handled 63.6m passengers with 479,000 flights and airfreight tonnage of 1.7m tonnes.

Schiphol Group, the owner and operator of the Schiphol airport, planned for it a capacity enhancement project in

March 2017 to strengthen its position and to evolve it into a multimodal hub in Europe. In 2017, with an investment of €350m from EIB (The European Investment Bank), the airport commenced the building of a new pier and terminal; the pier is planned to complete in 2019 and the terminal in 2023. This will increase Schiphol's yearly capacity by 14m passengers. Additionally, in the first half of 2017, the Dutch Council of State also permitted expansion plans for Lelystad Airport. According to the plan, the airport's runway will be extended from 1,250 m long to 2,700 m and from 30 m wide to 45 m to make the airport suitable for heavier aircraft types.

Along with the expansion plans, the Air Traffic Control of the Netherlands will also receive a grant of approximately €3.9m for the introduction of Performance Based Navigation that will put the accurate navigation options of aeroplanes to frequent and better use. This will lead to more efficient routes and less noise.

Netherlands



Rail

Dutch ports are fundamental gateways to Europe. They facilitate the annual movement of more than 500m metric tonnes and account for 54% of all Western European trade shipping. The Netherlands' most important ports are the Port of Rotterdam and the Port of Amsterdam. The former is Europe's largest port, with a capacity of 12.2m TEUs (twenty-foot equivalent unit).

The Port of Rotterdam Authority invests around €150m to €200m per year in its port infrastructure. The country has initiated its Port Vision 2030 to support these investments. In April 2017, Port of Rotterdam Authority announced the expansion of the Botlek Tank Terminal's capacity from 200,000 to 467,000 cu m. Eventually, the aim is to increase storage capacity to roughly 750,000 cu m.

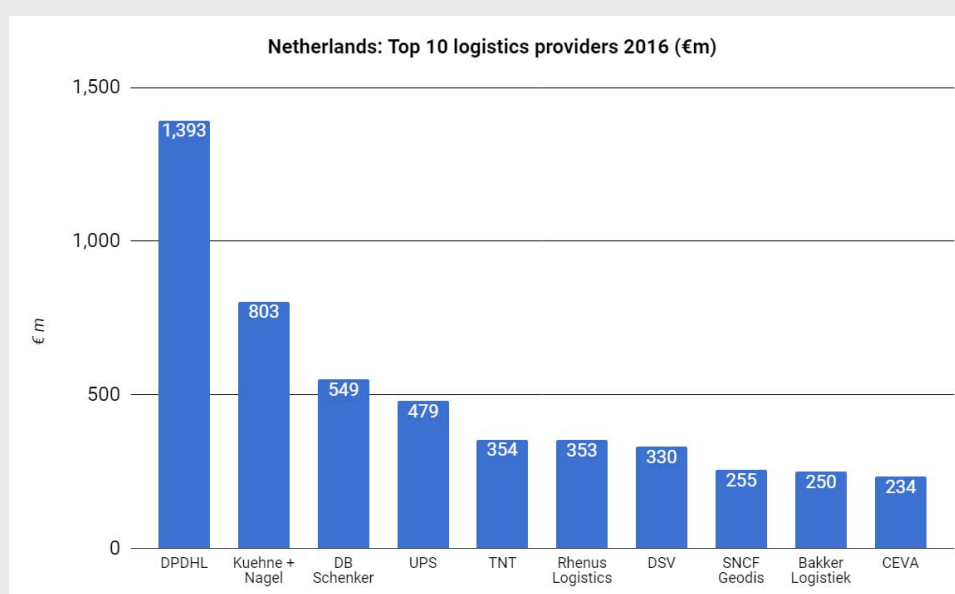
In October 2017, the Port of Rotterdam Authority announced the start of works on the deepening of the Nieuwe Waterweg, the canal that connects the centre of Rotterdam with the North Sea. The work will include a 1.5 m deepening alongside a 25 km section of the waterway between Hoek van Holland, the Benelux Tunnel, and the adjoining Botlek port. It is scheduled to be completed in the spring of 2018.

Market Size

Netherlands: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	1.6%	4,763	1.9%	5,136
Express	4.9%	1,955	5.3%	2,405
Freight Forwarding	3.0%	2,804	3.8%	3,256
Road Freight	3.4%	18,520	3.0%	20,848

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Netherlands



Brief summaries of the activities of the top 5 logistics companies in Netherlands

1. DPDHL's presence in the Netherlands is concentrated around Rotterdam (harbour), Amsterdam (Schiphol airport) and Venlo (near border with Germany), but spans the whole country. As well as its typical fleet of trucks, trailers and aircraft, DHL also operates a fleet of canal boats and helicopters in the Netherlands.

2. Kuehne + Nagel operates at 22 locations within the Netherlands, with a workforce of 2,700 employees. It offers

end-to-end supply chain solutions, as well as both sea and air freight services for its customers in the country.

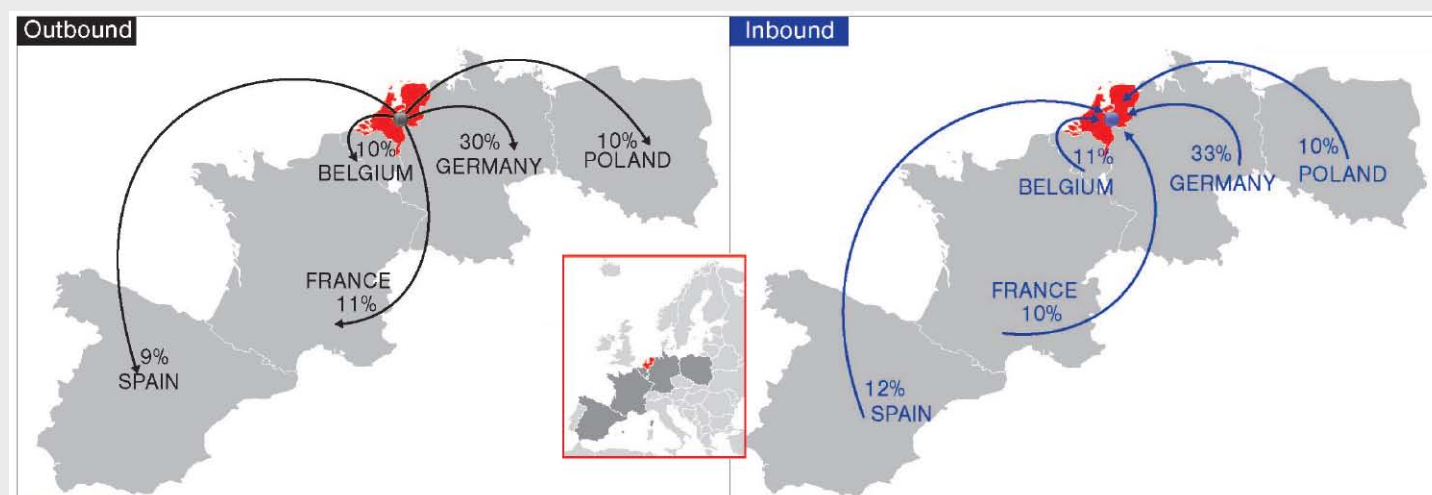
3. DB Schenker Logistics Netherlands, headquartered in Tilburg, offers transport solutions via road, rail, air and sea. Across the country it boasts 22 logistics centres, offices at 18 locations and 3,200 employees.

4. UPS has invested in infrastructure in the Netherlands in recent years

in response to growing demand for healthcare, retail and high-tech logistics solutions. The country is of strategic significance to UPS given its close proximity to its European air hub at Cologne/ Bonn airport in Germany.

5. TNT maintains a substantial presence in the Netherlands, with the company headquartered at Hoofddorp. In addition, the TNT European road freight network headquartered in Eindhoven.

Origins and destinations of international road freight



Key destinations and origins of international road freight in the Netherlands (2016)

Loaded in the Netherlands			Unloaded in the Netherlands		
	m tkm	%		m tkm	%
Germany	13358	30%	Germany	12,077	33%
France	4841	11%	Spain	4,520	12%
Poland	4552	10%	Belgium	3,939	11%
Belgium	4323	10%	France	3,543	10%
Spain	3785	9%	Poland	3,453	10%
Other	13,309	30%	Other	8,662	24%
All countries	44,168	100%	All countries	36,194	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Netherlands to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Norway



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Norway is the world's 30th largest economy, with GDP of €340bn. Norway has the world's 3rd highest standard of living, with GDP per capita of €64,614. It is the world's 36th largest exporter, with export of €81bn. It is the world's 40th largest importer, with imports of €65bn. 	<p>Growth Prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.8%. On the same basis, real import growth is predicted at 2.5%. Real export growth is predicted at 1.6%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Norway's economy is heavily dependent upon revenue from the oil sector, consequently persistently low energy prices have a negative impact on its economy. Brexit poses a major threat as the UK is the largest export market for Norway. Labour shortage in high value-added sectors increases unemployment and weakens the Norwegian krone. Low interest rates, high immigration, and overvalued houses leading to high household debt (225%). 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 22nd in World Bank's Logistics Performance Index, scoring 3.73 out of 5. The World Economic Forum ranks the quality of its roads as the 58th best globally, scoring 4.3 out of 7. Its railroads rank 36th best globally, scoring 4.0 out of 7. Its ports rank 13th best globally, scoring 5.5 out of 7. Its airports rank 10th best globally, scoring 6.0 out of 7.

Source: Ti

Analysis

Norway occupies a strategic location adjacent to sea lanes and air routes in the North Atlantic. Although not part of the EU, it is a member of the European Economic Area and is part of the Schengen Area of free movement.

The country came 22nd in the World Bank's Logistics Performance Rankings in 2016, down from seventh in 2014.

Oslo is the biggest logistics hub in Norway. The north eastern part of Oslo serves as the core of Norway's logistics sector with many distribution centres for retail and transportation businesses. It is home to the main international airport and the country's principal port, as well as global logistics providers such as DHL, Agility, UPS and DB Schenker.

The modality mix in Norwegian cargo transportation is mainly explained by Norwegian geography. Road is the main mode for transport of goods in Norway.

The country's road network was ranked 58th in the World Economic Forum's Global Competitiveness Report. The road network is densest in the south-east, with only a minor network serving the north of the country. Construction of roads and railroads is difficult and expensive in Norway because of the country's terrain: about two-thirds of the country is mountainous. 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.

Of Norway's main logistics markets, the express market is seeing the strongest growth, and domestic express is leading this growth. The warehousing and property development market is also seeing robust growth, with demand significantly outperforming supply.

In addition to the bulk and general cargo segments, transportation of

temperature controlled cargo forms a very important niche due to the role of the fishing industry. Logistics providers in Norway have also developed advanced technologies for a combination of petrochemical products and other bulk cargoes demanding high quality treatment. The oil and gas industry is of crucial importance to the Norwegian economy, whilst the strong growth of e-commerce in recent years has also brought opportunities for logistics providers. With the occurring emergence and increased presence of e-commerce, the perception is that the demand for logistics developments will only strengthen going forward.

Brexit will affect Norway as the country is part of the EU single market through the EEA Agreement. In addition, the UK's exit from the EU poses a major threat for the Norwegian economy as the UK is Norway's largest export market.

Norway



Infrastructure



Road

Road is the main mode for the transport of goods in Norway. Its network consists of 93,870 km of roads, including 393 km of expressways. The road network is densest in the south-east, with only a minor network serving the north of the country. Construction of roads and railroads is difficult and expensive in Norway because of the country's terrain: about two-thirds of the country is mountainous. As a result, Norway has 1,100 road tunnels, including the world's longest tunnel: the 15-mile Laerdal Tunnel.

Norway's National Transport Plan 2014-2023 has a record budget of €63.5bn (40% of the Norwegian State Budget for 2013). 60% of the plan's budget is earmarked for roads. The government wants to upgrade the E39, which is a north-south road which runs along the west coast of the country. At present, numerous sections are via car ferry. The aim is to make the route ferry-free within 20 years, by replacing the ferries with bridges and tunnels.

As part of this, Norway is currently building the longest road tunnel ever constructed. At depths reaching 390 m below sea level, the 27 km Rogfast tunnel will also be the world's deepest. The route runs from Randaberg, close to the city of Stavanger, to Bokn, in Rogaland, with an additional spur connecting to the island of Kvitsøy. The first stages of the construction commenced in 2017, with the link expected to open to traffic in 2025 or 2026. The tunnel is expected to cost in the region of €1.5-€1.6bn to build, with tolls paying back a proportion of the construction costs.

In addition, Southern Norway will see a major upgrade of several sections of the main roads, such as the E6, E16, E18 and E134. The E18, extending from the Swedish border to Kristiansand, will be converted into a four-lane highway between Oslo and Langangen in Telemark, while significant work will be carried out south of Langangen.

In September 2017, a bridge and a new highway linking Norway and Russia was officially opened. Norway's Sor-Varanger municipality is connected with Russia's Pechengsky District in the Murmansk Region by a 25 km stretch. Construction and renovation work on the highway started nearly ten years ago after the Russian and Norwegian Foreign Ministers agreed to invest in better cross-border infrastructure.

Rail

Railroads are state-operated in Norway and the network is 4,250 km long, 59% of which is electrified. There are 775 rail tunnels and 3,000 rail bridges.

Jernbaneverket is a state-owned agency which builds and maintains all railway tracks, while other companies such as Norges Statsbaner, NSB Anbud and

CargoNet are operators.

A third of Norway's National Transport Plan 2014-2023 budget of €63.5bn will be spent on railways. Projects to

Norway



increase freight capacity include the phasing in of new ERTMS signalling systems, efficiency improvements at Narvik, Bergen and Trondheim, the expansion of the Alnabru freight terminal in Oslo (completion expected in 2025) and the completion of a new Trondheim terminal.

Several InterCity rail projects are underway to facilitate a much-needed rail capacity expansion between some of Norway's major cities. In 2016, the government proposed to work on the Ringerike Line, a 40 km extension of the Bergen Line from Honefoss to Sandvika which is estimated to cost around €2.76bn. Construction is planned to commence during 2021 or 2022.

In 2017, the country announced a rail infrastructure around Oslo that will significantly help to upgrade the rail transport options between Sweden and Norway. The project comprises a 10 km double-track railroad design in a hilly terrain as well as a new rail station in Moss approximately 60 km south of Oslo. The construction is scheduled to begin in 2018.

In June 2017, the government announced plans to develop a second LRT (Light Rail Transit) line in Norway's second-largest city, Bergen. The 10.8 km line comprising of two tunnels, nine stations and one underground will run south from Kaigaten in the city centre to Fyllingsdalen. The plan is estimated to cost €666m and is set to begin in

2018; construction is scheduled for implementation in three phases and trains should be running to Fyllingsdalen by 2022.

The Government emphasises the development of IC (intercity) routes with regard to rail. By the end of 2024, the government plans to install double track lines to Tonsberg, Fredrikstad, and Hamar, which will make it possible to establish train services with half-hour frequency throughout the day. By the end of 2026, the double track will be extended to Sarpsborg. The Government aims for a future planning that will bring completion of the entire IC-system in 2030.

Air

Norway operates 98 airports, 67 of which have paved runways. The country also has one heliport. 45 of the airports are run and maintained by Avinor, a limited company fully owned by the Norwegian state. Gardarmoen, a fully-owned subsidiary of Avinor, is the main international airport in Norway, located just north of Oslo.

Gardermoen serves as a hub for Norwegian

Air and Scandinavian Airlines. The second largest Norway airport, Bergen Airport, serves as the main airport for the west coast.

To meet the expected growth in traffic, Avinor is planning to expand capacity at the major airports. Avinor's 2014–2023 investment plans worth €4.0bn include the New Bodo Airport development project to replace the current Bodo Airport that will utilise around €584m

to €649m of the investment, along with structure valuation of the new airports in Lofoten, Vesterålen, Ofoten, and Helgeland.

Gardermoen added a 140,000 sq m extension, doubling the size of the airport in April 2017. In August, Bergen Airport opened its third terminal. Work on the project has taken three years and cost €398m.

Sea

Norway's principal port is located in Oslo. Other ports in Norway include Bergen, Borg Havn, Haugesund, Maaloy, Mongstad, Narvik and Sture. The coastal towns of Bergen, in the southwest, and Kirkenes, near the Russian border, are linked by a daily

boat service. Norway has 1,577 km of inland waterways.

The country handles 37.3m tonnes of seaborne goods.

The Port of Oslo handled 195,460 TEUs in 2015. In 2015, Yilport took over the

operation of the Sjursøya container terminal. The Port Authority of Oslo is building a new cargo port in Sydhavna. Whilst the current port has a capacity of 350,000 TEUs, this will grow to 450,000 TEUs when the new container terminal is completed.

Norway



The government of Norway has initiated the Oslo port plan 2013-2020 for the development of the port areas. It plans to invest €300m in the cargo port for container terminal handling and

development of the dry bulk terminal by 2030.

In the first half of 2017, Sweden initiated the construction of the new terminal in

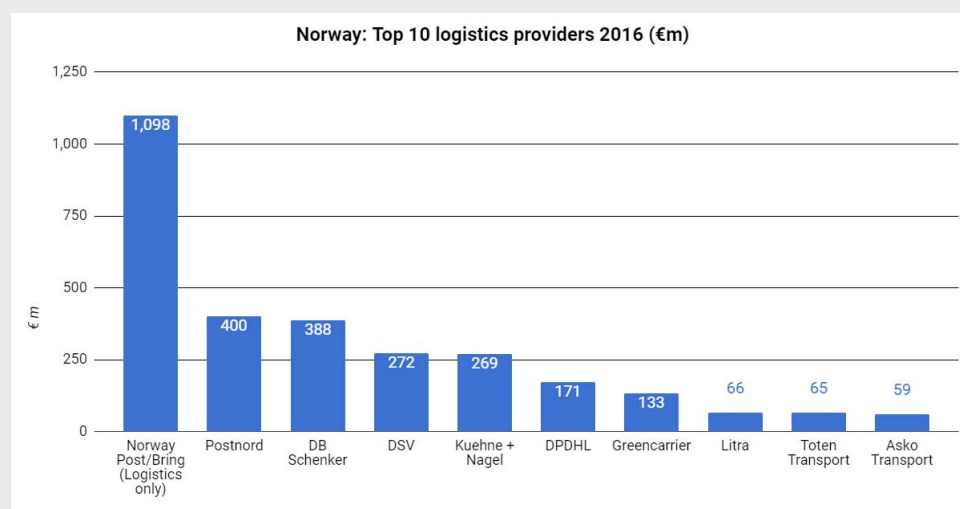
Arendal port that will be fully operational in 2024. The terminal area is 220,000 sq m and has a maximum water depth of 10 m.

Market Size

Norway: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	-1.1%	410	2.2%	448
Express	3.8%	761	5.0%	924
Freight Forwarding	1.8%	630	3.7%	730
Road Freight	1.8%	5,280	2.5%	5,821

Source: Ti

Logistics Providers



*Note: Revenues for Toten Transport and Asko Transport are at the Group level and are all recorded in Norway. However, these revenues are in fact generated from operations conducted in Norway and elsewhere in Europe. Country-specific revenues for these companies are not available. Revenues for all other companies are country-specific.

Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Norway

1. Norway Post operates through two brands: “Posten” which provides services for private customers, the post office network and daily postal delivery in Norway, and “Bring” which is directed towards business customers, within mail

and logistics, in the Nordic region. Bring claims to be the fourth largest logistics company and second largest mail distribution company in the Nordic area.

2. PostNord Norway, part of the

PostNord Group, offers end-to-end supply chain solutions. According to the group, PostNord Norway contributes around 30% of total sales.

3. Schenker AS, as known in 2015,

Norway



was formed through a series of mergers and acquisitions. In 1992 DB Schenker acquired shipping business Kristiania (Oslo). This was merged with the company's 1998 acquisitions of Swedish Bilspedition and Scansped, to become Schenker AS. It utilises 1,300 drivers across the Nordic countries and is

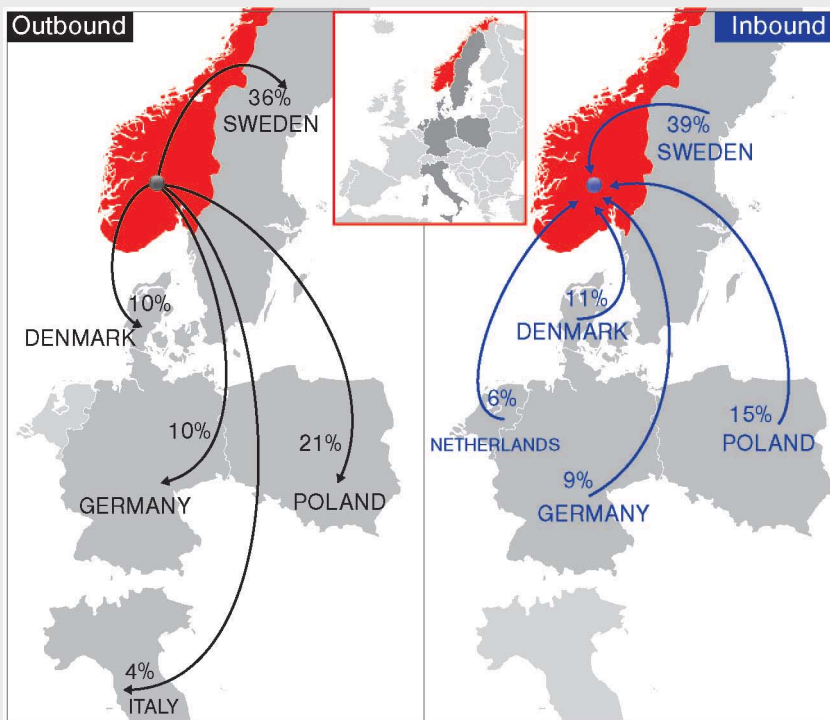
headquartered in Oslo, Norway.

4. Kuehne + Nagel operates from 13 locations across Norway and offers its customers the following services: international freight forwarding by sea, air, rail and road; customs services; domestic transport; warehousing; distribution; and special project logistics.

Since its 2009 acquisition of Martens Holding A/S, it is also present in the international oil and gas logistics market.

5. DSV offers a range of services under its brands DSV Road, DSV Air & Sea and DSV Solutions brands in Norway. It acts as Boeing's spare parts supplier in Scandinavia.

Origins and destinations of international road freight



Key destinations and origins of international road freight in Norway (2016)					
Loaded in Norway			Unloaded in Norway		
	m tkm	%		m tkm	%
Sweden	1,474	36%	Sweden	1884	39%
Poland	858	21%	Poland	709	15%
Germany	421	10%	Denmark	555	11%
Denmark	419	10%	Germany	440	9%
Italy	147	4%	Netherlands	289	6%
Others	805	20%	Other	986	20%
All countries	4,124	100%	All countries	4,863	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Norway to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Poland



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Poland is the world's 25th largest economy, with GDP of €422bn. Poland has the world's 59th highest standard of living, with GDP per capita of €11,124bn. Poland is the world's 23rd largest exporter, with export of €178bn. Poland is the world's 24th largest importer, with imports of €170bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 3.2%. On the same basis, real import growth is predicted at 6.2%. Real export growth is predicted at 5.5%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Inadequate level of investments and very low domestic savings rate. High fiscal deficit and public debt. Political uncertainties, structural unemployment, and low birth rate. Currency volatility increased in 2016, with the PLN experiencing weakness due political events such as the start of the PiS government's implementation of its controversial policy measures in early 2016, Brexit in June, and the election of Donald Trump as U.S. President in November. Increase in household income, strong employment, and growth in public investment will help Poland's economy grow in 2017. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 33rd in World Bank's Logistics Performance Index, scoring 3.43 out of 5. The World Economic Forum ranks the quality of its roads as the 39th best globally, scoring 4.6 out of 7. Its railroads rank 45th best globally, scoring 3.6 out of 7. Its ports rank 64th best globally, scoring 4.2 out of 7. Its airports rank 66th best globally, scoring 4.5 out of 7.

Source: TI

Analysis

Poland is one of the rising stars of European logistics. It possesses some of the strongest growing logistics markets in Europe, with its contract logistics, freight forwarding, road freight and express and parcels experiencing high single-digit growth in recent years. Economic growth is healthy and international trade is thriving. Its position in central Europe means it has become a major east-west and north-south transit hub.

Poland's road freight market is one of its strongest logistics sectors. It benefits from its position in Central Europe, and its lower costs relative to its Western European neighbours. For example, its hauliers' international driving costs are around €10 per hour, which is around half the cost of a German driver. As such, Polish hauliers carry out around

35% of European cabotage, and account for around 30% of all international road freight tonne kilometres. The Polish government is continuing to invest in its infrastructure; it is in the middle of its "National Road Construction Programme". This will add a further 2,000 km of roads and is estimated to cost approximately €16bn over a seven year period.

One concern going forward is potential EU changes to posted workers and cabotage, although the possible effects are disputed. It is worth also noting that even its domestic market is one of the 10 largest in Europe.

Alongside its road infrastructure projects, the Polish government is seeking to upgrade its railways, with around €2bn of modernisation projects announced in early 2017. Poland also features in China's "Silk road" scheme

through stops in Warsaw and Lodz.

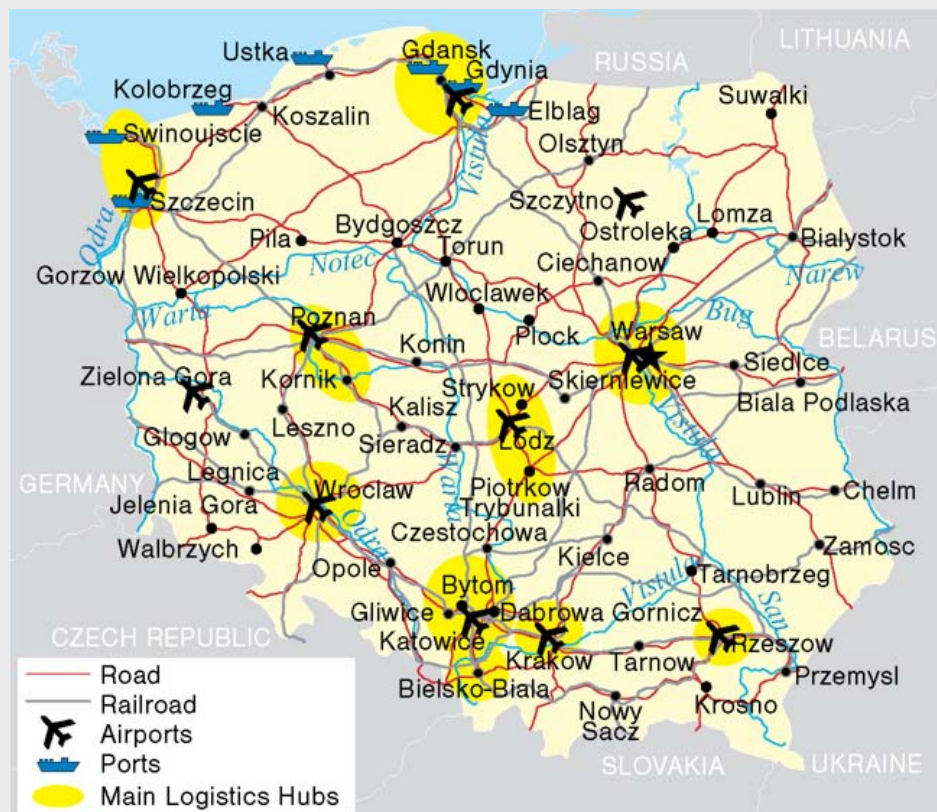
Poland hosts one of the Baltic Sea's largest seaports in Gdansk. The Polish government is hoping to expand its capacity by around 50% and also intends to develop upon its system of inland waterways. Part of this includes connecting it with the Black Sea, enabling it to become a key transit hub for Europe and enhancing Poland's position as a key gateway between the Nordic countries and Southern and Eastern Europe.

Poland is a key exporter of industrial products, which is providing growth for its contract logistics market. In particular, vehicle production is particularly strong. Operators such as Imperial, Rhenus and Kuehne + Nagel have had key contract wins in the automotive sector recent years. The retail sector is another key growth sector providing opportunities for 3PLs.

Part of the reason for growth in the retail sector is rising wages. In 2018, the EU forecasts nominal wage growth of over 5% and is enhancing consumer spending. Wage growth is as a result of a tightening labour market, which could provide structural problems in the future for the Polish economy, by dampening growth and making public infrastructure investment more difficult.



Infrastructure



Road

Poland is located between key east-west and north-south European road freight transport routes. It has a total of 417,026 km of roads of which 287,650 km are paved.

In 2014, Poland set out the National Road Construction Programme (2014-2023) for road development and expansion of the nationwide network. The Polish General Directorate for National Roads and Motorways “GDDKiA” disclosed that so far about 157 tenders have been declared under this programme for the period 2014-2023. The projects involve the construction of around 2,089 km of roads. The total value of this work is around €15.7bn.

A new tunnel in Poland was proposed in

January 2017 to improve transport links between Uznam Island, Woznin Island, Karsibor Island, and the country’s mainland. With an investment of €179m, the project is planned for completion by late 2021 or early 2022.

In March 2017, Poland commenced construction work on two parallel tunnels as part of its S7 dual carriageway project. The €225m project includes 38 bridges and viaducts and three motorway services. There will also be 25 km of access roads and two junctions. Along with this, Polish General Directorate for National Roads and Motorways “GDDKiA” announced a project for the construction of three sections of the S19 dual carriageway. The 570 km Expressway S19 or express road S19 will run from the north-eastern

border crossing to Belarus in Kuźnica south through the Polish towns of Białystok, Lublin, and Rzeszów, to the border with Slovakia at Barwinek.

The work on two sections of the S17 highway in Poland was also initiated in March 2017. It involved the construction of two stretches of the S17, measuring over 25 km. One of the stretches, measuring 12.2 km, will connect Gonczyce with the ring road around Garwolin. The other stretch runs 13 km long and connects the distance between Lubelskie through Mazowieckie to Gonczyce. A further 95 km stretch of the S17 is underway in seven separate locations; connecting Warsaw with Lublin. This project will incur a cost of €744m and is due for completion in 2019.

In July 2017, for the construction of 570 km Expressway S19 via Carpatia, the Polish government increased the budget for building roads by €6.7bn to €32.1bn. The first phase of building the road will include 248 km northern ring road of Białystok Sochonie-Dobrzyniewo-Choroszcz to connect with the S8 at an estimated cost of €2.85bn. In addition, the construction of a stretch of the S7 dual carriageway in Poland commenced in August 2017. The stretch, connecting Lotnisko junction with Grojec’s ring road, will involve an investment of €186.66m.

In September 2017, Poland approved financing of two road projects worth nearly €1.2bn in total, including a ring road around Chelm. These projects will include a dual carriageway section for the S17 between Piaski and Hrebenne. In addition, Poland also announced €9,359m of funding for three projects involving rebuilding the

Poland



road out of Białystok in the direction of Warsaw, and upgrading two sections of road, one from Zabłudow to the border of the municipality and the other from Markowszczyzna to Lapy. In addition, four offers worth between

€194m and €259m were announced by the country's General Directorate for National Roads and Motorways announced for the construction of a 1.4 km long tunnel in northern Poland.

Into 2018, the Polish Government intends to lower its road development budget. The country intends to spend approximately €875m on upgrades to the national road network, a drop of €110.8m from 2017.

Rail

The rail infrastructure of Poland consists of 19,231 km of railways, including 395 km of broad gauge and 18,836 km of standard gauge. Approximately 11,865 km of its railways are electrified. The rail network is spread densely in northern and western Poland; the eastern part is less developed in comparison.

Poland is to invest over €15.6bn in railway infrastructure in line with the 2014-2023 railway investment plans, an EU-funded project. It included the two-phase modernisation of Pruszcz Gdański–Gdańsk Port Północny section of Poland's line no. 226, which helps move freight between the maritime Port of Gdansk and the E 65/CE 65 railway line. In addition to improvements along line no. 226, they cover adjacent parts of

railway lines no. 846, 965 and 721 and track systems at the Gdansk Olszynka railway station. Seven railway bridges are being constructed, including a new one over the Martwa Wisła River while another is being modernised.

In February 2017, Polish Railway Lines announced five projects for rail modernisation worth €2bn. The first project involves the modernisation of Białystok – Suwałki –Trakiszki section on line E75 with an investment of €383m. The second project involves the modernisation of Kędzierzyn Koźle – Opole Zachodnie section on Line E30 with a total value of €142.4m. The modernisation of E30 and E65 lines with a total value of €937m is included in the third project, while the last project

involves the rail section on C-E 20 line with a total value of €227.4m.

The 2017 value of investments is estimated at €1.3bn and these projects will contribute to the development of rail freight transport in Poland. In addition, Poland's rail infrastructure manager, PKP PLK announced plans to upgrade two sections of Line 7, which link Warsaw and Dorohusk with the Ukrainian border. The two contracts are worth a total of €233m and will involve the installation of new rails, upgradation of 38 structures, including bridges, overpasses, underpasses, tunnels, and sewers and building new platforms by the end of 2020.

Air

Poland has a number of international airports – the largest of which is Warsaw Chopin Airport, which handles around 70% of cargo traffic in Poland. The most frequent carried goods include consumable parts and materials for

heavy industry, pharmaceuticals, books and newspapers. Other key regional airports include Gdańsk, Rzeszów, Katowice, Wrocław, Kraków and Poznań.

Poland announced the construction of a

new mega-airport "The Central Airport" on a site between Lodz and Warsaw in February 2017, with an investment of €5.8bn. The new airport is expected to become the hub of LOT Polish Airlines and is forecast to be completed in 2027.

Sea and Inland Waterways

The main ports in Poland are Gdańsk, Gdynia, Szczecin, and Świnoujście. There are three main sea cargo

terminals – Szczecin with a re-loading capacity of 78,000 TEUs BCT Gdynia Seaport with a re-loading capacity of

over 850,000 TEUs, and DCT Gdańsk Seaport with re-loading capacity of over 3m TEUs.

Poland



Sea and inland waterway transport redevelopment is one of the priorities of the current government of Poland. Currently sea and inland transport are supported by over €1.5bn of investment plans. The government has planned to spend €1.5bn by 2020 on maritime transport. In this timeframe of maritime transport investments, the container

terminal in Gdansk will increase its capacity to 4.5m TEUs from 1.5m TEUs at present. Approximately €0.3bn will be directed to investments in Szczecin and Świnoujście ports.

Poland announced new development plans as part of “Strategy of development of Port of Gdansk by

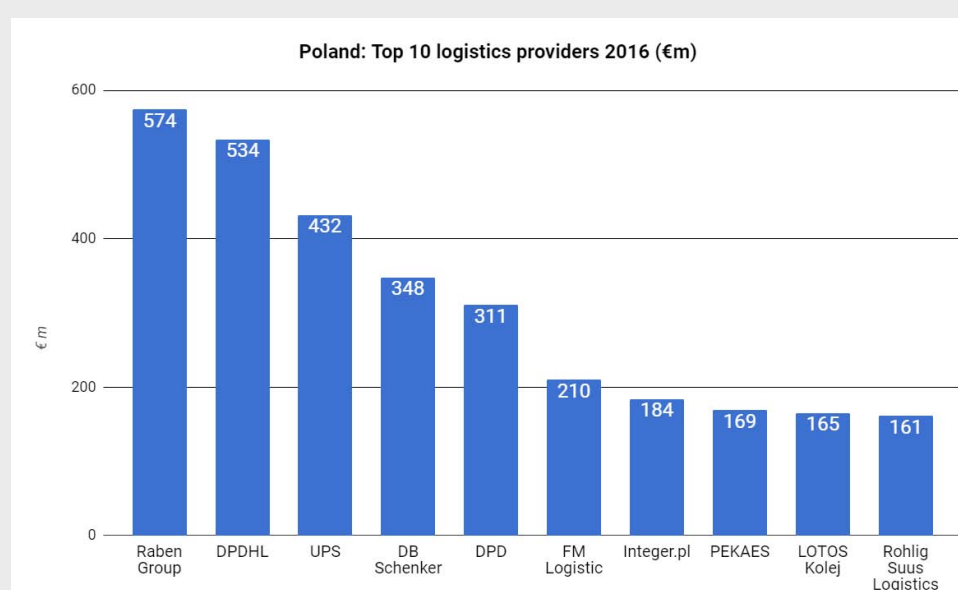
2027” on June 26, 2017, involving the construction of a Central Port, complete with new deepwater terminals to handle large vessels entering the Baltic Sea. The work will involve the reconstruction of the existing bank reinforcement and modernisation of the quay’s above-water part. The project is scheduled to be completed by the end of 2020.

Market Size

Poland: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	5.2%	997	4.9%	1,209
Express	6.7%	1,253	7.5%	1,676
Freight Forwarding	7.1%	1,021	6.6%	1,316
Road Freight	7.9%	6,460	6.3%	8,756

Source: Ti

Logistics Providers



Poland



Brief summaries of the activities of the top 5 logistics companies in Poland

1. Raben Group, based in Poland, provides warehousing and distribution services across Europe, through national subsidiaries. It also has subsidiaries based across Europe providing warehousing, international and domestic forwarding and distribution, supply chain solutions and temperature-controlled services.

2. DPDHL has been present in Poland since 1983. It provides services via its Global Forwarding, Supply Chain, Express and Freight divisions. It operates from 10 warehouses, three hubs and seven gateways in the country, as well as a number of offices,

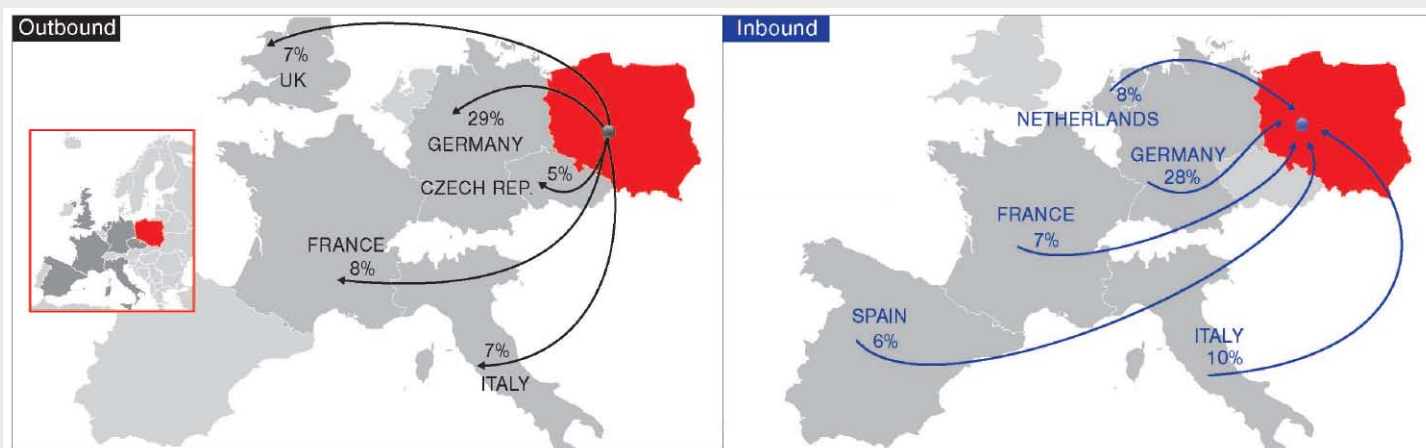
distribution centres and other locations. The company's floor space in Poland is around 208,000 sq m.

3. UPS has expanded its presence in Poland in recent years, having established two facilities in the country in 2014. The first facility was a new parcel sorting hub and centre in Strykow. The second facility was to house a UPS global business services (GBS) centre in Lodz. UPS has since used stops in Warsaw and Lodz on its multi-modal service from Europe to China.

4. DB Schenker is represented in Poland by Schenker Sp. Z o.o. It offers integrated logistics solutions for companies in a number of industries, including electronics, machinery, FMCG and chemicals. The solutions offered cover road and rail transport, contract logistics and distribution, air and ocean freight, as well as value-added services and customs clearance.

5. DPD in Poland was formerly known as Masterlink. It reinforced its position in the market and gained market share in 2014 by acquiring courier firm Siódemka S.A and has successfully integrated it into its European network.

Origins and destinations of international road freight



Key destinations and origins of international road freight in Poland (2016)					
Loaded in Poland			Unloaded in Poland		
	m tkm	%		m tkm	%
Germany	19,343	29%	Germany	16,909	28%
France	5,587	8%	Italy	5,912	10%
Italy	4,900	7%	Netherlands	4,552	8%
United Kingdom	4,867	7%	France	4,174	7%
Czech Republic	3,499	5%	Spain	3,778	6%
Others	28,362	43%	Other	25,026	41%
All countries	66,558	100%	All countries	60,351	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Poland to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Portugal



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Portugal is the world's 47th largest economy, with GDP of €186bn. Portugal has the world's 40th highest standard of living, with GDP per capita of €17,856. Portugal is the world's 45th largest exporter, with export of €50bn. Portugal is the world's 41th largest importer, with imports of €61bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.1%. On the same basis, real import growth is predicted at 4.0%. Real export growth is predicted at 3.9%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> High unemployment and considerable reform in the last few years. structural lack of strong economic growth, resulting in negative implications for welfare, unemployment, and debt sustainability. Delayed investment and subdued private consumption slowed down the Portuguese real GDP growth rate to +1.4% in 2016 (after +1.6% in 2015). Economic growth struggles expected to exceed +2% per year due to low productivity. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 36th in World Bank's Logistics Performance Index, scoring 3.41 out of 5. The World Economic Forum ranks the quality of its roads as the 8th best globally, scoring 6.0 out of 7. Its railroads rank 31st best globally, scoring 4.2 out of 7. Its ports rank 25th best globally, scoring 5.2 out of 7. Its airports rank 29th best globally, scoring 5.5 out of 7.

Source: Ti

Analysis

Given Portugal's Atlantic coast and close proximity to the Mediterranean Sea, it is almost inevitable that logistics related to port operations and sea freight are substantial. Being at the crossroads of principal north/south and east/west maritime routes, its location makes it a natural transshipment hub, allowing carriers the option of feeding traffic either to the north of the continent, east through the Mediterranean or south to West Africa. Its largest port is Sines, which handled over 1.5m TEUs in 2016, ranking it 91st globally and 17th in Europe. Plans are in place to expand capacity at the port's sole box facility to 3.3m TEUs, but an international tender is also on the table to build another container terminal, which could offer 3m TEUs of capacity in its first phase. Evidently, Portugal is looking to bet big on becoming a bigger transshipment hub.

Apart from sea freight, road freight is the other dominant mode of transport

that concerns Portuguese logistics operators. The fortunes of Portugal's logistics market are closely intertwined with those of Spain's. A substantial part of the Portuguese logistics market involves cross-border operations with Spain, making the former's international road freight sector appear disproportionately large.

Rail freight and air freight are relatively unimportant for Portugal. The country's primary air hub is Lisbon, although air freight destined for or originating in Portugal often goes through Spanish airports.

The country's main logistics hubs are centred around Lisbon. The Port of Sines, located south of Lisbon, can be considered a separate hub. Elsewhere, Porto is the main logistics centre in the north, while Faro is the primary hub in the south.

Infrastructure

Road

Portugal's road network is 82,900 km long and includes 2,613 km of expressways. The network has concentrated on linking the economic centres of Porto and Lisbon, as well as the tourism-focused Algarve region, via Faro. Since 2012, a toll system has operated on the entire motorway system as a way of enabling the country to meet its bailout terms. Not only has it encouraged companies to use roads that were not designed for HGVs, it has lead many to use older, cheaper rolling stock for domestic services, as a means of offsetting the increased operating costs.

Current road infrastructure projects include the refurbishment of the international bridge over the Guadiana river, connecting Vila Real de Santo Antonio in Portugal and Ayamonte in Spain. The 18-month project will cost €13m. The government has also put out to tender the construction of the first section of the Via dos Duques highway. The route will connect Coimbra, between the junction of the main road A13 and the A25 highway in Mangualde, and also go through Viseu. Construction of the 72 km of highway will cost an estimated €320m.

Portugal



Rail

Portugal is a listed member of the International Union of Railways (UIC). The rail network comprises 2,786 km

providing north-south connection down the coastline and east-west across the country. Railway network density

Air

Portugal has three major international airports located in the coastal cities of Lisbon, Porto, and Faro. Due to the isolation of the autonomous regions there are a larger number of airports - the Azores have nine and Madeira has two. Most international airlines serve the country's main airports.

The airports managed by ANA - Aeroportos de Portugal serve about

66 regular airlines, connecting the Portuguese regions with nearly 149 worldwide destinations around the world. Transportes Aereos Portugueses (TAP), the national flag-carrier, provides domestic and international service along with most major U.S. and European airlines.

On February 16, 2017, a MoU was signed between Portuguese

tends to be more significant in regions with a higher population concentration. The total length of the railway system comprises 2,603 km broad gauge and 183 km gauge.

During the next six years, Portugal will invest €2.7bn to build 1,200 km of railways to improve freight transport. The Plan for Transport and Infrastructure (PETI) involves constructing a 92 km new line, between Évora and Caia, requiring an investment of €626m. The strategic plan also provides for the conclusion of the modernisation on the Northern Line in 2020, which will require an investment of €315.2m, in the Alfarelos – Pampilhosa, Ovar – Gaia, and Braço de Prata – Alverca rail sections.

In 2016, a plan called FERROVIA2020 was introduced, which is now fully underway. The plan has a total investment of around €2bn until 2020 and gives priority to the conclusion and modernisation of international routes which cross the country, as well as the modernisation of the network's backbone – the North/South route between Lisbon and the Galiza border in Valença.

Portugal



Sea

The five main ports in Portugal comprise Aveiro and Douro & Leixões in the north and Setubal, Lisbon, and Sines in the south. The other ports include the ports in the autonomous regions of Madeira and Açores and a few other smaller ports, managed by the four main ones: Figueira da Foz, managed by Aveiro; Viana do Castelo, managed by Douro & Leixões; and Algarve, managed by Sines.

In 2016, Port of Setubal experienced 6.98m tonnes and 156,567 TEUs of traffic volumes. The installed capacity of Leixões port is around 7m tonnes and 700,000 TEUs. Containerised

cargo at the port has been recording a steady growth and in 2016 the two terminals together handled 6.4m tonnes and 660,000 TEUs, almost reaching its installed capacity.

The country's 2017 plans include a project to improve and upgrade railway connections to the Port of Setubal, electrifying all railway connections, constructing new incoming and outgoing railway tracks, and building a new connection between the port and the stations of Praias-Sado and Setubal Mar.

In 2017, Mozambique and

Portugal signed a Memorandum of Understanding (MoU) on solidifying maritime and port transport cooperation and strengthening bilateral relations. The geographical positioning of Mozambique is particularly strategic concerning to transportation and logistics, mainly for countries such as Malawi, Congo, Zambia, Zimbabwe, and north-east of South Africa. This partnership may perhaps translate into areas such as technological and training solutions, for instance, the single logistics window, the single port window, and the coastal maritime traffic system (VTS).

Inland Waterways

Portugal has a number of navigable estuaries, including the Tagus River which flows through Lisbon. The only true inland waterway is the river Douro, canalised over a length of 211 km to the Spanish border, with a series of five

multi-purpose dams and locks.

This development project featured the highest shaft lock in the world at Carrapatelo (35 m) when it was built in the 1970s. The entire length was

opened to navigation in 1990. Although designed to carry iron ore down to Porto, the river has little commercial traffic and is predominantly used for leisure purposes.

Market Size

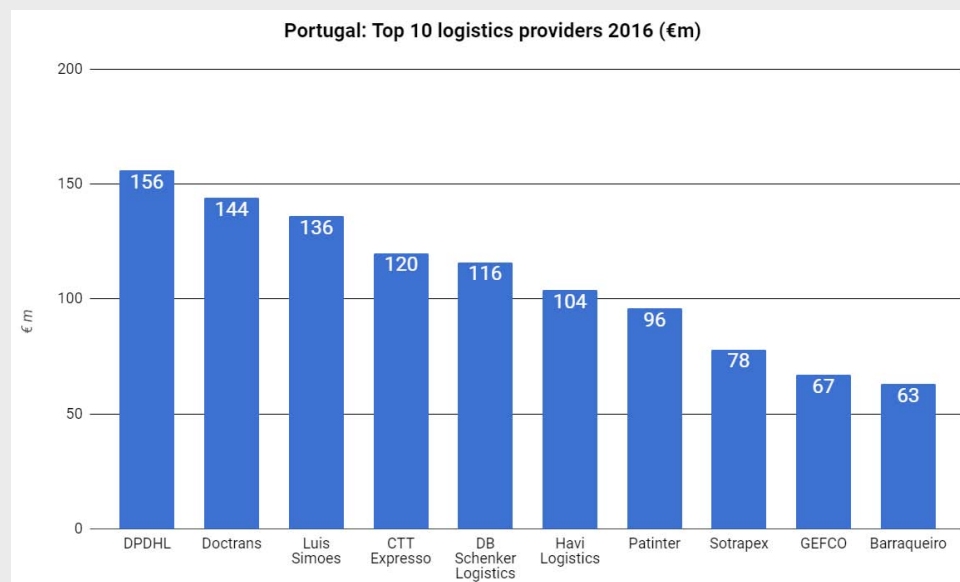
Portugal: Logistics Market Sizing Data

Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	8.9%	370	5.4%	456
Express	4.9%	639	5.1%	781
Freight Forwarding	1.5%	424	2.6	470
Road Freight	1.0%	4,235	3.2%	4,805

Source: Ti



Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Portugal

1. DPDHL's Global Forwarding, Supply Chain, Express and Freight businesses all operate within Portugal. In November 2014, DHL Freight established two stations in Portugal (Lisbon, Porto) which were integrated into its Eurapid network. The day-definite service for less-than-truckload (LTL) shipments up to 2.5 tonnes is now available at 50 terminals in 17 countries and covers 80% of all business addresses in Europe.

2. Doctrans' primary focus is the transport of refrigerated goods across

Europe. Headquartered in Portugal, Doctrans offers international FTL and LTL road freight transport, as well as an international express service.

3. Luis Simoes is headquartered in Portugal and operates a dense network in the Iberian Peninsula, including 20 logistics centres, 16 cross-docking platforms, 11 co-packing centres and 10 transport operations centres.

4. CTT Correios de Portugal is Portugal's postal operator. It has three business sectors: Mail, Express &

Parcels and Financial Services. CTT's Express & Parcel business is present in Portugal via CTT Expresso. Distribution is outsourced to local players in high-density areas, while CTT uses its own retail network in low density and rural areas. CTT claims to maintain the lead in the domestic market.

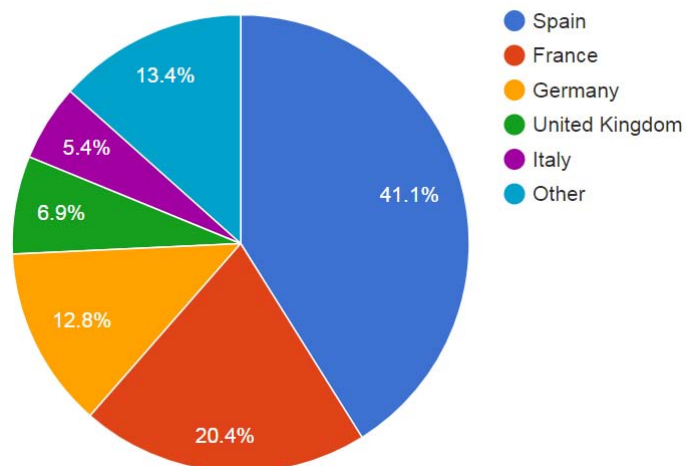
5. DB Schenker has five branch offices in Portugal where it provides land transport, contract logistics and freight forwarding services. DB Schenker operates 17,000 sq m of warehouse space in Portugal.

Portugal

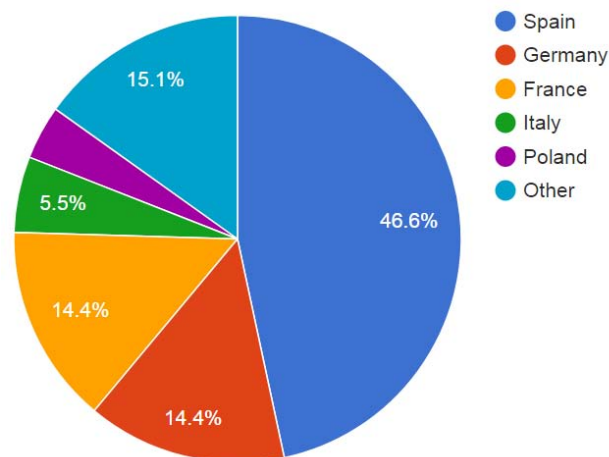


Origins and destinations of international road freight

Portugal: Key destinations of international road freight(2016)



Portugal: Key origins of international road freight(2016)



Key destinations and origins of international road freight in Portugal (2016)					
Loaded in Portugal			Unloaded in Portugal		
	m tkm	%		m tkm	%
Spain	4,739	41%	Spain	6,148	47%
France	2,348	20%	Germany	1,900	14%
Germany	1,479	13%	France	1,899	14%
United Kingdom	798	7%	Italy	723	5%
Italy	623	5%	Poland	515	4%
Other	1,547	13%	Other	1,995	15%
All countries	11,534	100%	All countries	13,180	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Portugal to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Romania



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Romania is the world's 51st largest economy, with GDP of €169bn. Romania has the world's 67th highest standard of living, with GDP per capita of €8,530. Romania is the world's 39th largest exporter, with export of €57bn. Romania is the world's 39th largest importer, with imports of €67bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 3.4%. On the same basis, real import growth is predicted at 6.8%. Real export growth is predicted at 6.2%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> From a political perspective, it suffers from corruption practices a demographic crisis, and an ineffective judicial system. Manufacturing is the main driver of exports (accounting for 75% of total exports) but it is hampered by low productivity and lack of competitiveness. Leading global companies such as Siemens, Ford, and Bosch have expanded or set up operations in Romania over the recent years, boosting an economy that's already growing at speed. Its economy is forecast to grow 5.5% in 2017. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 60th in World Bank's Logistics Performance Index, scoring 2.99 out of 5. The World Economic Forum ranks the quality of its roads as the 120th best globally, scoring 2.7 out of 7. Its railroads rank 73th best globally, scoring 2.6 out of 7. Its ports rank 92nd best globally, scoring 3.5 out of 7. Its airports rank 89th best globally, scoring 4.0 out of 7.

Source: TI

Analysis

Romania's geographical position makes it an important hub between Asia and Europe. It also benefits from its proximity to the Balkans and the Middle East, and controls the most easily traversable land route between the Balkans, Moldova and the Ukraine. Romania is dominated by the Carpathian Mountains in the north and centre of the country, while the main feature in the south is the vast Danube valley which becomes a delta as it approaches the Black Sea.

Romania's road network is poorly developed. It was ranked 120th in the World Economic Forum's 2017/18 Global Competitiveness Report. The poor quality of roads adds to travel times across the country and causes problems for cargo with a short shelf-life. Substantial improvements have been made in Romania's road infrastructure in recent years, with the country receiving

US\$4.06bn from the EU for road infrastructure projects between 2014 and 2020.

Romania's logistics industry is concentrated in Bucharest, which benefits from being close to the Port of Constanta and Budapest (Hungary). Timisoara, Arad and the West Region in Romania are becoming more popular, along with Cluj, Sibiu and Brasov and Constanta. The West and the North of the country have become important for manufacturing, with businesses attracted by lower land and labour costs, as well as the proximity of Hungary.

Romania's retail sector is playing an increasingly important role in the logistics market, spurred on by large grocery multinationals such as Kaufland, Carrefour and Lidl. Another area with growth potential for logistics providers is e-commerce.

The automotive industry is also of benefit to domestic logistics providers. Renault, Ford and Mercedes Benz have plants in Romania and approximately 600 original equipment manufacturers are producing automotive components in Romania. Other car manufacturers, including BMW, are also looking at the Romanian market.

Overall, investments in retail and manufacturing, coupled with consistent GDP growth and the presence of numerous automotive companies, have turned Romania into an attractive market for freight forwarders and logistics companies.

Shortage of staff is a significant issue for the logistics sector, with increasing emigration exacerbating the situation in the labour market.

Alongside further investment in road infrastructure, which remains of the highest importance for the logistics industry, the port of Constanta and the country's railway network are also of strategic importance.

Romania



Infrastructure



Road

The total road network in Romania is about 198,817 km long, comprising of 60,043 km paved and 138,774 km unpaved roads. A total of 86,080 km constitute the public roads, of which 17,606 km (20.5%) are national roads; 35,316 km (41%) country roads, and 33,158 km (38.5%) are communal roads.

In 2017, the documents necessary to begin the acquisition process for construction works of the express road linking Craiova and Pitesti cities have been submitted by the National Company for the Administration of Road Infrastructure (CNAIR). The total project cost is estimated around €820m and

the road to be constructed will run 121.1 km and split into four sections. This initiative will correlate with the designs of larger European infrastructure projects, is expected to prove supportive to the economic development of the south-western part of Romania. The construction is expected to begin in 2018.

Romania had around 734 km of motorways network at the end of 2015. The country expects around 1,000 km of motorways in operation in the first half of 2018, as many of the ongoing building projects were stopped mid-way for lacking construction permits in 2016.

Two major road projects are currently ongoing in Romania. Work on the Pitesti-Sibiu Highway is due for completion in 2023. This follows on from a €1.6bn investment provided through the Large Infrastructure Operational Programme (LIOP). Meanwhile, completing the final 3.3 km of the Bucharest - Ploiesti highway will cost €28.54m, according to the National Company for Highways and National Roads of Romania (CNADNR). The project is being carried out jointly by Aktor and Euroconstruct Trading '98. Work is due for completion during early 2018.

Rail

Romanian railway network comprises 22,298 km. Of these, some 8,585 km are electrified. The route length is 10,788 km. It comprises about 1000 stations, 200 tunnels, and 4000 bridges.

Ongoing degradation of the Romanian railway infrastructure over the last 26 years continues to adversely affect

transport safety, and the country's GDP in consequence to political decisions that conflicted with nation's interest and EU's policy. The railway transport lost its share significantly since the national budget did not prioritise investment in the Romanian railway infrastructure within 2017. In accordance with lowered

railway transport, CFR SA accomplished six large investment projects worth €293.4m in the first half of 2016 and is currently (2017) implementing works for the rehabilitation of the railway infrastructure and superstructure worth €1.56bn. Apart from these projects, 58 more investment projects worth €2.8bn

Romania



were launched, while the rest of 336 projects were prioritised at the regional level, with total costs worth €228.9m.

In 2017, Romania's current project on Pan-European Railway Corridor IV

includes the restoration of Braşov-Apaşa (38 km) and Caţa-Sighişoara (47 km) sections, expected to complete by 2020. At the end of 2017, the country will complete its two other ongoing projects on Paneuropean Railway Corridor IV for

the rehabilitation of Craiova –Drobeta-Turnu Severin – Caransebes railway and for the rehabilitation of Craiova-Calafat railway with estimated costs of €9.9m and €1.7m, respectively.

Air

Romania offers a network of 16 airports. The largest and the busiest airport is Henri Coanda International Airport (Otopeni, 15 km from Bucharest city centre). It is the main gateway into the country. The second busiest airport is in Cluj. The five largest airports in Romania – Henri Coandă International Airport, Bucharest Băneasa Aurel

Vlaicu International Airport, Timisoara International Airport, Cluj Napoca International Airport, and Sibiu Turnisor – handle over 24,000 tonnes of freight annually.

The ground-based infrastructure directly contributes RON1,471m to the Romanian economy (GDP). It indirectly contributes

another RON600m through the output it supports down its supply chain. In September 2017, Romania's national company Bucharest Airports announced the start of a €818.5m airport expansion programme, due to be implemented in stages by 2022. The investment will help the company to nearly double the Romanian airport's capacity.

Sea

Romania offers three maritime ports, and over 20 ports along the Danube River. The Constanta port has a handling capacity of over 120m tonnes per year. Romania has direct access to the Black Sea, with the Constanta port (both maritime and riverine) the

country's largest. Additionally, the Port of Giurgiu is among the largest Romanian river ports, possessing a container terminal that handles an annual traffic of around 30,000 TEUs.

It is reported that Romania plans to

invest €16m to upgrade three ports on the river Danube. The objective of the project is to modernise the ports of Giurgiu, Bechet, and Corabia with funding worth €5.2m, €5.1m, and €5.3m, respectively.

Market Size

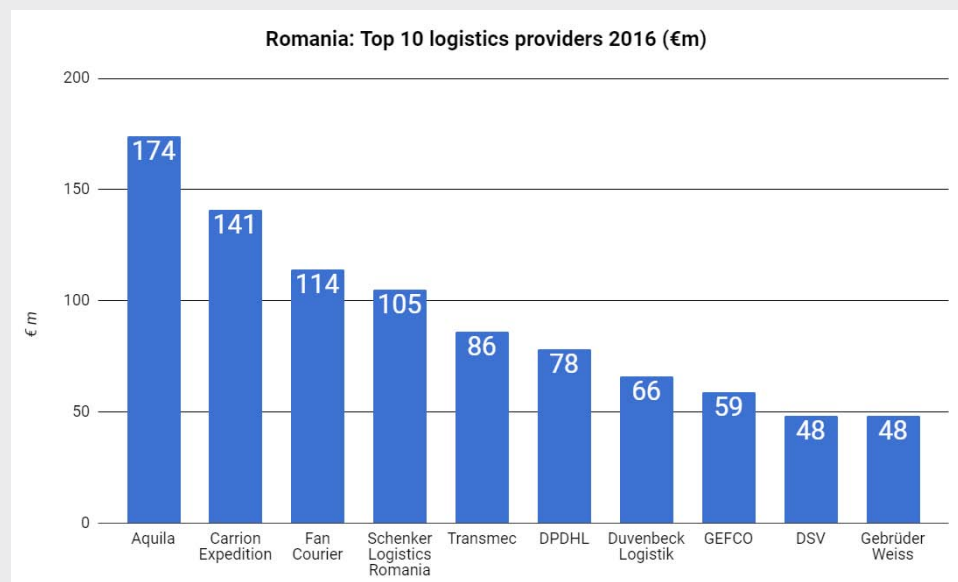
Romania: Logistics Market Sizing Data

Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	8.9%	370	5.4%	456
Express	7.7%	614	7.8%	829
Freight Forwarding	8.9%	426	7.5%	569
Road Freight	6.6%	3,525	6.2%	4,479

Source: Ti



Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Romania

1. Aquila provides distribution, logistics and transport services across Romania to the FMCG sector. It has over 100 vehicles and has relationships with Unilever, SCA, Ferrero, Philips, Wrigley, Lavazza, Coca-Cola, Mars, and Perenna.

2. Carrion Expedition founded in 2009, is a road freight transport provider. Operating out of offices in Galati, Arad, Bucharest and Cluj-Napoca, it provides international services as an agency and a carrier, through its fleet of over 1,000 vehicles.

3. Fan Courier, founded in 1998, has developed to become the 'leading express courier' in Romania. It provides a range of international and domestic solutions, including its EURO CARGO service. EURO CARGO was developed to support logistics for the import and export of parcels, palletised or atypical freight.

4. DB Schenker Logistics' operations in Romania are conducted by DB Schenker Romtrans, which was formed in December 2008 following Schenker's acquisition of S.C. Romtrans. It offers

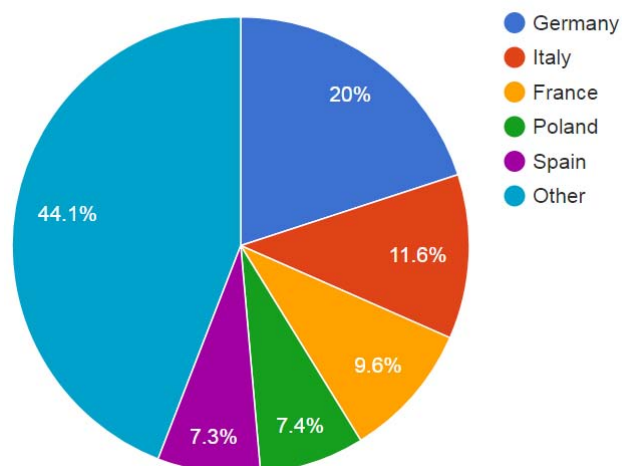
road transport, air and ocean freight forwarding, rail transport, warehousing and logistics, customs clearance, project logistics, and exhibitions & events logistics. Its domestic land transport network has six branches and more than 60 offices.

5. Transmec was founded in 1850 and has grown to become a leading provider of global transport, logistics and packaging services.

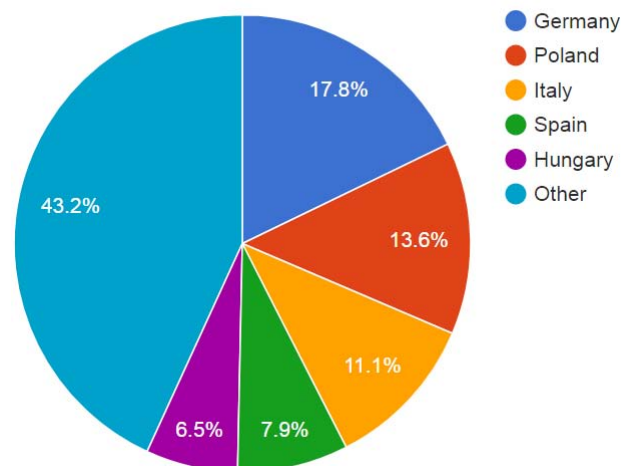


Origins and destinations of international road freight

Romania: Key destinations of international road freight(2016)



Romania: Key origins of international road freight(2016)



Key destinations and origins of international road freight in Romania

Loaded in Romania			Unloaded in Romania		
	m tkm	%		m tkm	%
Germany	1,947	20%	Germany	2,087	18%
Italy	1,133	12%	Poland	1,588	14%
France	936	10%	Italy	1,294	11%
Poland	722	7%	Spain	919	8%
Spain	709	7%	Hungary	762	7%
Other	4,300	44%	Other	5,048	43%
All countries	9,747	100%	All countries	11,698	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Romania to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Slovakia



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Slovakia is the world's 65th largest economy, with GDP of €82bn. Slovakia has the world's 46th highest standard of living, with GDP per capita of €15,045. Slovakia is the world's 37th largest exporter, with export of €70bn. Slovakia is the world's 37th largest importer, with imports of €68bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 3.6%. On the same basis, real import growth is predicted at 5.7%. Real export growth is predicted at 6.2%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Economy shows high dependence on the automobile sector and on exports. Relatively high external debt level. Regional disparities, large income inequality, poor infrastructure and high long-term unemployment. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 41st in World Bank's Logistics Performance Index, scoring 3.34 out of 5. The World Economic Forum ranks the quality of its roads as the 73rd best globally, scoring 4.0 out of 7. Its railroads rank 25th best globally, scoring 4.4 out of 7. Its ports rank 11th best globally, scoring 3.0 out of 7. Its airports rank 108th best globally, scoring 3.5 out of 7.

Source: TI

Analysis

Slovakia benefits from its location in the centre of Europe, close to the large markets of Russia and the Ukraine. High industrial growth, based mainly on the automotive industry, combined with a qualified and cheap labour force have driven the expansion of the logistics industry in the country. Inland transport costs for cargo travelling to or from Slovakia are elevated as a result of the country's landlocked status.

The country's infrastructure remains relatively underdeveloped which has a negative effect on the country's competitiveness. Similarly, the timeliness of shipments is slightly below the EU average. At the same time, the country's specialisation in export-oriented manufacturing is placing increasing demands on its transport system.

Bratislava is the country's biggest logistics hub and is home to the main

international airport. Global logistics providers such as Agility, Dachser, CEVA and FedEx are all based in Bratislava.

Companies operating in Slovakia face moderate risk in relation to transporting their goods to and from the country. Given that the majority of exports are bound for the Eurozone, Slovakia's well-integrated road and rail networks offer efficient and safe passage for cargo. Through significant investment and various projects, the quality and extent of the road and rail networks are set to improve more in the medium term.

In relation to inland waterway and air freight transport options, the infrastructure for these modes is less developed and therefore does not offer competitive supply chain alternatives. This increases the chances of supply chain disruptions, and costs for countries which are not located in Europe and need to access Slovakia from maritime or air means.

Slovakia's automotive industry is of key importance to its logistics industry. Volkswagen and Audi have plants in Bratislava, PSA Peugeot Citroën's plant is in Trnava, Kia Motors is based in Zilina. In 2015 Jaguar Land Rover announced plans to build its first European plant outside the UK, in the city of Nitra, 80 km east of Bratislava.

Slovakia is also attracting logistics investment by retailers. For instance, discount grocery retailer Lidl has committed to investing €200m in Slovakia over the 2014-2018 period and built one of Lidl's largest DCs in Serad, in southern Slovakia. Amazon is also increasing foothold in Slovakia and announced plans to open a new logistics centre in Sered.

The express and parcels market is the fastest growing logistics market in the country and has been driven by e-commerce which is estimated to be worth \$1bn by 2021 in Slovakia.

Slovakia



Infrastructure



Road

Slovakia's road network consists of 43,761 km of roads, including 464 km of highways and 384 km of expressways. The country's infrastructure remains relatively underdeveloped, with road density lower than the EU average. This has had a negative effect on the country's competitiveness. At the same time, the country's specialisation in export-oriented manufacturing is placing increasing demands on its transport system.

In 2014 Slovakia received €3.5bn in funding from the EU for transport infrastructure projects between 2014 and 2020. The money is being spent

on constructing roads and motorways which are part of the Trans-European Transport Network (TEN-T), as well as modernising railways and improving the navigability of the Danube River. As a result of this funding a number of projects are due to be completed by the end of 2017. Slovakia plans to open three highway sections in 2017, including the R2 expressway section between Zvolen East and Pstrusa in the Central Slovakia, the D3 section between Zilina-Strazov and Zilina-Brodno, and the D3 motorway stretch between Svrčinovec and Skalite in the Northern Slovakia. The total construction cost for these section is around €800m.

In 2017, construction started on the €117m bridge over the Danube River between the Hungarian town of Komarom and the Slovak town of Komarno, scheduled to be completed in 2019.

Slovakia also receives support from the European Bank for Reconstruction and Development for the construction of new sections of the D4 highway and the R7 expressway. The investment includes sections Jarovce to Ivanka Sever and Ivanka Sever to Rača of the D4 highway, totalling 27 km. The new section will increase the transport capacity of Bratislava and surrounding areas, strengthen local and international road connections, improve safety and cut journey times. The financing agreement will also enable the construction of a link between D1 and D2 highways in the Slovak Republic, along with the R7 expressway that will connect the D4 and D1 highways. The R7 expressway will be 32 km in length and serve as a link to the city of Bratislava from the south-east; it will also improve business connections between the industrial zones and urban districts of the country.

Rail

Slovakia has a dense network of railways for railroad connections and railway transport services. Most of these tracks are part of the network of international corridors and all comply with international standards. Slovakia is connected by an extensive railway network with all of its neighbouring countries, which includes the Ukraine, thus providing access to eastern

markets. The length of Slovakia's railway network is 3,658 km from which 1,577 km is electrified.

National freight operator ZSSK Cargo has approximately 80% share of the Slovakian rail freight market. In the first six months of 2016, it transported 16.9m tonnes of freight, 878,000 tonnes below forecast, and the greatest declines were recorded in the transport

of iron-ore, building materials and combined transport. In May 2015 ZSSK Cargo signed an agreement for the sale-and-leaseback of 12,450 wagons to a new joint venture company, Cargo Wagon AS, in which it has a 34% stake, in order to raise investment funds.

The main focus of recent railway infrastructure improvements is to increase the speed of lines included

Slovakia



in Trans-European corridor networks. These include:

- Corridor No. IV (Berlin - Prague - Bratislava - Štúrovo - Budapest - Istanbul/Thessaloniki)
- Corridor No. V (Terst - Budapest/ Bratislava - Uzhorod - Lvov)
- Corridor No. VI (Gdansk - Lodz - Žilina).

In August 2016 Slovak Railways

ŽSR signed a contract with Nimnica Association for the modernisation of the railway line between Púchov and Žilina, in order to handle track speeds of 160 km/h. The first phase, Púchov – Považská Teplá, is 16 km long and includes the construction of two tunnels, 14 bridges and 11 culverts, and the modernisation of Považská Bystrica and Považská Teplá railway stations. The work should take 40 months.

In 2016, ŽSR presented a tender for the construction of a freight intermodal terminal in Nitra-Sever Business Park. Lužianky Intermodal Transport Terminal (TIP Lužianky) will be established in the north-western part of the industrial park and construction works are scheduled to start in 2018. The terminal will have a capacity of 35,493 intermodal transport units of 20-foot-long containers.

Air

Slovakia's most important airports for the transport of goods are Bratislava and Košice. Other international airports in Slovakia include Poprad-Tatry Airport, Sliač Airport (which also serves Banská Bystrica), Piešťany Airport and Žilina Airport.

Bratislava airport is Slovakia's biggest international airport. It is located 9 km north-east of Bratislava city centre. Cargo handling of the airport increased by 9% to 22,895 tonnes in 2016.

Košice Airport, in the east of Slovakia,

is the country's second largest international airport. Freight handlers operating at the airport include TNT, Skyport and R-Cargo.

Inland Waterways

Slovakia's inland waterway network is around 260 km long. It consists of 172 km on the Danube, 80 km on the Lower Váh waterway and 9 km on the Bodrog waterway. Slovakia has completed 100% of its TEN-T Core Network for inland waterways.

The Danube is the most important river in Slovakia. It is part of the Trans European Waterway Danube-Main-Rhine and European corridor number seven. It connects Slovakia with eight European countries, and with North and Black Sea. Three important international ports are located on the Slovakian stretch of the Danube: the Port of Bratislava, the Port of Komárno and the Port of Štúrovo.

The Port of Bratislava benefits from its

proximity to centres such as Vienna and Budapest, as well as good railway and road connections to Slovak industrial and economical areas. It plays an important role in the transit of goods, multi-modal transport, ro-ro and container transport.

The Port of Komárno is located 100 km downstream from Bratislava. It is an important port for transshipment, and handles bulk and general cargo.

The Váh Waterway project aims to exploit the huge transport potential of Slovakia's rivers by turning the Váh River into a canal. This would connect Slovakia to international water corridors. The work is estimated to be completed in 2025, with will take place in four stages:

- Komárno – Sereď (navigation opened in 1998)
- Sereď – Púchov
- Púchov Púchov– Žilina
- Žilina – Bohumín.

A floating terminal for liquefied natural gas worth €20m will be built in the next four years at the Port of Bratislava. It is expected that construction work will commence in 2018, with operations starting from 2020. The terminal is currently in the Environmental Impact Assessment phase. On completion, it will cover an area of 2.52 hectares that will provide ship displacement capacity of up to 5,000 tonnes.

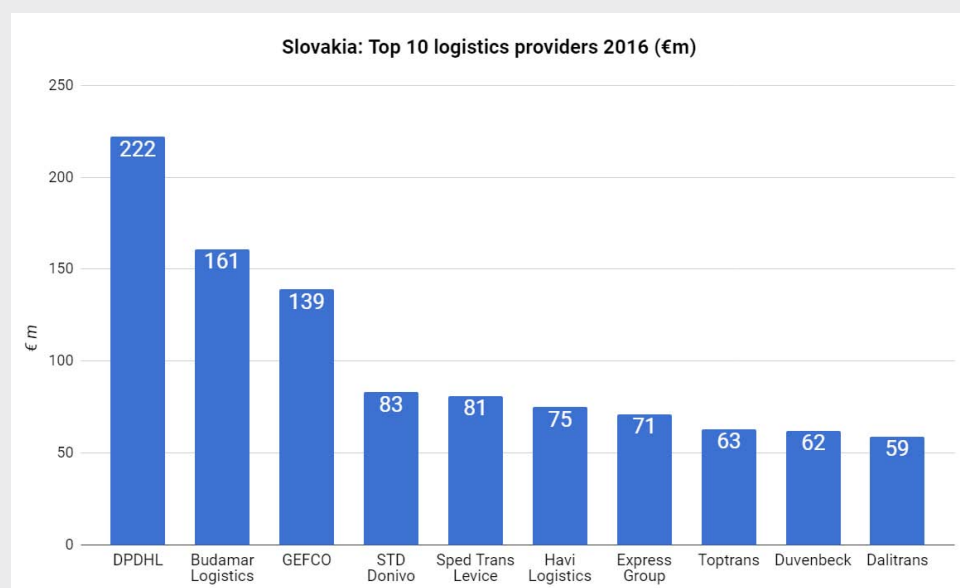


Market Size

Slovakia: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	4.1%	374	5.8%	469
Express	6.0%	389	7.6%	521
Freight Forwarding	4.7%	419	6.8%	546
Road Freight	3.5%	2,333	6.4%	2,985

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Slovakia

1. DPDHL's Slovakian operations include Express, Global Forwarding, Freight and Supply Chain services. DHL Supply chain has more than 352,500 sq m of warehousing space in the country. Its fleet consists of more than 470 contract vehicles. In November 2014 DHL Freight opened a new terminal in Slovakia as part of the company's expansion of its Eurapid service.

2. Budamar Logistics, founded in

1997, offers international forwarding and logistics services including rail, road, river, sea and multimodal transport, as well as customs declaration and storage solutions.

3. GEFCO began operations in Slovakia in 2004. It provides the distribution of vehicles for PSA Peugeot Citroen from its 13,000 sq m site in Trnava. In addition, GEFCO has a 17,000 sq m logistics centre located in Zavar. It is

active in five business areas in Slovakia: land transport, sea and air transport, storage & management of returnable packaging, finished vehicles logistics, and customs and tax representation.

4. STD Donivo provides international road transport and forwarding services, including expedited transport and just-in-time delivery of goods and merchandise. Since it was founded in 1996 it has served both domestic



Slovakian and international markets.

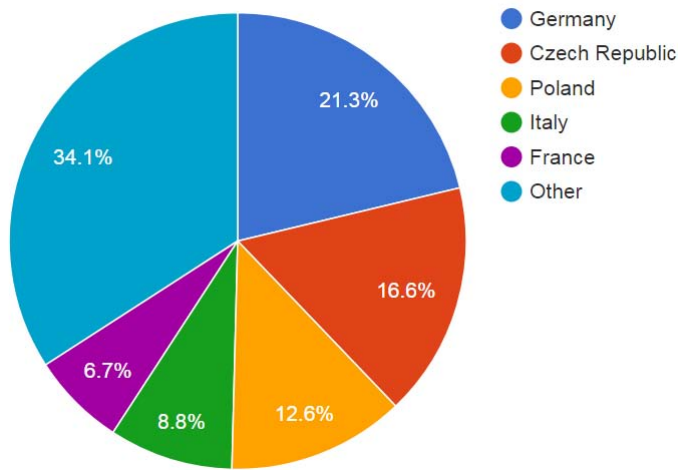
5. Sped Trans Levice is a forwarding company, provides international and

internal freight forwarding services. It offers railway, road, river, sea, air, and combined transportation services.

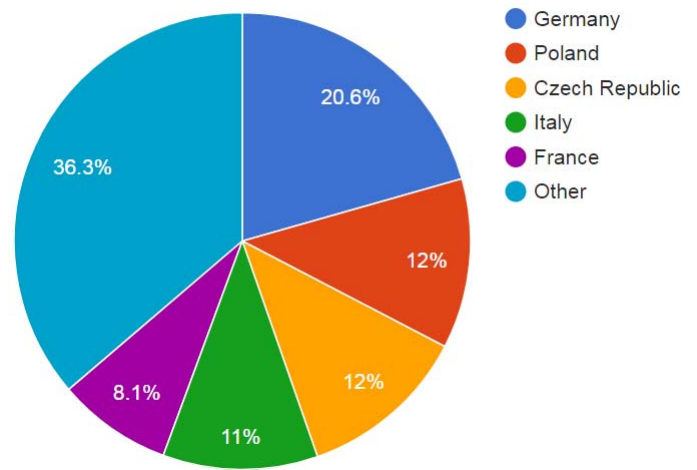
It was founded in 1989 and is based in Levice, Slovakia.

Origins and destinations of international road freight

Slovakia: Key destinations of international road freight (2016)



Slovakia: Key origins of international road freight(2016)



Key destinations and origins of international road freight in Slovakia (2016)					
Loaded in Slovakia			Unloaded in Slovakia		
	m tkm	%		m tkm	%
Germany	2,706	21%	Germany	2,418	21%
Poland	1,581	12%	Czech Republic	1,888	17%
Czech Republic	1,579	12%	Poland	1,428	13%
Italy	1,441	11%	Italy	998	9%
France	1,066	8%	France	762	7%
Other	4,763	36%	Other	3,882	34%
All countries	13,136	100%	All countries	11,376	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Slovakia to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Spain



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Spain is the world's 14th largest economy, with GDP of €1,132bn. Spain has the world's 30th highest standard of living, with GDP per capita of €24,411. Spain is the world's 17th largest exporter, with export of €255bn. Spain is the world's 15th largest importer, with imports of €273bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.9%. On the same basis, real import growth is predicted at 4.4%. Real export growth is predicted at 4.6%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Poor employment rates have led to emigration out of Spain. Long-term unemployment is compounded by youth unemployment that remains high at more than 40%. Higher growth rates may be needed in the future to keep unemployment on a decreasing trend. High public and private debt in Spain has decreased its growth potential. Spain's debt has increased due to high level of foreign energy imports and negative net international investment position. Starting in 2016 measures was taken, such as increasing corporate tax advances and freezing departmental spending. These measures will result in picking up of corporate profitability, declined debt and decline in unemployment rate. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 23rd in World Bank's Logistics Performance Index, scoring 3.73 out of 5. The World Economic Forum ranks the quality of its roads as the 17th best globally, scoring 5.5 out of 7. Its railroads rank 8th best globally, scoring 5.6 out of 7. Its ports rank 16th best globally, scoring 5.5 out of 7. Its airports rank 14th best globally, scoring 5.8 out of 7.

Source: TI

Zaragoza produced growth of 9.0%, 13.3% and 29.0% respectively. Its airports have capitalised on improving market conditions, with stronger Spanish exports in a range of sectors, including textiles, pharma and perishables. The market has also been quick to increase bellyhold and freighter capacity, by adding new international routes. Spain is well-positioned to build on its success. In Madrid, its largest airport (415,773 tonnes handled in 2016), the Spanish airports network is planning to add an additional 72,000 sq m of facilities.

Spain has an extensive port network, due to its long coastline. It hosts three of the 20 largest European ports for throughput in 2016. Its ports in Algeciras and Valencia are the largest Mediterranean ports, handling over 4m TEUs in 2016 each. The port of Barcelona is third in the top 20, and handled over 2m TEUS in 2016 for the first time.

Unsurprisingly, there are extensive logistics hubs centred around its key ports and airports. At the centre of the country, Madrid is home to the headquarters of 75% of logistics companies in Spain and has 38m sq m of dedicated logistics space. The bay of Algeciras hosts the second largest industrial complex in Spain and its rival Valencia has two logistics activity zones near its port covering over 950,000 sq m. Catalonia is another key distribution point, being home to keys airports and ports in Girona, Barcelona and Tarragona.

Spain has a well-developed overland market to support these logistics hubs.

Analysis

Having bounced back from the European financial crisis of 2012, Spain is among Western Europe's fastest-growing economies. In May 2017, the country surpassed its pre-crisis GDP peak, and is expected to register an economic growth rate of above 3% for the third successive year. It has expanded its export industries to account for 33% of GDP, and has curtailed a historic reliance upon the construction industry.

Spanish exports in the automotive, chemical, pharmaceuticals, and industrial machinery categories represent a strong opportunity for logistics providers.

Nonetheless, Spain faces substantial, entrenched issues which it must overcome in order to attract investment.

The World Economic Forum ranks the country poorly when assessed for the ethical behaviour of firms, and for the time it takes to start a business. More importantly, the political unity of the nation is under question with the North-eastern region of Catalonia riven by a secessionist independence movement. Whilst support for Catalan independence is not absolute within the region, a considerable portion of the population supports its objectives. Catalonia accounts for approximately 20% of Spanish GDP, and 16% of the country's population, and contains the major city of Barcelona, which forms one of Spain's principle logistics hubs.

In 2016, Spain saw extremely impressive growth in its air freight industry. The combined network saw air cargo growth of around 11.0% Its key airports in Madrid, Barcelona and

Spain

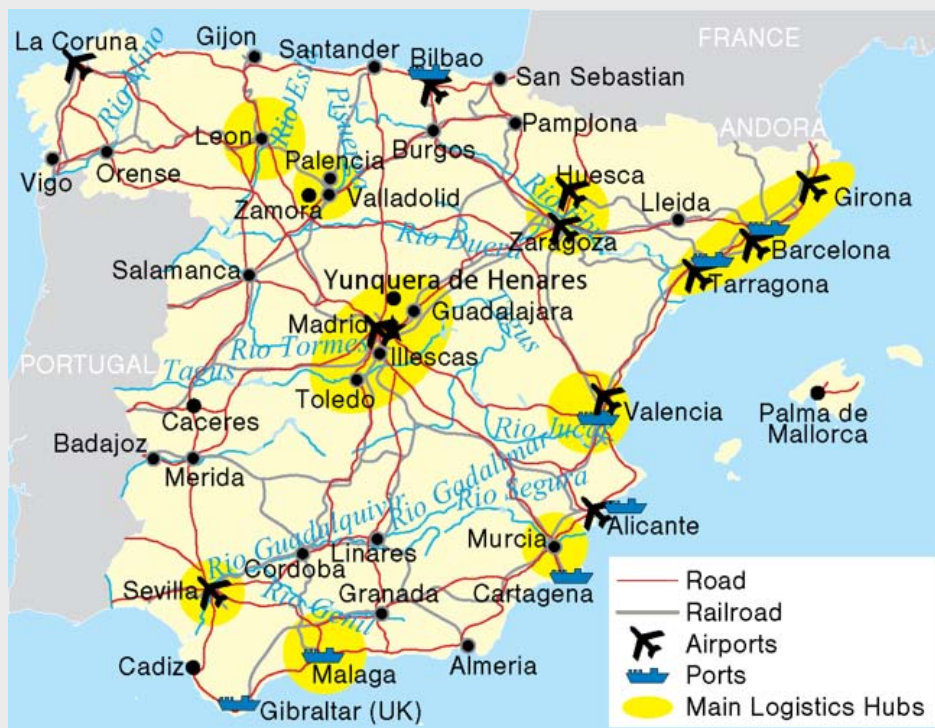


At the far west of Europe, cabotage is low and Spanish hauliers rack up a 26% more international tonne-kilometre exports than imports. It is the fifth largest road freight market in Europe. Its rail

freight services are particularly strong according to the World Economic Forum, ranking 8th globally. Spain has the second longest high speed rail network in the world after China.

Spain attracts many major multinational logistics providers, including seven of its 10 largest companies. It is also home to Seur (part of La Poste), MRW and Comapnia Logistics Acotral.

Infrastructure



The Spanish Government is determined to continue its programme of investment in road infrastructure. The objectives of this plan include the improvement of the motorway and dual carriageway network, the construction of more than 3,500 km of high-capacity roads, through investments of €18,668m, and a further €6,200m earmarked for improvements to the conventional road network.

In 2016, Spain launched a €5bn public-private investment programme for highways to boost its road infrastructure. Over the next three years, the programme would involve an investment on 2,000 km of roads around Spain, including completing unfinished highways: tenders will be furnished with maintenance contracts for a 30-year period. In addition, Spain also launched a new Spanish road building programme in 2016 under which it secured €182m from a Spanish construction company Autovía del Pirineo for the construction and operation of several sections of the A21 motorway in Spain's northern Navarre region.

Road

In terms of road infrastructure, Spain ranks thirteenth out of 148 countries. Around 14,981 km of the motorway and dual carriageway network has been subject to constant renovation and in terms of km of this type of roads Spain is currently leading in Europe.

In recent decades, Spain has undertaken major investment plans to improve and expand nationwide road infrastructures. Extensions to the road system are providing greater transport access across regions and connecting Spain to the trans-European network.

Rail

Spain's rail infrastructure, which is one of the best in Western Europe, is also the most developed part of Spain's infrastructure. The country

has a network of almost 19,285 km of railways. Renfe Operadora, a state-owned company and operator of freight and passenger trains operates most

railways in Spain. FEVE, a division of Renfe Operadora, operates the metre and narrow-gauge lines, whilst other carriers operate services in individual

Spain



autonomous communities.

Since its foundation, approximately €45,120m has been invested in the high-speed rail network making Spain the leading country in Europe and the second worldwide, after China, by km of high-speed lines in operation. High-speed rail now accounts for 23% of total rail travel in Spain. In late 2015, the government launched a tender to buy a minimum of 15 more high-speed trains for €1.1bn. This contract included 15-year maintenance, with an option to buy up to 30 additional units and extend the maintenance period to 40 years. In addition, with the inauguration of new lines in 2015, the high-speed rail network in Spain is now available in 17 new cities.

Several line extensions are scheduled to open in 2017 and many projects are underway. With this, the Spanish government's infrastructure budget continues being focused on high-speed rail as a major priority. In March 2017, the Spanish government announced an investment of approximately €4.2bn towards infrastructure improvement of the Catalan region in north-east Spain, with majority investment in the local and regional rail network and the "Mediterranean Corridor", a main east-west axis corridor that runs south of the Alps. The Catalan local rail service Rodiales is forecast to receive €1.88bn between 2017 and 2020 and a further €2bn between 2021 and 2025. The Catalan branch of the Mediterranean Corridor will be finished in three years.

In April 2017, the government announced an investment of €500m towards updating its high-speed rail network and further expanding it by the additional construction of an important new southern route. This investment will strengthen the fleet with 15 new bullet trains. In addition, the government also announced a €2.5bn investment to improve all areas of railway infrastructure during the period 2017-2020. The improvement plan will include the implementation of the first phase of the new CTC (Centralised Traffic Control) systems in Barcelona, with an investment of more than €7.4m and new configuration of the conventional broad gauge scheme of the Sants station in Barcelona, with an investment of more than €5.6m.

Air

The Spanish airport-system contains 49 civilian airports, including four general aviation airports (Madrid Cuatro-Vientos, Madrid-Torrejón, 9 Sabadell, and Son Bonet) and two heliports (Algeciras and Ceuta). As of 2016, Spain's busiest airports in terms of passenger traffic are Madrid, Barcelona El Prat, Palma de Mallorca, Malaga, Alicante, and Gran Canaria.

Spanish airports handled 594,393 tonnes of freight and mail in 2015, of

which, 57,600 tonnes were domestic.

Around 49% of Spanish Airports and Air Navigation "AENA", a public organisation that manages 46 airports in Spain and serves more than 207m passengers, was privatised by the government of Spain in 2014. AENA, which runs under the Ministry's guidance, is responsible for the supervision of proposal implementation for the improvement of airport infrastructure.

Over the past few years, the network

of airports in Spain with exterior connections has significantly expanded. Financial support from the EU (European Union), cheap financing, and a national decentralisation policy are key contributors to the airport building phenomenon in Spain. The major government initiatives for airport infrastructure include the enlargement of Spain's most important airports which have reached a saturation point due to the sharp rise in air traffic over the past decade.

Sea

Ports play a pivotal part in the country's foreign trade and transport plan. Due to its long coastline, Spain depends heavily on maritime transport for the import and export of goods to both European states,

as well as those outside of Western Europe. Its merchant marine and fishing fleet is among the largest and most important in the world.

The major seaports of Spain are Algeciras, Barcelona, Bilbao, Cartagena, Huelva, Tarragona, Valencia (mainland Spain); Las Palmas and Santa Cruz de Tenerife (Canary

Spain



Islands). The container port Algeciras has a capacity of 4.5m TEUs, whilst Barcelona and Valencia have capacities of approximately 2.3m TEUs and 4.6m TEUs, respectively.

Spain has 28 port authorities managing 46 ports. They handle around 480m tonnes each year, approximately 20% of the transport sector's GDP and 1.1% of total GDP. In January 2017, the Spanish government announced several investment plans that aim at upgrading

rail and road links between its existing ports. The ports of Puertos del Estado will receive both direct investment and in-port access upgrades of €1.418bn, the Port of Cartagena will receive an investment of €61.8m over the next five years, and the Port of Escombreras will spend €13.6m on upgrading its infrastructure.

Additionally, under the Investment Plan for Port Accessibility 2017-21, locations such as Cadiz, Ferrol, and Barcelona

will benefit. Barcelona Port Authority and the Administrator of Railway Infrastructures (ADIF) will provide €72.6m and €77.2m, respectively, in a joint scheme for a new freight link to the Port of Barcelona. In the south-west, the Port Authority of the Bay of Cadiz says it will spend around €4m on links to a new container terminal, and €1.2m on line infrastructure at Puerto Real.

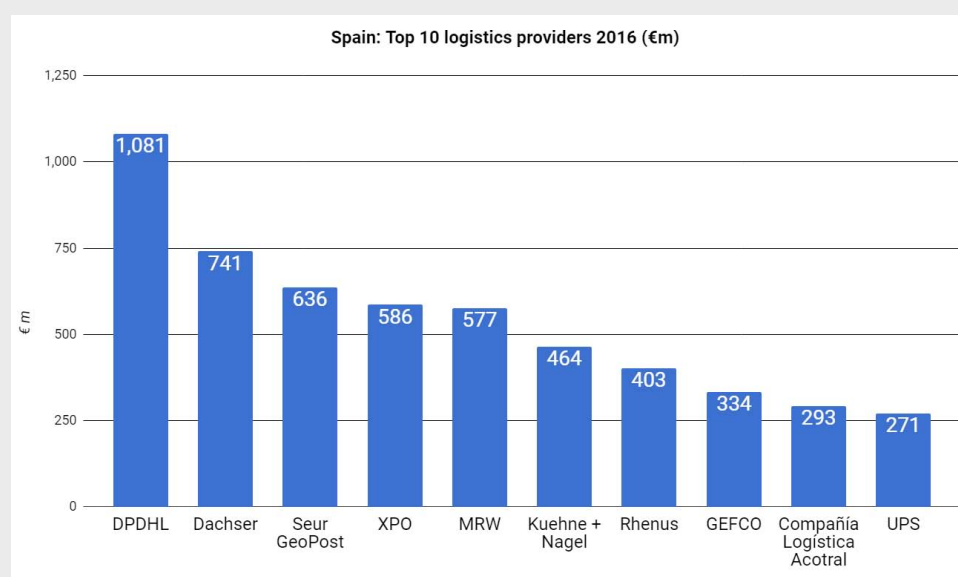
Market Size

Spain: Logistics Market Sizing Data

Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	3.7%	2,777	2.2%	3,028
Express	6.5%	5,176	5.6%	6,444
Freight Forwarding	4.9%	1,751	4.5%	2,091
Road Freight	1.5%	31,316	3.6%	36,053

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Spain



Brief summaries of the activities of the top 5 logistics companies in Spain

1. DPDHL employs more than 7,500 staff in Spain who serve the company’s 100,000 customers. It has hubs in Madrid and Vitoria, as well as 10 gateway locations.

2. Dachser is one of the largest road freight providers in Europe and has established a significant market share in Spain through the acquisitions of road freight company Azkar and air and sea forwarder Transunion in 2012.

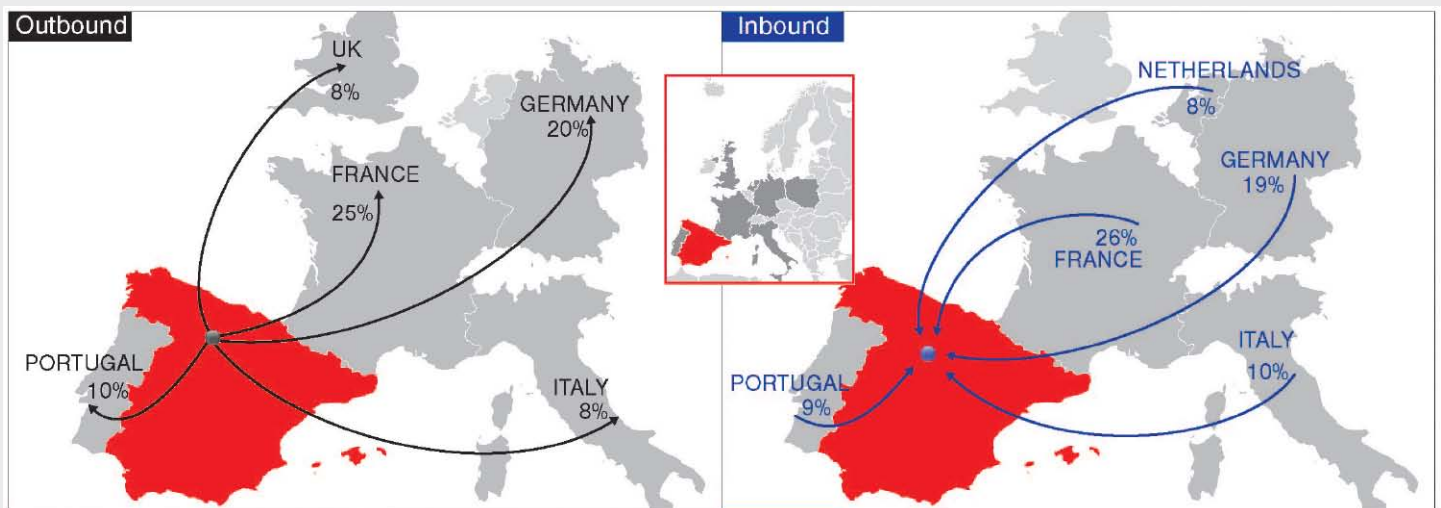
3. SEUR, based in Madrid, Spain, offers parcel delivery, transportation, and logistics services. It has a specialised logistics division, as well as an international division with offices in Europe, the United States and South America.

4. XPO Logistics reports that Spain represents the source of around 10% of its total revenues. It expanded its presence in the country significantly

in May 2013 when it acquired the transport and logistics business of Fiege in Italy, Spain and Portugal. Its network was further expanded in 2016 through engaging in a partnership with transportation firm Regional Galicia SL.

5. MRW is a Spanish business that was founded in 1977. It offers domestic and international door-to-door courier services.

Origins and destinations of international road freight



Key destinations and origins of international road freight in Spain (2016)					
Loaded in Spain			Unloaded in Spain		
	m tkm	%		m tkm	%
France	15,858	25%	France	13,064	26%
Germany	12,477	20%	Germany	9,749	19%
Portugal	6,148	10%	Italy	4,794	10%
Italy	4,988	8%	Portugal	4,739	9%
United Kingdom	4,987	8%	Netherlands	3,785	8%
Other	18,821	30%	Other	14,062	28%
All countries	63,279	100%	All countries	50,193	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Spain to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Sweden



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Sweden is the world's 23rd largest economy, with GDP of €468bn. Sweden has the world's 11th highest standard of living, with GDP per capita of €46,636. Sweden is the world's 32nd largest exporter, with exports of €126bn. Sweden is the world's 28th largest importer, with imports of €127bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 2.3%. On the same basis, real import growth is predicted at 4.2%. Real export growth is predicted at 2.9%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Sweden's real economic growth has averaged 2.8% annually since 2009, compared with the euro area's 1.1% per year. On a per capita basis, Sweden has been the European nation most welcoming of refugees from conflicts in the Middle East and Africa, accepting more than 300,000 asylum-seekers since 2013. A concern for the country's government is the employment gap between high-skilled locals (with an unemployment rate of 3%) and low-skilled migrants (at 33%). Integrating new arrivals has proven tricky, due to high minimum wage requirements, though some fear that lowering barriers will create an ethnically stratified class system. A positive is the potential for immigrants to support a rapidly ageing society if properly integrated. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 3rd in World Bank's Logistics Performance Index, scoring 4.2 out of 5. The World Economic Forum ranks the quality of its roads as the 18th best globally, scoring 5.5 out of 7. Its railroads rank 21st best globally, scoring 4.6 out of 7. Its ports rank 15th best globally, scoring 5.5 out of 7. Its airports rank 15th best globally, scoring 5.8 out of 7.
<i>Source: TI</i>	

Analysis

Sweden is the largest logistics market in Scandinavia, with its population almost twice the size of those of Norway, Denmark and Finland, whose populations are all in the range of five to six million.

In common with other Scandinavian markets, its core logistics hubs are located in the more densely populated south of the country. On its west coast, Malmö and Gothenburg are particularly important, while Stockholm and neighbouring conurbations dominate the east coast.

Perhaps Sweden's most crucial piece of infrastructure is the Oresund Bridge, a combined two-track rail and four-lane road bridge-tunnel, which connects Malmö with Copenhagen, Denmark. It is

fundamental for connecting Sweden with the wider international European road freight market.

As for air cargo, Sweden handles approximately 300,000 tonnes of freight annually. Sweden's major cargo airports include Stockholm Arlanda (around 50% of tonnage), Malmö and Gothenburg Landvetter. Stockholm Arlanda is located where most Swedish export companies have operations and is also well-positioned to serve markets in Norway and Finland. Most forwarders have their main offices here. Gothenburg Landvetter's air freight is skewed towards high tech goods, with many major tech companies located in the city, while salmon is also important.

The Nordic region's largest container port is the Port of Gothenburg, which has the capacity to accommodate

vessels with capacities of over 19,000 TEUs. It handled almost 800,000 TEUs in 2016, accounting for around 60% of Swedish container traffic. In addition, the port handles half of Sweden's crude oil imports, and is also the largest automotive export point in Sweden. Almost 250,000 cars passed through the port in 2016, with Volvo its primary customer.

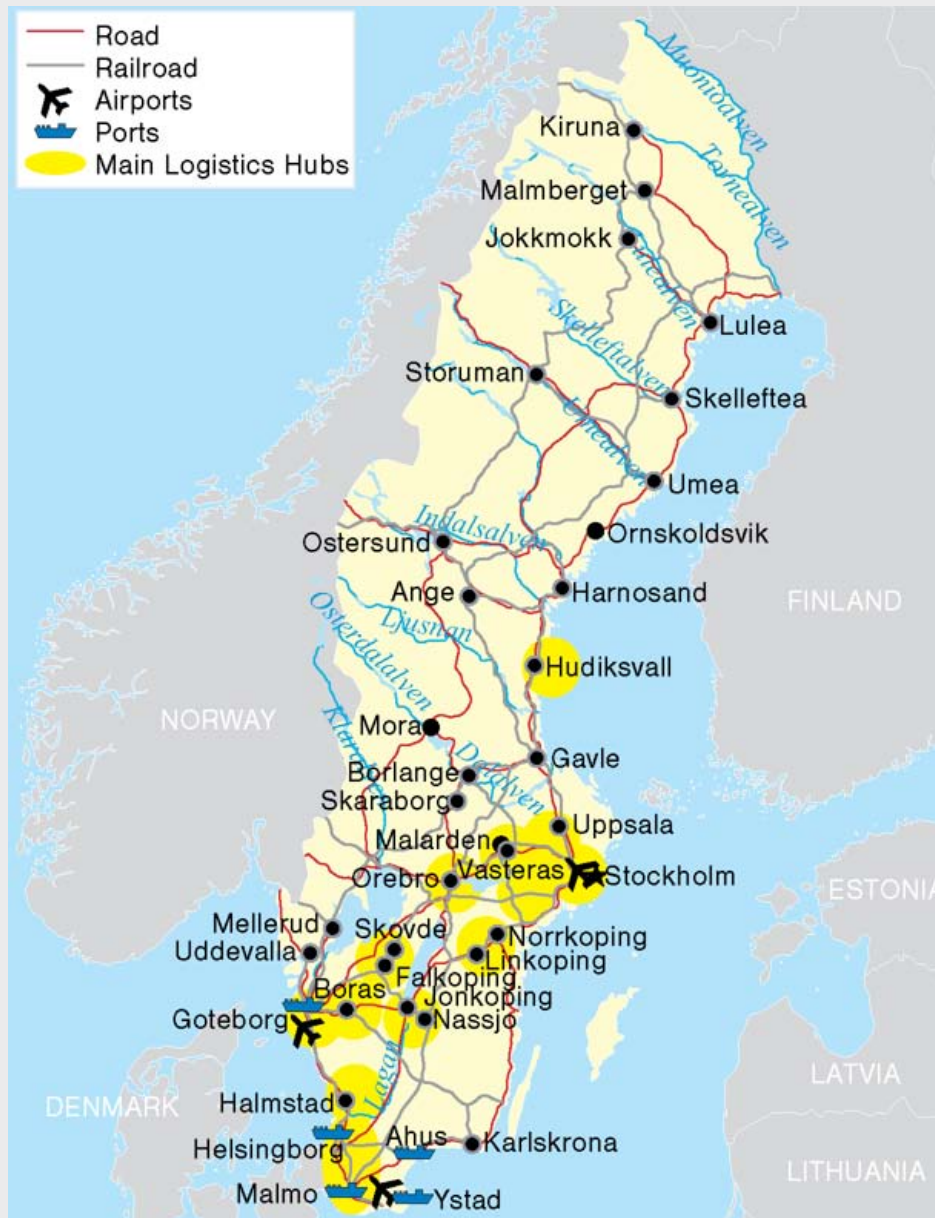
Indeed, an under-recognised facet of the Swedish logistics market is that the country has many substantial home-grown multinational companies such as H&M, Ikea, Ericsson, AstraZeneca, Electrolux and Volvo. Such companies are among the largest logistics buyers in the country.

Like other Nordic markets, at the top of Sweden's logistics landscape are a healthy dose of the world's leading logistics providers, though 'local heroes' seem to have a larger presence than elsewhere in Europe. Deutsche Post DHL and DB Schenker Logistics are the top two players, although PostNord, the merged Swedish and Danish post office, is close behind in third (excluding its mail operations). The Norwegian post office, which offers logistics services through its brand Bring, sits in fifth. DSV, Geodis and UPS are some other global giants in the top ten, while other local heroes rounding off the list are Greencarrier, GDL Transport and MaserFrakt.

Sweden



Infrastructure



of the country, though it is sparse in the north. Sweden is connected to other EU states by the Öresund Bridge, a combined two track rail and four lane road bridge-tunnel, which provides land connection between Malmö and Copenhagen, Denmark.

The Government is currently prioritising sustaining the functionality of roads, such as coping with the greater volume of traffic, primarily in the cities, through maintenance works; funds for road operation and maintenance are thus projected to increase. As of 2016, the construction work of Sweden's Marieholm Connection Project was in progress that included a new road tunnel under and a new railway bridge over the river Gota Alv in Gothenburg. In addition, the country's E4 Stockholm bypass Project was also in progress; the road will link together the northern and southern parts of the county and some 18 km of the total 21 km of new road will be in tunnels. Estimated to be completed in a decade's time, the Stockholm bypass will be one of the longest road tunnels in the world upon completion. It is estimated by the Swedish Transport Administration that, by 2035, the Stockholm bypass will be used by around 140,000 vehicles per day.

Road

Sweden has a road network of 579,564 km, including 1,913 km of expressways.

The network is well-developed around population centres in the southern half

Rail

Sweden has 14,127 km of total railway network with 14,062 km standard gauge and 65 km of the narrow gauge; about 12,322 km of rail network is electrified.

Sweden has rail links to neighbouring countries of Denmark, Finland, Norway, Germany, and Poland.

The government's major investments

are focused on the metropolitan areas of Sweden. They proposed a project for the construction of Ostlanken high-speed line in 2016. The project will involve the

Sweden



construction of 27 tunnels totalling 25 km, 126 bridges, and 29 overpasses and various new stations. The construction works are expected to begin in 2019 or 2020.

The East Link Project, a part of Sweden's first high-speed railway is the first step towards a new generation of railways in Sweden. The government announced the construction of this project to begin over the period 2017 to 2021, aiming for the first trains to

become operational in 2033-2035. After completion, it will have nearly 150 km of new high-speed railway, 20 km of tunnels, and 200 bridges.

Expansion of the West Coast Line, one of the most important railways in Sweden, to a double-track railway has been in progress for years and approximately 85% of the West Coast line has been upgraded so far. In April 2017, the government announced procurement for the expansion of

Varberg tunnel to double track. The planning phase is scheduled to take place between 2018 and 2019 while the implementation period for phase two, comprising demolition and restoration of the existing railway, is scheduled to take seven years between 2019 and 2025. With an estimated cost of €421m, the project covers approximately 9 km and involves the construction of tracks, bridges, and other civil engineering works for both passenger and freight trains.

Air

Sweden has a total of 81 airports. The major airports of the country include Stockholm Arlanda Airport, Malmö Airport, Göteborg Landvetter Airport, and Luleå Airport. The country carries approximately 300,000 tonnes of air freight annually.

Aviation plays an important role in Sweden's competitiveness as well as economy. The Swedish government has initiated an aviation strategy that focuses on expansion and upgrades to airport infrastructure in Sweden over

the long-term. In 2016, the government announced the expansion of Göteborg Landvetter Airport to approximately 10,000 sq m. It includes project engineering, preparatory work, and construction of the terminal, costing an estimated €80m.

Additionally, the Swedish government announced the initiation of maintenance and expansion works at Stockholm Arlanda airport in 2016. A total of about €116bn is being invested in this project and involves the rebuilding of 20,000

sq m and additional construction of 26,000 sq m. The Stockholm Arlanda development plans consist of a new pier in Terminal 5, an expanded commercial space and security checkpoint in that terminal, along with terminal's parking facilities. It is estimated that a total of more than €1.4bn will be invested during the period 2014-2043 to develop the terminals. The new maintenance area is forecast to complete in the summer of 2018.

Sea

The key seaports of Sweden consist of Brofjorden, Helsingborg, Trelleborg, Karlshamn, Göteborg, Luleå, Malmö, Visby, and Stockholm. The Port of Gothenburg is the largest port in the Nordic region with the capacity to handle vessels with capacities of over 19,000 TEUs; around 60% of Swedish container traffic is handled at the port.

The Stockholm Norvik Port, a new freight port north of Nynashamn,

was established in 2016 to facilitate the sustainable and efficient supply of goods to the region.

Sweden is currently focussed on the expansion of the Port of Gothenburg by building new terminals, logistics areas, roads, and railways to accommodate larger vessels and future freight volumes. At the outer area of the Port of Gothenburg, the construction of a new terminal commenced in first half of 2017.

The terminal is expected to become operational after 2020.

A three-year refurbishment and expansion project was completed in June 2017, at the port of Kapellskarås. The reconstructed port consists of 200,000 sq m of logistics area, a reconstructed quay-berth, a newly renovated pier with two quay-berths, and an all-new pier with two quay-berths.

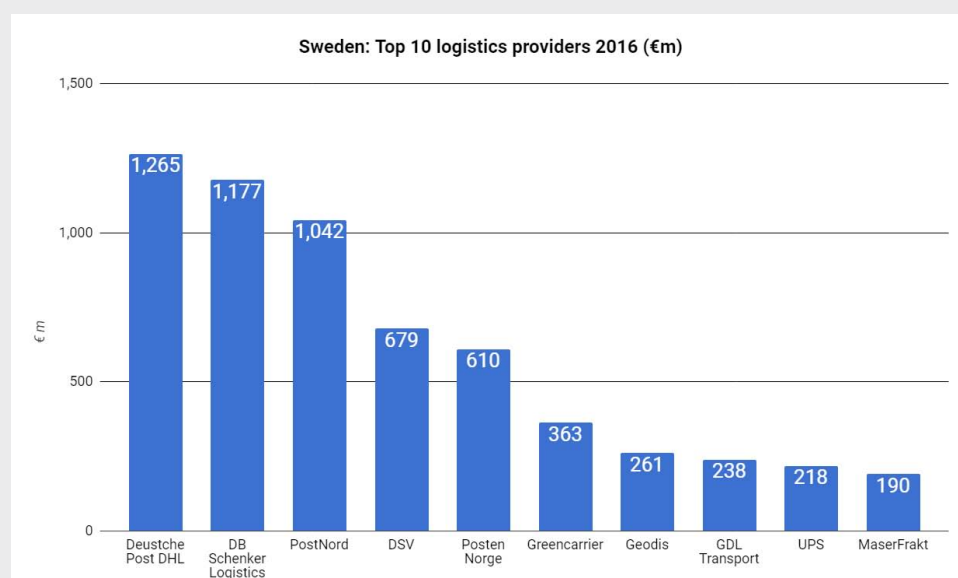


Market Size

Sweden: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	3.9%	876	2.9%	984
Express	5.9%	1,297	5.5%	1,608
Freight Forwarding	3.8%	1,416	4.3%	1,677
Road Freight	3.6%	9,368	3.2%	10,620

Source: Ti

Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Sweden

1. DPDHL offers services through its Express, Freight, Global Forwarding and Supply Chain business sectors in Sweden. It operates around 377,700 sq m of floor space, including offices, gateways, distribution centres and warehouses. In August 2016 DHL Global Forwarding was awarded a three-year contract with New Wave Group, a Swedish supplier of corporate promotional goods, gifts and home furnishings.

2. DB Schenker's Swedish headquarters are in Gothenburg. It operates a logistics network with the capacity to combine different transport offerings, including truck, ship, train and aeroplane. In 2013 it had around 4,000 loading units and 3,800 employees, as well as 300 cooperative hauliers in Sweden.

3. PostNord is a provider of postal and logistics services across Scandinavia.

In September 2014 PostNord Logistics and Posten Meddelande, a Scandinavian provider of postal and logistics services, adopted a merger plan, which, in this case, saw PostNord Logistics become part of Posten Meddelande. The newly merged entity became PostNord Sverige AB.

4. DSV's three divisions (Air & Sea, Road and Solutions) are all operational in Sweden. The country headquarters

Sweden



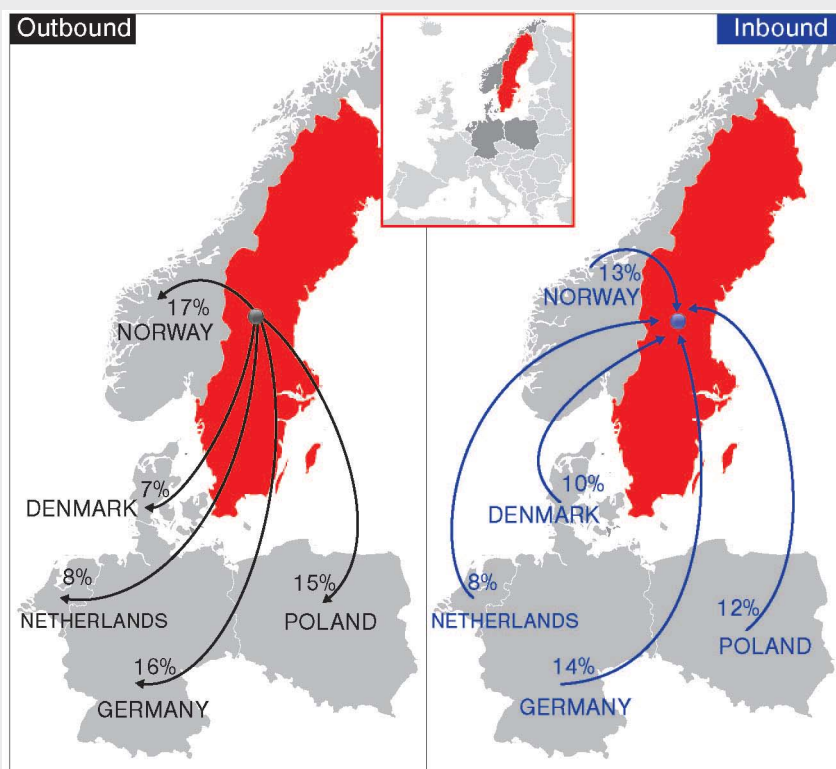
for DSV Road and Solutions is located in Landskrona, whilst the DSV Air & Sea country headquarters is located in Stockholm. It has a network of 19 road

freight terminals within Sweden.

5. **Bring**, the logistics business of Norway Post (**Posten Norge**), offers logistics solutions for businesses across

the Nordic region. It handles package, courier, mail and cargo solutions, and is also able to handle temperate food logistics.

Origins and destinations of international road freight



Key destinations and origins of international road freight in Sweden (2016)					
Loaded in Sweden			Unloaded in Sweden		
	m tkm	%		m tkm	%
Norway	1,884	17%	Germany	1500	14%
Germany	1,713	16%	Norway	1,474	13%
Poland	1,617	15%	Poland	1,365	12%
Netherlands	894	8%	Denmark	1,060	10%
Denmark	808	7%	Netherlands	941	8%
Other	3,930	36%	Other	4,756	43%
All countries	10,846	100%	All countries	11,096	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Sweden to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Switzerland



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Switzerland is the world's 19th largest economy, with GDP of €599bn. Switzerland has the world's 2nd highest standard of living, with GDP per capita of €71,916. Switzerland is the world's 15th largest exporter, with exports of €275bn. It is the world's 17th largest importer, with imports of €243bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.5%. On the same basis, real import growth is predicted at 3.7%. Real export growth is predicted at 3.2%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> International pressures on bank secrecy, populist votes on immigration and an ageing population could affect the business environment in the medium term. Europe is Switzerland's main trading partner, consequently slower growth on the continent can dampen economic growth. High dependency on trade, financial services and the presence of multinational firms. Overvaluation of the Swiss franc. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 11th in World Bank's Logistics Performance Index, scoring 3.99 out of 5. Switzerland ranks 3rd on the quality of its roads according to the World Economic Forum, scoring 6.3 out of 7. Its railroads rank 1st globally, scoring 6.6 out of 7. Its ports rank 56th globally, scoring 4.5 out of 7. Its airports rank 7th globally, scoring 6.2 out of 7.

Source: TI

Analysis

Due to its geographical location in the heart of Europe and developed infrastructure, Switzerland plays an important role in the European transport sector. It scores consistently highly in the World Bank's Logistics Performance Index. Its overall global rank of 11th means it is an attractive location for logistics companies to operate. Because of its dense transportation infrastructure, financial stability and favourable corporate tax structures, Switzerland has become a stepping stone for global businesses seeking to target new markets and outsource manufacturing to Eastern Europe.

Switzerland's railroads rank first globally according to the World Economic Forum Global Competitiveness Index Metrics. Rail is the main means of transportation for traffic transiting through Switzerland, accounting for over one-fourth of total freight traffic. This proportion is much higher than in nearly

all other Western European countries. Rail is the main option particularly for the north-south transit traffic due to the huge advantages over road which is very traffic-dependent. By developing the most hostile regulatory environment for road freight providers, the Swiss government encourages the shift of transalpine freight traffic from roads to railways.

To eliminate its geographical barriers, Switzerland is investing heavily in its rail infrastructure. In June 2016, Switzerland opened the longest rail tunnel in the world, the Gotthard Base Tunnel running under the Alps which links Northern and Southern Switzerland and consequently brings Northern and Southern Europe closer together. With nearly a quarter of the total freight traffic volume, SBB Cargo is Switzerland's leading freight company and the largest rail freight operator.

Switzerland's road network ranks third in the World Economic Forum Global

Competitiveness Index. However, the country's mountainous geography poses significant challenges for road building and accommodating large volumes of heavy traffic, ultimately leading the Swiss government to introduce policies aimed at shifting freight traffic from roads to railways.

The Port of Switzerland, Basel, consisting of three ports, is a major asset for the country and the most important traffic hub in the country. The ports are particularly important for the transport of petroleum products. In recent years the Rhine Port of Basel has modernized many of its facilities including those handling containerized traffic, which is experiencing continuous strong growth.

In Switzerland, the express and freight forwarding markets are significantly larger than the contract logistics market. Swiss Post leads the field in the Swiss courier, express and parcels (CEP) market.

The continued growth of pharmaceutical companies in Switzerland has given rise to innovations in the pharma cold chain logistics sector. A number of logistics providers have made significant investments in infrastructure and services to accommodate the needs of the Swiss pharmaceutical industry, including Kuehne+Nagel, Panalpina, Agility and CEVA.

With the double-digit growth forecast for road and rail freight traffic, the massive bottlenecks which affect all modes of traffic in Switzerland will remain key challenges for the logistics

Switzerland



sector. Despite the initiatives to shift freight from road to rail, both are reaching their capacity limits. To address this problem, Switzerland

plans a 70km long underground freight network that will use autonomous vehicles to ferry pallets and packages between Switzerland's major cities and

towns. Construction is expected to start in 2024 through 2030, after which the network is expected to expand across Switzerland.

Infrastructure



In 2016 works began to refurbish tunnels on the A2 motorway. The A2 is the main north-south motorway in Switzerland, connecting Basel with Chiasso. The Schänzli and Hagnau tunnels have been in operation for four decades and are used by around 59,000 vehicles a day. The work is being carried out while the tunnels remain open.

In March 2016 a project to build a second road tunnel, parallel to the Gotthard tunnel (a key stretch of the most important transit corridor through Switzerland), was given the go ahead after 57% of Swiss subjects who voted in a referendum backed the plans. Construction of the new tunnel is expected to start in 2020 and finish in 2027. In addition, the current Gotthard road tunnel will be closed for three years for renovation work to bring it up to the latest safety requirements. Both tunnels will be open from 2030 and each will carry traffic in one direction only.

Road

Switzerland has 71,464 km of roadways, of which 1,790 km is expressways. The country's geography means that many

of the roads are long, steep and narrow, which makes road haulage a slow process.

Rail

Switzerland has a total railway network of 5,651.5 km. It has 4,424.8 km of standard gauge line, 82% of which is electrified, and 1,226.7 km of narrow gauge, 98% of which is electrified.

SBB Cargo, a division of the Swiss Federal Railways, is the leading

rail freight operator in Switzerland, accounting for a quarter of freight traffic. It operates around 6,800 freight cars. In 2015 the division made a loss of €20m, as a result of the strong Swiss franc, the economic slowdown and the de-industrialisation of the economy.

In June 2016, after 17 years of construction, the longest train tunnel in the world was opened in Switzerland. The 57 km-long Gotthard Base Tunnel cost €11bn to complete. It is at the heart of a new Trans-Alpine Railway Link project and will significantly aid

Switzerland



the north-south movement of freight in Europe. It can accommodate 260 freight trains a day, with these trains able to travel up to 250 km/h. This project also

includes the construction of Ceneri base tunnel that will open in 2020. The government also approved a project to build a new parallel link for the Gotthard

Tunnel in Switzerland in March 2016. The construction of the new tunnel will start in 2020 and will end in 2027.

Air

Switzerland has 63 airports, 40 of which have paved runways. Zurich is the country's busiest airport, serving over 169 international destinations. In 2016 it handled 433,577 tonnes of freight. However, only 313,097 tonnes of this was air freight (a 7.2% increase on 2015) as, due to their size, some cargo shipments are transported by lorry to

other European airports. The airport also handled 31,282 tonnes of mail (4.3% increase on the previous year). 45% of the air freight handled was imports and 55% was exports.

In global terms, the air cargo market in Switzerland is small, with several airlines, handlers and forwarders all

competing for a share of the business. The national carrier, Swiss International Airlines was taken over by Lufthansa in 2005, but its freight division, Swiss World Cargo (SWC), remains strong and is headquartered at Zurich airport. SWC uses the holds of its parent's passenger aircraft to transport cargo.

Inland Waterways

The river Rhine plays a crucial role in imports and exports of heavy goods as it is now navigable from the North Sea, up to the Swiss border in Basel. Located on the Rhine, the Port of Switzerland is Switzerland's only cargo port with direct access to the sea. It includes the Port of Basel-Kleinhüningen, plus two other ports in the Basel region. In 2016, it handled 125,442 TEUs, a 5.0% increase on the previous year. It handled 5.89m

tonnes of cargo. Around 10% of Swiss imports arrive through the port and it is particularly important for imports of petroleum products.

To strengthen the national logistics hub, the Swiss federal government agreed to upgrade the Port of Switzerland in Kleinhüningen in September 2017. This includes the construction of a third harbour basin in the port of Basel-

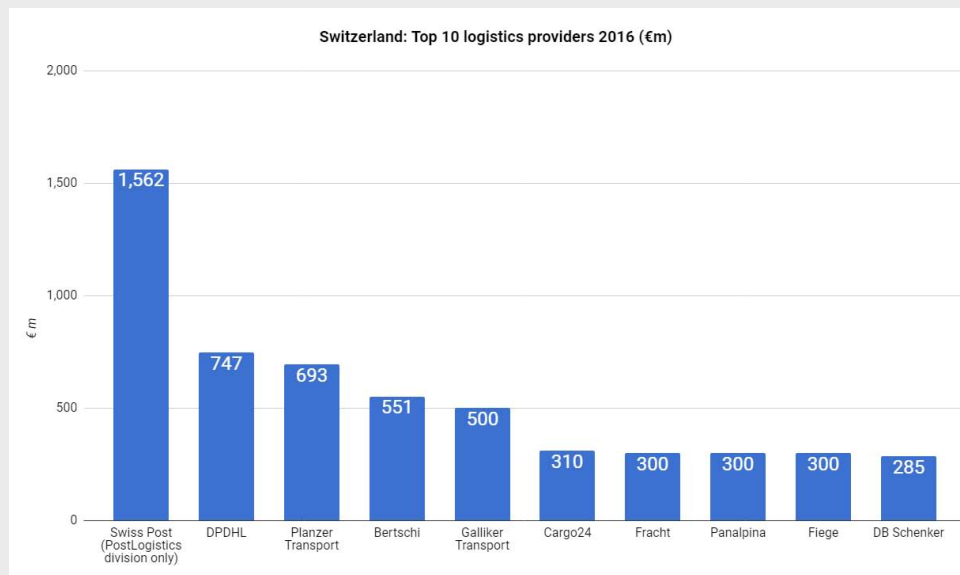
Kleinhüningen. In order to provide additional international shipping service into Italy from Switzerland, a 270 km freight line is also being established between Basel and the Italian border, scheduled to complete by 2020. This line will assist in bringing cargo from northern Switzerland to the Italian border and southern region.

Market Size

Switzerland: Logistics Market Sizing Data				
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	0.2%	628	1.7%	672
Express	5.3%	1,287	5.1%	1,573
Freight Forwarding	3.2%	1,117	2.8%	1,245
Road Freight	2.3%	11,139	2.5%	12,310
				<i>Source: Ti</i>



Logistics Providers



*Note: Revenues for Planzer Transport, Bertschi, Galliker Transport, Cargo24 and Fracht are at the Group level and are all recorded in Switzerland. However, these revenues are in fact generated from operations conducted in Switzerland and elsewhere in Europe. Country-specific revenues for these companies are not available. Revenues for all other companies are country-specific

Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Switzerland

1. Swiss Post provides domestic and cross-border logistics services, including parcels, express services, goods transportation and warehousing. Across Switzerland it has around 3,800 access points, including 1,300 post offices, 950 agencies with partners, 1,250 home delivery services, 350 My Post 24 terminals and more than 2,300 PickPost points.

2. DPDHL offers a range of road freight services within Switzerland, including DHL Coldchain, the international temperature-controlled network designed to support the life sciences industry. In addition to industry specific solutions, Swiss customers can utilise

its full service offering, from express through to distribution and warehousing. In 2016 agriculture company Syngenta awarded DHL Freight a contract to manage its road distribution across Europe – covering both inter-company and last-mile deliveries.

3. Planzer Transport is the biggest family-owned logistics business in Switzerland. It is formed of 47 subsidiary companies and around 4,200 employees. Across Switzerland it has 50 locations and around 1m sq m of warehousing space. Planzer Transport operates a fleet of 960 company-owned vehicles.

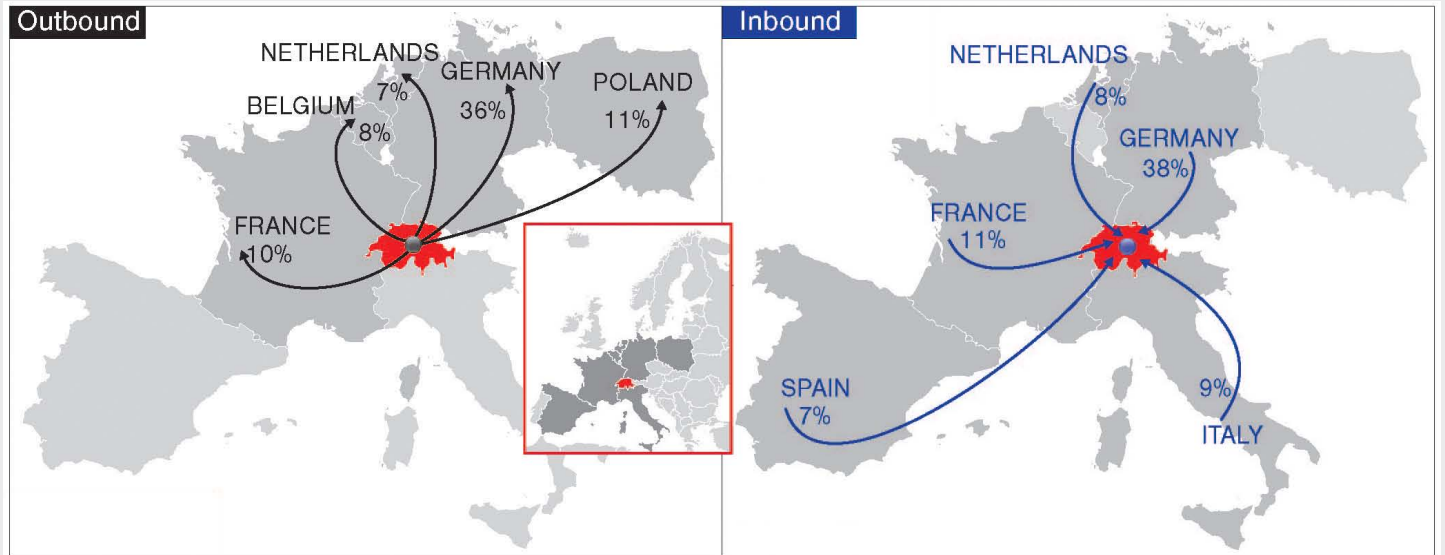
4. Bertschi, headquartered in Dürrenäsch, Switzerland, was founded in 1956 and has 2,710 employees. It is a family-owned business providing a range of logistics solutions, including, bulk-chemical logistics, intermodal transport and supply chain management. Bertschi has 75 subsidiaries in 37 countries.

5. Galliker Transport is a family-owned company offering a range of logistics services from automotive, healthcare and general cargo to food logistics. It operates a fleet of over 1,000 vehicles and employees some 2,760 staff across Europe. Galliker Transport has 17 branches in six countries.

Switzerland



Origins and destinations of international road freight



Key destinations and origins of international road freight in Switzerland (2016)					
Loaded in Switzerland			Unloaded in Switzerland		
	m tkm	%		m tkm	%
Germany	1,644	36%	Germany	3,505	38%
Poland	489	11%	France	1,042	11%
France	432	10%	Italy	820	9%
Belgium	351	8%	Netherlands	738	8%
Netherlands	318	7%	Spain	648	7%
Other	1,311	29%	Other	2,381	26%
All countries	4,545	100%	All countries	9,134	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for Switzerland to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Turkey



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> Turkey is the world's 18th largest economy, with GDP of €665bn. Turkey has the world's 69th highest standard of living, with GDP per capita of €8,420. Turkey is the world's 31st largest exporter, with export of €129bn Turkey is the world's 21st largest importer, with imports of €179bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 3.2%. On the same basis, real import growth is predicted at 2.6%. Real export growth is predicted at 5.8%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> National security and political instability continues to be a challenge for Turkey after an attempted coup and subsequent backlash by President Erdoğan. Organised crime, high risk of terrorism, uncontrolled migration out of Syria, and cyber-attacks are other key concerns. Entry for foreign investors is hindered due to factors such as a complex local business landscape and political instability. Currency risks and persistent current account deficit are key financial challenges. Inflation is expected to remain in double-digits for the rest of the year. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 34th in World Bank's Logistics Performance Index, scoring 3.42 out of 5. The World Economic Forum rank the quality of its roads as the 30th best globally, scoring 5.0 out of 7 Its railroads rank 57th best globally, scoring 3.0 out of 7 Its ports rank 54th best globally, scoring 4.5 out of 7. Its airports rank 31st best globally, scoring 5.4 out of 7

Source: Ti

domestic politics are particularly fractious. An attempted coup led to a severe crackdown by President Erdoğan on journalists, human rights activists and dissidents.

Turkey is likely to struggle to retain its current levels of foreign direct investment amidst its domestic and international problems. There are other macroeconomic factors to be concerned about too; it has a wide current account deficit, youth unemployment is near 25% and inflation is in double figures.

Analysis

Turkey has undoubtedly benefitted from the near-sourcing trend of European manufacturers. They are still able to source goods from a relatively low cost labour market, but it is the proximity to the main European consumer markets makes it more attractive than Asian alternatives. It is now a key exporter of agricultural products, textiles, motor vehicles, construction materials, consumer electronics and home appliances. This has led to a buoyant economy which has produced higher levels of consumer spend.

Multinational logistics providers have benefitted as domestic manufacturers and retailers have switched from in-house operations to outsourced solutions. A number of home-grown providers have also seen success, and have spread out to provide international services, such as Ekol and Netlog.

Its geographical position, on the border of Europe and Asia, close to Africa and the Suez Canal, means it has the potential to become a key transit hub. The Turkish government has invested significant sums in upgrading its infrastructure to make this a possibility. Its road network is by far its key form of overland transport, but construction is underway to build 3,500km of high speed railway lines. A new airport in Istanbul will have an annual capacity of 5.5m tonnes.

Geopolitical issues in the region threaten to undermine and weaken the Turkish market. The war in neighbouring Syria has brought conflict to its doorstep. Whilst its relationship with Russia is improving, it has a difficult partnership with the US and Europe. The latter is particularly significant, as Turkey's transition into the EU has hit difficulties. As well as tense international relations,



Infrastructure



Road

Road transport is the primary mode of freight transport in Turkey. It accounts for about 85% of domestic freight (by tonne–km). It has a well-developed road network of approximately 385,754 km. The country has continually invested in its road infrastructure under its highway upgrading programme. Part of this included adding an extra lane to

existing single carriageways, and in the construction of new road highways and tunnels. In 2016, Turkey opened its road tunnel “The Eurasia Tunnel” between Kazlıçeşme–Göztepe along a 14.6 km route, together with a 5.4 km twin-deck tunnel that crosses the Bosphorus strait underneath the seabed. This project also comprised of improving and

widening roads that led to the tunnel, up to 9.2 km in total on both sides of the Bosphorus.

Turkey’s 2023 Vision is an infrastructure programme under which it aims to bring the total road network to over 70,000 km. One of its major projects Gebze-Orhangazi-Izmir Highway, with a 269-mile-long road, will open in 2018; it will reduce travel times between Turkey’s economic centres Istanbul and Izmir and help country’s manufacturing industries add a reliable road connection to new sea ports north of Izmir. By the end of 2018, with an investment of approximately (€2.09bn), it will construct the 169 km North Marmara Highway stretching from Kinali to Akyazi. In addition, Turkey began constructing the 324 km Istanbul-Balikesir highway and Canakkale 1915 bridge project in March 2017. The constructions are expected to finish in 2023.

Rail

Türkiye Cumhuriyeti Devlet Demiryolları (TCDD) (Turkish State Railways) is the country’s main rail carrier. TCDD carries around 27m tonnes of freight per annum in Turkey. It is aiming to increase freight traffic by constructing new international rail connections to Georgia, Iran and Iraq and by building 18 new logistic centres.

Turkey has 8,334 km of well-developed railway line network, including 593 km of high-speed railway network. Major investments are being made in high-speed lines, rail-led freight and distribution solutions, and urban transportation in major cities

nationwide. Turkey has planned to invest approximately €20.2bn by 2023 and €38.7bn by 2035 in an expansion programme. Under this plan, it hopes to increase its total network size to 25,000 km by 2023. This will involve the construction of 13,000 km of railway line with 3,500 km high speed, 8,500 km rapid, and 1,000 km of conventional lines. The new high-speed lines will be double-track and electrified and have a speed of 250 kph. For Istanbul alone, it is planning to provide 118 km of new lines by 2018, and a further 276 km by 2023.

There are four key high speed railway

lines that formed part of its initial high speed strategy; Ankara to Istanbul, Konya, Sivas and Izmir. The Istanbul and Konya legs have already been completed. The Izmir and Silvas lines are expected to be completed by 2019. Further works on the Bursa Bilecik, Konya-Karaman-Ulukışla, and Mersin-Adana-Osmaniye-Gaziantep high-speed rail lines are also ongoing.

In July 2017, Turkey initiated the operations of its third largest project, the Baku–Tbilisi–Kars rail link project connecting Azerbaijan, Georgia, and Turkey. The modernisation of the Georgian line

Turkey



from Akhalkalaki to Marabda was also commenced. The Baku-Tbilisi-

Kars railway project is projected to be completed in 2018.

Air

Turkey has currently 57 airports, with 33 providing both domestic and international flights and 24 which are military airports or airbases. Turkish airports handle around 425,000 tonnes of freight per annum. It has main two airports; Ataturk International Airport and Sabiha Gokcen International Airport (both Istanbul). Istanbul serves as a practical route of transport with a maximum four-hour direct flight to all major cities in Europe, Western &

Central Asia, the Middle East, and Africa.

A third airport, to the North-East of Istanbul, is due to be completed by 2018. Once the first two phases of development are complete, the site will have an annual capacity of 4.5m tonnes. After the second terminal is added, it will have an annual capacity of 5.5m tonnes. The new airport will have six runways and will feature a 1.4m sq m cargo and

logistics facility, with 300,000 sq m of warehouses for air freight operators and 100,000 sq m for freight forwarders.

To realise its Vision 2023 targets, the Government intends to increase its operating domestic flight network to 63 airports, by constructing new airports in Yozgat, Bayburt-Gümüşhane (Salyazi), RizeArtvin, Karaman, İzmir Çeşme Alaçatı, Niğde-Aksaray, Western Antalya, and Çukurova.

Sea

About 90% of Turkey's foreign trade is carried out through maritime transport, with a coastline of 8,333 km. Its major sea ports include Aliaga, Ambarli, Diliskelesi, Ereğli, Izmir, Kocaeli, Mersin, Limani, and Yarimca. Turkey's Mersin International Port is one of the largest container ports South of Turkey; it has a capacity of 2.6m TEUs. The port is connected to all major ports around the world, through a network of over 20 shipping lines. The country seeks an

increase its maritime trade and invests towards increasing the capacity of its ports. Turkey's Filyos port project, started in 2016, will give the country its third largest port, with a loading and unloading capacity of 25m tonnes per year. It is expected to decrease the load on Marmara ports and straits and provide an extra link between Central Asia-Black Sea region and the Middle East. This project is planned to be completed by 2020.

In terms of handling capacity, the government is determined to have at least one Turkish port listed on the list of world's 10 largest ports by 2023. Turkey plans to invest in hub ports in the Mediterranean, Aegean, and Black Sea regions and hopes its ports will make it be recognised as key regional transit hub. By 2023, capacities of Turkish ports are forecast to increase to 32m TEUs after the finalisation of all megaport project investments.

Market Size

Turkey: Logistics Market Sizing Data

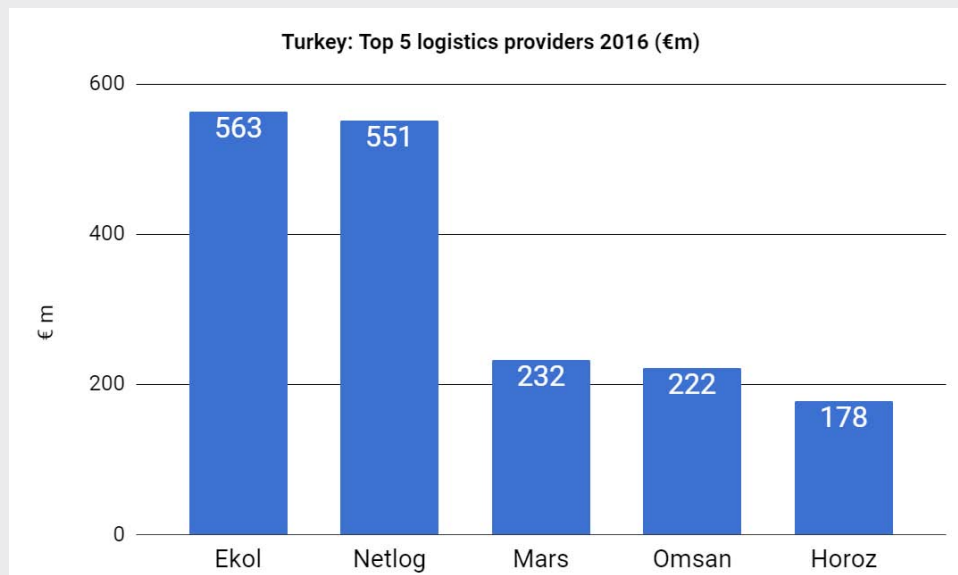
Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	5.2%	1,240	5.0%	1,509
Express	6.0%	1,955	7.0%	2,565
Freight Forwarding	4.6%	1,594	6.6%	2,058

Source: Ti

Due to a lack of visibility and reliable data, Ti is not able to provide road freight estimates for Turkey



Logistics Providers



Note: Due to a lack of visibility and reliable data, only a top 5 is provided

Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in Turkey

1. Ekol Logistics, headquartered in Istanbul provides international and domestic transport and logistics services in 80 locations in 14 countries. Its partner network consists of over 900 locations in over 150 countries. In Turkey, it provides transportation, warehouse management, customs clearance, and foreign trade and supply chain management. In October 2017, it opened a new €40m Ro-Ro terminal in Yalova.

2. Netlog provides a range of domestic and international services ranging from general goods logistics and warehousing to international road, rail, air and sea freight transport services, to temperature controlled logistics and liquid bulk food transport. In Turkey, it has 57 warehouses spread across 18 cities, with 500,000 sq m of indoor storage area.

3. Mars operates via its subsidiaries which include International Freight Storage Distribution, Mars Air & Sea Freight, Mars Insurance and Mars Logistics SARL. Its offices are located in Yenibonsa, Istanbul, Avcilar, Tuzla, Esenyurt, Bursa, Kocaeli, Izmir, Adana, Ankara, Mersin, Ataturk Airport, Adnan Menderes Airport, Esenboga Airport and Adana Sakirpasa Airport. It also has international branches located in: Luxemburg; Trieste, Italy; Guangzhou and Shanghai, both China.

4. Omsan's business segments include Domestic and International Land, Sea, Air and Rail Transportation, Bonded and Non-Bonded Warehouse Services as well as Home and Office Logistics services for leading enterprises of various industries, primarily including automotive, iron and steel, cement-construction, fuel oil,

textile, retail, food and communication. It has a road fleet of 438 self-owned vehicles and 1,100 certified suppliers; rail fleet of 240 swapbodies, 82 wagons and 180 containers; 1 bulk carrier of 30,000 DWT and the first Turkish flagged Cement carrier of 4,000 DWT with pneumatic discharging equipment; one helicopter; a total logistics service area of 1.1m sq m; and 2,200 employees.

5. Horoz Lojistik Kargo Hizmetler operates through two main subsidiaries. Firstly, Horoz Logistics provides transportation, storage and distribution, international road and railway transportation services. Secondly, Horoz Bolloré Logistics serves customers in the areas of sea and air forwarding, container internal transportation and project cargo transportation.

Note: Due to a lack of visibility and reliable data, Ti is not able to provide a key origins and destinations section for Turkey.

United Kingdom



Background	
<p>Economic overview</p> <ul style="list-style-type: none"> UK is the world's 5th largest economy, with GDP of €2,395bn. UK has the world's 21st highest standard of living, with GDP per capita of €36,521. UK is the world's 10th largest exporter, with export of €376bn. UK is the world's 4th largest importer, with imports of €574bn. 	<p>Growth prospects</p> <ul style="list-style-type: none"> For the period 2016-2020, real GDP growth, on average, is predicted at 1.6%. On the same basis, real import growth is predicted at 1.0%. Real export growth is predicted at 2.1%.
<p>Key issues and risks</p> <ul style="list-style-type: none"> Inflation is the biggest challenge currently facing the UK economy due to the Brexit vote as the pound plunged in value against the dollar. This has led to an increase in import prices and decrease in consumer purchasing power. Growth will slow in 2017, household incomes will be squeezed by higher inflation and businesses will hold back on investment decisions because of uncertainty about Brexit. 	<p>Transport and logistics overview</p> <ul style="list-style-type: none"> Ranks 8th in World Bank's Logistics Performance Index, scoring 4.07 out of 5. The World Economic Forum ranks the quality of its roads as the 27th best globally, scoring 5.1 out of 7. Its railroads rank 19th best globally, scoring 4.8 out of 7. Its ports rank 12th best globally, scoring 5.6 out of 7. Its airports rank 18th best globally, scoring 5.8 out of 7.

Source: TI

Analysis

The UK has one of the of the best logistics industries in the world, both in terms of infrastructure, depth and range of services as well as competence. It scores very highly in the World Bank's Logistics Performance Index and the World Economic Forum's Global Competitiveness Index with high quality and ethical logistics companies and government agencies (such as Customs).

The UK has seen a wealth of investment in port infrastructure in recent years with new ports being built at London Gateway and extensions initiated at Felixstowe, Liverpool and Southampton to name just a few. The ports are used for direct calls by many of the global shipping lines as well as operating feeder services to European ports such as Rotterdam and Antwerp.

However expansion of airport capacity has been more problematic and the

decision of whether to build a third runway at the UK's biggest airport at Heathrow has been consistently delayed, leading to a potential bottleneck and the loss of cargo to competing airports in Europe such as Amsterdam, Frankfurt and Paris.

Clustered around the main international gateways there are numerous global and locally based freight forwarders, providing a full range of services for importers and exporters. Comprehensive financial services as well as all other trade services are also readily available.

Rail freight has under gone something of a renaissance in recent years, not least due to attempts to reduce congestion and environmental impact on the UK's roads. Demand is expected to grow strongly over the next decade which will put pressure on the existing rail network. To meet demand, not least from the movement of sea containers and automotive import/export through

ports, investment in a Strategic Freight Network is ongoing.

Road freight is the most important mode in terms of freight movements. There is a highly competitive market both domestically and internationally with few barriers to market entry and exit. Pallet networks have developed to provide network services across the country, linking many local and regional transport operators with many hubs located in the English Midlands, the geographic centre of the country. International road freight is dominated by Central and Eastern European companies, offering low cost services for UK exporters. With the relaxation of cabotage rules mooted, they may have a greater impact on domestic services in the future.

The market is also very competitive for express parcels networks, offering next day services. The UK was the first market in the world to offer such levels of service and has been a continual source of innovation. Shippers have a range of options for international express parcels, with DHL, UPS and FedEx dominating the market.

The Contract Logistics market is very mature, developing at an early stage due to de-regulation of the market by the UK government in the 1970s. For this reason a large proportion of manufacturers' and retailers' logistics needs are out-sourced. In terms of distribution property, many hubs are located in the so-called 'golden triangle' located in the English Midlands. However there has been a trend to developing at port locations to expedite

United Kingdom



the distribution of imports.

The UK's logistics industry faces significant challenges over the coming years. There is a labour shortage in many sectors, most notably road freight and warehousing, and this may be exacerbated by Brexit if European

workers leave the country. This is already happening due to the weak pound which has reduced the country's attractiveness to migrant labour.

There may also be an impact on UK-European cross channel volumes if barriers to trade are increased by the

inability to conclude a Brexit deal. However on the other hand there are expected to be many opportunities arising for the intercontinental air and sea freight sectors due to increased trade inter alia with Asia, North and South America.

Infrastructure



Road

The UK has a total of 394,428 km of roadways with 394,428 km of paved roads. Roads being the most popular method of transport in the UK, carrying 65% of domestic freight.

In June 2017, the UK government unveiled a €7.2bn programme of road improvements as part of its €27bn upgrade to the road network in England. It includes works at the A19 Downhill Lane junction; the route will help increase road capacity that in turn will support the new international manufacturing park and ease traffic. Over the next six months, the government will take the next steps on 55 road improvements across the country, involving initiating eight schemes, consulting on ten schemes, and publish final plans for another 29 schemes. The upgrades under the plan will include adding capacity to sections of the A1 in Northumberland, proposals for a capacity increase at the A12 Colchester Bypass to reduce delays, and a new strategic corridor to the south-west via the A303. In addition, the government will be investing €881m to improve smaller local roads through resurfacing, filling potholes and undertaking other infrastructure projects.

In August 2017, the UK government

United Kingdom



awarded a Cross Tay Link Road project to SWECO UK, a manufacturer of customised industrial separation equipment. This project with the investment of approximately €124m includes the realignment of a section of the A9 trunk road and provision of a bridge across the River Tay. There will be a new grade-separated junction on the A9 and a new 6 km road connecting the A9 with the A93 and A94 roads.

The design of the Cross Tay Link Road is due to be completed in mid-2019 while the construction is expected to commence in 2021 and complete in 2023.

Two major new road schemes of approximately €351m were announced in Merseyside and Cheshire in September 2017. These projects will include the upgradation of the route to the Port of Liverpool along with a new

three-mile dual carriageway between the motorway network and the port. The construction work is due to start by spring 2020. In addition, a preferred route was declared for a new road and tunnel link on the A303 route that will bypass the Stonehenge stone circle. The work includes construction of a new 13 km dual carriageway link and a 2.6 km stretch of tunnel. The construction of the new road could commence in 2021.

Rail

With a total length of 16,837 km including 303 km broad gauge in Northern Ireland and 16,534 km of standard gauge, the railway system in the UK is the oldest in the world. Most of the railway track is managed by the UK's infrastructure manager of most of the rail network "Network Rail".

In 2016, there were 1.718bn journeys on the National Rail Network, making the British network the fifth most used in the world. To cope with this increasing passenger numbers, the UK government is making significant investments for the upgradation of its rail network. As part of the UK Government's vision for a better, faster and greener railway, the €11bn Rail Investment Strategy, announced in 2012, provides for railway upgrades across England and Wales for the period 2014 to 2019. This includes upgrading stations and tracks to create enough capacity around cities for an additional 140,000 passenger journeys daily at peak commuter time.

Europe's largest construction project,

Crossrail, is a €18.1bn scheme that will create a new transport infrastructure to support London's economic growth. Running under Central London, it will deliver faster journey times and a 10% increase in London's rail-based capacity. The first crossrail services through Central London will start in late 2018. The route will run for more than 100 km from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east, involving the construction of 42 km of new tunnels under Central London.

As a result of the €8.0bn Thameslink Programme, rail passengers will see upgradation of infrastructure, the deployment of new rolling stock and the introduction of a new Thameslink franchise to achieve 24 trains per hour through London's core, almost doubling current capacity. The redevelopment of London Bridge Station is underway and will be complete by June 2018. In addition, a €367m scheme to electrify more than 160 route kilometres of the South Wales local network is being sponsored by the Welsh Government.

This scheme is planned to be completed in 2019 and enables the 30-plus-year-old diesel fleet of passenger trains to be replaced by faster, quieter, and more environmentally friendly electric trains.

To have longer and faster trains operate more often, the UK is upgrading several major main lines and stations. As part of the Strategic Freight Network the Great Western Main Line, Transpennine, Midland Main Line, East Coast Main Line, and the link from Felixstowe to Nuneaton are being upgraded. High-Speed 1 (HS1), running between St Pancras in London and the Channel Tunnel, connecting with international high-speed routes and serving a domestic commuter route is currently the only high-speed line in the UK; another high speed line, HS2 (High Speed 2) is under government planning to meet future needs. With the construction expected to start in 2017, the new HS2 project will provide a high-speed rail connection between London, Birmingham, Manchester, and Leeds.

United Kingdom



Channel Tunnel

The Channel Tunnel is the longest undersea tunnel in the world. It provides a transport link for passengers and freight from Folkestone (Kent) in the UK to Coquelles (Pas-de-Calais) in France. It consists of three tunnels, two single track rail tunnels and a service tunnel all bored 40 m below the Channel seabed. The total length of the Tunnel is 50 km, of which 30 km is below the sea.

Groupe Eurotunnel is responsible for the management and operation of the Channel Tunnel. It coordinates operations through two terminals, located at either end of the tunnel, in Folkestone (Kent) and Coquelles (Pas-de-Calais) which provide access to the Channel Tunnel. It also controls a fleet

of 27 shuttles which transport passenger vehicles or trucks through the Tunnel. In each of the two rail tunnels, there are two cross-overs located a third of the way along each tunnel, allowing traffic to pass from one tunnel to the other. The transportation of trucks along the Channel Tunnel is carried out by dedicated “truck shuttles”, different to “Le Shuttle” which is responsible for all vehicle transport other than trucks. Truck shuttles occur every 10 minutes.

The Channel Tunnel also provides paid access to rail freight and passenger trains from all interested railway operators. Amongst those customers Eurotunnel counts principally are Eurostar, SNCF and its subsidiaries, DB

Schenker and Europorte.

Groupe Eurotunnel has two major subsidiaries that are responsible for its operations outside the Channel Tunnel, Europorte which operates a rail freight network in France, and its subsidiary, GB Railfreight (GBRf) which operates a rail freight network in the UK.

In 2016, Channel Tunnel traffic volumes reached record highs. Over 1.64m trucks transited the tunnel in 2016, transporting around 21.3m tonnes of freight. Rail traffic volumes amounted to 1,797 freight trains carrying 1.04m tonnes of cargo.

Air

There are approximately 189 airports in the UK. London Heathrow Airport is amongst the busiest airports in the world. Outside of London, Manchester Airport is by far the largest and busiest of the remaining airports.

Air freight accounts for about 40% of UK imports and exports by value. The main London airports handle around 1.8m tonnes of freight, with Heathrow accounting for around 1.4m tonnes. The approximate amount of air freight handled in all UK airports is 2.20m tonnes.

Capacity is tight at these London airports. Plans and consultations have taken place over many years regarding the addition of a third runway at Heathrow, or further expansion at other airports. At the time of writing, there has been no confirmation that any such expansion will definitely take place.

An expansion project of €1.2bn was announced for the expansion of Manchester Airport’s new ‘Super Terminal’ in February 2017. This terminal will include a giant floor as part of a €1.2bn expansion at the site.

In September 2017, the construction of three-storey extension from the existing gate 12 area spanning the old east end service yard in Edinburgh Airport Terminal was started as part of the airport expansion programme. Planned to be completed by the year 2018, the first phase of this project forms part of a €98m investment plan.

Sea

The UK ports industry, by virtue of its long coastline and maritime history, is the largest in Europe. The scale of the diversity of port operations in the UK ranges from all-purpose facilities to

container ports, along with bulk, ferry, and cruise terminals. The major ports of the UK include Port of Bristol, Port of Southampton, Belfast Harbour, Harwich International Port, Port of Felixstowe,

and London Gateway. Approximately 96% of the volumes of all the UK import/export trade enters the UK through its ports. In addition, some 32m international passengers use the UK

United Kingdom



ports every year while another 38m use them for domestic journeys. The private sector operates 15 of the largest 20 UK ports by tonnage and around two-thirds of the UK's port traffic.

The Port of Felixstowe handles approximately 3.68m TEUs of cargo, London handles 1.19m TEUs, while Southampton handles 2.35m TEUs. In the first quarter of 2017, UK major ports handled 115.9m tonnes of freight and the volume of unitised traffic stood at 5.3m units.

In 2016, the UK announced the Port of Southampton Master Plan 2016-2035 as part of its "Strategy for Growth" for the Port to 2035. The key objective of this plan includes the improvement, upgrading and building of new

infrastructure in Southampton port. In February 2017, a €1.13bn expansion plan was announced for the London Port. This plan will include the addition of a deep-sea jetty for ships from Europe and increase the size of its site from 850 to 1,100 acres.

The Port of Felixstowe announced an expansion project in March 2017 including seven acres of seabed to be reclaimed and developed for container storage in a 700-acre complex on the River Orwell. The total storage capacity on Berths 8 & 9 will increase by nearly 20,000 standard-sized boxes to 52,500.

The UK-based Peel Ports Group, the owner of the Port of Liverpool, began the second phase of the ports infrastructure expansion in June 2017. This includes

the installation of three more ships to shore cranes and ten cantilever rail mounted gantry cranes. Liverpool2, with an investment of €470m, will provide an unloading capacity of two 380-meter-long vessels, providing a state-of-the-art ocean gateway for international trade to and from the UK.

In September 2017, the design and construction of 13 ha of paved container yard behind Berth 9 was also started in Port of Felixstowe. The completion of the new container yard, which will comprise of ten container blocks and allow six-high stacking, is scheduled for early 2019. The yard will add 18,000 TEUs of stacking capacity to the 130,000 TEUs already available at the UK's largest container port.

Market Size

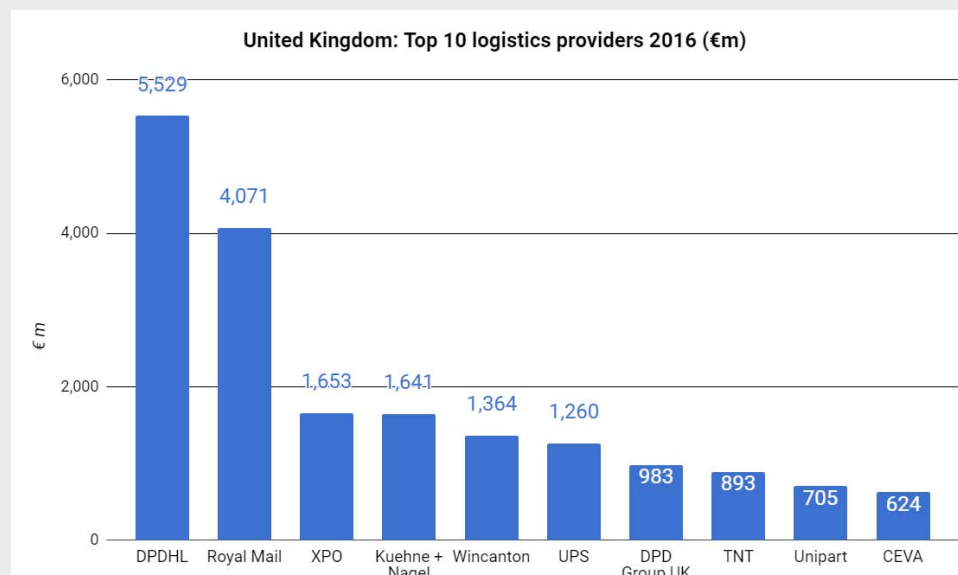
UK: Logistics Market Sizing Data

Market	2016 Real Growth Rate	2016 Market Size (€m)	2016-2020 Real CAGR	2020 Market Size (in real terms)
Contract Logistics	2.2%	15,489	1.8%	16,610
Express	5.3%	13,823	5.3%	16,968
Freight Forwarding	3.7%	4,133	3.2%	4,695
Road Freight	1.5%	35,284	2.0%	38,212

Source: Ti



Logistics Providers



Note: The methodology used by Ti for estimating the revenues of the Top 10 logistics providers can be found in the Appendix

Brief summaries of the activities of the top 5 logistics companies in the United Kingdom

1. DPDHL offers its entire suite of services to UK customers, including: express; air, ocean, rail and road freight; warehousing and distribution; global mail; and industry specific solutions. The group acquired UK Mail in December 2016, adding a commercial and operational presence, including pick-up and delivery capabilities, in the UK.

2. Royal Mail, the national postal service of the UK, operates in two segments: UK Parcels, International and Letters (UKPIL) and Global Logistics Services (GLS). UKPIL, formed of three of the group's subsidiaries, processes

and delivers letters and parcels, and is a provider of collection and delivery services for express parcels. GLS forms its own segment and is the Group's European-based parcel, express delivery and value-added logistics solutions provider.

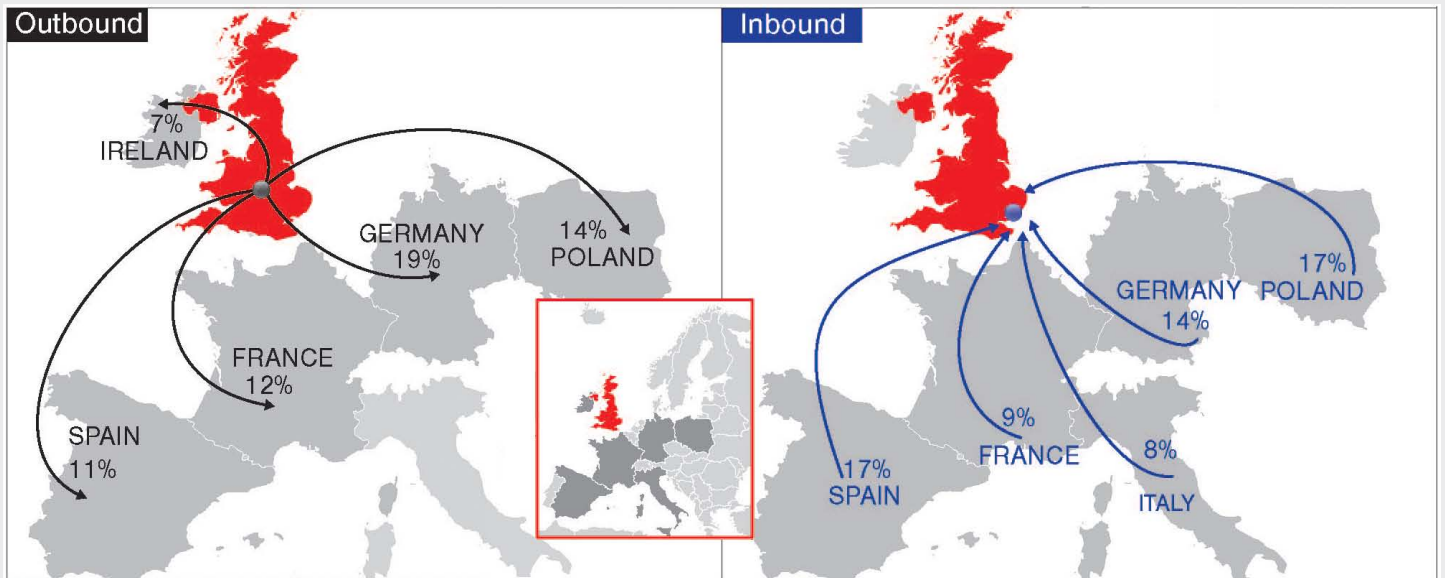
3. XPO Logistics has a significant presence in the UK, with the country being its second largest European market, after France. The UK represented the source of 28.2% of XPO Logistics Europe's total revenues in 2016.

4. Kuehne + Nagel has a network of more than 100 locations in the UK and has a workforce of more than 10,000 employees. It offers a range of supply chain solutions, including its KN PharmaChain and KN FreshChain services.

5. Wincanton Plc is a UK and Ireland-based supply chain solutions provider. The majority of its business concerns the provision of warehousing and transport solutions in a range of sectors including construction, consumer goods, defence, energy, milk & bulk food, public sector and retail.



Origins and destinations of international road freight



Key destinations and origins of international road freight in UK (2016)					
Loaded in UK			Unloaded in UK		
	m tkm	%		m tkm	%
Germany	3,465	19%	Spain	4,987	17%
Poland	2,421	14%	Poland	4,867	17%
France	2,138	12%	Germany	4,009	14%
Spain	1,991	11%	France	2,717	9%
Ireland	1,234	7%	Italy	2,310	8%
Other	6,547	37%	Other	9,794	34%
All countries	17,796	100%	All countries	28,684	100%

Source: Eurostat

Note: Tkm data here measures the top origin and destination markets for UK to/from EU28, Norway and Switzerland. Transports made by all EU28 registered hauliers are included (data is not available for all nationalities).

Appendix

METHODOLOGY: CONTRACT LOGISTICS MARKET SIZING

Definition of contract logistics

Contract logistics includes revenues derived from integrated warehouse and transportation services, supply chain services and value-added logistics, including sub-assembly, postponed manufacturing, kitting, labelling and returns management etc., within the

context of a long-term relationship between supplier and client, formalised on a contractual basis.

Note that dedicated contract carriage (DCC)/contract distribution is also considered to be a contract logistics service.

Ti considers the contract logistics market to be a sub-set of the third party logistics (3PL) market. The 3PL market is broader in nature, including services such as freight forwarding, in addition to contract logistics.

Contract logistics market size estimation

The methodology used by Ti for estimating contract logistics market sizes is a two-tiered approach.

First, 'bottom-up' estimates are calculated by undertaking a comprehensive survey of leading contract logistics companies operating in the market, to aggregate revenues. An estimate is then made for the remaining part of the market which

has not been identified, using industry structural statistics. The results are cross-checked by surveying leading companies to find out what market shares they believe they have.

Second, a 'top-down' approach is also employed to estimate market sizes. Macroeconomic measures such as GDP, retail sales and industrial production data

have been used as starting points in the determination of relative market sizes across countries.

The figures derived from both approaches are then compared for each market and subsequently compared against every other market size, before final figures are decided upon.

Market sizing growth methodology - real growth rates

Contract logistics growth for each market is provided in real terms only.

Real growth is defined as the rate of contract logistics market growth when the price of contract logistics services

is assumed to be constant (the same as the previous year). In other words, it measures growth in the underlying volume of contract logistics services provided. This ensures meaningful like-for-like

comparisons can be made of performance across countries.

In order to estimate contract logistics price growth in a particular market, Ti suggests that macroeconomic inflation measures

such as consumer price inflation, producer price inflation, or GDP deflator implied inflation may be reasonable

proxies. However, this may not be the case for all markets.

Exchange rates and historic market sizes

All market sizes for 2016 were initially estimated in domestic currency terms for each country. They were then converted

to euros at the 2016 average annual exchange rate, according to OANDA data.

Contract logistics market size estimation

Real growth forecasts are also provided for each market. Compound annual growth rates (CAGRs) for the period 2016 to 2020 are provided.

be, given a certain set of macroeconomic variables.

pervasive in emerging markets.

The forecast approach is to compare historical growth rates of contract logistics markets with growth of macroeconomic variables. Models are estimated which state what growth in contract logistics will

A CAGR measures the average annual growth rate of a time series from a specified start and end year. CAGRs are a good way of assessing the medium-term outlook for each market. However, caution should be taken as they do not reveal volatility, a feature that is especially

Forecasts do not attempt to measure or take into account changes in prices and exchange rates that will take place over the forecast horizon. Forecast growth rates are driven by estimated changes to contract logistics volumes only.

METHODOLOGY: EXPRESS AND SMALL PARCELS MARKET SIZING

Definition of a Parcel and the Market

The definition used for the 'total parcels market' by Ti is the aggregation of revenues generated by businesses involved in the movement of parcels weighing less than 31.5kg (70lbs).

All palletised volume (freight) is excluded from the parcels market as it requires specific handling equipment and specific vans or trucks for pick-up and delivery.

well have an impact on how revenues are reported from company to company. However, Ti believes that the definition it employs fits most closely to industry benchmarks. For instance, in the EU Commission's investigation into the proposed but failed merger of TNT and UPS, the definition it employed for a parcel was a small package with a weight limit of 31.5kg.

31.5kg is an estimate of the maximum weight that can be handled by one man without specific equipment. This is the key differentiator between a parcel and freight.

The market sizing does rely to an extent on a consensus definition of a parcel. There are consequently some 'grey' areas. For example, some companies will have their own definitions and this may

Parcel Market Sizes

The methodology used by Ti for estimating parcel market sizes includes undertaking a comprehensive survey of

all the leading parcel companies operating in each major geographic market, to aggregate revenues on a country, regional

and then global basis. The results are cross-checked by surveying leading companies to find out what market share

they believe they have.

Where it is not possible to undertake a comprehensive survey of parcel companies for an individual market (such as in the developing world), a more 'top down' approach is employed. For

example, a market size value can be initially proportioned between countries based on a country's GDP or scale of international trade, for example.

Ti employs a 'triangulation' approach. Adjustments and re-calculations are

carried out if necessary and in many cases refinement of market sizes has been undertaken as a result of Ti's extensive research programme. Ti has carried out in-country research in global markets, including Europe.

Parcel Market Size Growth Rates

All growth rates estimated in the market sizing are 'real' growth rates. That is, they estimate how much the market has

grown by in any given year when the price of parcel services is assumed to be constant (the same as the previous year).

In other words, the growth rates measure growth in the underlying volume of parcels transported.

Exchange Rates

All market sizes for 2016 were initially estimated in domestic currency terms for each country. They were then converted

to euros at the 2016 average annual exchange rate according to OANDA data.

Parcel Market Forecasts

Ti forecasts medium-term growth rates of every domestic and international parcel market it measures. Forecasts are offered in the form of compound annual growth rates (CAGRs) from 2016 to 2020.

As part of the forecasting methodology, historic growth rates of domestic/international parcel markets are measured against growth rates of relevant macroeconomic variables. Models are estimated which state what growth in

domestic/international parcel markets will be, given a certain set of macroeconomic variables.

Using data from the IMF, future growth rates of domestic/international parcel markets are then extrapolated using these models. The parcel market growth rates produced by the models are then reviewed and adjustments are made if necessary.

The forecast methodology is evaluated

each year to refine and optimise the models used to estimate domestic/international parcel market growth.

Note that as with all growth rates in the market sizing, forecasts do not attempt to measure or take into account changes in prices and exchange rates that will take place over the forecast horizon. Forecast growth rates are driven by estimated changes to parcel volumes only and are thus 'real term' forecasts.

METHODOLOGY: EXPRESS AND SMALL PARCELS MARKET SIZING

Definition of freight forwarding

Freight forwarders act on behalf of their clients (shippers) to buy and manage transportation services. This usually

includes air or sea freight, as well as the land transportation required to move goods from the shipper to the port.

In its purest form, a freight forwarder owns no assets of its own, however in reality many freight forwarders are involved

in 'integrated logistics', owning certain transportation and warehousing assets enabling them to offer value-added services.

Clecat, the European forwarders' association, states that "Freight Forwarding and Logistics Services" includes services of any kind relating to the carriage (performed by single mode or multimodal transport means),

consolidation, storage, handling, packing or distribution of goods, as well as related ancillary and advisory services. The latter includes customs and fiscal matters, declaring goods for official purposes, procuring insurance and collecting or procuring payment or documents.

Ti defines the global freight forwarding market as the sum of global revenues from international air and sea freight

forwarding. Given that the definition of 'freight forwarding' is broad, it is impossible to pin down precisely what is counted as freight forwarding by all companies. The market sizing relies on the notion that what one company classifies as "sea freight forwarding" or "air freight forwarding" is broadly the same as another. Overall, this appears to be not too strong of an assumption.

Freight forwarding market size estimation

The freight forwarding market size estimates are the totals of air + sea for each country.

The methodology used by Ti for estimating freight forwarding market sizes is a two-tiered approach.

First, 'bottom-up' estimates are calculated by undertaking a comprehensive survey of leading freight forwarding companies operating in the market, to aggregate revenues. An estimate is then made for

the remaining part of the market which has not been identified, using industry structural statistics. The results are cross-checked by surveying and speaking to leading companies to find out what market shares they believe they have.

Second, a 'top-down' approach is also employed to estimate market sizes. Macroeconomic measures such as GDP and trade data are used as starting points in the determination of relative market

sizes across countries. World Bank air freight tonne km and port throughput data, among other data, is also used to inform estimates.

The figures derived from the bottom-up and top-down approaches are then compared for each market and subsequently compared against every other market size, before final figures are decided upon.

Market sizing growth methodology – real growth rates

Freight forwarding growth for each market is provided in real terms only.

Real growth is defined as the rate of growth when the price of freight

forwarding services is assumed to be constant (the same as the previous year). In other words, it measures growth in the underlying volume of freight forwarding

services provided. This ensures meaningful like-for-like comparisons can be made of performance across countries.

Exchange rates and historic market sizes

All market sizes for 2016 were initially estimated in domestic currency terms for each country. They were then converted to euros at the 2016 average annual

exchange rate, according to OANDA data. The market size in any given year should be seen as the market size in terms of 2016 prices and exchange rates. For

example, the UK market size in 2011 can be interpreted as how large the market would have been in 2011 had prices and exchange rates been at 2011 levels.

Market sizing methodology - forecasts

Real growth forecasts are also provided for each market. Compound annual growth rates (CAGRs) for the period 2016 to 2020 are provided.

The forecast approach is to compare historical growth rates of freight forwarding markets with growth of macroeconomic variables. Models are estimated which state what growth in

freight forwarding will be, given a certain set of macroeconomic variables.

A CAGR measures the average annual growth rate of a time series from a specified start and end year. CAGRs are a good way of assessing the medium-term outlook for each market. However, caution should be taken as they do not reveal volatility, a feature that is especially

pervasive in emerging markets.

Forecasts do not attempt to measure or take into account changes in prices and exchange rates that will take place over the forecast horizon. Forecast growth rates are driven by estimated changes to freight forwarding volumes only.

METHODOLOGY: ROAD FREIGHT TRANSPORT MARKET SIZING

European Road Freight Market Sizes

The overall road freight market in any given country is the sum of its domestic and international road freight markets. Ti provides market sizes for domestic and

international markets, as well as the total market size.

Total market sizes for each country have been informed by Eurostat data which

provide road freight transport turnover for EU countries (formerly NACE code 60.24 Freight transport by road, and now NACE code H4941 Freight transport by road).

Split into Domestic and International Markets

The method by which overall market sizes have been split into domestic and international markets is informed by Eurostat data on domestic and

international tonne-km data by country, for road transport specifically. Tonne km data measures both the weight of goods and the distance travelled, making it

a good indicator of the relative size of international and domestic markets.

Estimation of Growth Rates

Ti estimates volume growth and price growth in each market to get an estimate of the overall growth in each market. Various data sources are used to

calculate domestic and international volume and price growth in each country.

For 2016 Ti offers a real growth rate

(growth holding price constant) for each market.

Exchange Rates

All market sizes for 2016 have been initially estimated in domestic currency terms for each country. They are then

converted to euros at the 2016 average annual exchange rate where necessary, according to OANDA data.

Forecasts

2016 to 2020 CAGRs are provided in real terms only. The forecasts do not attempt to account for price movements as this is simply not possible with any reasonable degree of confidence. Ti has observed that road freight volumes tend to grow

proportionally to certain macroeconomic variables. Models are estimated which state that given a certain set of macroeconomic variables, what growth in domestic/international road freight markets will be.

The forecast methodology is evaluated each year to refine and optimise the models used to estimate domestic/international road freight market growth.

Definitions

Domestic Market Sizes

The domestic market size reflects the potential addressable domestic commercial road freight market in any given country. This implies that cabotage transports (shipments made within a country by hauliers not registered in that country) are included in domestic market sizes.

International Market Sizes

The international market size reflects

the potential addressable international commercial road freight market in each country. This means, for instance, that the international road freight market for the UK cannot be calculated by summing the revenues of all UK international road freight providers because they would account for only a relatively small percentage of the total UK international market. Foreign hauliers comprise the majority proportion of the UK international market. Thus where the road freight provider is registered is irrelevant, it is the

size of the potential addressable market that matters.

General Freight

Only 'general freight' is included in road freight market sizes. Bulk freight, project transports, as well as mail and parcels are excluded. All LTL and FTL traffic is included, as well as road freight that takes place within the context of non-bulk contract logistics operations. Therefore, there is overlap between road freight and contract logistics market sizes.

TOP 10 LOGISTICS PROVIDERS

In each country, the primary services of the companies ranked typically include freight forwarding, contract logistics, express & parcels and road freight services. Airports, ports, airlines,

shipping lines and rail freight operators are excluded from the rankings. Only the parcels and logistics operations of post offices are included in any rankings: letters operations are excluded. When

figures are not reported in euros, average exchange rates for 2016 have been used for conversion. Revenues for all companies are country-specific, unless otherwise noted.

About Ti



Ti is one of the world's leading providers of expert research and analysis dedicated to the global logistics industry. Utilising the expertise of professionals with many years of experience in the mail, express and logistics industries, Transport Intelligence has developed a range of market leading web-based products, reports, profiles and services used by many of the world's leading logistics suppliers, consultancies, banks and users of logistics services.

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