



Logistics in Germany: Only modest growth in the near term

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The logistics sector in Germany is characterised by innovative and diversified companies as well as very good location factors. There are, however, economic and structural reasons to expect that turnover growth will be relatively moderate over the next few years. Between 2003 and 2008 sector turnover grew by a nominal 4.6% per year. Following the recession, that is from 2009 to 2014, the growth rate dropped to 3.4% p.a. (while the inflation rate was somewhat lower). Over the next five years average annualised nominal turnover growth is likely to be more in the range of between 2% and 3%. This would propel sector turnover through the EUR 300 bn barrier.

Structurally weaker world trade, only slow economic recovery in Europe and the reluctance to invest among major customer groups in Germany (industry) suggest that the logistics business will record slightly slower growth in future. Stiff competition will remain a typical feature of the sector; this will apply above all to simple, easily substitutable services. Germany is a fiercely contested logistics and transport market, not least because of its location at the centre of Europe. Foreign transport companies command a 40% share of the market for freight conveyed via toll roads in Germany.

The logistics sector will remain a focus of state regulation; this is true particularly of the important transport segment. Policymakers are seeking to reduce and/or limit the pollutant and CO₂ emissions of all modes of transport. In addition, there are regulations for specific modes of transport, such as truck tolls in the road segment or noise-differentiated track access charges for rail services. The fundamental requirements for policymakers are to retain a sense of proportion and to take into account the conditions in foreign markets with respect to competition.

Many German logistics firms succeed in reducing the competitive pressure by providing their clients with sophisticated, customised services (contract logistics, value-added services). Over time the logistics firm becomes ever more closely integrated in the customer's value chain. This enables higher margins to be earned and growth potential to be tapped. One challenge for the logistics firms is to adapt their services to the increasing digitalisation and further automation of their customers' production processes (Industry 4.0, internet of things). This may compel them to make major investments in their own technological equipment or staff training.

It is obvious that not all companies in the logistics segment have access to the expertise or financial resources to supply these market segments. Joint ventures between smaller firms could provide a solution, but ultimately a greater qualitative differentiation between the firms in the logistics sector is likely.

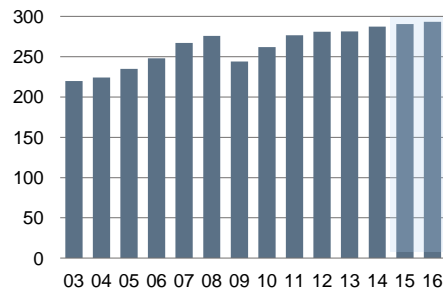


Logistics in Germany

Turnover gradually approaching the EUR 300 bn threshold

1

Turnover* in the transportation and storage sector**, DE, EUR bn



* The calculation is based on the structural survey in the service sector for 2013. The other readings were based on growth rates from the short-term surveys. Discrepancies with previous turnover figures from the structural statistics are the result of differing statistical definitions. The readings for 2015 and 2016 are Deutsche Bank forecasts.

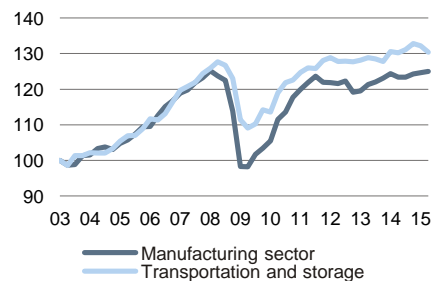
** Nearly 20% of turnover is generated from services for private clients.

Sources: Federal Statistical Office, Deutsche Bank Research

Industry cycle major driver of transportation and storage

2

Real manufacturing output and nom. turnover in the transportation/storage sector, sa, DE, Q1

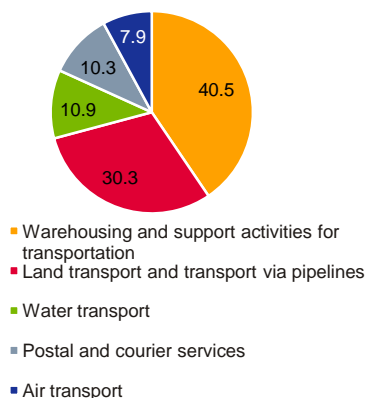


Sources: Federal Statistical Office, Deutsche Bank Research

Transportation business leads the way

3

Turnover split in the transportation and storage sector, Germany, 2013, %



* Segment dominated by forwarding companies

Source: Federal Statistical Office

1. Logistics in Germany: Muted performance in 2015/16

The logistics sector as such is less clearly defined in the official statistics than other service sectors such as retailing or traditional areas of manufacturing. The “transportation and storage” sector of the service industry however encompasses all the activities that are commonly covered by the term “logistics” (transport, transshipment and storage of goods and related services such as the forwarding business or the operation of freight centres, ports and other infrastructure facilities).

Turnover of the transportation and storage sector in Germany reached nearly EUR 290 bn in 2014. The sector provided employment for around 2 million people. By comparison, the automotive industry (including suppliers) in Germany generated turnover of EUR 270 bn¹ and employed nearly 740,000 people in 2014. The transportation and storage sector registers the highest absolute turnover of the (predominantly) business-related services. Almost 20% of turnover in the transportation and storage sector is however generated from services for private clients; these are dominated by local public transport and air travel. In some cases it is difficult to draw a line between business-related and personal services. In the aviation segment, for instance, passenger aircraft are also used to transport air freight.

The biggest segment in the transportation and storage sector is “warehousing and support activities for transportation”, which is dominated by forwarding companies. In second place comes land transport (including transport via pipelines), with road freight again generating the largest share of turnover.

Only muted turnover growth of late

Turnover in the transportation and storage sector grew only minimally in the last few years. From 2012 to 2014 the average increase in turnover was a mere 1.3% per year. The segment thus performed worse during this period than other business-related services. One important reason for the limited growth was probably that domestic industrial output has barely increased over the period stated. Traditionally, industry has been the most important economic driver of the logistics sector. That is why industrial output and turnover in the transportation and storage sector basically follow a similar cyclical pattern. Between 2012 and 2014 logistics came under additional pressure from both domestic investment activity (above all investment in plant and machinery) and Germany's external trade rising only less than average on a long-term comparison. This weighed on new order intake at logistics firms.

The worst performing individual segment of the transportation and storage sector between 2012 and 2014 was water transport services, which is dominated by sea and coastal transport. In 2012 in particular nominal turnover fell by some 10%. Global sea and coastal water transport is still characterised by overcapacities and low freight and charter rates. In addition, it is feeling the impact of global trade growth that is low on a long-term comparison (see chapter 2). Prior to the year of recession 2008/09, by contrast, water transport had regularly sparked by posting particularly large increases in turnover.

In the other segments of the transportation and storage sector there were no particularly positive or negative outliers in the past three years. From 2012 until 2014, average nominal turnover growth ranged between 1.5% p.a. in the warehousing and support activities for the transportation segment and 2.3% p.a. in the postal and courier services segment. No other segment apart from sea

¹ This turnover figure refers to the statistical definition according to so-called functional operating units. Based on the “facilities” the turnover of the automotive industry in Germany in 2014 came

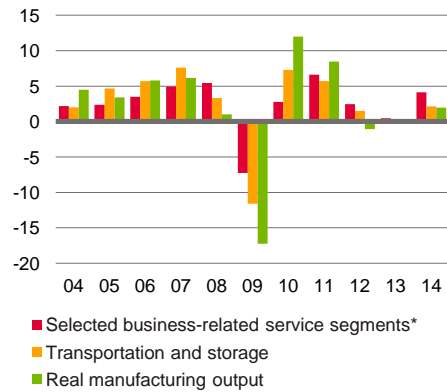


Logistics in Germany

Logistics growth below average since 2011

4

Nominal turnover in services sectors and real manufacturing output, DE, % yoy



* Includes following segments of the service sector: transportation and storage (NACE code H), information and communication (J), professional, scientific and technical services (M) as well as administrative and support service activities (N).

Sources: Federal Statistical Office, Deutsche Bank Research

and coastal water transport has had to suffer a nominal decline in turnover since 2012.

Employment in the transportation and storage sector has risen steadily since 2010 at an average of more than 2% per year. The increase in employment during this period was thus slightly lower than for all business-related services (+3% p.a.), but much higher than the increases prior to the year of recession 2008/09. It is pleasing that the number of corporate insolvencies in the sector since 2009 has fallen steadily and was nearly below its 2009 level of 29%.

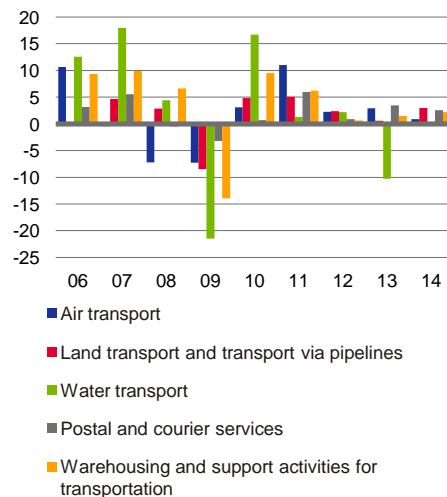
Economic outlook for logistics: Mixed signals

The German economy is doing well. We currently forecast that German GDP is set to rise by 1.7% in 2015 and by no less than 1.9% in 2016 in real terms (2014: 1.6%) – despite numerous economic and geopolitical risks inside and outside Europe. Private consumption should be a key growth driver in both years. It is likely to rise by 2% in 2015 and by 1.8% in 2016 in real terms and thus grow on average nearly twice as fast as the long-term comparison. Stimulus should come from the labour market, which is characterised by high employment and low unemployment. In addition there are pay increases that are higher than the long-term average. Furthermore, real income gains result from the currently low mobility and energy prices. Net immigration to Germany also contributes to the strong growth in private consumption.

Growth momentum only minimal for several years

5

Nominal turnover in individual segments of the transportation and storage sector, DE, % yoy



Source: Federal Statistical Office

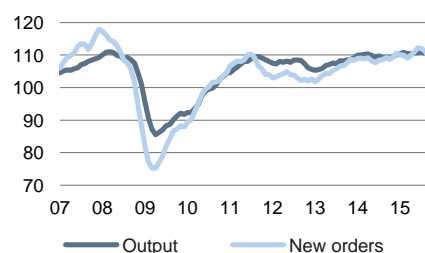
This year and next year real investment in fixed assets will contribute to GDP growth, but the growth rate will remain only modest. Given the still quite low capacity utilisation in many sectors – at least at the European level – companies are exercising caution in their maintenance investment activity. That is why the demand stimulus for the logistics sector has been low from this side. We currently forecast that foreign trade, by contrast, will develop somewhat better in 2015 and 2016 than in the last three years; the relatively weak euro compared to its long-term average and the gradual economic recovery in the eurozone are supporting factors. The growing volume of trade with major European and several non-European partner countries (primarily the US in 2015) is accompanied by a higher demand for transport, storage and transshipment services. However, German exporters are feeling the impact of the lower growth and the recession in several emerging markets (China, Russia and Brazil); so exports to these countries will decline in 2015.

Developments in domestic industrial production are particularly important for the economic performance of the logistics sector. We expect real growth in domestic industrial production of 0.5% in 2015 and stagnation in 2016. Business expectations in the manufacturing sector in the last few months were only just in positive territory. Capacity utilisation fell in Q2 and Q3 2015, but recovered slightly at the start of Q4. With growth in industrial output of (at best) 0.5% the industry share of total gross value added would fall in 2015 and 2016. German industry has performed well against international competitors in recent years – despite weak demand in western Europe. However, 0.5% real growth in industrial output is nothing spectacular given that interest rates remain low, energy and commodity prices have fallen and the euro is favourably valued compared to the currencies of major trading partners. This also holds for the above-mentioned domestic investment activity.

Manufacturing output trending sideways

6

Output and new order intake in manufacturing sector, DE, sa, moving average, 2010=100



Sources: Federal Statistical Office, Deutsche Bank Research

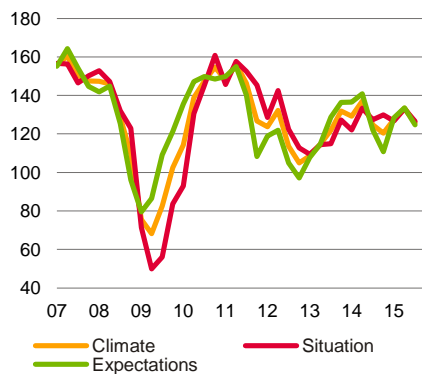


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Sentiment deteriorating of late

7

Logistics indicator, DE, normal level=100



Sources: Bundesvereinigung Logistik, Kiel Institute for the World Economy (IfW)

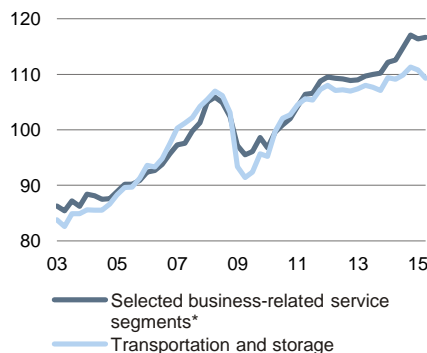
Sentiment in the logistics sector has deteriorated somewhat of late

If the mixed macroeconomic signals are used as a yardstick, it is certainly understandable that there has been no clear trend in sentiment in the logistics sector in the year to date. In each of the first two quarters of 2015 there was a rise in the logistics indicator calculated on a quarterly basis by the Kiel Institute for the World Economy (IfW) on behalf of the logistics trade association Bundesvereinigung Logistik (BVL). Above all, the expectations components rose sharply during this period. The sentiment of companies may also have improved because the price of diesel fuel in the first months of 2015 was markedly lower than the 2014 level. This is bringing relief to the cost side of the important transport segment (e.g road freight). In Q3, however, the companies' assessment of both the current situation and also their expectations had deteriorated again.

Transportation and storage: Below-average growth recently

8

Nominal turnover, sa, DE, 2010=100



* Includes following segments of the service sector: transportation and storage (NACE code H), information and communication (J), professional, scientific and technical services (M) as well as administrative and support service activities (N).

Source: Federal Statistical Office

Only moderate growth in turnover in 2015 and 2016

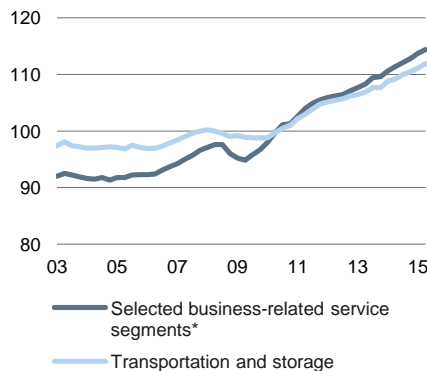
The slightly worse sentiment among logistics companies of late tallies with the latest trend in turnover in the transportation and storage sector. In the first two quarters of 2015 nominal turnover fell by a seasonally adjusted 0.4% and 1.4% qoq respectively (figures for Q3 are not yet available). It should be noted here that the sector had reached a high level of turnover at the end of last year. Sector turnover in H1 2015 is thus still 0.9% higher than in the corresponding year-earlier period. The lowest turnover growth recorded during this period was in the land transport segment. Low diesel prices may in turn have played a part. After all, the stiff competition in the road freight segment for example may result in transport firms having to pass on some of the reduction in their fuel costs to their customers. If the prices of transportation services then fall, this weighs on nominal turnover for the sector.

Overall, we expect nominal turnover in the transportation and storage sector to rise by around 1% in both 2015 and 2016. This would represent a slowdown in growth compared to previous years. Faster growth is mainly prevented by the only slow increase in industrial output and modest investment activity. Nominal turnover could grow more strongly in 2016, if fuel prices rose appreciably and these increased costs were to be added to the prices of transportation services. Oil prices are, however, likely to remain relatively low into 2016 on account of the plentiful supply of oil. The moderate growth in employment in the sector is likely to continue in the current year and into next year, with the sector also benefiting from additional contracts from clients in the manufacturing and other sectors (see chapter 2).

Since end of 2008/09 recession steady rise in employment

9

Employees in Germany, sa, 2010=100



* Includes following segments of the service sector: transportation and storage (NACE code H), information and communication (J), professional, scientific and technical services (M) as well as administrative and support service activities (N).

Source: Federal Statistical Office

Road transport dominates the modal split and has gained market share again of late

If we analyse the development of shares of the individual modes of freight traffic (modal split), the dominance of road freight is striking. In 2014 its share of transport volume (freight volume forwarded) of 83.7% and traffic volume (tonne-kilometres, i.e. freight volume forwarded in tonnes multiplied by the distance transported in kilometres) of 70.9%. The rail freight share of transport volume came to 8.7%. The rail share of traffic volume was much higher at 17.3%. The difference between transport volume and traffic volume is due to the fact that the average distance covered on rail freight journeys is usually longer than that for road freight; also, more heavy bulk goods (such as coal and ores) are transported by rail – relatively speaking.

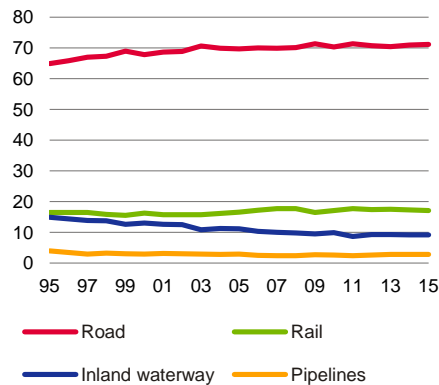
It is striking that rail freight has been losing market share again over the last few years and will do so again in 2015. The main reason for this in 2014 and 2015 is



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Road transport dominant 10

Modal split of freight traffic volume in Germany, %



Sources: DIW, Transport Consulting International

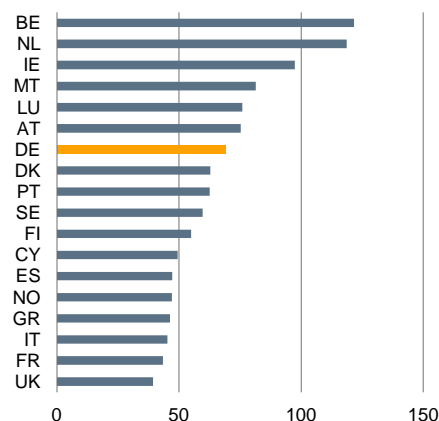
probably the rail journeys lost due to strikes. In addition, road freight is benefiting this year from the low price of diesel, which is boosting its competitiveness relative to rail freight. In the past decade rail freight was still managing to grow slightly faster than other modes of transport and thus gain market share. As a result of deregulation new providers entered the rail freight market. Competition in this segment intensified. In addition, road freight was encumbered by new regulatory measures (e.g. truck tolls) and subsequently high diesel prices. This “rail renaissance” is currently faltering, however.

2. Medium-term growth outlook for logistics intact, but low growth rate – structural challenges looming

There is a host of reasons to suggest that the logistics sector in Germany can boost its turnover levels in the coming years as well. One factor on the supply side is the capability of the domestic firms. They range from large groups with global operations that are internationally competitive right through to small and medium-sized firms that focus, for example, on certain regions or product and/or client-specific logistics services and are successful in their niches.

Germany particularly open compared to other major economies 11

Degree of openness: Goods exports plus goods imports relative to GDP, 2014, %



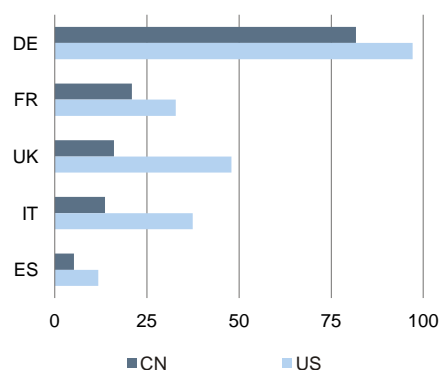
Sources: Eurostat, Deutsche Bank Research

Another advantage that Germany has as a logistics location is its geographical position at the centre of Europe. The economic integration of the eastern European EU states is not yet complete. The prospect of (even) closer ties between the old and the new EU states and other eastern European states ought to benefit firms in Germany, as they mean increased demand for logistics services; of course the economic crisis in Russia is currently acting as a dampener in this respect. In the process of EU enlargement eastwards and the deregulation of the European freight market, competition and cost pressures have of course also intensified, which mainly applies to simple transport services.

Along with its central location in Europe Germany's economic openness also has a positive impact on the logistics sector. The share of goods exports and imports relative to GDP is higher in Germany than in any other large European country. For the German logistics groups operating worldwide it is an advantage that Germany also entertains very extensive trade relations with economies outside Europe. For instance, German exports to the US or China are much higher than those of other European countries in absolute terms. Relatively speaking, too, the US and China have expanded their shares of German goods exports in recent years.

Germany maintains close trade relations with the US and China 12

Exports* of selected EU states to the US and China, USD bn, 2014



* Deviations from national statistics are possible

Source: IMF

Polycentric economic structure and high degree of industrialisation are beneficial

Logistics companies in Germany benefit from additional positive location factors. For instance the highly polycentric economic structure – compared to France or the UK – results in greater demand for logistics services: Germany has a very large number of economically strong regions that collaborate closely with each other. This makes it necessary, among other things, to transport freight between the individual business centres. Germany's high degree of industrialisation is a further positive aspect. The manufacturing sector's share of total gross value added was about 22% in 2013 and thus nearly seven percentage points above the EU average.

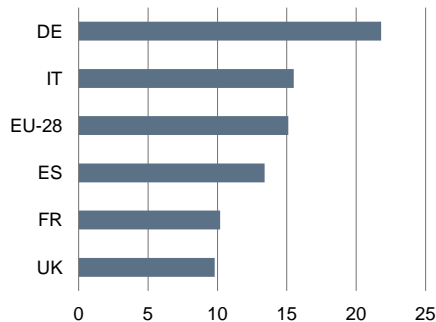
Of prime importance for a functioning logistics sector is a well-developed infrastructure, which above all applies to transport routes. For many years there have been complaints from business associations, commissions set up by politicians and economic institutes that too little is being invested in Germany's transport infrastructure. Indeed the degree of modernity of the public transport infrastructure in the last 20 years has fallen slowly but steadily. The investment



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Germany has high manufacturing share 13

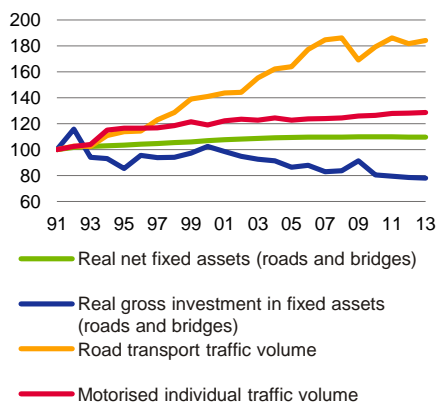
Manufacturing share of total gross value added, 2013, %



Source: Eurostat

Road infrastructure: Demand has risen faster than supply 14

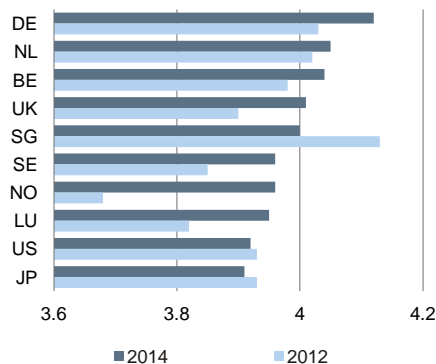
Germany, 1991=100



Sources: DIW, Deutsche Bank Research

Germany back at top of leading logistics locations 15

Logistics Performance Index; 1=low, 5=high



Source: World Bank

in the transport infrastructure has not kept pace with the increase in traffic volume. Local bottlenecks have been restricting the flow of traffic for many months and driving up costs for the freight business and transport companies. The linking of major seaports to the hinterland is progressing only slowly. There is widespread agreement that there has indeed been insufficient investment in transport infrastructure. There are, however, differing estimates as to the extent of the shortcomings in public infrastructure. In a report published at the end of 2014 Deutsche Bank Research estimated that an additional EUR 5-10 bn per year needed to be invested in (transport) infrastructure.² It is a positive sign that the federal government plans to increase expenditure on the maintenance and expansion of federal highways over the next few years.³ This ought to be maintained for the long term. All the same it will probably take a number of years before the past failures to invest in transport infrastructure have been remedied.

Despite the insufficient investment over recent years Germany's transport infrastructure is still very good by international standards. According to the World Bank's Logistics Performance Index (LPI) Germany even earns 1st place in the rankings for the infrastructure criterion. It would be fatal for Germany if its (hitherto still present) advantages with respect to transport infrastructure were to be put at risk by sustained insufficient investment. After all, a well functioning infrastructure enables macroeconomic efficiency gains to be made and can make up for at least some of the shortcomings in other areas (such as labour costs).

Globalisation shifting down a gear or two

The observations already made in chapter 2 have shown that Germany is an excellent logistics location. Indeed Germany occupies first place in the above-mentioned World Bank LPI ranking taking into account all the criteria. Thanks to these prerequisites the logistics sector in Germany can probably also boost its turnover over the medium term. Nevertheless, there are a number of reasons to suggest that turnover growth will be only moderate in the next few years.

One of these reasons, in our opinion, is the structural weakness of world trade, which is likely to persist for some time. Whereas in previous years global trade grew much faster than global GDP on average, their growth rates have converged since 2012. The international division of labour and interconnection of trade have lost momentum since then. This is due to a variety of factors. For one, China is currently seeking to alter its growth model. Instead of focusing on investment and exports private consumption is supposed to develop into a more important pillar of the Chinese economy. This domestic focus is reducing the stimulus generated for global trade. Another key factor in structurally slower growth in global trade is the failure to make progress in liberalising trade at the WTO level. Bilateral trade agreements have become more important in recent years. These are, however, always merely "second-best solutions". And even in that regard only slow progress is being made. Negotiations are frequently hampered by political opposition, as shown by the Transatlantic Trade and Investment Partnership (TTIP) that is currently being negotiated between the EU and the US.⁴ Furthermore, there are currently no singular events on the horizon that will boost international trade at the regional or even global level. In the first decade of this century there were China's accession to the WTO (2001) and EU

² See Rakau, Oliver (2014). Case for higher investment in infrastructure – despite questionable "gap analysis". Deutsche Bank Research. Standpunkt Deutschland. Frankfurt am Main.

³ See Pro Mobilität (2015). Verkehrsetat 2016. Informationen zu den Haushaltsberatungen von Bundestag und Bundesrat. Berlin.

⁴ See Heymann, Eric et al. (2015). German exporters facing strong headwind despite softer euro. In: Deutsche Bank Research. Current Issues. Focus Germany. Frankfurt am Main. Peters, Heiko and Stefan Schneider (2014). Sluggish German exports – cyclical or structural? In: Deutsche Bank Research. Current Issues. Focus Germany. Frankfurt am Main.



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World trade has only grown at same speed as global GDP recently

16



Source: IMF

enlargement (2004). Ultimately the growth in global trade is dampened by the fact that several large emerging markets are currently suffering from economic and (homemade) political problems. As major commodities exporters, Russia and Brazil feel the impact of low commodity prices. Moreover, they are not currently attractive for foreign investors due to the failure to implement domestic policy reforms, high inflation rates and exchange rate risks.

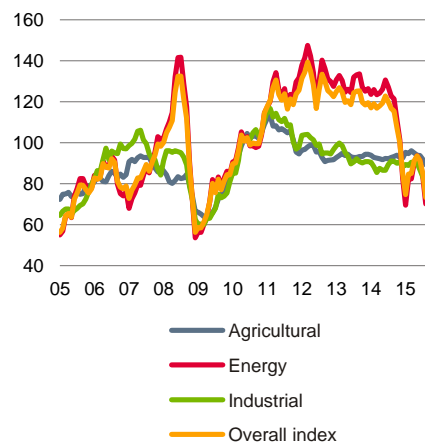
Economic recovery in Europe occurring only slowly

The medium-term outlook for the German logistics industry is also being dampened by what will probably be an only sluggish economic recovery in Europe. There are several countries inside the EU that are growing again not least thanks to successful structural reforms and are receiving stimulus from exports (e.g. Spain). In other eurozone countries, by contrast, such reforms are progressing more slowly (e.g. Italy, France). As such, the eurozone is likely to remain a heterogeneous economic area in terms of its growth dynamics. Ultimately, the continued expansionary monetary policy of the ECB is a sign that the eurozone still finds itself in a kind of crisis mode. The high unemployment in certain EU states cannot be eradicated in the short term.

Low commodity prices

17

2010=100, Germany, EUR basis



Source: HWWI

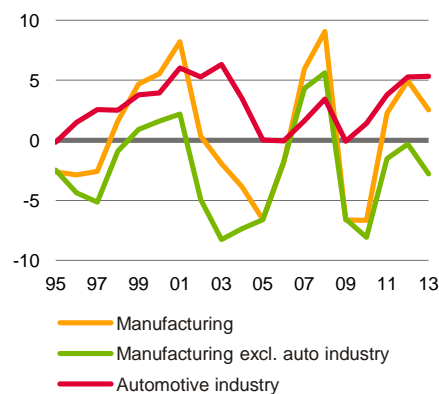
German manufacturing sector reluctant to invest

In addition to these impediments from the foreign trade side the stimulus for the German logistics sector from the domestic economy may also diminish in future. This applies especially to the manufacturing sector in Germany as a major client to logistics firms. It is striking after all that the manufacturing sector has been reluctant to invest in Germany in recent years; one exception is the automotive industry. Overall, the share of the (less relevant for the logistics sector) investment in research and development as a share of total investment has risen, while the investment in physical equipment (e.g. machinery) and above all in construction has been lower. There are many reasons for this development.⁵ There is a danger that industry's reluctance to invest will also erode the growth potential of the manufacturing sector in Germany over the medium term, as long-term productivity gains are only possible if the capital stock is renewed. Lower industrial growth – all things being equal – means fewer orders for the logistics sector.

Auto industry investing extensively

18

Net fixed asset investment*, DE, EUR bn



* Gross fixed asset investment minus depreciation

Sources: Federal Statistical Office, Deutsche Bank Research

The wholesale and retail sectors in Germany are also among the important client groups of the domestic logistics business. From this side, too, the medium to long-term demand stimuli for the logistics sector will probably be only minimal over the next few years. This is suggested by demographic developments (long-term population decline). Furthermore, a certain saturation limit has been reached for a large proportion of the products sold by retailers (e.g. food, textiles and clothing, furniture, housewares). Within the retail segment there will continue to be a shift in market share away from in-store business to the online channel (e-commerce). Going forward, this will also lead to an increase in smaller-volume shipments, which means growth opportunities for the logistics segment of postal and courier activities.

Regulatory and technological challenges continue to increase

Moving on from the economic circumstances for the German logistics industry, if we also look at the regulatory environment, it is evidently the case that the

⁵ See Heymann, Eric (2014). Capital investment in Germany at sectoral level. Service providers continue to expand while industry contracts slightly Deutsche Bank Research. Current Issues. Frankfurt am Main.

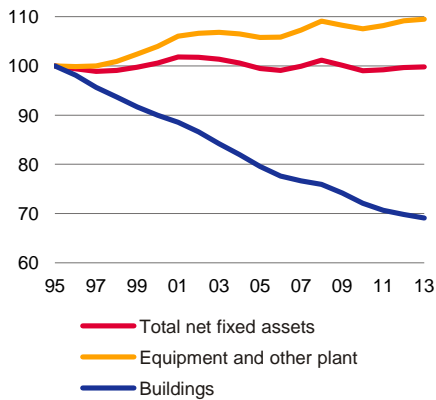


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Manufacturing investment in buildings declining steadily

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Real net fixed assets in manufacturing sector, Germany, 1995=100



* Including capitalised R&D expenditure

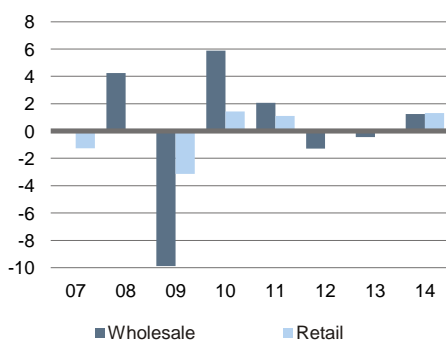
Source: Federal Statistical Office

Diesel could receive more attention from policymakers

Distributive trade: Only minimal growth

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Turnover, Germany, real, % yoy.



Source: Federal Statistical Office

Conflicting objectives of reducing pollutants and CO₂

sector will again face several challenges in the medium term. The logistics business in Germany has basically been impacted by state regulation for many decades. The focus has hitherto always been on the transport segment, which is affected by, among other things, measures motivated by fiscal and environmental considerations. It is highly probable that this development will continue in future. We shall outline below a number of potential regulatory measures pertaining to the transport sector that might be implemented presently or in the future:

- In the *road freight* segment fuel taxes have been a major cost factor for many years. At present in Germany there is currently no debate about raising petroleum tax (as part of the energy tax); in the longer term, however, this cannot be ruled out. In future it is conceivable and probable that truck toll fees will also be increased and/or that the toll will be expanded to include other vehicles and/or roads. Since the beginning of October 2015, for example, trucks of 7.5 tonnes and over have also been subject to toll fees. As of July 1, 2015 the truck toll was extended to include an additional 1,100 km or so of motorway-like federal roads. The toll is intended to be levied on all trucks by mid-2018 on all trunk roads.

Stricter regionalisation is to be expected in the road segment, and also with regard to the pollutant and CO₂ emissions of trucks. For pollutant emissions the current standard is Euro-6, with which all newly registered trucks must comply. Here, too, there are currently no plans for stricter regulation, especially as the type approval for heavy trucks – in contrast to that for passenger cars – emissions testing is conducted under on-road driving conditions (Portable Emissions Measurement System, PEMS). In light of the current “Dieselgate” affair concerning Volkswagen AG diesel cars that were fitted with defeat devices, however, diesel engines in general could become the focus of greater attention from policymakers. Up until now vans are the only vehicles for which specific maximum volumes of CO₂ emissions have been set at the EU level. Heavy trucks are not yet affected. However, the CO₂ emissions of heavy duty vehicles are also on the agenda of the Commission. As a first step, the measurement of CO₂ emissions by vehicles is to be clarified. The European Commission makes explicit mention of specific CO₂ emission limits for trucks as a potential regulatory instrument.

Ultimately the (potential or expected) stricter limits on pollutant and CO₂ emissions by vehicles result in higher costs for truck makers. They are already constantly working on less environmentally damaging and more efficient vehicles, including their design and other features in addition to engine technology. For heavy-duty vehicles, however, it is impossible to switch to alternative propulsion technologies in the short term and at a reasonable cost. In the debate it needs to be noted that measures to reduce the pollutant emissions by trucks are usually accompanied by a deterioration in energy efficiency and therefore higher CO₂ emissions. This conflict between objectives also suggests – all things being equal – that the costs of developing and producing trucks will rise in future. Truck makers will pass on the higher costs to their customers, including the transport industry. These higher costs will probably, however, be offset by lower operating expenditure (e.g. lower toll fees for vehicles that emit low levels of pollutants and lower fuel costs for economical vehicles).

Road freight could also be regulated more strictly with regard to the safety standards for trucks (for instance to prevent traffic accidents). Truck makers are also working on technological solutions to this end. The regulations concerning driving hours and rest periods for truck drivers might also be tightened up. If the social standards in the transport industry within the EU were to be harmonised, the position of German firms relative to their

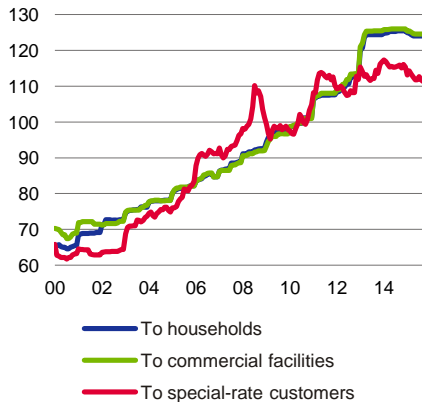


Logistics in Germany

Electricity price rising sharply over long term

21

Producer price index for electricity: Breakdown by customer groups, DE, 2010=100

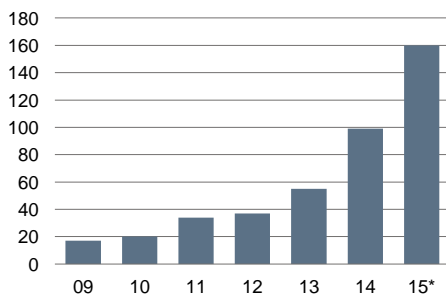


Source: Federal Statistical Office

Rising EEG levy costs for rail segment

22

Rail transport costs incurred by Deutsche Bahn due to EEG, EUR m.



* Forecast

Source: Deutsche Bahn AG

Competition with airlines and airports in the Gulf states increasing

competition, for example from eastern Europe, would improve; this will probably occur only slowly, however.

- In the *rail segment* the biggest regulatory uncertainty (motivated by environmental policy) results from the future development of Germany's transition to renewable sources of energy ("Energiewende"). The entire electrified rail transport business is among the biggest consumers of electricity in Germany. The ambitious energy and climate policy objectives of the federal government suggest that electricity prices in Germany will trend upwards in future. The exemptions that currently still apply to the rail sector in accordance with the renewable energies law (EEG) could be scaled back (further) in the next few years. Even in the last few years the EEG costs for the market leader in the rail sector, Deutsche Bahn AG, have risen steadily. Additional costs for the electric rail business also result from the EU Emissions Trading System. The price of CO₂ allowances is currently low, however.

Pollutant emissions by diesel locomotives or the noise emissions by rolling stock are other aspects that could be subjected to regulation (more so than up until now). In autumn 2014 the European Commission issued a proposal for a regulation that would set stricter emission limits for new internal combustion engines used outside the road segment (non-road mobile machinery, NRMM; i.e. also diesel locomotives). A noise emissions directive from the then Federal Ministry for Transport, Building and Urban Development (BMVBS) came into force at the end of 2012. It regulates the promotion of measures that can abate the noise emissions of rail freight rolling stock already in service. The primary abatement instrument is a noise-based route price system (LaTPS). DB Netz AG introduced such a system for rail freight when the seasonal timetable change occurred at the end of 2012. Under this system loud freight trains have been subject to noise-based surcharges on the track access fee since June 2013; quiet freight trains, by contrast, receive a bonus from DB Netz AG. So, on the one hand the conversion of freight trains can be subsidised via the BMVBS directive; and quiet trains benefit from lower track access charges. And on the other, loud freight trains are charged higher track access fees. Railway noise emissions are likely to remain on the political agenda over the next few years.

- Over the last few years the *aviation* segment has witnessed an increasing amount of debate about the regulatory environment for Germany as an air travel location and its international competitiveness. The aviation market in Germany (and Europe) is more tightly regulated than in many other regions around the globe. Although there is no tax on kerosene and several statutory instruments, e.g. the German aviation tax, only apply to passenger flights, air freight is nevertheless also impacted by a wide variety of regulatory stipulations. The integration of aviation in EU emissions trading is confined to the EU, which benefits non-European airlines and also airports. Furthermore, strict night flight rules (night flight bans) impede or prevent freight operations at many German airports. In the last few years the companies concerned – airlines and airports – have made more frequent reference to their disadvantages compared with competitors from outside Europe (especially the Gulf states). These include differences with regard to the liability to pay taxes and fees, noise protection regulations, governmental influence and with regard to labour and social standards. The introduction of other regulations at the German or European levels that are a burden on the domestic aviation segment cannot be ruled out in future. This would further compound the disadvantages of being located in Europe compared to non-European competitors.

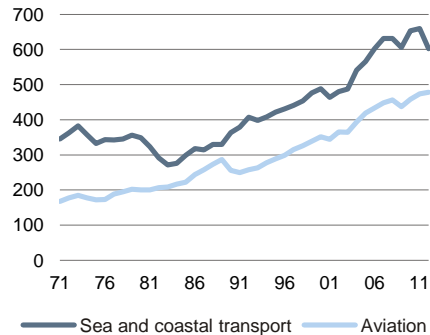


Logistics in Germany

Rising CO₂ emissions

23

CO₂ emissions of int. sea and coastal transport and int. air transport, million tonnes



Source: International Energy Agency

Aiming for concrete CO₂ emissions reduction targets for sea and coastal water transport

Diesel price at low level

24

Consumer price of diesel fuel in Germany, cents per litre



Source: Mineralölwirtschaftsverband

Oil price very low at present

25

USD per barrel, monthly averages for Brent, WTI and Dubai benchmarks



Source: HWWI

— In the *water transport* segment the regulatory focus has mainly been on the pollutant emissions of ships. In the sea transport subsegment there are Emission Control Areas (ECA). They are specific zones – mostly located near to a coast – in which stricter regulations concerning pollutant emissions (SO_x, NO_x, soot particles) apply. There are plans to tighten up these rules further over the next few years. As of January 1, 2015 the limits for the maximum permissible sulphur content of fuels were reduced in some of these ECAs (e.g. in the North Sea and Baltic Sea). There is a variety of options for complying with the stricter regulations (in future), such as the installation of filters. Converting to alternative fuels (with lower pollutant emissions) that are used in the respective control zones is also a possibility (dual fuel operation). A short-term alternative to heavy oil is marine diesel oil. In the medium to longer term liquefied natural gas (LNG) is a much-discussed option in the sea transport segment. Capital investment costs would of course be incurred in converting the ships. In the inland waterways subsegment, too, the focus is on pollutant emissions. The above-mentioned proposal for a regulation by the European Commission on the emissions of new internal combustion engines outside the road segment (NRMM) also affects inland water transport. The federal German inland waterways association and the Shipping and marine technology association are opposed to the stricter limits proposed in the draft regulation and have described them as not technically feasible.

CO₂ emissions in sea and coastal water transport have hitherto still not been regulated. In the coming years, however, politicians will seek to cap the rise in emissions from this sector. The EU's preference is a global approach with the involvement of the International Maritime Organisation (IMO). Since the progress towards a globally coordinated climate protection policy in the sea and coastal water transport segment has, however, occurred only slowly to date the EU wants to adopt at least initial measures that address the sector's CO₂ emissions. For instance, by 2018 a legal framework is to guarantee among other things that CO₂ emissions by big ships are reported and monitored as soon as they approach ports in the EU. This is to apply to journeys by the ships concerned between individual ports in the EU and outside the EU. This would be one important prerequisite for concrete emissions reduction targets in the sea and coastal water transport segment.

The observations show that policymakers will in future continue to exert a major influence on the transport sector – as an important segment of the logistics industry. The companies concerned (vehicle construction, forwarding and transport segments, for example) have to get used to this and will do so. State intervention will also alter the relative competitiveness between the individual modes of transport and thus the modal split.

Logistics sector afraid of problems with new recruits

In an IfW survey conducted in Q2 2015 the logistics business cites the demographic shift and the shortage of skilled workers as the biggest risk factor. For many years the sector has been trying to enhance the image of the professional driver in order to avert bottlenecks. The autonomously driving truck is not a technological flight of fancy, but it will take decades before the sector can do without professional drivers altogether. Other significant risk factors identified in the survey are the inadequate transport infrastructure and the tendency to go on strike in Germany. Respondents were not asked about fuel costs as a special risk factor, which may be to do with the low fuel prices at present. In the medium to longer term oil prices are likely to rise again, however, especially on account of the currently low trading prices which mean that many



investments in exploring for new fields are being put on ice and global demand for oil will probably rise over the medium term.

Competition remains intense – value-added services boost growth potential

Stiff competition will remain a characteristic of the logistics sector in future, too; this will apply above all to simple, easily substitutable services (e.g. pure transport business). One reason for this is the overcapacity in the individual segments of the sector. This puts an even bigger squeeze on margins, the slower the growth of the sector. Germany is a hotly contested transport market due to its location at the heart of Europe. The federal association of freight transport, logistics and waste disposal (BGL) talks of foreign transport companies having a 40% share of the market for road freight conveyed on German toll roads. As such, the coming years cannot be expected to bring an easing of competition – the opposite is more likely. Even if individual firms exit the market for economic reasons, this does not necessarily reduce capacity, as vehicles and other equipment can be acquired by the companies that remain.

Customer-specific value-added services reduce margin pressure

Many German logistics firms have succeeded for years in reducing the competitive pressure by providing their customers with sophisticated and individual services. The buzzwords in this respect are contract logistics or value-added services. Over time the logistics firm becomes ever more closely integrated into the value chain of the client and even of their supplier or customer; the precondition for this is mutual trust. In the course of such a process an industrial company may, for example, reduce its own capacities and concentrate on its actual strengths. The logistics company can in return earn a higher margin, not least because the services offered are specialised and thus less substitutable. In this way new growth potential can be tapped at source – relatively independently of the macroeconomic circumstances mentioned. The activities range from stock management and quality control, additional assembly work, product labelling, shelf management right through to setting up call centres for customers.⁶ Sector or customer-specific characteristics may be a factor. One challenge faced by the logistics firms is to adapt their services to the increasing digitalisation and further automation of their customers' production processes (the buzzwords are Industry 4.0 and the Internet of things). This may compel them to make major investments in their own technological equipment or staff training. If logistics providers are involved in this process at an early stage new growth opportunities are indeed created. What is ultimately also clear, however, is that not all companies in the logistics segment have access to the expertise or financial resources to supply these market segments. Joint ventures between smaller firms could be a solution in this case, but a wider qualitative dispersion between their logistics sector companies is likely.

Industry 4.0 will also impact on the logistics sector

3. Conclusion and outlook

Germany is an intact logistics location. It is typified by innovative and diversified companies as well as fundamentally very good location factors. There are, however, economic and structural factors which suggest that turnover growth will be relatively moderate over the next few years. Between 2003 and 2008 the sector managed to boost its nominal turnover by 4.6% per year. Following the recession, that is from 2009 to 2014, the growth rate dropped to 3.4% p.a. (while the inflation rate was somewhat lower). In the next five years, by contrast, average annual nominal revenue growth is more likely to be between 2% and 3%. The simpler the respective logistics services are, the more intense the competition remains. Customer-specific services that in some cases are much

⁶ See Deutscher Speditions- und Logistikverband (2015). Zahlen, Daten, Fakten aus Spedition und Logistik. Berlin.



more extensive than the traditional repertoire of a logistics firm can help to ease the pressure on margins and open up new growth potential. However, not all companies will succeed in doing this.

State regulation will also remain a burden on the sector in future, which applies to the transport business in particular. Policymakers need to remain objective and take into account the respective conditions in foreign markets for reasons of competitiveness. From a political point of view it is of course essential for the German logistics business that the important domestic customers (above all the industrial sector, but also the distributive trade) are not subjected to excessive burdens. The recent resolutions passed by the grand coalition concerning the labour market and pensions policy as well as the ambitious German energy policy are likely to prompt many companies to be cautious about making extensive investments. This would also impact on the German logistics business.

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