

Project partner



Analysis of Transport and Logistics Sector in EU and Latvia

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Introduction

Efficient and competitive freight transport is an essential part of the elements that contributes to the economic growth and quality of life in Europe. Logistics is one of the main drivers and key pillars of European competitiveness, creating the way for added industrial value, the movement of goods and cooperation among companies, but also a prime contributor to the Lisbon agenda on growth and jobs. Transport and logistics sector relevance for European Economy is mainly related to the share of the logistics industry in the European economy, estimated about 5% for transport industry and 10% for logistics industry¹. Industry's growth rates have been above average of the overall economy over the recent years. Europe is one of the main International Trade and Logistics areas and it is massive Consumer market, but it is also place where a lot of manufacturing is happening (car industry, mining equipment, building machinery, oil equipment, wind turbine technologies, various consumer goods etc.). With rising living level in China, consolidation of carriers which slowly raises shipping rates long haul transportation costs do increase. This is push for Western companies which 10-15 years ago moved manufacturing to Far East to return it home. Various indexes show that trade to and from Europe is blossoming and this also has positive impact to EU transport system.

To evaluate what are the industry's main challenges and development opportunities it is important to understand what constitutes efficient and competitive logistics and freight transport systems. The main objective of this document is to accomplish a comprehensive analysis of the transport and logistics industry in the EU with special focus to Latvia to define and assess the constraints and opportunities for developing logistics and transport sectors. This paper presents the last available statistical data from a different statistical sources, reflects opinion of industry's entrepreneurs and governmental institutions about industry's trends, challenges etc. Therefore, it gives a general picture of the structure, development and characteristics of the European transport and logistics system, trying to identify main trends and internal dynamics. There is analysed structural profile of the industry (incl. main types of cargo, transit corridors, different transportation segments etc.). For better visualisation of the current situation of the transport and logistics industry SWOT analysis is completed. The analysis will be followed with the Round table discussions within the scope of the Project.

The European Transport Policy, itself, is a mixture of legal regulation and inter-state cooperation. It has been based on the development of policy documents such as White Paper (2001), Mid-term review of the White Paper (2005), Green Paper (2006), Blue Book (2007), Action plans and programmes as well as Directives and Regulations. The Green Paper has suggested for the first time steps in building an integrated maritime policy. The Blue Book has developed this concept further².

European Commission's Transport White Paper 2011 has summarized the main objective of European transport strategy which is to help establish a system that support European economic progress, enhances competitiveness and offers high quality mobility services while using resources more efficiently. Therefore, we can assume that stronger role and more contribution of the transport sector in the improvement of European economic growth and competitiveness are highly expected. Thus, it is important to understand the relationship between the

¹ European Commission. 2016. <https://ec.europa.eu/jrc/en/research-topic/transport-sector-economic-analysis>. Observed 31.08.2017.

² EU Transport Policy Analysis: strengths and weaknesses. 2015. http://www.eutrapelproject.eu/uploadfiles/EU_Transport_Policy_Analysis.pdf. Observed 31.08.2017.

development of transport and logistics sector and overall economic growth and the competitiveness.

Efficient logistics chain is key factor for competitiveness of production and distribution networks to ensure the transport of raw materials and finished goods across the EU and beyond. From that perspective, transportation and logistics activities become strategic business functions, not only because related costs account for a wide share of the costs of goods sold, but also because logistics and transportation performance can strongly effect customer service levels³.

Therefore, logistics activities like warehousing and freight transport and strategy of goods handling are important factors which determine company's competitiveness in the market. Other important aspect of transport and logistic services in EU is environmental - growth of flows transported has caused congestion, pollution, noise and other environmental problems.

Recent enlargement of the EU has determined a more than proportional growth of bi-directional flows within and across the EU region, presenting the European Logistics Industry with relevant business opportunities and challenges. In particular, the outsourcing and relocation of business operations to relatively lower cost markets, the growth in trade with the countries of Central and Eastern Europe and the increase of freight traffic and congestion, stimulate logistics services providers operations provoking an high rise in the demand of specialized and integrated logistics services which require the creation more efficient European intermodal transport systems.

Taking into account previously mentioned we can assume that there is a necessity to optimize Europe's transport and logistics systems through innovative logistics solutions. In other words, there is a recognized growing need for a holistic European approach to transport and logistics questions, focusing on integration and coordination between the different dimensions of transport policy. Despite that technically there are no borders between the various European countries there are still differences in terms of market structure, competitive approaches and cultural identities, making the EU sector, a really complicated market to operate in.

1. European Transport System

1.1. European Transport Network

The Trans-European Transport Network (TEN-T) is a European Commission policy directed towards the implementation and development of a Europe-wide network of roads, railway lines, inland waterways, maritime shipping routes, ports, airports and rail-road terminals. It consists of two planning layers⁴:

- The Comprehensive Network: Covering all European regions;
- The Core Network: Most important connections within the Comprehensive Network linking the most important nodes.

One of the TEN-T main objectives is to improve overall efficiency of transport system in Europe by eliminating existing barriers between the transport networks of different EU Member states. Therefore in could help to strengthen the social, economic and territorial cohesion of

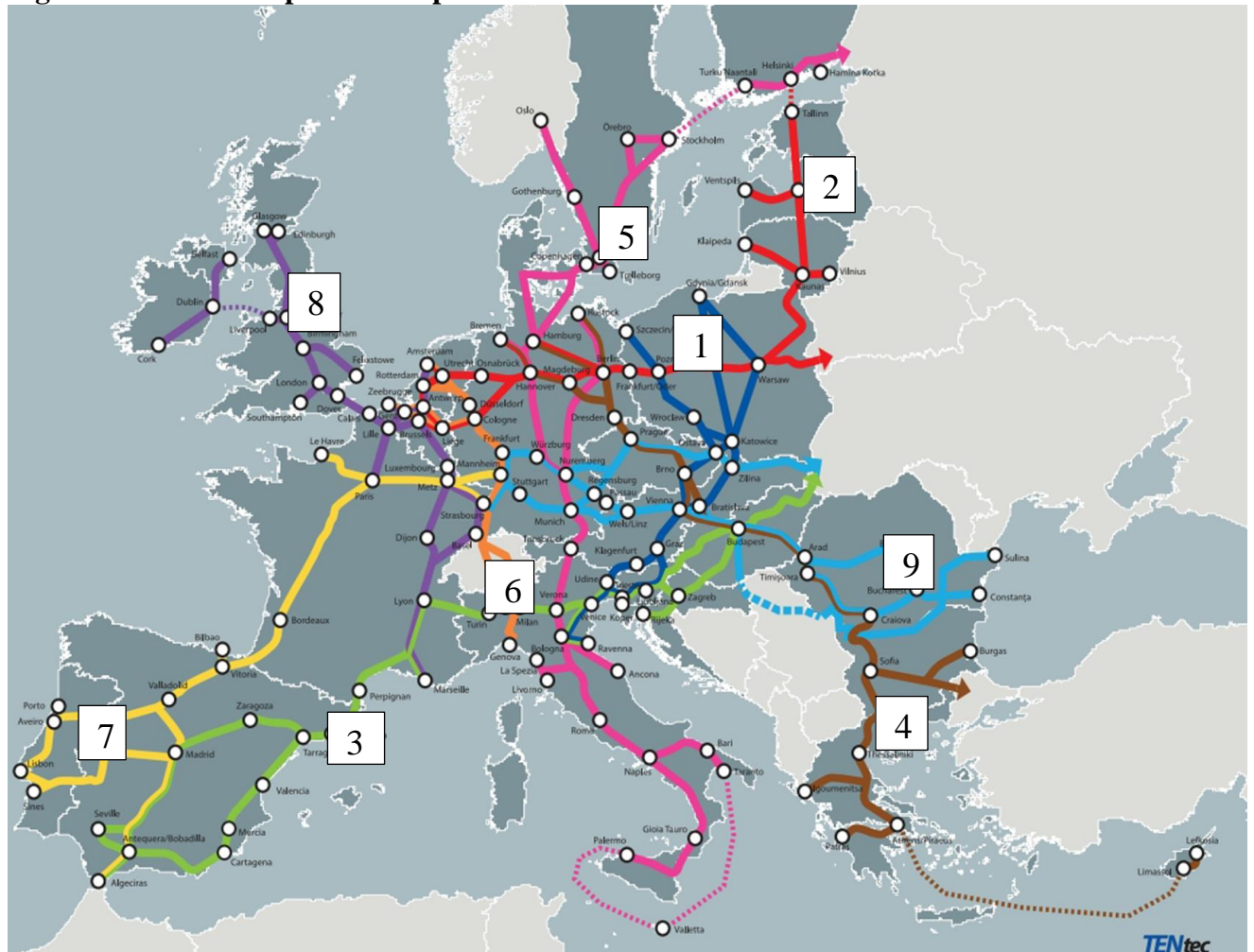
³ Impact of Transport Infrastructure on International Competitiveness of Europe. 2016. A. Joko Purwanto, Christophe Heyndrick and others.

⁴ European Commission. https://ec.europa.eu/transport/themes/infrastructure_en. Observed 31.08.2017.

the Union and contribute to the creation of a single European transport area. The EU policy is focused to the construction of new physical infrastructures; the adoption of innovative digital technologies, alternative fuels and universal standards; and the modernising and upgrading of existing infrastructures and platforms⁵.

Following a 2013 review of TEN-T policy, nine Core Network Corridors were identified to streamline and facilitate the coordinated development of the TEN-T Core Network (please see Figure 1).

Figure 1. Trans-European Transport Network⁶



1. Baltic - Adriatic
2. North Sea – Baltic
3. Mediterranean
4. Orient/East – Med
5. Scandinavian – Mediterranean
6. Rhine -Alpine
7. Atlantic
8. North Sea – Mediterranean
9. Rhine - Danube

⁵ European Commission. https://ec.europa.eu/transport/themes/infrastructure_en. Observed 31.08.2017.

⁶ European Commission. https://ec.europa.eu/transport/themes/infrastructure_en. Observed 31.08.2017.

First generation Work Plans for each Corridor and Horizontal Priority were presented in 2014, outlining exact objectives for each Corridor and Horizontal Priority, within the framework of the TEN-T Core Network. This is a continuous process, which takes into consideration current developments⁷.

Funding for further development of the transport corridors is granted by different types of European funds as well as national governments. It is important to mention that Member States national infrastructure investment policy must be in line with European priorities (development of TEN-T).

The territory of Latvia is crossing one of the TEN-T corridors - the North Sea-Baltic Corridor. It stretches from the North Sea ports Antwerp, Rotterdam, Amsterdam, Bremen and Hamburg through Poland to the Belarus border and to the Baltic countries' ports Klaipeda, Ventspils, Riga and Tallinn as well as to Helsinki. It covers rail, road, airports, ports, RRT's, also inland waterway as the "Mittelland Kanal" and "Motorway of the Sea" links to Finland. In terms of further development of the corridor the key project is Rail Baltic - a UIC standard gauge railway between north-eastern Poland, Kaunas, Riga and Tallinn (for more information please see Chapter 2.1).

TEN-T Network in Europe enhance transport multimodality - better rail, inland waterways and maritime infrastructure connection. Because of transport corridor evolution there are developed new infrastructure objects and usage of innovative technologies in the field of transport. Key benefits are more employments and investments, increased competitiveness, less time for modal shift, reduced congestion on road, lower emissions of greenhouse and polluting gases and higher transport safety and security.

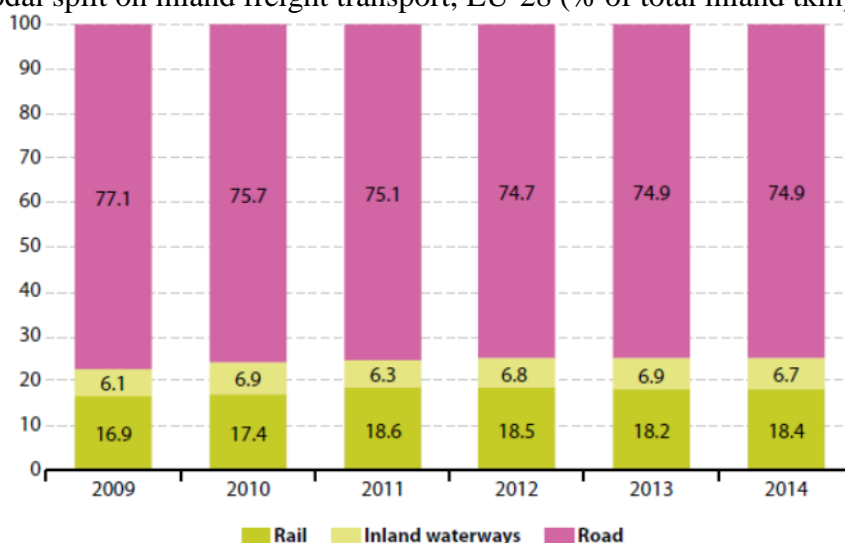
1.2. Modal structure of European Transport System

Freight transport **by road** has dominant role in the EU inland transport system – more than 3 quarters of the total inland tonne-kilometres (please see Figure 2). Road freight transport has slightly lost the importance in favour to **rail transport**. The share of road freight transport has slightly decreased by 2 percent in the time period 2009-2014, but at the same time there was observed increase in rail freight transport by 2.5%. This confirms signs of recovery in rail transport performance, but still there are very substantial differences between EU countries. For example, six EU Member States has reported increase in rail freight transport performance (2013-2014) – Greece +31%; Spain +15.9%, Slovenia 8.2%, but the largest decrease was observed in Estonia -31%; Romania -5.2%⁸. New railway infrastructure object are also significant factors for regional development. For example, Rail Baltic is massive investment project not only for Baltic countries, but also Finland which has very quickly appreciated rail link coming into Estonia and embarked on massive plan to build the under-sea tunnel to connect Helsinki and Tallinn. Finnish trade is increasing and today seaborne trade is 99%. Railway link will be a very healthy alternative. Also Swedish railways are going through substantial upgrading – to link vital industrial development spots, increase weight what can be transported and integrate into West European train system.

⁷ European Commission. https://ec.europa.eu/transport/themes/infrastructure_en. Observed 31.08.2017.

⁸ Eurostat. Statistical Book 2016. Observed 01.09.2017.

Figure 2. Modal split on inland freight transport, EU-28 (% of total inland tkm)⁹



In the road freight transport the major product groups in terms of tonnage were mining (25.7%), other non-metallic mineral products (12.5%), food, beverages and tobacco (11.5%) and agricultural products (9.1%)¹⁰. There was observed increase in total volume of cargo in several groups – transport of goods (+9.1%), equipment (+8.5%), decrease in coal crude petroleum, natural gas (-40.9%).

In the last decades the general trend in European logistics has been from manufacturer-led to retailer-led supply chains. In retailing, control of the supply chain has passed to the large supermarket and non-food retail chains. Because of previously mentioned tendency there was observed reduction in the number and size of manufacturer/wholesalers' warehouses, and the consolidation of a reduced level of stocks at small number of large regional distribution centres, controlled by the retailer but often operated by outsourced company - logistics manager.

Retail distribution has significant impact to road congestion costs, which in many cases are underestimated because they include only the costs arising from the delays, not the costs incurred in avoiding them (longer scheduled journey times, spare vehicles, more local depots). Retailers are already making changes to reduce some the most adverse environmental impacts. These steps include: use of smaller, quieter and environment friendly vehicles for distribution in urban areas; cross-docking and sharing of vehicles with competitors to improve vehicle utilisation and reduce the number of trips; redesign of vehicles to increase their volume: weight ratio, reducing road damage etc¹¹.

There have been attempts to divert retail traffic from road to rail, but mostly they have been unsuccessful because railway operators cannot guarantee collection and delivery times required by retailers. The other issue is related with the optimal use of capacity - the difficulty of assembling full trainloads when the demand is for small, frequent deliveries, especially there is a problem to transport via railway special categories of goods (frozen, chilled, fragile). There are also problems with appropriate infrastructure - the lack of well-designed road-rail interchange points¹². There is a need for double handling of goods before they can be delivered

⁹ Eurostat. Statistical Book 2016.

¹⁰ Eurostat. Statistical Book 2016.

¹¹ Euro – CASE, 2011. Freight Logistics and transport System in Europe.

¹² Giovanni Sata, 2011. The EU Logistics industry: Structure and trends of Major Subsectors and National Markets.

to shops, which takes additional time and increases costs. Finally, railway costs are much higher which together with previously mentioned factors makes railway uncompetitive comparing to road freight transport in the retail segment. Therefore, for retail industry it will be very difficult to switch from road transport to railway. European railways fall far short of meeting these needs, and there is no perception within industry that the gap is closing.

However, the demand for road transport of freight is fairly inelastic, as the alternatives (rail, air, sea and inland waterways) are regarded as unsuitable by many companies. Higher road user charges (vehicle and fuel taxes, vignettes and tolls) will therefore have very little effect on the modal split of freight unless they are combined with structural reforms to make other modes of transport (particularly railways) more acceptable. Otherwise user charges may have to be set at levels which would have a detrimental effect on economic growth in order to have a significant effect on modal split.

After economic crisis in 2008 the growth of inland waterways transport has been very slow. Mainly because of geographical factors the main contributors to the EU inland waterway transport performance are Germany and Netherlands. These two countries together have more than 70% from total EU inland waterways transport in 2015¹³.

Europe's ports are important parts of global supply chains, linking its transport corridors to the rest of the world. 74% of goods entering or leaving Europe go by sea¹⁴, therefore ports play important role to support the exchange of goods between Europe's internal and external markets as well as within the internal market and in linking peripheral and island areas with the mainland of Europe.

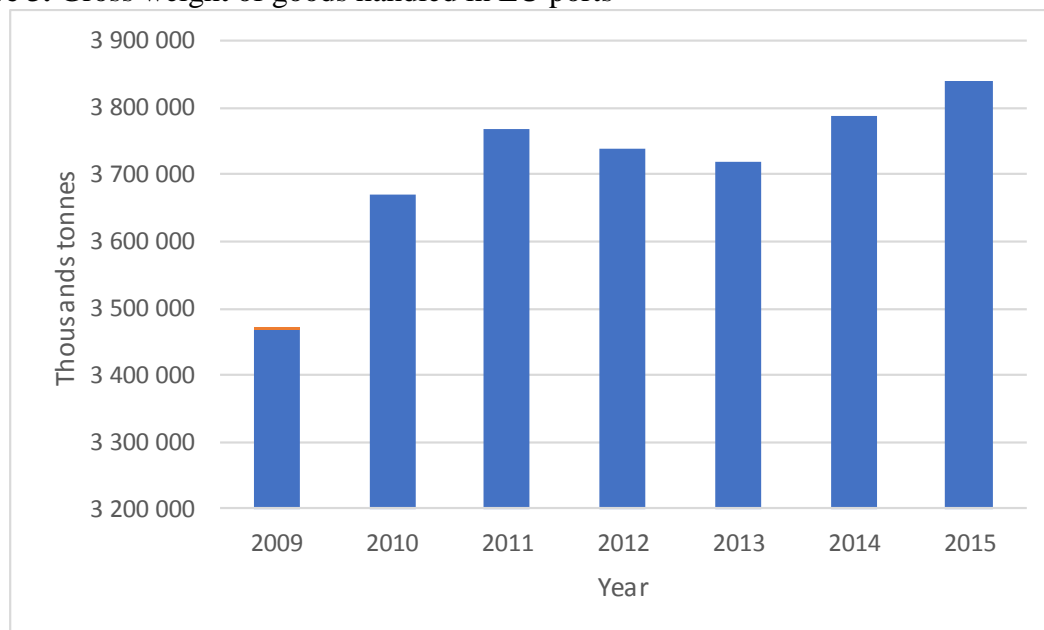
The total volume of gross weight handled in the EU ports is estimated close to 3.85 billion tonnes in 2015. The EU port freight activity experienced difficult times after economic crisis in 2008, but now trend is positive and in the year 2015 there was almost reached the same volume like in pre-crisis years (2006). The Netherland has proved the leader status and recorded the largest annual tonnage of maritime freight transport in Europe – 571 billion tonnes (2014) thus overtaking the United Kingdom by 67 billion tonnes. That represented around 15% of EU total seaborne cargo. The Netherlands was followed by United Kingdom (13.3%), Italy (11.7%) and Spain (11.3%)¹⁵.

¹³ Eurostat. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=iww_go_atygo&lang=en. Observed 01.09.2017.

¹⁴ European Commission. https://ec.europa.eu/transport/modes/maritime/ports/ports_en. Observed 01.09.2017.

¹⁵ Eurostat. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar_mg_aa_cwhd&lang=en. Observed 01.09.2017.

Figure 3. Gross weight of goods handled in EU ports¹⁶



The EU port freight activity experienced difficult times after economic crisis in 2008, but now trend is positive and in the year 2015 there was almost reached the same volume like in pre-crisis years (please see Figure 3). The Netherlands has proved the leader status and recorded the largest annual tonnage of maritime freight transport in Europe – 571 billion tonnes (2014) thus overtaking the United Kingdom by 67 billion tonnes. That represented around 15% of EU total seaborne cargo. The Netherlands was followed by United Kingdom (13.3%), Italy (11.7%) and Spain (11.3%)¹⁷. In the future as new transport corridors will be developed existing structure of cargo flow in Europe may change. For example, some deep-sea carriers, which incorporate Mediterranean Sea ports in their route are considering Italian ports where to unload large part of containers destined for European market and use railway for distribution. This would save vessels sailing all the way around to reach Antwerp – Hamburg range.

Air transport is vital for manufactures trade, particularly trade in components which is a major part of cross border trade today. The use of air freight can create competitive advantages. For example, producers may agree on shorter order times if shipments possibly experiencing delays in production or cargo clearance can be shipped by air. Similarly, manufacturers of garments, electronics, and other goods will compete for larger orders by shipping the large initial order using ocean freight and then using air freight to replenish inventories if demand is greater than expected. Air freight can also be used as part of a strategy for diversification — to introduce products with shorter shelf lives or to provide reliable delivery of smaller volumes in new markets. Once the market has been established and volumes increase, the manufacturer can reconstruct supply chains by using a less costly mode of transport.

The main difficulty for landlocked developing countries is to generate enough traffic to attract air freight services that are both frequent and competitively priced. Permitting free competition, or “open skies,” for air cargo services can be significant but not sufficient if most cargo is transported as small shipments in passenger aircraft. Liberalizing passenger services to include

¹⁶ Eurostat. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar_mg_aa_cwhd&lang=en. Observed 01.09.2017.

¹⁷ Eurostat. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar_mg_aa_cwhd&lang=en. Observed 01.09.2017.

fifth freedoms has been a greater challenge, especially in countries with a national carrier and limited passenger volumes. Also important is expanding the role of consolidators, especially the large integrators such as UPS, and the international freight forwarders specializing in air cargo such as Kelly Logistics, as well as local forwarders with international connections.

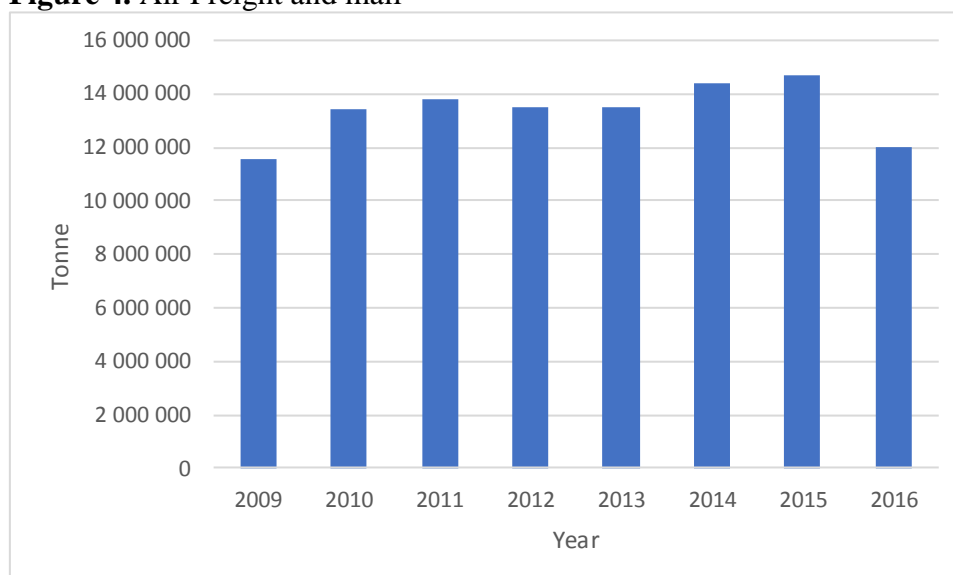
The growth in air freight over the last five decades has led to a diversification in the types of services and also the markets that are served. Most goods carried by air are high-value low-density cargoes, or time-sensitive goods such as perishables. The basic commodity groups transported by air are:

- capital and transport equipment,
- computers, telecommunications equipment and other technology products,
- apparel and textiles,
- perishables and refrigerated goods,
- intermediate goods for distributed manufacturing, and
- other consumer products.

Rapid growth of air freight is also related to e-commerce development (Amazon, Alibaba, eBay and other e-commerce companies are frequent users of aviation services). This segment in relation with regular postal services can facilitate further growth of the aviation industry in general. Unfortunately, some concerns are raised by regional customs administration, that unequal distribution of applicable taxes between postal deliveries and regular cargo creates pressure of fair competition and generates less tax incomes for local governments.

The importance of the international air transport segment is moderate and after positive trends (growth) in the years 2014-2015 there was experienced significant fall in 2016 – in amount of 18%. The evolution of freight and mail transport by air between varies significantly at country level. For example, in the year 2014 there was 40% decrease in Latvia, but at the same time air freight volume increased by 40% in Denmark¹⁸.

Figure 4. Air Freight and mail¹⁹



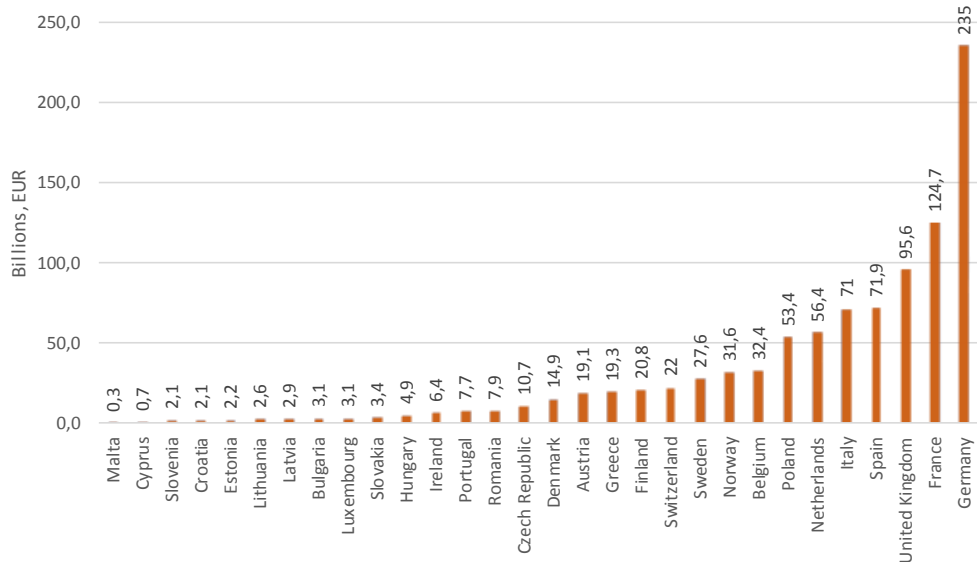
¹⁸ Eurostat. Statistical Book 2016.

¹⁹ Eurostat. http://ec.europa.eu/eurostat/statistics-explained/index.php/Freight_transport_statistics. Observed 01.09.2017.

Total air freight volumes are still relatively small comparing to other types of transportation – for example air freight is only 3% from Europe’s sea freight volume. The future forecast about industry growth is moderate - still there is a high potential for growth because of strong development of e-commerce and high value specialized cargo, from other side air cargo may lose importance as a mechanism for minimizing inventories and supporting just-in-time production. For these activities, the higher cost of transport offsets the benefits of minimizing inventories in the supply chain. While it is important for potential exporters to have access to air freight services, they also must manage their supply chains to provide a competitive balance for the cost, speed, and reliability of shipments²⁰.

The Europe’s transport market is not equally distributed between member countries. As we can see from the Figure 5, there is a big difference in terms of size of the transport market in different countries. The European transport market accounts for 960 billion euro in 2014 and transports 18.6 billion tons.

Figure 5. EU transport market size by country, 2014²¹



Transport and logistics market in each country mainly depends from the level of economic development of the country and do have relatively little effect on the global location of primary activities such as the manufacture and sale of final products. This is determined primarily by markets, labour conditions, financial incentives, and the social or cultural preferences of senior management. Transport and logistics play a more important role in location of secondary industries – “upstream” and “downstream” activities such as components manufacture, wholesaling and distribution, and industries in the service sector. The importance of transport and logistics in location decisions varies according to the level of competition within the industry, the bulkiness of the products and their weight loss during manufacturing, the premium attached to quality/technological leadership, and the location of the activity within the supply chain.²²

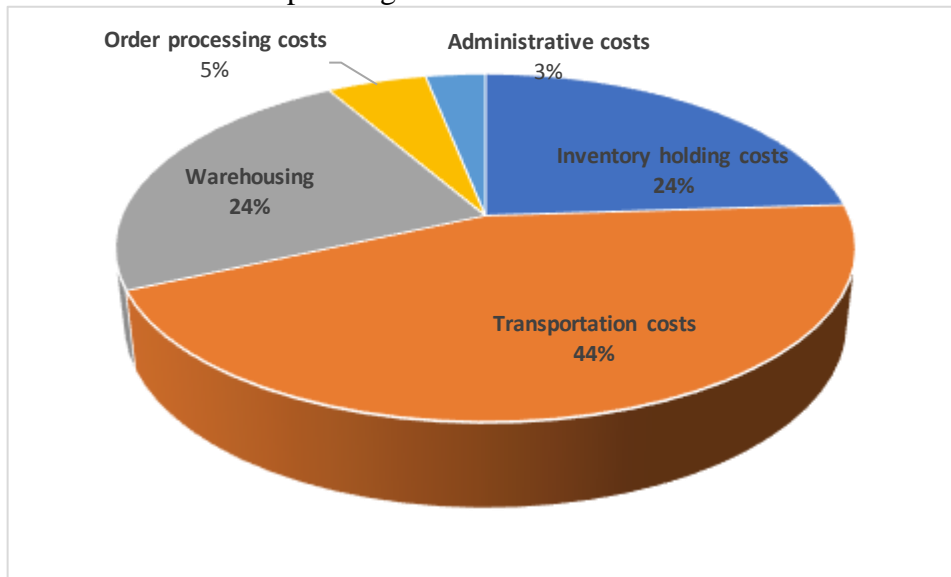
If we have closer look to the structure of costs related to transport and logistics segment (please see Figure 6), it can be concluded that major part of costs is related to transportation (44%), warehousing and inventory holding costs has 24% share each.

²⁰ Arturs Kokars, CEO. Aviation Association on Latvia.

²¹ Eurostat. <http://ec.europa.eu/eurostat/statistics-explained>. Observed 04.09.2017.

²² Euro – CASE, 2011. Freight Logistics and transport System in Europe.

Figure 6. The structure of European logistics market²³



Around 50% (~473 billion euro) from total European logistics market size is outsourced. Ocean cargo, CEP, groupage/LTL, Air Freight are transport segments which are almost fully outsourced, but outsourcing level in contract logistics segment is only 40% therefore leaving place for future growth.

Around 50% (~473 billion euro) from total European logistics market size is outsourced. Ocean cargo, CEP, groupage/LTL, Air Freight are transport segments which are almost fully outsourced, but outsourcing level in contract logistics segment is only 40% therefore leaving place for future growth.

Table 1. Market share of TOP 10 companies in the contract logistics outsourced segment²⁴

No	Company	Country	Market share
1	Deutsche Post DHL	Germany	8.1%
2	Kuehne+Nagel	Switzerland	2.5%
3	XPO Logistics	United States	2.4%
4	Arvato	Germany	2.0%
5	SNCF	France	1.9%
6	Volkswagen Konzern-Logistik	Germany	1.7%
7	UPS Europe	Belgium	1.6%
8	DB Mobility Logistics	Germany	1.5%
9	Ceva Group	United Kingdom	1.4%
10	Fiege Logistik	Germany	1.4%

According to table above the biggest market power in contract logistics is concentrated in Germany as five of TOP 10 companies are from Germany including unquestionable market leader – Deutsche Post.

²³ Top 100 in European Transport and Logistics Services 2015/2016. Fraunhofer Center for Applied Research on Supply Chain Services SCS.

²⁴ Top 100 in European Transport and Logistics Services 2015/2016. Fraunhofer Center for Applied Research on Supply Chain Services SCS.

The future of Europe's transport system is facing several challenges - to harmonize smooth intermodal shift, meet new environmental criteria etc. In March 2011, the European Commission presented the White Paper "Roadmap to a Single European Transport Area. Towards a competitive and resource efficient transport system". 40 initiatives are singled out in order to preserve mobility, remove major barriers in key areas, fuel growth and employment, cut carbon emissions in transport by 60% by 2050 and lower Europe's dependence on imported oil. A profound modal shift is advocated both for passengers and freight transport, along with the development and deployment of new fuels and propulsion systems, a better use of information systems and market based incentives (such as the application of "user pays" and "polluter pays" principles). Conventionally fuelled cars and trucks should be phased out from cities; road traffic death should be halved by 2020 and near-zero casualties should be achieved in road transport by 2050.

In air transport, the initiatives include the completion of the Single European Sky, the deployment of the future European air traffic management system (SESAR), as well as revising the Slot Regulation to make more efficient use of airport capacity. In rail transport, the initiatives include the development of a Single European Railway Area, opening the domestic rail passengers market to competition, and establishing an integrated approach to freight corridor management. In maritime transport, the European Maritime Transport Space without Barriers should be further developed into a "Blue Belt" of free maritime movement both in and around Europe, with waterborne transport being used to its full potential. The Commission therefore proposes a regulatory framework for innovative transport, including standards for CO2 emissions of vehicles in all transport modes and vehicle standards for noise emission levels. One of the White Paper's top priorities is still to complete the trans-European transport network already envisaged back in 1992: the so called TEN-T²⁵.

EU focus to environment friendly transport system has significant influence to the performance of companies in transport and logistics segment. For example, one of the global leaders *Containerships* is planning to use LNG powered vessels in future as EU has launched LNG masterplan to support investments in the LNG infrastructure and LNG powered vessels. New vessels will be partly financed by EU funding and it is expected that already in 2018/2019 new LNG powered vessels will service container routes also in the Baltic sea.

Improved transport efficiency would also deliver substantial economic and environmental benefits. For instance, the take-up of electric vehicles and 2025 standards for cars is estimated to lead to a 1% increase in EU GDP, up to 2 million additional jobs and a 93% reduction in GHG emissions from cars and vans, by 2050²⁶.

Any national or regional economic growth is strengthened by a competitive and progressive transportation system - system that is geared to the needs of customers and operated as a sustainable network offering high quality and affordable services. To achieve such a system, policies of all levels have to be coordinated and harmonised. This harmonisation supports not only the economic development and trade but also avoids extra costs to the transport system, and improves the capital and labour productivity within the EU.

Innovations are key driver in the future EU transport system. More and more EU transport companies use various program systems to be more efficient and competitive. One of the projects what major service suppliers are working is integrated supply platform with

²⁵ Boitani&Ponti. 2013. The European Transport Policy - A case study on its main issues.

²⁶ Transport&Environment. <https://www.transportenvironment.org>. Observed 13.09.2017.

supermarket chains to receive online information about stock level changes. When stocks go down and there is time to replenish them this is automatically reflected in system which holds suppliers, volume, quantities, dates of supply. This is where service providers receive regular notification and transform into container / truck deliveries. This eliminates a lot of man power and it is very innovative way forward to automate supply processes. There are also software developed for optimal running / employing HDV, with the main purpose – to ensure that minimum miles are run empty. There are gadgets developed to measure tire pressure to ensure that tires are pumped up to the set pressure which offers most economical fuel consumption. Savings can be achieved up to 5-6% which on annual bases with several hundred trucks is considerable. Start-stop engines achieve fuel savings up to 7%.

There are more and more sea terminals run without people. Rotterdam Delat Terminal in Maasvlakte was first one, followed today by CTA in Hamburg. Shipping lines log into Terminal system, their import and export loads for vessels, there are added vessel's stow plans so when the container is received in port the rest is done automatically. System selects required boxes from stack for specific vessel's sailing, loads them on electronic trollies which transfer boxes onto quay side in required order to go on vessel where sea crane automatically loads containers in required cells onto the vessel.

Innovations can be observed also in cargo transportation system and production of equipment, where the main purpose is to avoid empty legs. Another examples of innovations to increase efficiency are described further. Optimal use of Container lining - carry dirty cargo in one direction and clean on return. Invention of equipment to load and discharge cargoes to/from containers. Increase in vessel size to minimize the unit transport costs. Development of train equipment, which can accept trailer units for carriage by rail. On distances which are further than 1000 km standard trailer unit is carried by rail, at destination hub it is united with trucking unit and last leg is truck delivery. This is practice on main long distance routes North – South. Larger trading companies co-operate on warehousing systems where one company predominantly receives goods in warehouse where as other releases for distribution. This allows trucking companies (service providers) always run full loads IN and OUT. That reduces the costs and also keeps the rates for service receivers low. Also, example of cost saving comes from UK where several shopping chains (like ASDA, TESCO) have built distribution warehouses – centres right in port, close to main container Terminals.

Most likely we will observe further market consolidation in the different market segments like logistics companies, vessel owners, broker houses, trucking companies – with the main purposes to control larger slice of the market, reduce costs, optimize assets and to boost revenue.

2. Transport System in Latvia

Latvia historically has been one of the main transit points for both north-south and east-west cargo flows – therefore connecting major world economies like the USA, European Union, Russia, the CIS and the Far East. The transit sector is one of the most important industrial sectors in Latvia. Almost 90 % of turnover in Latvian ports, more than 80 % of rail cargo is transit. Close to 8 % of Latvia's employees are engaged in the transportation and servicing of transit cargo. The importance of the transport, transit and storage sector in terms of GDP contribution is substantial at around 8 % in 2016.²⁷

²⁷ Central Statistical Bureau of Latvia. <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html>. Observed 04.09.2017.

The strategic location of the capital Riga, including its own consumer market potential, offers opportunities for development within the Baltic States and is the reason that numerous international companies have located their Baltic States' head offices there. Development and quality level of transport and logistics services is improving, led by large, international transport and forwarding companies, which have the ability and expertise to organise value-adding activities. There are located appropriate transport connections for maritime cargo flows in containers, good quality of railway and road transport. In general skilled workforce is available for companies in transport and logistics sector, despite shortage in some sub-segments (for example truck drivers). Advanced level IT systems, internet connections, and the development of electronic data interchange are used by companies in the industry. The development of technology is being stimulated by the large, international transport and forwarding companies.

Development of transport system is also one of the key priorities of the Latvian government. There are developed several strategic documents like “The National Developments Plan” and “transport Policy Guidelines”, which sets out the objectives of transport planning and expected results. The “Transport Policy Guidelines 2014-2020”²⁸ have two main focus areas:

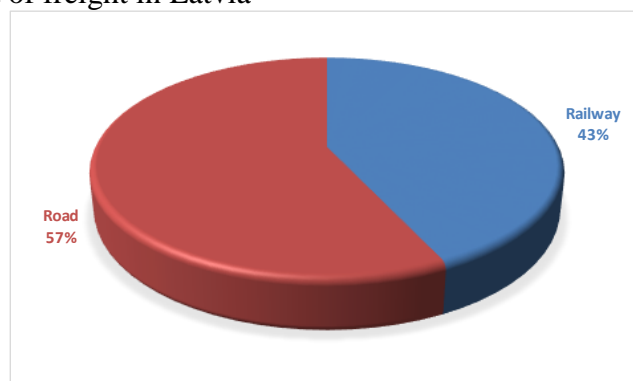
- 1) Developing Latvia as a sustainable transport and logistics service provider;
- 2) Ensuring internal and external accessibility and high quality of opportunities for mobility within the country.

Despite the previously mentioned positive aspects of development of transport and logistics and government’s intention to increase competitiveness of transport system in Latvia there are important threats for industry’s further development. It can be assumed that in the future transit cargo volume may decrease because of decline of Russia origin cargo. For significant time Russia is developing and increasing capacity of own ports in the Baltic Sea, therefore shifting transit cargo from Baltic countries’ ports to own ones.

2.1. Railway Freight

In Latvia cargo is mainly transported via road (around 57%) or via railways (around 43%) and relatively insignificant part with air freight – less than 1%.

Figure 7. Modal split of freight in Latvia²⁹



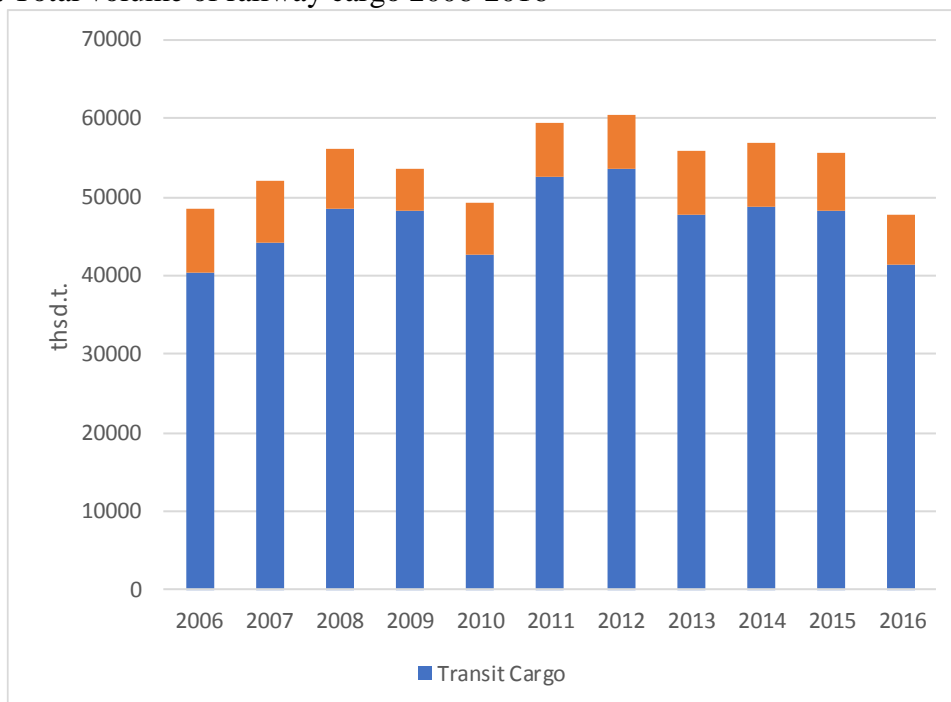
²⁸ Ministry of Transport of Latvia.

http://www.sam.gov.lv/images/modules/items/PDF/item_4174_SAMPamn_030713_transp.1pdf.pdf. Observed 15.09.2017.

²⁹ Central Statistical Bureau of Latvia. <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html>. Observed 04.09.2017.

Railways link Latvia with Russia, CIS, the neighbouring Baltic States, and through Poland with the rest of Europe. Rail transport is one of the most perspective means of land transport both considering security and ecology aspects. Railroad already plays a significant role in Latvian economy. The rail freight volumes constitute around 52% of the country's total land transport volume. In year 2016 nearly 83% of rail freight was transit traffic mainly from Russia and Belarus to Latvian ports (East-West Transit Corridor) with domestic transport reaching only 5% which can be explained with relatively short transportation distances. There was observed decline in transit freight by 14% (year 2016 vs. 2015) which is in line with total railway cargo decline by 14%. This is mainly explained by the reduced freight volume through Latvian ports.

Figure 8. Total volume of railway cargo 2006-2016³⁰

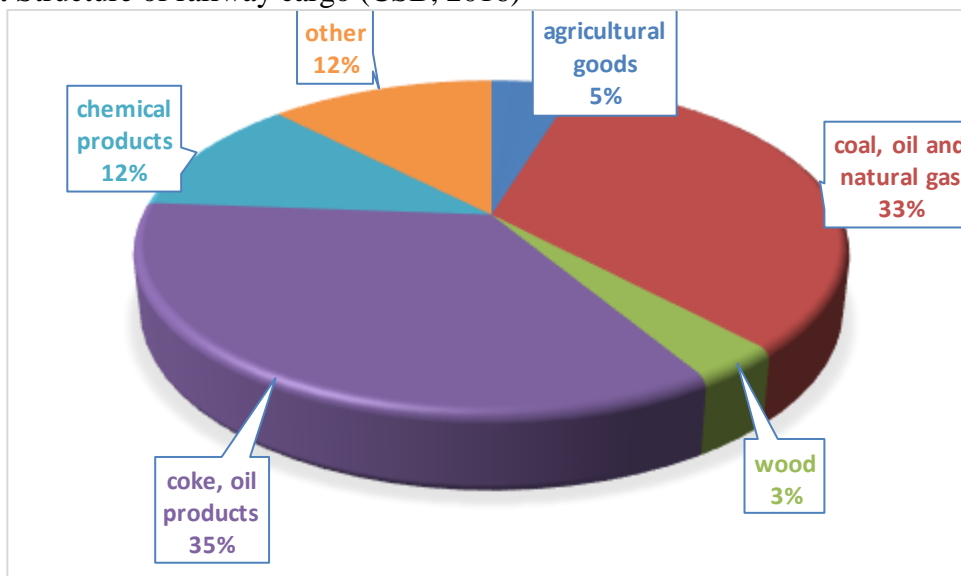


Latvia possesses a dense railroad network connecting the country to destinations as far as the Russian Far East, wherever the former Soviet railway gauge standard is in operation. There are additional opportunities for trade connection with Japan and Southeast Asia. Currently state-owned operator Latvian Railways functions mostly as a transit trunk-line with as much as 80 % of total freight volumes being transit connected to Latvian ports and about 30 % 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. There is enough capacity to substantially increase the cargo currently transported by rail³¹.

³⁰ Central Statistical Bureau of Latvia. <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html>. Observed 01.09.2017.

³¹ Ministry of Transport of Latvia. August, 2017.

Figure 9. Structure of railway cargo (CSB, 2016)



Previously positive dynamics of the railway (also ports) cargo volume increase mainly was generated coal and in the last years reached about one third of the total cargo volume. Russia is one of the biggest coal suppliers to Europe (ensuring about 30% from total coal consumption in Europe), but Russia ports infrastructure now cannot tranship all the volume. But there are potential risks that in the nearest future coal cargo flow through Latvia ports can significantly decrease because political decisions, development (increased capacity) of Russia ports and decline of demand in Europe (because there is tendency to substitute coal to more environment friendly energy sources). The first alarm signals can be observed already now – two year in the row there is a railway cargo volume decrease (year 2015 total volume 55.6 mio tons, decline -2%; year 2016 total volume 47.8 mio tons, decline -14%) and negative tendency continues also in 2017. The optimal capacity of Latvia Railway is 60 mio tons now it used only by 75% which have negative effect on rentability as increases share of fixed costs. There already has started discussion regarding tariff increase, but it potentially could result in further cargo volume decrease as new tariffs may not be competitive with neighbouring countries.

Latvian Railway is heavy depending from the Russia cargo. In the recent years there was observed decline in total cargo volumes but the proportion of the Russia cargo even increased – in the year 2012 around 71% was Russia originated cargo, now the proportion grown up to 80%. Cargo volume from other countries is relatively low and almost fully has stopped cargo flow from Central Asia.

Despite decrease of cargo volume from Kazakhstan to the Latvian ports, Kazakhstan is still partner of strategical importance as the shortest railway connection from Latvia to China goes through the Kazakhstan. There have been several attempts to organize special container train lines from Central Asia, China and Afghanistan to Latvian ports, but none of those routes could be successful in the long term. According to transport industry's entrepreneurs opinion it could be explained because sea transport to Europe is still more costs efficient and there are no cargo flow from Latvian ports to China and Central Asia therefore container trains are returning home empty. That increases railway costs even more.

Figure 10. Logical gateway from China to Scandinavia³²



Despite decrease of cargo volume from Kazakhstan to the Latvian ports, Kazakhstan is still partner of strategical importance as the shortest railway connection from China to Latvia (and further to Scandinavia) goes through the Kazakhstan (please see Figure 10). There have been several attempts to organize special container train lines from Central Asia, China and Afghanistan to Latvian ports, but none of those routes was able to be successful in the long term. According to transport industry's entrepreneurs opinion it could be explained because sea transport to Europe is still more costs efficient and there are no cargo flow from Latvian ports to China and Central Asia therefore container trains are returning home empty. That increases railway costs even more.

But there is still high potential for container trains from China to Latvian ports as an alternative route to current destination Duisburg (Germany). Development of new logistic centres in Latvia is one of the priorities to become a significant transport hub and attract cargo flow from China and also countries from Central Asia. Certainly, such plans are capital extensive and investors from China potentially could be interested in such projects. Some years ago, there was well established log flow from Belarus to China through Latvian ports. But unexpectedly in the year 2015 significantly was increased phytosanitary fees and log cargo moved to the ports of Lithuania and Estonia.

Many transport industry entrepreneurs are rather sceptical about significant increase of cargo flow from China. Today close to 99% from China export to Europe is transported by sea because sea transport is 2-3 times cheaper than railway. Container trains can deliver cargo during 10-15 days while sea transportations takes around 30-45 days, but still time economy is not so important comparing to cost economy. Therefore, more customer friendly railway tariffs are important precondition for sustainable development of container train lines from China to Latvia and other European countries.

Two large scale infrastructure development objects might have fundamental impact on further development of the Latvian railway. The most important one is Rail Baltic – which will connect Baltic countries with Europe via rails according to European standards. The project includes five European Union countries – Poland, Lithuania, Latvia, Estonia and indirectly also Finland.

³² Samskip, 2016. <https://www.ldz.lv/lv/konference-glob%C4%81%C4%81s-transporta-kust%C4%ABbas-v%C4%ABzija>) conference “Vision of global transport development”

The project is implemented jointly by three Baltic countries and mostly financed by EU funding. Length of the rails is 870 km, total project costs are 5.8 billion euro, almost 2 billion euro will be Latvia's share. Planning and other technical preparation works already started and it is expected that new railway line will be opened in 2026. There is still ongoing discussion regarding financial efficiency of the Rail Baltic. Auditor company Ernst and Young³³ has concluded that project is not profitable and for the first five years of operation and there will be necessary financial support from the government. From the other side, Rail Baltic has political and social importance in the regional aspect and positively influence development of construction industry for the coming years. Rail Baltic could become significant player in the international freight segment. Potentially it could take over cargo which is transported by road and from Finland and Baltics to other European countries. Another target segment could be containerized cargo currently transported with sea transport from Baltic Sea region ports to European ports-hubs for further delivery all over the world. Today the capacity of that market is 0.4 mio TEU and via Rail Baltic it would be possible two times shorten time period while cargo is delivered to European ports-hubs. From other side expected costs of transportation will be higher comparing to sea transport. Together with construction of new rails there will be necessary to develop new intermodal logistic centres to tranship railway cargo from CIS countries (where Soviet standard rails are used) to European standard rails.

The other important infrastructure development project is planned railway electrification which is expected to be financed by EU funding. Total project costs may reach 1.3 billion euro and could be relevant driver for regional development. Economic benefits of the project are still under discussion but Ministry of Transport supports this initiative. According to opinion of Ministry of Transport³⁴ electrification of infrastructure will have positive effect on environment and also save the costs in the future because of less employees necessary and decrease in operating costs. Via electric railroad is possible to transport bigger, heavier and also longer cargo and that is important from long term perspective assuming that containerized cargo share will increase. This development concept is in line with the global vision of European Commission to more focus on environmentally friendly way of transport.

Despite new geopolitical situation and poor relation with Russia, Latvian Ministry of Transport is still focused to maintain constructive relationship with the Eastern neighbour. Latvian transit sector now is experiencing times of structural changes and there is a strong focus to new market segments. Potentially perspective could be development of container transportation via railway from China, Central Asia, Belorussia and Russia.

Diversification of rail traffic could ensure financial sustainability in the face of significant revenue risk from a reduction in Russian transit trade.³⁵ Development of China-Latvia rail corridor and connection of Northern European markets to Eastern Asia could be reasonable alternative to compensate declining Russia cargo volumes.

2.2. Sea Freight

Ports are among the key elements in the logistics chain as they contribute not only to the economic development of the port city, but to the whole region making the role of ports increase

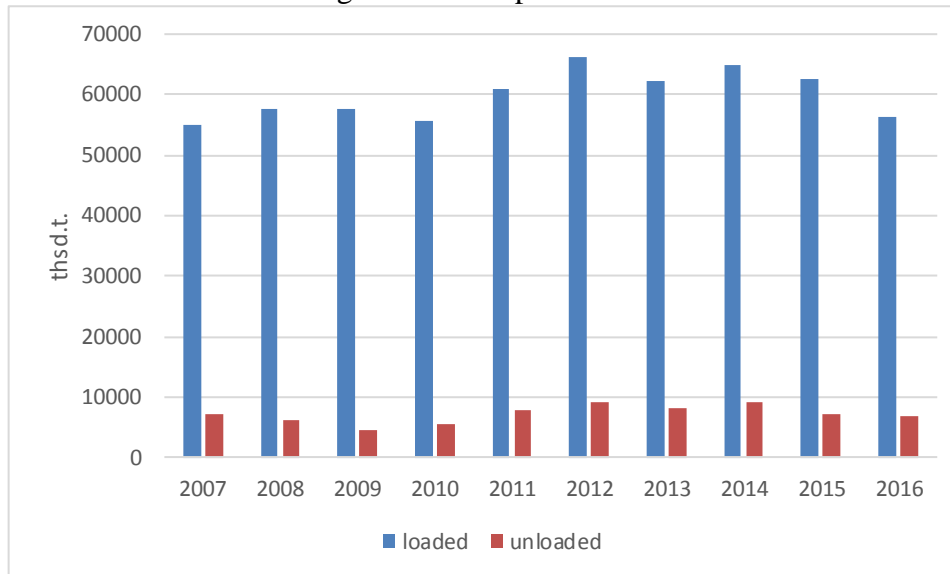
³³ Ernst and Young. <http://www.railbaltica.org/lv/rail-baltica-globala-projekta-izmaksu-un-ieguvumu-analize-projekts-ir-finansiali-un-ekonomiski-pamatots>. Observed 06.09.2017.

³⁴ Ministry of Transport of Latvia. http://www.sam.gov.lv/satmin/preview/?cat=8&art_id=6543&action=print&. Observed 06.09.2017.

³⁵ OECD Economic Surveys. Latvia, 2017.

both in Latvia and in European Union. Latvia has three major ports - Liepaja, Riga and Ventspils. Large ports mainly deal with the handling of transit cargo - about 80% of transit cargo transported through Latvia are reloaded there. The three major ports have been accorded favourable incentive schemes to help attract new business (80-100 % relief on direct taxes and significant discounts on indirect taxes (VAT, Excise). Ventspils and Riga Ports are Free Ports whereas the entire city and port of Liepaja comprise a Special Economic Zone. Latvian ports are competitive and their performance is only slightly lagging the best performing ports among its competitors.³⁶

Figure 11. Total volume of Sea cargo in Latvian ports 2007-2016³⁷



Around 90% of total sea cargo is loaded in the ports – it means that major part of cargo flow is from the East to the West. Until the beginning of this century sea cargo flow in the east coast of the Baltic Sea was divided between ports of Tallin, Riga, Ventspils, Klaipeda and S-Petersburg. In that time Russia started development projects in the own ports that significantly decreased oil flow through the port of Ventspils. In the nearest future it is expected potential decrease in the coal and fertiliser volume through the port of Riga, because of launching new terminals in the ports of Primorsk and Ustluga. Significant benefits for further development of Russia ports in the Baltic Sea are improved capacity of railway infrastructure and predatory tariffs in those directions set by Russia Railway. The Russian port, Ust- Luga, has become the biggest one in Baltic Sea, and the volumes achieved are already at the top European port level (88 mio.t. in 2015, 12 mio.t. in 2010), thus future cargo volume decline in Baltic States ports is expected to happen, namely for the ports of Estonia and Latvia.

Russia is the biggest oil supplier to Europe: dependence on Russia has grown from 22% in 2001 to 30% in 2015³⁸. The EU spends some €215 bn on oil imports, and 70 bn EUR is Russia share. Around 10% from the oil cargo flow from Russia to Europe is transported through Latvia. Forecast about future transit volume of oil is unclear – some of the entrepreneurs see’s potential to attract more oil cargo from Belarus, while there is an indication that Russia can make political

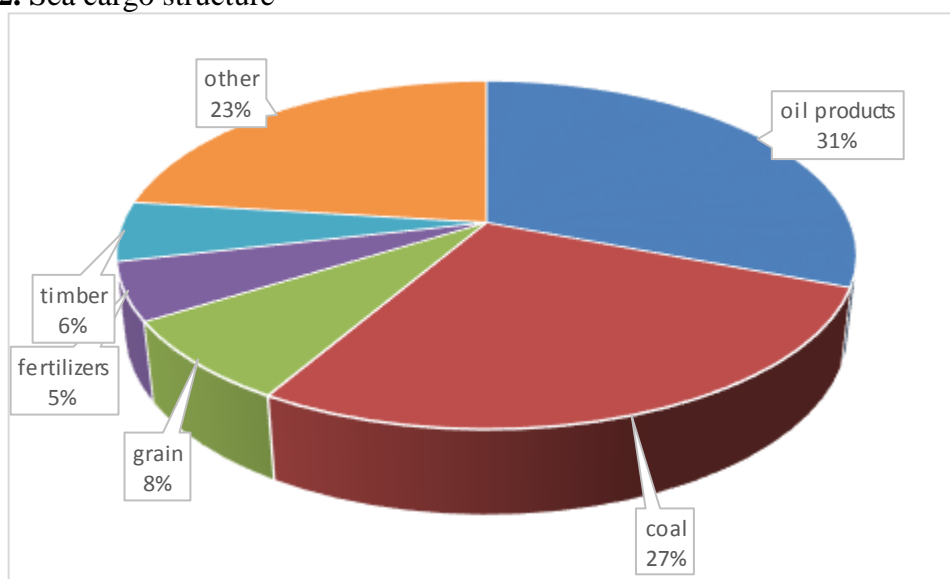
³⁶ OECD Economic Surveys. Latvia, 2017.

³⁷ Central Statisticak Bureau of Latvia; <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html>. Observed 06.09.2017.

³⁸ Energypost. <http://energypost.eu/europe-increasingly-dependent-oil-imports-russia/>. Observed 15.09.2017.

decision to require Belarus to transport more oil cargo via Russian railway to Russia ports in the Baltic Sea.

Figure 12. Sea cargo structure³⁹



Today mainly oil products and coal are reloaded in the ports of Latvia (please see Figure 12), but the future potential of growth is related to development of containerized cargo. The international shipping industry is responsible for the carriage of around 90% of world trade and major part of that is transported in containers⁴⁰. Containerized cargo volume in Latvia is growing year by year but still it is relatively small – in 2016 only 6% from the total seaborne cargo volume is transported in containers (0.4 mio TEU). To the final destination or to the ports containers are delivered with the road transport and hardly two percent is transported via railway. According to the industry’s companies opinion it is mainly explained by high railway tariffs in that segment.

Containerized cargo could alternative to substitute declining cargo volume from Russia and Latvian Ministry of Transport already several years has focused to find new markets in the Central Asia and China. Potentially Latvian ports could be some alternative hubs to German ports for China’s goods transported to Europe.

To mitigate political risks and increase cargo flow through Latvia’s ports it would be necessary to consider any options to attract foreign investors with appropriate experience and cargo owners from CIS, Russia and other countries for infrastructure project in the ports. As positive examples of development and attraction of new investments in the port of Riga can be

³⁹ Central Statisticak Bureau of Latvia; <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html>. Observed 06.09.2017.

⁴⁰ International Chamber of Shipping; <http://www.ics-shipping.org/shipping-facts/key-facts>. Observed 06.09.2017.

mentioned Riga Universal Terminal⁴¹ and Riga Fertiliser Terminal⁴². Some years ago Riga Universal Terminal was acquired by international port terminal operator Portek, but Riga Fertiliser Terminal is joint development project of Uralchem and local port operator - Riga Commercial Port. In both cases, there were attracted new investments in the infrastructure, which had positive impact to companies' further development and competitiveness.

2.3. Road Freight

Road traffic and road haulage is each country's strong economic component and provides the country's economic growth and well-being of people and the movement of goods in the country. The total length of roads and streets Latvia is 73 2059 km, including national highways - 20,131 km. The Latvian road network is well-developed but there is necessity for improvement of road surface quality. Road quality in Latvia is one of worst in Europe - according to European Commission data only in Malta and Rumania roads quality are worse. That is explained by lack of investment in the road infrastructure as significant part of payments collected from users of the transport is not invested in the roads but utilized by central budget.

All major road connections are included in the Trans-European Transport Network TEN-T and most significant investments are made directly to these routes. This ensures qualitative traffic from Latvian ports to neighbouring Russia and Belarus. The Via Baltic is the most important transport corridor, traversing Latvia in a north-south direction. Via Baltic is also a European transport corridor - route E67. It connects European cities Helsinki, Tallinn, Riga, Kaunas and Warsaw, and Riga, Kaliningrad and Gdansk. Traffic congestion usually are observed in the morning and afternoon hours only in Riga. This is a great advantage for transit flow and allows driving with relatively short interruption.

⁴¹ Riga Universal Terminal (RUT) operates in the Port of Riga since 2001. RUT today handles more than 3.mil tons of cargoes annually and is a leading player in the handling of wood products and frozen food cargoes. RUT's multipurpose terminal operation also includes the loading & unloading of containers, bulk cargoes and general cargoes, cold storage and rail transport. The Terminal has certified quality, environment protection and working safety management system and complies with ISPS code regulations. In April 2013, Mitsui & Co., Ltd. ("Mitsui") through its subsidiary Portek International Pte. Ltd. ("Portek"), acquired an 80% equity stake in RUT. Year later Portek/Mitsui acquired other balance 20%. Therefore now RUT is 100% subsidiary of Portek/Mitsui. Through this transaction, RUT can gain from Portek's equipment engineering, port operation experience and close links with shipping lines and cargo owners. Portek, through RUT, can develop its reach into the container, wood and frozen food handling markets in and around the Baltic Sea. Portek International Pte Ltd. headquartered in Singapore, Portek is a global medium-sized terminal operator and port equipment engineering solutions provider, with offices in over 9 countries throughout Africa, Europe and Asia. Portek currently operates and manages 3 terminals in Indonesia, 2 in Gabon, 1 in Algeria, 1 in Malta and inland cargo handling and storage facility in Rwanda. Mitsui & Co., Ltd. The Mitsui & Co., Ltd was incorporated in Japan on 25 July 1947, which is a veritable household name with more than 130 years of history. Together with its subsidiaries, it operates one of the world's most diversified comprehensive trading, investment, and service companies.

⁴² Riga Fertilizer Terminal LLC (RFT) is a joint venture founded by Riga Commercial Port LLC and Uralchem Freight Limited, a daughter enterprise of OJSC Uralchem. Northern Europe's most advanced and safest terminal for mineral fertilizer transshipment and short-term storage was launched at the end of 2013. The preparatory infrastructure works on the terminal site were commenced in 2011. The total investment in the project exceeds 60 million Euros. In the first phase, the annual terminal capacity is 2 million tonnes. The construction of the terminal is a good example of mutually beneficial cooperation between the two countries, Russia and Latvia. RFT is one of the few terminals in the port of Riga that provide manufacturer-owned cargo transshipment. Ships are delivering fertilizers from Riga to South America, China, India, Europe, Australia and many other destinations. Uralchem is currently a major player in the global fertilizer market, supplying its products to more than 60 countries. It is one of the largest nitrogen and phosphor fertilizer companies in the Russian Federation and the CIS with facilities available for annual production of over 2.5 million tonnes of ammonium nitrate, 2.8 million tonnes of ammonia, 0.8 million tonnes of mono- and diammonia phosphate, 0.8 million tonnes of complex fertilizers, and 1.2 million tonnes of urea.

Unlike other transport sectors Latvian road carriers have demonstrated outstanding flexibility to the new geopolitical situation and decrease of cargo flow from Russia. That transport sector was able to re-focus to new markets in the Western Europe and find new market niches. Latvian road carriers are active in the international transport market. In Latvia there is one of the newest, most modern, EU compliant and largest road transport parks in Europe. Latvian transport fleet is environmentally friendly as almost 60% of the fleet are EURO VI or V environmental class vehicles, 6% - EURO IV, 13% - EURO III and only 22% are EURO II (or less)⁴³. So in terms of vehicles fleet quality it is enough competitive to service customer in Western European countries where environmental requirements are very strict. There are nearly four thousand licensed international road hauliers and around 300 local road transport carriers in Latvia.

Figure 13. Road cargo volumes 2002-2016⁴⁴



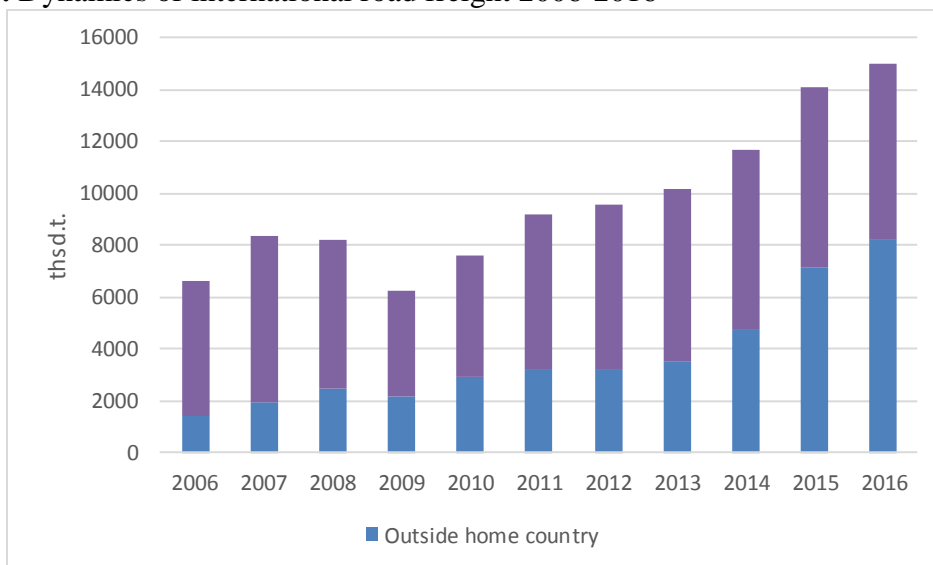
63.4. million tons of cargo was transported by road transport in 2016. International shipments increased by 0.8 million tonnes or 1.3 %. The main road transport market has always focused on Russia, the CIS and Central Asian countries. Under the global influence in 2016 the most of Latvian registered road transport carried freight to the Scandinavian countries and Germany. Latvian road carriers are competitive in the European and CIS markets; they have good knowledge of foreign languages and can freely communicate in Russian and English.

Road freight is not dependant from political decisions of Russia and therefore not so vulnerable to economic sanctions and transnational relationship. Companies in that transport segment have more flexibility and with some effort can move business from country to another, while for ports and railway such an option is limited because of fixed infrastructure. The flexibility of road freight segment can be proved with statistical data, especially increased road freight outside the home country (please see Figure 14).

⁴³ Central Statisticak Bureau of Latvia; <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html>. Observed 06.09.2017.

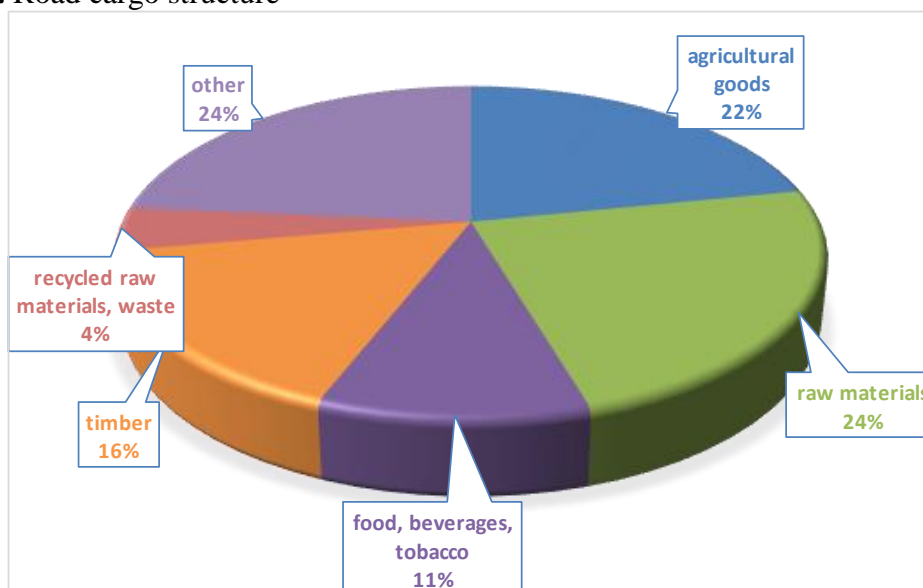
⁴⁴ Central Statisticak Bureau of Latvia; <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html>. Observed 06.09.2017.

Figure 14. Dynamics of international road freight 2006-2016⁴⁵



For the road freight carriers Russia market was almost closed since Europe and Russia mutual economic sanctions started (2014). Companies were forced to look for opportunities in the other markets in Western direction and share of international road freight significantly increased. Most popular cargo type in road freight are agricultural goods, different raw materials and timber.

Figure 15. Road cargo structure⁴⁶



Significant challenge for transport companies is limited labour force and therefore import of employees is increasing every year (mainly from Ukraine, Belarus, Russia, Uzbekistan, Philippines). Some of the industry's entrepreneurs blame government about poor support of the

⁴⁵ Central Statisticak Bureau of Latvia; <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html>. Observed 06.09.2017.

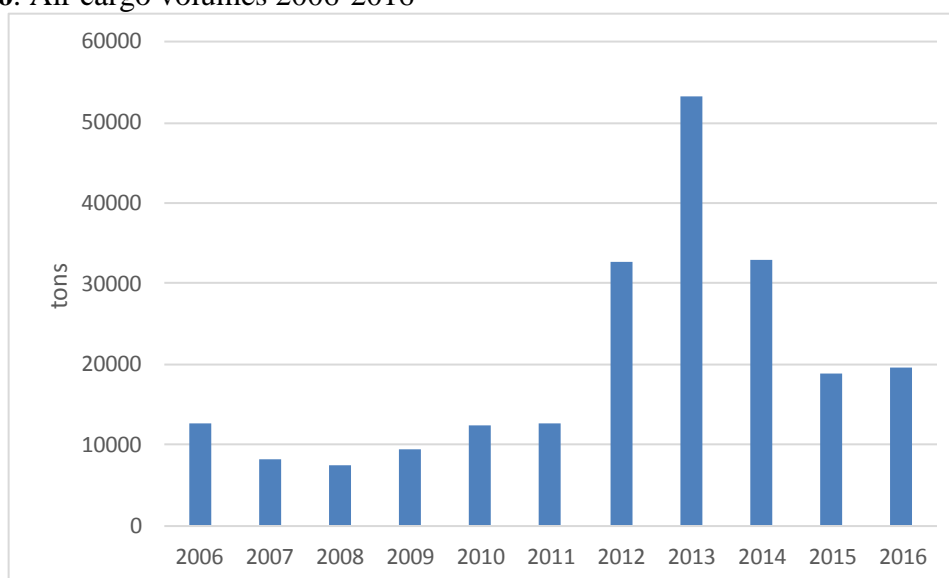
⁴⁶ Central Statisticak Bureau of Latvia; <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html>. Observed 06.09.2017.

transport and logistics sector and as an example provided fact that in the Lithuania (country that has the same geographical advantages) truck fleet is 3-4 times bigger than in Latvia.

2.4. Air Freight

Riga International Airport is the largest international airport in the Baltic states and the main air traffic centre in this region offering regular passenger, cargo and postal delivery to the cities of Europe and world - the market share of Riga International Airport was 45 percent. Riga airport attends both national and international airlines becoming one of the few European airports that attends both full service and low costs airlines. From the Riga International Airport it is possible to go to more than 70 destinations.

Figure 16. Air cargo volumes 2006-2016⁴⁷



In the year 2013 there was a rapid increase of air cargo turnover in the Latvia which is mainly explained because airport of Riga became important part of ISAF (International Security Assistance Force) supply chain to Afghanistan. Mainly there was transported food and other non-military cargo. In the year 2013 ISAF related cargo proportion was around 70% total cargo flow. As scale of ISAF mission in Afghanistan reduced in later years it affected total cargo turnover in the airport of Riga. It need to be noted that general strategy of Riga international airport is to double air freight by 2025 and reach at least 40 thousand tons annually. Therefore, investment project of new cargo apron and logistics complex is ongoing already.⁴⁸

In the Latvia there are presented world's leading companies in transport segment, like Maersk, Containership, Schenker, DHL, Kuehne&Nagel and others. This is a positive factor for development of transport and logistics sectors in Latvia as not only increases cargo volume in Latvia, but also increases confidence to the transport segment and provides know-how to local SME transport companies.

To increase competitiveness of SME extremely important is focus on IT system development – advanced level of automatization (invoices, consignment tracking, data exchange with

⁴⁷ Central Statisticak Bureau of Latvia; <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html>. Observed 06.09.2017.

⁴⁸ Arturs Kokars, CEO. Aviation Association on Latvia.

outsourced services providers), different function outsourcing and automatization can save around 15-30% of staff related costs. In general SME can provide the same quality service like big international players (DHL, Schenker etc.). SME can be successful in competition with industry's top players, but it is important to find own niche. SME's in transport industry is more focused to service smaller and medium sized customers, as in multinational customer segment it is very difficult to compete with international freight carriers. Competition is intense but there is still place for development of SME's if company can find own niche in the market.⁴⁹

According to industry's entrepreneurs' opinion main obstacles that hinder further development are:

- to much bureaucracy (governmental institutions – state tax department, complicated customs procedures on the borders with non-European countries);
- lack of financial resources (banks are not enough flexible to finance SME in transport and logistics sector)⁵⁰;
- geopolitical aspects – economic sanctions between EU, USA and Russia. Significant part of transport routes has been closed due to sanctions⁵¹;
- corruption – because of sanctions some of the transport companies have practice illegally transport goods that are subject to sanctions therefore increasing corruption level on the borders and creating unfair competition within the industry;
- highway robberies in certain routes – thus insurance costs are higher and companies are forced to look for alternative routes⁵².

The future development of industry is related to more process automatization therefore saving costs, reducing manual process administration and necessary time for "paper work". At the same time, it will result to decrease of employed workers in the transport segment. There would be necessary support development of new transport corridors where Latvia would have competitive advantages because of infrastructure and multimodal connectivity. Essential factor to ensure smooth shifting between different transport modes is cooperation with other market players.

To be competitive in the global scale Latvia's transport system must be effective, secure, multi-modal, balanced and environmentally-friendly. As Latvia is a part of EU, then it is extremely important to fully integrate Latvia's transport infrastructure with the Trans-European multi-modal transport system. Coastal shipping, combined transportation, promotion of ferry traffic in the Baltic Sea, construction and development of industrial, logistics and distribution parks are key priorities for sustainable transport system development in the future.

⁴⁹ Janis Mozga, CEO, Sonora. "Sonora" was established in 2000 and started its activities by exporting wool and cotton from Central Asia to Europe and the Baltic States. As demand for transportation and logistics services grew, the company began to develop in a wider scale and became a full service transportation and logistics company. Now "Sonora" is competitive transportation and logistics company in the international level. Company owns Quality Management System certificate ISO 9001:2015. Some of the key advantages to success are *Project Cargo* and outsized freight transportation knowledge, therefore Sonora can provide the most complicated freight forwarding solutions from and to any place in the world. Company is planning to introduce new IT system to increase level of automatization, save staff costs, and improve product quality.

⁵⁰ M.Fridman, Atlas LLC - one of the logistics and warehousing business pioneers in the post-Soviet period. Company offers wide range of services that covers all needs for the transportation, storage and distribution of goods to Russia, Customs Union, Europe and beyond.

⁵¹ G.Monokandilos, A&A Logistic – International transportation by road, sea, railway, and air transport processing of all European customs procedures, preparation of customs and accompanying documents. Company has customs terminal in Riga.

⁵² Olga Berezina, Member of Board, TBC Baltic. Company has experience in rail freight between Latvia-Russia and Latvia-Belorus.

Table 2. SWOT analysis of transport system in Latvia

Strengths	Weaknesses
<p>Modern universal ports with good infrastructure and ice free navigation possibilities all around the year</p> <p>Good quality of railway and road transport services</p> <p>Available (free) territories for new transport and logistic project development</p> <p>High level IT solutions in the transport industry</p> <p>Skilled labour force</p>	<p>Companies have limited financial resources for development</p> <p>Banks are very prudent to finance transport and logistic sector (especially SME)</p> <p>Poor road quality</p> <p>Dependency from certain types of cargo</p> <p>Dependency from political decisions in Russia (major part of transit cargo to Latvia is transported from/through Russia territory)</p>
Opportunities	Threats
<p>Geographical location between – transit corridor between East and West</p> <p>Available EU funding for transport infrastructure projects</p> <p>New technologies provide opportunity for improvement and are more environmental friendly</p> <p>Proactive and closer collaboration between different transport and logistics industry’s segments (ports, road transport, railway) to develop integrated and competitive transport corridors</p> <p>Effective cooperation with counterparts in government, ministries, authorities, NGOs (also international) and infrastructure providers</p> <p>Transparent and competitive tariff and fee schedule together with the improvement of services can attract more cargo</p>	<p>Lack of successful completion of large scale infrastructure projects in transport and logistics sector</p> <p>Because of uncertainty about future development of the industry, it is difficult to attract new investments</p> <p>Political decisions in Russia will strengthen competition and may force cargo currently handled in Latvia’s ports into Russian ports</p> <p>Increasing requirements for cargo control and anti-terrorism measures could require large financial and human resources.</p> <p>Competition about transit cargos from neighbour countries (Lithuania, Russia, Estonia, Belarus)</p> <p>Nature and environment protection requirements may become stronger therefore limiting development</p> <p>Port and other transport infrastructure project development in neighbour countries may cause loss of cargo volumes</p> <p>Availability of labour force in some transport segments</p>

Conclusions

1. Evolution of EU transport system is based on development of Trans-European transport Network corridors (TEN-T). There are nine Trans-European Transport Network corridors crossing Europe in different directions. The main purpose of the corridors is to increase transport multimodality – better rail, inland waterways and maritime infrastructure connection. Further development of TEN-T corridors will attract new investment for the transport infrastructure and foster usage of innovative technologies. Key benefits are more employments and investments, increased competitiveness, less time for modal shift, reduced congestion on road, lower emissions of greenhouse and polluting gases and higher transport safety and security.
2. Europe's inland freight is dominated by road transport (around 75% from total freight volume). Increasing importance is for railway freight (above 18% from total freight volume). In recent years road freight transport has slightly lost the importance in favour to rail transport. But still railways freight volume growth is limited as railway freight in some segments is not enough competitive comparing to road freight services. There are very substantial differences in terms of rail transport performance between EU countries – largest growth rate was observed in Greece (+31%) while leader position in decrease of volume had Estonia (-31%).
3. Europe's ports are important parts of global supply chains as well as of TEN-T corridors. Major part of goods entering or leaving Europe go by sea. After economic crisis in 2008 European ports are recovered and reached pre-crisis level. The Netherland has proved the leader status and recorded the largest annual tonnage of maritime freight transport in Europe. The leader is followed by United Kingdom and Italy.
4. The future of Europe's transport system is facing several challenges - to harmonize smooth intermodal shift, meet new environmental criteria etc. Many initiatives are launched to preserve mobility, remove major barriers in key areas, fuel growth and employment, cut carbon emissions in transport and lower Europe's dependence on imported oil. Conventionally fuelled cars and trucks should be phased out from cities; road traffic death should be halved by 2020 and near-zero casualties should be achieved in road transport by 2050. To meet new requirements companies in transport and logistics industry must improve performance and become more competitive. Efficiency increase and innovations will be extremely important factors for every company in that segment in the future.
5. Latvia historically has been one of the main transit points for both north-south and east-west cargo flows – therefore connecting major world economies like the USA, European Union, Russia, the CIS and the Far East. The transit sector is one of the most important industrial sectors in Latvia. Almost 90 % of turnover in Latvian ports, more than 80 % of rail cargo is transit. Transit segment is also important contributor to Latvia's GDP.
6. Quality of Latvian ports and railway is on competitive level from regional perspective. Large, international transport and forwarding companies are located in Latvia and provide world class experience and knowledge for the market. Skilled workforce is available for companies in transport and logistics sector. Advanced level IT systems, internet connections, and the development of electronic data interchange are used by companies in the industry.

7. Railroad has significant role in Latvian economy. The rail freight volumes constitute around 52% of the country's total land transport volume. Latvian Railway is heavily depending from the Russia cargo. In the recent years there was observed decline in total cargo volumes but the proportion of the Russia cargo even increased – in the year 2012 around 71% was Russia originated cargo, now the proportion grown up to 80%. Cargo volume from other countries is relatively low and almost fully has stopped cargo flow from Central Asia.
8. Two large scale infrastructure development objects might have fundamental impact on further development of the Latvian railway. The most important one is Rail Baltic – which will connect Baltic countries with Europe via rails according to European standards. Project is important from economic and political perspectives. Together with construction of new rails there will be necessary to develop new intermodal logistic centres to tranship railway cargo from CIS countries (where Soviet standard rails are used) to European standard rails. The other important infrastructure development project is planned railway electrification.
9. Ports are among the key elements in the logistics chain as they contribute not only to the economic development of the port city, but to the whole region making the role of ports increase both in Latvia and in European Union. Latvia has three major ports - Liepaja, Riga and Ventspils. Containerized cargo volume in Latvia is growing year by year but still it is relatively small, major part of sea cargo is coal and oil. Containerized cargo could be an alternative to substitute declining cargo volume from Russia. Potentially Latvian ports could be an alternative hubs to German ports for China's goods transported to Europe.
10. Unlike other transport sectors Latvian road carriers have demonstrated outstanding flexibility to the new geopolitical situation and decrease of cargo flow from Russia. That transport sector was able to re-focus to new markets in the Western Europe and find new market niches. Latvian road carriers are active in the international transport market. In Latvia, there is a modern road transport park according to EU standards. All major road connections are included in the Trans-European Transport Network TEN-T and most significant investments are made directly to these routes. In general road quality in Latvia is one of worst in Europe, according to European Commission data only in Malta and Rumania roads quality are worse.
11. Main obstacles that hinder further industry's development are too much bureaucracy, lack of financial resources and geopolitical aspects. Because of economic sanctions between EU/USA and Russia significant part of transport routes has been closed due to sanctions. From other perspective, it is a good reason to reduce dependency from Russia cargo flow and find new markets.
12. The future development of industry is related to more process automatization therefore saving costs, reducing manual process administration and necessary time for "paper work". At the same time it will result to decrease of employed workers in the transport segment. There would be necessary support development of new transport corridors where Latvia would have competitive advantages because of infrastructure and multimodal connectivity. Essential factor to ensure smooth shifting between different transport modes is cooperation with other market players.

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Appendix 1. Legislation

Road Freight

Latvian Laws:

Civil Law
Road Traffic Law
Law about Motorways
Road Freight Law

Cabinet of Ministers Regulations:

No.279 – Road Traffic Regulations
No.122 – Procedures of issuing and cancellation the European Community licenses (incl. driver licenses) for International Road Freight in the Territory of European Union
No.474 – Procedures of Vehicle Crew Working Time Organization and Tracking
No.836 – Regulations about Vehicle Driver Working Time and Use of Tachograph
No.442 – Procedures of issuing and cancellation licences for international road freight

Transit

Latvian Laws:

Customs Law
Law about Ports
Law about Freeport of Riga
Law about Freeport of Ventspils
Law about Liepaja Special Economic Zone

Cabinet of Ministers Regulations:

No.603 – Procedure of Application on Customs procedures/Transit
No.601 – Procedure of Temporary Storage
No.339 –Regulations about Port Formalities

Appendix 2. List of Contacts

Ministry of Transport of Latvia	www.sam.gov.lv
Investment and Development Agency of Latvia	www.liaa.gov.lv
Road Freight	
Association „Latvian Auto”	www.lauto.lv
“Latvian National Association of Haulers”- Association	www.lana.org.lv
Latvian Logistics Association	www.lla.lv
Latvian Association of freight forwarders and logistics	www.laff.lv
Baltic Association – Transport and Logistics	www.batl.lv
Sea Freight	
Port of Riga	www.rop.lv
Port of Ventspils	www.vbp.lv
Port of Liepaja	www.portofliepaja.lv
Association of Latvian Stevedore Companies	E-mail: rextoup@gmail.com Uldis Papans, phone +371 29238556
Latvian Port Association	E-mail: leiskalns.karlis@gmail.com
Railways freight	
SJSC “Latvian Railway”	www.ldz.lv
Rail Baltic	www.railbaltica.org
Latvian Transit Business Association	www.ltbassociation.lv
Ltd “LDZ Cargo”	www.ldz.lv
Air Freight	
Riga International Airport	www.riga-airport.com
Latvian Aviation Association	www.laa.aero

Afterword

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