# Road freight transport in the EU

IN SEARCH OF A BALANCE BETWEEN THE ECONOMIC AND SOCIAL DIMENSION OF THE INTERNAL MARKET

A quantitative sectoral analysis

Lynn De Smedt & Frederic De Wispelaere

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# Abstract

The road transport sector can be considered as one of the key sectors of activity in the EU: it counts more than 570,000 companies and employs some 3.3 million persons. However, it cannot be denied that the sector is confronted with several problems and challenges, which became even more visible during the COVID-19 pandemic.

Political and public discussions demonstrate that efforts should be made to better understand the complexity of road freight transport in the EU. Indeed, it is important to ensure that several concerns are based on facts and figures and not on myths. Additionally, such an approach should create balance in public and political debate and support evidence-based policy. In that regard, the aim of this report is to improve our understanding of business structures and employment practices in the European road haulage, mainly by analysing quantitative data from Eurostat and Orbis, on three different levels. First, for the EU as a whole, then for six Member States of interest (Austria, Belgium, Czech Republic, Germany, Poland and Slovenia), and finally for three defined tandems (Austria – Slovenia, Germany – Poland, Belgium – Czech Republic).



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# Glossary

| | |
|---|---|
| **ACEA** | European Automobile Manufacturers Association |
| **BOP** | Balance of Payments |
| **Cabotage** | National transport undertaken by hauliers from another Member State. |
| **Cabotage penetration rate** | The share of cabotage transport in total national transport, where total national transport is the sum of national transport (for hire and reward) and cabotage transport (in that country). |
| **CEE** | Central and Eastern Europe |
| **Cross-trade** | International road transport between two different countries performed by a road motor vehicle registered in a third country. |
| **ECR** | Euro Contrôle Route |
| **EFTA** | European Free Trade Association: Iceland (IS), Liechtenstein (LI), Norway (NO), and Switzerland (CH) |
| **ERRU** | European Register of Road Transport Undertakings |
| **EU** | European Union |
| **EU-13** | Bulgaria (BG), Croatia (HR), Cyprus (CY), Czech Republic (CZ), Estonia (EE), Hungary (HU), Latvia (LV), Lithuania (LT), Malta (MT), Poland (PL), Romania (RO), Slovakia (SK) and Slovenia (SI) |
| **EU-15** | Austria (AT), Belgium (BE), Denmark (DK), Finland (FI), France (FR), Germany (DE), Greece (EL), Ireland (IE), Italy (IT), Luxembourg (LU), Netherlands (NL), Portugal (PT), Spain (ES), Sweden (SE), and the United Kingdom (UK)[1] |
| **GDP** | Gross Domestic Product |
| **HCV** | Heavy Commercial Vehicles (maximum mass exceeding 16 tonnes) |
| **International transport** | Road transport between two places (a place of loading and a place of unloading) in two different countries and cabotage by road. It may involve transit through one or more additional country or countries. |
| **ITSS** | International Trade in Services Statistics |
| **LCV** | Light Commercial Vehicles (Used for the carriage of goods, maximum mass not exceeding 3.5 tonnes) |
| **MCV** | Medium Commercial Vehicles (maximum mass between 3.5 tonnes and 16 tonnes) |
| **MS** | Member State |
| **NACE** | Nomenclature of Economic Activities; the European statistical classification of economic activities. In this research, the NACE-code of interest is 4941 'Freight transport by road'. |
| **National transport** | Road transport between two places (a place of loading and a place of unloading) located in the same country by a vehicle registered in that country. |
| **PD** | Portable Document |
| **Tonne-km** | The transport of one tonne of goods over a distance of one kilometre. |

1 Although the United Kingdom withdrew from the European Union on 31 January 2020, a transitional period will last at least until 31 December 2020, with the option to prolong this period (European Commission, n.d.-b). Furthermore, data in this report will provide a quantitative analysis of the EU road transport sector concerning the most recent data available, namely 2017/2018, when the UK was still a member of the EU.

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# 1 | Introduction

The road transport sector can be considered as one of the key sectors of activity in the EU.[2] In 2017, the sector counted more than 570,000 companies and employed some 3.3 million persons.[3] The importance of the sector also became clear during the COVID-19 pandemic. Think for instance about the 'panic buying' and hoarding that occurred especially at the beginning of the pandemic, which highlighted the systemic importance of road transport and its crucial contribution in maintaining supply (European Commission, 2020b). Although the COVID-19 pandemic reconfirmed that truck drivers are essential workers (Fasani & Mazza, 2020), they are not always treated as such (Rasnača, 2020). This became even more apparent during the crisis. For instance, drivers did not always have protective resources at their disposal, social distancing was mostly disregarded, many drivers could not work or return home because of closed borders, and drivers were even not allowed at roadside stops to eat, sleep, or shower (Rasnača, 2020; ETF, 2020a, 2020b, 2020f; VNB, ITF & IUF, 2020).[4] Furthermore, many Member States relaxed limits on working times, which negatively influenced road safety (Rasnača, 2020).

The above-mentioned problems relating to working conditions and the protection of workers' health and safety are not new. The COVID-19 pandemic has only made these already existing problems more visible. Trade unions speak of a vicious circle, as the continuous demand for cheap(er) goods leads to lower prices, but also to heightened pressure on wages, unattractiveness of the job, companies 'flagging out', and fraudulent and illegal practices. These elements will then only reinforce each other further. The root of these existing problems can be traced back to a tension which has always been present in the EU, namely between the economic and social dimension of the internal market, where the imbalance appears to favour the economic dimension. Although this is a general tension in the EU, especially since the EU enlargements of 2004 and 2007, it is certainly visible in road freight transport. Moreover, several problems relating to the employment status of truck drivers arise from their often weak or unclear connection to a specific Member State. Indeed, most transport workers are highly mobile workers, 'namely workers whose place of employment is not a single Member State: they either regularly cross borders due to the nature of their work, work in multiple Member States, or cross a border every day in order to work in a Member State other than the one where they permanently reside' (De Wispelaere & Rocca, 2020 in Rasnača, 2020:1).[5]

The profile of international road freight transport has changed significantly over the past 15 years as EU-13 hauliers have acquired a significant share of the market. The price sensitivity of the sector, its labour-intensive nature, as well as the significantly lower wages in the countries that joined the EU

2 We would like to thank the project partners for remarks, comments and exchanges on previous versions. The usual disclaimer applies.

3 Eurostat [sbs_na_1a_se_r2].

4 Although the European Commission issued guidelines to ensure the availability of goods and essential services, they were not always well received by unions. The Commission highlighted that it is essential that the Single Market keeps functioning, resulting in the installation of 'green lane' border crossings (European Commission, 2020a, 2020b). Seeing that in some cases the waiting times at borders went beyond 24 hours, even for medical supplies, 'green lanes' should be open to all freight vehicles carrying any type of goods and the waiting time may not exceed 15 minutes (European Commission, 2020a). However, ETF (2020c) specified that this gives the wrong signal and does not address the real issues such as the health and safety and the working conditions of the drivers.

5 See also Recital 9 of Directive (EU) 2020/1057 of the European Parliament and of the Council of 15 July 2020 laying down specific rules with respect to Directive 96/71/EC and Directive 2014/67/EU for posting drivers in the road transport sector and amending Directive 2006/22/EC as regards enforcement requirements and Regulation (EU) No 1024/2012: *'Balanced sector specific rules on posting should be based on the existence of a sufficient link between the driver and the service provided, and the territory of a host Member State. To facilitate enforcement of those rules a distinction should be made between different types of transport operations depending on the degree of connection with the territory of the host Member State.'*

in 2004 and 2007 are probably the main drivers of the strong shift from Western to Eastern Europe and are the components of the comparative and competitive advantage of EU-13 hauliers. With the search for the cheapest solution, the sector is confronted with a number of phenomena that seem to erode the social dimension of the internal market. These phenomena as well as the European legal framework, which gives rise to or seeks to resolve these phenomena, are briefly discussed in this introductory chapter. Indeed, the reader needs to be aware of these phenomena in order to frame the results of the quantitative in-depth analysis of the sector.

The European single market is based on 4 essential freedoms: free movement of goods, people, services, and capital (Miron, 2018). This entails that a company has the freedom to establish a company in another EU Member State, or provide services on a cross-border basis, and move capital around, for instance by investing and owning other EU companies or raising money where it is cheapest (European Commission, n.d.-g). As a result of these freedoms it becomes attractive to be located, or provide services, in those countries that optimise efficiency. Thus, it makes sense that companies will reallocate themselves and their capital to the most advantageous countries, meaning those where the costs are lowest. A visible result hereof, especially after the EU enlargements of 2004 and 2007, is the 'flagging out' of transport companies to Eastern Europe, i.e. the establishment of subsidiaries and the registration of vehicle fleets abroad. This is mainly seen as a cost reduction strategy, to exploit the differences in socioeconomic conditions between Member States (Pastori & Brambilla, 2017). However, 'flagging out' is also seen as essential to survive in this highly competitive market of transport services (Kummer *et al.*, 2014). In itself, 'flagging out' is not an illegal practice; it is even a clear example that the internal market is working. Nevertheless, there are certain instances in which the specifics of the market are abused, leading to illegal practices.

One issue is the setting up of letterbox companies. Although this term is widely used and is heavily debated, there is no single common definition or agreed terminology behind the concept. It is often the case that the applied definition changes depending on the context in which the concept is looked at (EPRS, 2018). Nevertheless, most literature describing the concept of letterbox companies has one essential element in common, namely the *absence of substantial activities*. This can be interpreted in a *narrow* sense: companies are registered in one Member State but, while not carrying out any substantive economic activity in the Member State of registration/incorporation, operate in another Member State of the EU or outside the EU. On the other hand, a *broad* approach can be applied, meaning companies are registered in one Member State but have no economic activity either in that Member State, or within or outside the EU (Jorens & De Wispelaere, 2019). Seeing these two definitions, it makes sense that the broad definition is applied when analysing and assessing the use of letterbox companies by international transport companies. Notably, it will often be the case that international transport companies solely focus on the foreign market and would therefore be classified as letterbox companies when applying the narrow definition. However, this does not imply that certain (i.e. 'a minimum set of') (management) activities do not have to take place in the country of establishment.[6]

Fortunately, for the road transport sector, and in contrast to other sectors, the recently amended Regulation (EC) No 1071/2009[7] introduced requirements for transport undertakings to fight letterbox companies. They indicate that companies need to have an effective and stable establishment, to be of good repute, to have appropriate financial standing, and to have the requisite professional competence. Although some studies state that letterbox companies are not common in the road transport sector (Borkowski & Bąk, 2018) and are isolated incidents (Riesco-Sanz *et al.*, 2019), others consider

6 An important point of discussion during the negotiations on the revision of the Regulations on the coordination of social security systems. Moreover, see the Commission's proposal for amending Directive (EU) 2017/1132 as regards cross-border conversions, mergers and divisions (COM(2018) 241 final). In this proposal the term 'artificial arrangement' was defined. The term is not used in the final text of Directive (EU) 2019/2121 of the European Parliament and of the Council of 27 November 2019 amending Directive (EU) 2017/1132 as regards cross-border conversions, mergers and divisions. Nonetheless, see Recital 36 of this Directive.

7 Regulation (EC) No 1071/2009 of the European Parliament and of the Council of 21 October 2009 establishing common rules concerning the conditions to be complied with to pursue the occupation of road transport operator and repealing Council Directive 96/26/EC.

letterbox companies to be widespread (Šimurková & Poliak, 2019; Thörnquist, 2019; McGauran, 2016; Haidinger *et al.*, 2017; Sørensen, 2014). A letterbox company in this sector will be set up in a low-wage country, where it will have no substantial activity. Instead, the letterbox company's main purpose is the registration of drivers, in order to pay lower wages, taxes, etc. (Borgström, 2017; Šimurková & Poliak, 2019). McGauran (2020) states that setting up a letterbox company creates a permanent cost-saving business model. For instance, distorted situations like the following become possible: A German company sets up a subsidiary in Slovakia. The subsidiary then employs workers at the Slovakian monthly wage of € 250. However, the workers will never operate in Slovakia. Instead, they work in Germany, where the minimum wage is much higher and drivers earn € 1,200 per month (Borgström, 2017).

The reallocation of transport companies also has effects on the labour market. As labour costs are the most important part of total costs in this industry (Refslund & Thörnquist, 2016), and perhaps one of the only factors left on which companies can compete, companies search for the lowest labour costs, which can be found in Central and Eastern Europe (CEE) (Reuter & Šimurková, 2018). However, seeing that the EU as a whole is seen as the labour market, and national borders fade away in this regard, it becomes more favourable to attract labour from outside the EU, thus increasing the employment of third country nationals. Despite the concerns of job displacement, labour shortage in the road transport sector is a pressing issue. On the one hand, seeing that the demand for transport services is increasing due to globalisation, the demand for labour force in this sector grows as well (Haidinger *et al.*, 2017; Nowakowska-Grunta & Strzelczyk, 2019). On the other hand, domestic labour supply is stagnating or even shrinking as the labour force in this sector is ageing more quickly than in other sectors (Paradowska & Platje, 2016). Furthermore, another important reason for the labour shortage is the unattractiveness of the job. Due to the market conditions after liberalisation, leading to social dumping and unfair practices (see below), the working conditions of drivers have continually been worsening (Borgström, 2017; Hilal, 2008; Pastori & Brambilla, 2017; de Leeuw van Weenen *et al.*, 2017). These poor working conditions include long hours, low wages, a worsened work-life balance, unsafe and unsanitary working conditions, use of sometimes undocumented workers from third countries with little training, and inadequate safety (Borgström, 2017; Hilal, 2008; de Leeuw van Weenen *et al.*, 2017). Drivers themselves stated that over the last five years especially, the income levels, working hours, working environment, and accessibility and safety of parking areas have deteriorated significantly (Pastori & Brambilla, 2017). As a result, becoming a truck driver has become an unattractive job (Vandaele, 2019), particularly for EU-15 workers, and consequently few new drivers are entering the market. One solution for this problem, which is increasingly used by transport companies, especially in CEE, is the employment of third country nationals.

With the enlargement of the EU, wage differentials between Member States with the highest and lowest wage level increased from 1:3 to 1:15 (van Overbeeke, 2020). Wage levels in the EU-13 Member States are much lower than in the EU-15 Member States, which gives opportunity to regulatory competition and social dumping according to several scholars and stakeholders (Belgische Transport Bond [BTB], 2017, 2019; Hilal, 2008). Moreover, social dumping is strongly linked to the provision of services by posted workers (Arnholtz & Lillie, 2020). Bernaciak (2015) defines social dumping 'as the practice, undertaken by self-interested market participants, of undermining or evading existing social regulations with the aim of gaining a competitive advantage'. This definition as well as several other definitions refer to fraudulent practices, i.e. to non-compliant behaviour, when discussing the notion of 'social dumping'. For instance, Vaughan-Whitehead (2003) makes a distinction between what he calls illegal and legal social dumping while Berntsen and Lillie (2015) define three types of social dumping: regulatory evasion, regulatory arbitrage and regulatory conformance. We consider this as a too broad approach. Notably, the origin of the social dumping argument is a belief that low wage, low social welfare and weakly regulated national labour markets will have a competitive advantage within the EU (Adnett, 1995:3). In that regard, the term social dumping originally referred to the dismantling or undermining of the rules but not to evading them. The term has

since been 'contaminated' by using it to refer to cross-border social fraud as well. We prefer to make a clear differentiation between both terms and to define social dumping as 'a downward pressure on national welfare states because of the pressure created by the competitive advantage that other countries have resulting from differences in national legislation that are not remedied by European legislation' (De Wispelaere & Pacolet, 2017).[8] This definition cites the reason why labour costs (wage + labour taxes), labour conditions, and domestic employment come under pressure, particularly as a result of the applicable European legislation. However, from the very beginning, this was a deliberate choice. It is actually 'regulatory competition' between Member States (Costamagna, 2019; Verschueren, 2015).[9] In this regard, Barnard (2009) concludes, quite rightly, 'what is social dumping to the losers is economic opportunity to the winners who take advantage of their lower labour costs to gain a foothold on these new markets.'

In addition to the occurrence of letterbox companies and social dumping, the sector seems to be confronted with a high percentage of infringements on the terms and conditions of employment, including occupational safety and health[10] (i.e. 'cross-border social fraud'). Moreover, with the increased hiring of third country nationals, illegitimate practices are common as well. For instance, not providing a driver attestation and the lack of payment of social security contributions (Verschueren, 2018). In addition, although they cannot be classified as illegitimate practices, low wages and poor working conditions are frequent in this sector. Furthermore, the matter of bogus or false self-employment is said to be characteristic to the sector (Hilal, 2008). This means that workers will be classified as self-employed, even though they are working as employees. As a result, the labour costs for the employer are reduced, there is unfair competition, a loss of government revenue, and the worker does not have the rights and protections he would get when being genuinely employed (Thörnquist, 2019). However, this might be a problem specific for certain Member States and types of transport.

In general, the finding of Vitols and Voss (2019:69) is noteworthy, as they found that management representatives agreed that 'those companies that obey the legal rules and pay fair wages to their workers have no chance to remain competitive in international transport'. The problem also lies in the regulations and the enforcement itself. On the one hand, rules are not sufficiently clear, and certain 'grey zones' exist in legislation, which can lead to different interpretations (ETF Road Transport, 2016; Sternberg *et al.*, 2015; Verschueren & Bednarowicz, 2019). One example is the issue whether[11] and when the Posting of Workers Directive is applicable in the transport sector.[12] In addition, it is an issue of enforcement of the rules. In practice, there is a lack of control, monitoring

8 See, for example, in the field of social security, the EU provisions on determining the competent Member State if workers are active two or more Member States, such as international truck drivers (see Article 13. Regulation (EC) No 883/2004). 'A first rule subjects them to the law of their State of residence provided they substantially work there. Much more problematic is the conflict rule for those who do not pursue a substantial part of their activity in their State of residence (Article 13(1)(b)(i), hereinafter 'the multi-activity rule'). If these workers are employed by one undertaking, they are subject to the legislation of the Member State in which it has its registered office or place of business. Attaching exclusively to the circumstances of the employer intrinsically increases the risk of law shopping, by rendering the place of the workers' economic activity irrelevant to the determination of the applicable legislation.' (Rennuy, forthcoming).

9 This might result in 'regime shopping' (Cremers, 2020) or 'law shopping' (Rennuy, forthcoming) (see also Chapter 3 of this report).

10 See, for instance, Danaj & Zólyomi, 2018; EU-OSHA, 2011.

11 See the recent ECJ Judgment in Case C-815/18 'Federatie Nederlandse Vakbeweging v Van den Bosch Transporten BV and Others': 'Directive 96/71/EC concerning the posting of workers in the framework of the provision of services must be interpreted as applying to the transnational provision of services in the road transport sector.'

12 See also Recital 15 of Directive (EU) 2018/957 of the European Parliament and of the Council of 28 June 2018 amending Directive 96/71/EC concerning the posting of workers in the framework of the provision of services: 'Because of the highly mobile nature of work in international road transport, the implementation of this Directive in that sector raises particular legal questions and difficulties, which are to be addressed, in the framework of the mobility package, through specific rules for road transport also reinforcing the combating of fraud and abuse.' This issue is solved by Directive (EU) 2020/1057 of the European Parliament and of the Council of 15 July 2020 laying down specific rules with respect to Directive 96/71/EC and Directive 2014/67/EU for posting drivers in the road transport sector and amending Directive 2006/22/EC as regards enforcement requirements and Regulation (EU) No 1024/2012. Directive (EU) 2018/957 of the European Parliament and of the Council is to apply to the road transport sector from 2 February 2022. Recital 9 of Directive (EU) 2020/1057 states that 'Balanced sector specific rules on posting should be based on the existence of a sufficient link between the driver and the service provided, and the territory of a host Member State.'

and cooperation among Member States, as well as poor enforcement of minimum terms and conditions of employment, e.g. on wages, working time, and costs of housing and transport (Houwerzijl, 2019). Reasons for the lack of enforcement are the lack of human and financial resources in the enforcement and inspection bodies, the nature of the sector (hyper-mobile, difficulties in stopping trucks on the highway, linguistic problems), and uneven enforcement between Member States (Vitols & Voss, 2019; Iannuzzi & Sacchetto, 2019; Borgström, 2017).

The enumeration of all these issues show that the tension between the economic and social dimension of the internal market is very much alive in the EU. Particularly in the transport sector, the COVID-19 pandemic has highlighted several shortcomings in protecting social rights of truck drivers. A possible response to this tension might be the creation of a 'European Social Market Economy'. Although no single or precise definition exists,[13] this concept seeks to combine free market and social protection arrangements and does not see it as an either/or choice (Claassen *et al.*, 2019; European Commission, 2020f; Ferri & Cortese, 2019). Of course, its implementation depends very much on the European legal framework. The EU transport sector has largely been liberalised by abolishing market entry restrictions (Thörnquist, 2019). [14] At the same time, new regulations have been put into place by the EU to create a level playing field and limit unfair competitive advantages (European Commission, 2014; Hendrickx, 2013). For instance, there are common rules on access to the profession[15] and market,[16] minimal standards for working time,[17] driving time and rest periods,[18] minimum annual vehicle taxes,[19] and tolls and user charges for heavy goods vehicles.[20]

Recently, several revised rules for the road haulage sector, referred to as the 'Mobility package', were adopted.[21] These new rules focus on the improvement of drivers' working conditions, notably rest times, posting rules for cross-border transport, access to the market, stricter rules for establishing a transport company, and more efficient enforcement. The recitals in these regulations explicitly mention that the workforce in this sector is highly mobile and therefore needs a sector-specific approach for posting rules. Furthermore, it is highlighted that a balance should be found between social protection and establishing a smooth internal market. For instance, the Mobility Package includes a mandatory rest period for drivers, which cannot be taken in the truck cabin. In addition, the driver has to return to the company's operational centre or home at least every four weeks, or three weeks if the driver is given two short weekends in a row by the employer. Rules for fairer competition now ensure a 'cooling-off' period of four days to prevent systemic cabotage in the same Member States with the same vehicle, require trucks to return to their operational centre every eight weeks, and state that Light Commercial Vehicles (under 3.5 tonnes) are also subject to EU norms for transport operators. Furthermore, to combat fraud, vehicle tachographs have to be used, and to tackle letterbox companies, companies need to have substantial activities in their Member State of registration. Finally, the new rules on posting of drivers aim to provide a clear legal framework to prevent differing national

13 Article 3(3) TEU: 'The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance.'

14 Council Regulation (EEC) No 881/92 of 26 March 1992 on access to the market in the carriage of goods by road within the Community to or from the territory of a Member State or passing across the territory of one or more Member States.

15 Regulation (EC) No 1071/2009 of the European Parliament and of the Council of 21 October 2009 establishing common rules concerning the conditions to be complied with to pursue the occupation of road transport operator.

16 Regulation (EC) No 1072/2009 (see footnote 5).

17 Directive 2002/15/EC of the European Parliament and of the Council of 11 March 2002 on the organisation of the working time of persons performing mobile road transport activities.

18 Regulation (EC) No 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport.

19 Directive 2006/38/EC of the European Parliament and of the Council of 17 May 2006 amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures.

20 Directive 2011/76/EU of the European Parliament and of the Council of 27 September 2011 amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures.

21 The new rules amend Regulation (EC) No 561/2006, Regulation (EU) No 165/2014, Directive 96/71/EC, Directive 2014/67/EU, Directive 2006/22/EC, Regulation (EU) No 1024/2012, Regulations (EC) No 1071/2009, and Regulation (EC) No 1072/2009. The legislative acts can be found here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AL%3A2020%3A249%3ATOC.

approaches and ensure fair remuneration for drivers. For some stakeholders, above rules and initiatives constitute a restriction on the free movement in the EU, while others consider that these actions do not go far enough. Especially governments of CEE countries consider their companies disadvantaged by certain new rules, for instance the mandatory return of the driver and vehicle, once every four and eight weeks respectively, as it will cost them considerably more than Member States in the centre of Europe.[22]

Access to the domestic freight market of Member States, or cabotage, is still regulated, albeit debated (Sternberg *et al.*, 2015). First, a quota system with regard to cabotage was installed until 1998,[23] and later on, with the expansion of the EU in 2004 and 2007, the rules on cabotage were further clarified[24] (Thörnquist, 2019). Although the Commission itself has advocated to further liberalise cabotage (Koliousis, 2016), as it is said to reduce the number of empty runs, improve efficiency, reduce administration, and maybe even lower $CO_2$ emission (Savelberg & Korteweg, 2011; European Commission, 2014; Visser & Francke, 2010; Keuchel *et al.*, 2020), there are too many controversial views on the issue (Keuchel, *et al.*, 2020). The assumption is that when national markets are opened up to all EU hauliers, low-wage countries will perform a lot more cabotage in high-wage countries (Hendrickx, 2013). As a result, the EU-15 Member States feel threatened because they would lose market share in their national freight market (Lewandowski, 2016), as has already happened with respect to cross-border freight transport.

Overall, liberalisation of the transport market in the EU has had certain positive economic consequences. The market has become more competitive and more international, resulting in more volumes transported (Koliousis, 2016). Sternberg *et al.* (2015) mention that the liberalisation of the road transport sector has caused economic growth, reduced administration, and increased efficiency. However, the social dimension may not have been sufficiently taken into account, leading to tensions between countries. The recent legislative acts seem to indicate that the European legislator wants to correct the current imbalance between economic and social interests. As discussed above, the Mobility Package is focussing more on social aspects and the protection of drivers. According to the European Transport Workers Federation, the new rules will allow drivers to go home more often, restrain unfair competition that brings social dumping, and focus on illegal postings and letterbox companies (ETF, 2020g).

The road transport sector is a highly competitive and labour-intensive sector, confronted with specific phenomena, as stated above. In this report, the aim is to improve our understanding of business structures, and remuneration and employment practices in European road haulage. The evidence should allow all stakeholders to take further action. For instance, it may point out relevant elements and issues to develop union action and concrete action points. It can also be used as a basis to enhance information exchange and cooperation efforts of inspectorates. Finally, it might lead to possible further targeted legislative or non-legislative action of the European Commission.

To enhance our understanding of this sector, a quantitative analysis is provided. In Chapter 2, the methodology is explained in detail, including an overview of the sources being used and their shortcomings, and the variables analysed. The results are presented in three separate chapters. The first gives an overview of the European road transport sector as a whole (Chapter 3). The following chapter focusses on the transport market and its business structures in six Member States, Austria, Belgium, the Czech Republic, Germany, Poland, and Slovenia (Chapter 4). Next, the focus lies on the sectoral connections in the three defined tandems, namely Austria – Slovenia, Germany – Poland, and Belgium – Czech Republic (Chapter 5). Finally, a conclusion is provided in Chapter 6.

22 The transport ministers of Poland, Bulgaria, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, and Romania wrote an opinion article stating that the Mobility Package causes restrictions in market access and monopolisation by hauliers from some countries (Adamczyk *et al.*, 2020).

23 Council Regulation (EEC) No 3118/93 of 25 October 1993 laying down the conditions under which non-resident carriers may operate national road haulage services within a Member State.

24 Regulation (EC) No 1072/2009 of the European Parliament and of the Council of 21 October 2009 on common rules for access to the international road haulage market.

# 2 | Methodology

## 2.1 Research questions

The aim of this report is to better understand the business structures and employment practices in the European road transport sector. In that respect, the main research question is:

*1.* What is the profile of the road transport sector in the European Union? *(Chapter 3)*

In concrete terms, this means we look into different groups of indicators. A first group concerns the *road freight transport*, in which the amount and kind of transport is analysed, as well as the number of vehicles. Next, *employment* in the sector is thoroughly analysed by looking at the number of persons employed in the sector, the number of driver attestations, labour costs, wages and salaries, and data on postings in the sector. Furthermore, *company indicators* consist of the number of companies active in the road transport sector, the turnover they earn, and their address. Finally, *cross-border elements* of companies are discussed by examining the foreign majority shareholders and foreign subsidiaries of transport companies, and the international trade in services performed. These four groups will allow us to accurately describe the business structures and employment practices in this sector. Throughout this analysis, attention is also paid to certain challenges like posting, third-country nationals in cross-border transport, and letterbox companies.

Additionally, following the set-up of this project, this question is focussed further on the six Member States taking part in the project, as well as on the three identified tandems between the six Member States. As a result, two further research questions are:

(1) What is the profile of the road transport sector in Austria, Belgium, the Czech Republic, Germany, Poland, and Slovenia? *(Chapter 4)*

(2) What is the profile of the road transport sector in the tandems Austria-Slovenia, Germany-Poland, and Belgium-Czech Republic? *(Chapter 5)*

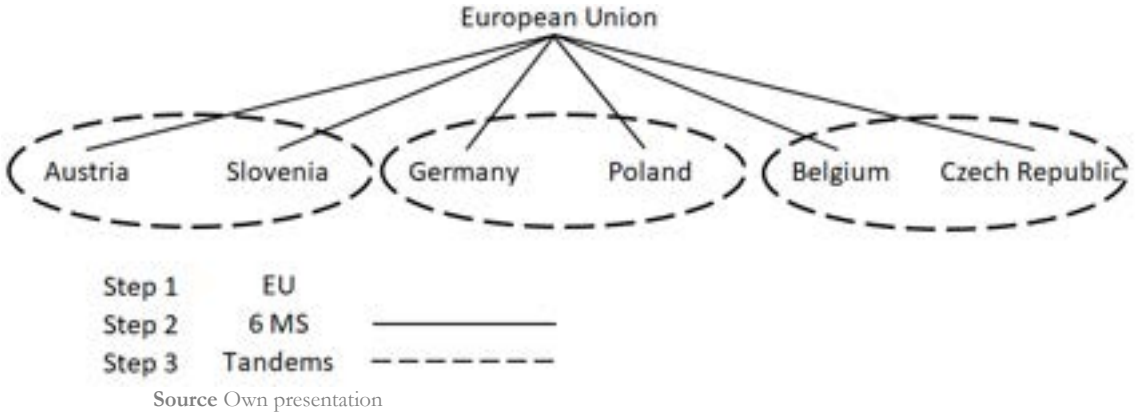
## 2.2 Research methodology

The research methodology followed is a top-down one. In a first phase, the profile of the road transport sector in the EU is analysed. Then the different Member States are looked at. Finally, the focus is on the three tandems between the six Member States, where we then look at the characteristics and flows of cross-border road transport between these Member States. A schematic overview of the research methodology is provided in Figure 2.1.

The analysis of the road transport sector in this report is a quantitative analysis. Therefore, the focus will not be on legal matters or a qualitative analysis of the sector. To carry out this analysis, different sources are used, which are discussed in detail in Section 2.3.

The results of this quantitative analysis are presented in tables and graphs. Additionally, country fiches are provided in each stage of the research. This means there is a fiche for the EU, for the six Member States analysed in detail, and for the three defined tandems (see appendix 6).

**Figure 2.1 Schematic overview of research methodology**




**Source** Own presentation

## 2.3 Sources

In general, the road transport sector and its pressing issues have been extensively discussed in literature. However, this is mostly based on anecdotal evidence. There are only limited statistics on road haulage as a whole (Sternberg & Lantz, 2018). Especially phenomena that want to remain hidden, like letterbox companies, illegal cabotage, or non-declaration of posted workers, are hard to quantify.

Moreover, due to methodological issues the data that are available occasionally turn out not to be reliable, for instance Eurostat data, which are discussed in Section 2.3.1, or the number of postings in the transport sector, as discussed in Section 2.3.3. Nevertheless, these data sources remain valuable, as they are 'one-of-a-kind'. Eurostat statistics are the most comprehensive and most comparable data available (European Commission, 2014), the Orbis database gives us the opportunity to analyse variables nowhere else available, and data from the Network Statistics FMSSFE are the most complete to sketch the European posting landscape. Thus, without turning a blind eye to the sources' shortcomings, it is still worth performing the quantitative analysis with these available sources.

In what follows, the different sources used in this research are analysed. The scope and content of each source are discussed in detail. Furthermore, their added value as well as limitations are examined.

### 2.3.1 Eurostat

Eurostat is the statistical office of the EU, established in 1953 (Eurostat, n.d.-a). Data are collected on a range of topics, going from economy and finance, population and social conditions, and international trade to environment and energy, agriculture, forestry and fishery, and transport. In this research, three different sources of data are used from Eurostat.

#### 2.3.1.1 Road freight transport measurement [road_go]

Data on transport have a broad scope, as they include multimodal, railway, road, inland waterways, oil pipeline, maritime, and air transport. In this research, road transport is of interest. Statistics on road transport consist of multiple components, namely road transport infrastructure, road transport equipment, road transport enterprises, economic performances and employment, road traffic, road transport measurement, and road freight transport measurement. Especially the last component and the stock of vehicles (under road transport equipment) are of use in this research.

Data that should be provided to Eurostat by Member States on road freight transport measurement [road_go] are set out in Regulation (EU) No 70/2012.[25] The data based on this Regulation cover all

25 Regulation (EU) No 70/2012 of the European Parliament and of the Council of 18 January 2012 on statistical returns in respect of the carriage of goods by road.

EU Member States, with the exception of Malta,[26] as well as Norway, Liechtenstein (from 2005-2013), and Switzerland (Eurostat, n.d.-b). Data must be provided on three areas: vehicle, journey, and goods; their definitions and components are all explained in the Annex of the Regulation.

The required data for road freight transport are micro-data and their collection happens through questionnaires. These questionnaires are sent out to a sample of hauliers registered in the reporting Member State. The data collection is carried out by National Statistical Institutes or other Competent National Authorities (e.g. Ministries of Transport) in charge of data collection for road freight transport statistics (Eurostat, n.d.-b).

A detailed methodology of how these questionnaires are carried out by the different Member States is provided in a manual (European Union, 2018). This shows, for every participating Member State, the sample register used for the survey, and the sampling methodology. A short overview of the methodology of the six Member States of interest is provided in Table 2.1. As shown, a web questionnaire or Excel questionnaire is possible in Belgium, the Czech Republic, Germany, Austria, and Poland, whereas in Slovenia the questionnaire is only carried out on paper. The third column of Table 2.1 displays the response rate of the questionnaire, so the number of filled out questionnaires on the total number of questionnaires sent out. This rate is rather low in Belgium (52%), but especially high in Germany (96%) and Austria (100%). An explanation could be the methodology used by these Member States. Whereas Belgium only sends out one reminder after one month, Austria sends two reminders (3 and 5 weeks after the surveyed week). Furthermore, both in Germany and Austria a penalty procedure is commenced when the questionnaire is not returned (after 46 days and 11 weeks after the questionnaire was due respectively) (European Union, 2018).

The final column displays the sampling rate, which indicates the scope of the total population that is captured by the sample. This rate is lowest in Poland (8%), and highest in Austria (42%).

**Table 2.1 Methodology for road freight transport measurement [road_go], 2016, in %**

| | Type of questionnaire | Response rate [2] | Sampling rate [3] |
|---|---|---|---|
| Belgium | Paper or Excel | 52.1 | 14.9 |
| Czech Republic | Web or paper | 91.5 | 12.4 |
| Germany [1] | Web | 95.8 | 37.5 |
| Austria | Electronic or Excel | 99.7 | 41.6 |
| Poland | Electronic or paper | 73.9 | 7.6 |
| Slovenia | Paper | 72.9 | 35.3 |

[1] For DE, the response and sampling rate concern 2014.
[2] The response rate is defined as the number of questionnaires dispatched minus those classified as non-response divided by the number of questionnaires dispatched, expressed as a percentage.
[3] The sampling rate is defined as the 'Number of statistical units in the sample' divided by 'Number of statistical units in the population'. In this case, a statistical unit can be understood as a 'tractive vehicle', which is 'A vehicle equipped with prime mover and motor, or with motor only, intended either for hauling other vehicles (a 'locomotive') or for hauling other vehicles and/or for the carriage of passengers and/or goods (a 'railcar')' (European Union, United Nations, ITF & OECD, 2019:15).
**Source** European Union, 2018

The main advantage of Eurostat is its broad scope of data at European level. For the moment, Eurostat is the only source that provides complete statistical data available on the European road transport sector (Sternberg *et al.*, 2015). Although one can also look at national studies on the sector, for one thing there are not many national studies to look at (for instance on cabotage operations)

26 Malta is exempted from providing data, as long as the number of Maltese-registered goods road transport vehicles licensed to engage in the international carriage of goods by road does not exceed 400 vehicles. Therefore, Malta should annually submit the number of these vehicles to Eurostat (Article 1(3) of Regulation 70/2012).

(Vitols & Voss, 2019), and for another, this will make it challenging to compare between Member States and get an overview of the sector in the EU as a whole.

However, like all databases, there are some shortcomings. First, as seen in Table 2.1, Member States can use different types of questionnaires. Although some Member States have started using electronic questionnaires, many still rely on 'paper-pencil questionnaires', which can lead to incoherent and inconsistent results (Eurostat, n.d.-b; Fürst *et al.*, 2019). Furthermore, several variables are only defined as 'optional' in the Regulation, causing these data to be incomplete. In addition, even though it is set out what data should be collected and how it must be collected, many data are still missing in Eurostat (Sternberg *et al.*, 2015). For some Member States, the data are undisclosed and other Member States lack routines for collecting the data (Sternberg *et al.*, 2015). Take for instance the share of cabotage in different Member States. According to Eurostat, the share of cabotage in national transport in Austria amounts to 8.0%, whereas Kummer *et al.* (2016a) estimate this share to be 21.7%[27] (Vitols & Voss, 2019). In Germany, this difference was revealed as well. Although Eurostat reports a cabotage rate of 3.8%, other sources estimate the rate to be above 5.5% or even as much as 12.5% (Sternberg *et al.*, 2015). This problem is also noted by Eurostat itself, mentioning that 'the accuracy of data on cabotage is lower than the accuracy of other variables and the percentage standard error of cabotage transport varies significantly from country to country' (Vitols & Voss, 2019:16). These critiques should always be kept in mind when using these data to analyse the European road transport sector.

#### 2.3.1.2 Structural Business Statistics [sbs_na_1a_se_r2]

Besides the general data provided by Eurostat, they also publish Structural Business Statistics. These describe the structure, activity, competitiveness and performance of economic activities within the business economy down to the detailed level of several hundred sectors. These data are compiled from information concerning units engaged in economic activity; the types of statistical units observed are mainly enterprises (Eurostat, n.d.-d).

The regulation which governs the annual data collection for structural business statistics is set out by Regulation (EC) No 295/2008.[28] According to this regulation, business statistics are essential for economic analysis and policy formulation, as they make it possible to analyse the potential growth of a sector and the employment creation.

Data for Structural Business Statistics are generally collected by the National Statistical Institutes among enterprises, through statistical surveys, business registers or administrative sources (Eurostat, n.d.-e). They are provided by all EU Member States, Norway, Switzerland, and some candidate and potential candidate countries.

The data of interest for this report concern the Annual detailed enterprise statistics for services (NACE Rev. 2 H-N and S95) [sbs_na_1a_se_r2], as in this dataset it is possible to descend to the detailed level of NACE 4-digit, namely NACE 4941 'Freight transport by road'. There are three main categories of data collected by Structural Business Statistics: Business Demographics variables (e.g. number of enterprises), 'Output related' variables (e.g. turnover, value added), and 'Input related' variables, consisting of labour input (e.g. employment, hours worked), goods and services input (e.g. total of purchases), and capital input (e.g. material investments).

An advantage of the Structural Business Statistics is the detail available, especially on the European level. Seeing that the data collection is again regulated by EU legislation, data are standardised and comparable among Member States. Nevertheless, this Regulation is an output-oriented Regulation, leaving data providers the choice of data sources. In most countries, a combination of survey and

27 In this study, this share equals the amount of cabotage that was performed by Austrian companies in the total amount national transport operations. This means that while Kummer *et al.* (2016a) estimate that around one fifth of Austrian transport concerns cabotage performed by Austrian companies, Eurostat only gives an estimate of 8%.

28 Regulation (EC) No 295/2008 of the European Parliament and of the Council of 11 March 2008 concerning structural business statistics [amended by Commission Regulation (EC) No 251/2009 of 11 March 2009, Council Regulation (EU) No 517/2013 of 13 May 2013, and Commission Regulation (EU) No 446/2014 of 2 May 2014].

administrative data is used. Therefore, it is very hard to assess the accuracy of the administrative data (Eurostat, n.d.-e).

#### 2.3.1.3 International trade in services [bop_its6_det]

In addition to Eurostat statistics concerning the road transport specifically, data on the international trade in services included in the Balance of Payments (BOPS) is analysed.[29] The balance of payments is a statistical statement that summarises, over a given period of time, all the transactions of an economy with the rest of the world. The balance of payments records all economic transactions undertaken between the residents and non-residents of an economy during a given period. The balance of payments provides information on the total value of credits (or exports) and debits (or imports) for each BOP item and on the net result or 'balance' (credits minus debits) of the transactions with each partner (Eurostat, n.d.-g). Data on International Trade in Services Statistics (ITSS) are an important component of the BOP current account. In the production of data on International Trade in Services, the references are the IMF's Balance of Payments and International Investment Position Manual (BPM6) and the United Nations' Manual on Statistics of International Trade in Services.

The data collection is regulated by Regulation No 184/2005[30] and has been taking place from reference year 2006 onwards. Data are collected through questionnaires filled out by the national banks or the national statistical offices of the Member States and a number of administrative sources. Data for international trade in services are derived from a variety of surveys where the data can be reported either by the banks or directly by the enterprises or the households. These data on the trade in services allow us to put international road transport in perspective.

### 2.3.2 Orbis database

Orbis is a database from Bureau van Dijk which contains (non-)financial information from private companies across the world, currently more than 365 million companies and entities (Bureau van Dijk, n.d.-a). Data are collected from over 160 providers and own sources which are then treated, appended and standardised to ensure comparability (Bureau van Dijk, n.d.-b). This database is increasingly being used by academics studying multinational enterprises and tax analyses, among others (Rungi *et al.*, 2018; Nakamoto *et al.*, 2019), as it is a very extensive database, considered to be the 'most comprehensive commercially available company-level global database at present' (Nakamoto *et al.*, 2019:4).

In the Orbis database a broad scope of information can be consulted, including the address of the company, headquarters, the sector of activity, foreign subsidiaries and shareholders, financial information, balance sheet information, and information on directors, managers and advisors. In particular, information on foreign subsidiaries and shareholders is of great importance, taking into account the aim of this report. Seeing that we want to better understand the business structures in the European road haulage sector, this type of information is very valuable, and not possible to analyse based on our other data sources.

The Orbis database has several important advantages. First, its main asset is the detailed information on corporate ownership structures, which is unique among firm-level datasets (Luptak *et al.*, 2015; Ahmad *et al.*, 2018). Second, its coverage is very broad and balanced, not only in terms of type of information, but also in the countries and industries covered (Cortinovis & van Oort, 2015; European Commission, 2017a; Johansson *et al.*, 2017). Several studies have compared the coverage

29 Reported by Eurostat but also by other data sources: for instance the World Input Output Database (WIOD) (see http://www.wiod.org/release16), the UN Comtrade Database (see https://comtrade.un.org/data/), or the central balance sheet from Banco de Portugal Microdata Research Laboratory (BPLIM) (see https://msites-dee-bplim-prd.azurewebsites.net/datasets),

30 Regulation (EC) No 184/2005 of the European Parliament and of the Council of 12 January 2005 on Community statistics concerning balance of payments, international trade in services and foreign direct investment.

of Orbis to other sources, namely OECD, Eurostat data, data from commercial registers, or Cambridge Econometrics (Cravino & Levchenko, 2014, 2016; Merlevelde *et al.*, 2015; Gerner-Beuerele *et al.*, 2016). These studies concluded that Orbis captures reality quite well, as the database approximates the structure of the European economy across countries, regions and industries. Third, seeing that data are standardised, there is a certain degree of consistency between data from different countries, which would be impossible to achieve when using different national datasets (Luptak *et al.*, 2015). The fourth main advantage is the detail of the information that can be retrieved. As a result, the profile of a company can be thoroughly analysed, for instance by looking at its ownership structure, its address, legal form, year of incorporation, network analysis, and much more. This level of detail is not possible in Eurostat, hence illustrating Orbis' main advantage over Eurostat.

However, there are also certain important shortcomings of the Orbis database, which cannot be overlooked. First, some information is not possible to download without additional access, although it is possible to consult these data in the database itself. This is for instance the case for data on the location of a foreign shareholder and foreign subsidiary. Furthermore, there is a limit on the amount of data that can be downloaded at the same time. Consequently, for downloading large volumes of data, which is often necessary for research like this, the platform is rather slow (Kalemli-Ozcan *et al.* 2015). Second, the data in the database is regularly updated, which is of course beneficial in order to analyse the most up-to-date-information (see Table 2.2 for the update frequency of the six discussed Member States). However, it can also lead to inconsistencies when data are downloaded several days apart.[31] The third disadvantage of the Orbis database can be regarded as the most pressing issue, namely missing data. Although the broad coverage of Orbis is one of its main advantages, its coverage is not complete, which is understandable, as Orbis is not an administrative dataset (European Commission, 2017a; Johansson *et al.*, 2017). Firms included in Orbis only represent a fraction of the entire firm population, and the firms included in the database are on average larger, older and more productive (Bajgar *et al.*, 2020). Connected to this disadvantage is the missing data for certain variables in various countries. The principal reason for missing data seems to relate to the different accounting rules and obligations with regard to the provision of information in different countries. Additionally, data are collected from different sources across countries, such as chambers of commerce, local public authorities, and credit institutions (Johansson *et al.*, 2017). As a result, the availability of information might differ between countries and sectors (Ahmad *et al.*, 2018; Tørsløv *et al.*, 2018). It was also found that since larger firms often have stricter data reporting requirements, they are better covered in the database, and smaller firms might be underrepresented (Johansson *et al.*, 2017; Cortinovis & van Oort, 2015). However, missing data of a certain firm could also indicate a 'red flag' of intentional non-reporting, for instance in the case of a letterbox company.

In general, it should be kept in mind that not every company in Europe is present in the Orbis database. Nonetheless, as stated above when summarising Orbis' benefits, its overall coverage is certainly adequate. For the six Member States of interest, the total number of companies available in the Orbis database is shown in Table 2.2. Furthermore, the number of public and private limited companies as well as sole traders included in the Orbis database is presented. It can be seen that especially in the Czech Republic and Poland a high share of the information for total number of companies originates from sole traders.

31 For this reason, every time Orbis data are used in the analysis, the date of data extraction is mentioned in a footnote.

**Table 2.2 Update frequency and data availability in Orbis database**

| | Update frequency | Total number of companies* | Of which public and private limited companies | Of which sole traders |
|---|---|---|---|---|
| Austria | Twice a month | 806,050 | 179,954 | 124,125 |
| Belgium | Weekly | 2,505,782 | 496,348 | 697,363 |
| Czech Republic | Weekly | 2,170,754 | 436,903 | 1,171,686 |
| Germany | Weekly/Monthly | 2,827,378 | 1,687,175 | 142,315 |
| Poland | Monthly | 1,851,029 | 361,909 | 1,125,979 |
| Slovenia | Monthly | 282,107 | 80,969 | 146,879 |

* This number includes all active companies available in the database up until 15 April 2020. The different standardised legal forms available in Orbis are public limited company, private limited company, sole trader/ proprietorship, partnership, public authority, non-profit organisation, branch, foreign company, and other legal form.

** For an overview of Information partners and update frequency by country see https://help.bvdinfo.com/LearningZone/Products/orbis4.1/Content/I_Data/Coverage/UpdateFrequencyByCountry.htm (only accessible after login).

**Source** Orbis database** [Data extracted 15 April 2020]

### 2.3.3 Data collected by the Network Statistics FMSSFE

The final sources concern data collected by the Network Statistics FMSSFE (free movement of workers, social security coordination and fraud and error), more specifically data from A1 certificates, prior notification tools, and the report on fraud and error. The first two are both useful to analyse the number of postings in the transport sector, and the final source will shed more light on infringements especially related to postings.

The Network Statistics FMSSFE is set up by the European Commission - DG Employment, Social Affairs and Inclusion. This network of experts collects and analyses statistics and administrative data on intra-European free movement of persons, European coordination of social security systems and the constraint of fraud and error. The network consists of experts from HIVA (KU Leuven), Milieu Ltd, IRIS (UGent), Szeged University and Eftheia. The statistical reports cover intra-EU labour mobility and social security coordination, which consists of applicable social security legislation, cross-border healthcare, unemployment benefits, family benefits, old-age, survivors and invalidity pensions, and measures to tackle fraud and error.[32]

The first source we look at is data from the A1 certificates. In order to prove that a person is subject to a social security system a Portable Document A1 (PD A1) is issued by the Member State whose legislation remains applicable. This certificate concerns the social security legislation that applies to a person and confirms that this person has no obligations to pay social security contributions in another Member State. A PD A1 is not only issued to posted persons (Article 12 of the Basic Regulation)[33] but also to several other mobile workers, such as persons who pursue an activity in two or more Member States (Article 13 of the Basic Regulation), mariners and flight or cabin crew members (De Wispelaere *et al.*, 2020). Especially the number and evolution of PDs A1 issued under Article 13 (i.e. being active in two or more Member States) is relevant for the analysis of the transnational dimension of the road freight sector. PD A1 data thus concern data from a sending perspective, because it is the sending Member State that issues these forms when workers go abroad.

In addition, a second data source from the Network FMSSFE is analysed, namely data from the prior notification tools (De Wispelaere *et al.*, 2019). These tools are set up in the host Member States

32 See https://hiva.kuleuven.be/en/news/newsitems/Reports-on-social-security-coordination-and-intra-EU-labour-mobility-20171212 for an overview of the published reports.

33 Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems (i.e. 'Basic Regulation').

and include data on incoming posting undertakings and their workers. The Enforcement Directive[34] allows Member States to require a service provider established in another Member State to make a 'simple declaration' containing the relevant information necessary in order to allow factual controls at the workplace. All Member States[35] have used this opportunity to implement a prior notification tool for incoming posting undertakings and the workers concerned. Data collected from prior notification tools concern data from a receiving perspective, because it is the host Member State that asks information about incoming posted workers and undertakings.

These two data sources are complementary, as they look at postings from a different perspective. However, their personal scope is not necessarily the same. For instance, self-employed persons falling under Article 12 (2) of the Basic Regulation are not covered by the Posting of Workers Directive. Consequently, most prior notification tools exempt posted self-employed persons. In contrast, workers who pursue an activity in two or more Member States (Article 13 and not 12(1) of the Basic Regulation) may fall under the Posting of Workers Directive. These workers may have to be reported in the prior notification tools.

Overall, these data sources only provide an indicative picture of the phenomenon of intra-EU posting. In some/many cases, a posting may take place without the institutions being informed of it. Consequently, the number of PDs A1 issued and its evolution may depend on the number of inspections performed by the enforcement bodies in the host Member State, to what extent host Member States impose administrative fines in case of failure to show a PD A1 but also to what extent posting undertakings are aware of the application procedures in the Member State of origin. Data from prior notification tools also have restraints, as the content of the notification tools may vary considerably between Member States. In most Member States, the obligation to register only applies to posted workers and not to self-employed. The majority of Member States also require the registration of posting undertakings from countries outside of the EU-28/EFTA. Furthermore, several Member States exempt certain activities or sectors from notification (e.g. persons attending business meetings, academic conferences, international truck drivers, professional artists, athletes etc.), which makes comparison between EU Member States challenging. For instance, Belgium, Poland and Slovakia stated that postings related to international transport are exempted from notification (De Wispelaere *et al.*, 2019). Additionally, Denmark and Poland explicitly exclude cabotage operations from notification.

A third and final source of data is the report on fraud and error in the field of EU social security coordination. This will primarily be used to analyse infringements regarding the use of the A1 certificate. However, this data source is not transport specific, and many data are often lacking. Nevertheless, it gives a first idea of the kinds and extent of inappropriate use taking place.

## 2.4 Variables analysed

In this final section of the methodology, the variables used in this research are looked at in more detail. As could be seen in Section 2.3, certain sources have a multitude of variables available. As a result, several variables can be looked at using different sources. Table 2.3 displays the variables that are analysed in this research, along with the source(s) in which they can be consulted. It concerns the data available on a European level. It is often useful to complement these data with information on a national level, which will then be described in the report where necessary.

For every variable, only one source is used in the final research (indicated with an asterisk in Table 2.3). However, in a first stage when analysing a variable, the available sources are compared to

34 Directive 2014/67/EU of the European Parliament and of the Council of 15 May 2014 on the enforcement of Directive 96/71/EC concerning the posting of workers in the framework of the provision of services and amending Regulation (EU) No 1024/2012 on administrative cooperation through the Internal Market Information System ('the IMI Regulation')

35 An exception is the United Kingdom, which has not implemented a prior notification tool. Although the United Kingdom is no longer a Member State of the EU, it is still included in this research, as it mostly entails data from when it was still a member of the EU.

each other and the possibly different results explained. This indicates that understanding the methodology and source material is crucial in any research, and different sources might lead to different results.

For statistics on the *road transport sector* in general, Eurostat will be used. The number of new vehicle registrations is available through both Eurostat and the European Automobile Manufacturers Association (ACEA). The final source chosen in this regard is ACEA, as its data are more complete and more recent.

*Employment statistics* mainly originate from the Structural Business Statistics. For the number of driver attestations, data from the European Commission are used, and postings are analysed using information from the Network Statistics FMSSFE.

The *company statistics* compromise data from the Structural Business Statistics and the Orbis database. For variables that are available in both datasets, the Structural Business Statistics are preferred, as they are completer and more standardised. As seen in Section 2.3, not every company in the EU is available in Orbis, whereas the data collection for Structural Business Statistics is set out in an EU regulation.

The final few variables, however, concerning the *cross-border elements*, are consulted through Orbis, as this is the only possibility. The database gives a very detailed overview of companies, which makes it possible to perform a comprehensive analysis of variables that are not available anywhere else on a European and individual country level. For the international trade in services, BOP from Eurostat is consulted.

**Table 2.3 Variables and sources used in the research**

| Variable | Source |
|---|---|
| **Road freight transport statistics** | |
| Annual road freight transport | Eurostat |
| Volume of freight transport relative to GDP | Eurostat |
| Modal split of freight transport | Eurostat |
| Number of Community Licences | European Commission |
| Number of new vehicle registrations | European Automobile Manufacturers Association*<br>Eurostat |
| Number of vehicles | Eurostat |
| **Employment statistics** | |
| Number of employees | Structural Business Statistics*<br>Orbis |
| Number of driver attestations | European Commission |
| Personnel cost | Structural Business Statistics*<br>Orbis |
| Wages and salaries | Structural Business Statistics*<br>Orbis |
| Number of postings (sending perspective) | PD A1 (Network Statistics FMSSFE) |
| Number of postings (receiving perspective) | Prior notification tools (Network Statistics FMSSFE) |
| Infringements | Report Fraud & Error (Network Statistics FMSSFE) |
| **Company statistics** | |
| Number of companies | Structural Business Statistics*<br>Orbis |
| Turnover | Structural Business Statistics*<br>Orbis |
| Address | Orbis |
| Year of incorporation | Orbis |
| **Cross-border elements** | |
| Companies with a foreign majority shareholder | Orbis |
| Companies with a foreign subsidiary | Orbis |
| International trade in services | BOP (Eurostat) |

* When two data sources have the same necessary data available, the data source with the asterisk is used in the final analysis.

**Source** Own analysis

# 3 | The EU road transport sector

In this chapter, first a general overview of the road transport sector is provided, looking at the volume and kind of transport in the EU. Next, the number of companies and trucks in this sector are analysed, as well as the number of Community Licences issued by the EU. In a following section, the profile of companies active in the road transport sector is investigated, meaning the average turnover and personnel cost per enterprise. In Section 3.4, employment in the sector is looked at. In the next section of this chapter the cross-border elements in the sector are discussed, more specifically the number of companies with a foreign majority shareholder and foreign subsidiary, as well as the international trade in services. Finally, infringements in the road transport sector are looked at in more detail.

Whenever Eurostat data are used, the data concern companies active under NACE 4941 'Freight transport by road', as this is the intended focus of this report. However, the reader should be aware of the fact that certain companies active in the road transport sector do not operate under this NACE-code, for instance when they own no trucks but subcontract to other companies. It is of course challenging to include these companies in the analysis, as they could be 'scattered' all over other industries. Therefore, in the Eurostat data only NACE 4941 is looked at.

Also in Orbis, this problem arises. However, in this database, it is also possible to select companies based on other industry classifications, such as the US SIC (Standard Industrial Classification) or NAICS 2017 (North American Industry Classification System). In appendix 1, we take a look at the number of companies under each relevant code in these classifications, and then see what other codes they received. This makes it clear that the most important NACE-code is 4941 'Freight transport by road'. Seeing that the NACE-classification is utilised by Eurostat, we also use this classification, and more specifically NACE-code 4941, to filter the data in the Orbis database. This creates an important limitation in this research, as some companies active in the road transport sector will not operate under the primary NACE-code 4941. However, opting for this NACE-code is an unambiguous choice that ensures clarity and comparability with the Eurostat data and other research. In this research, a certain classification is adopted, which is not always a reflection of reality, but rather a proxy to reality.

## 3.1 General overview of the EU road transport sector

The importance of the freight transport sector differs considerably between Member States. For instance, in 2017, in Estonia, Malta, and Ireland, the index of the volume of the road transport sector relative to the GDP lies below 70.[36] This indicator provides information on the relationship between the demand for freight transport and the size of the economy. It means that in the aforementioned countries, GDP grew at least 30% faster than freight transport. In Poland, the Czech Republic and Slovenia on the other hand, the index surpasses 110, meaning that freight transport grew more than 10% faster than the total economy. The EU-28 average index amounts to 97.5, indicating that the road transport sector is an important sector in general and a key indicator of economic development, as it grows closely to the GDP. When analysing this variable, a division can be noticed between EU-15 and EU-13 Member States. In 2017, the median for the EU-15 was 94.1, whereas the EU-13

36 Eurostat [tran_hv_frtra] (index of inland freight transport volume relative to GDP, 2010=100).

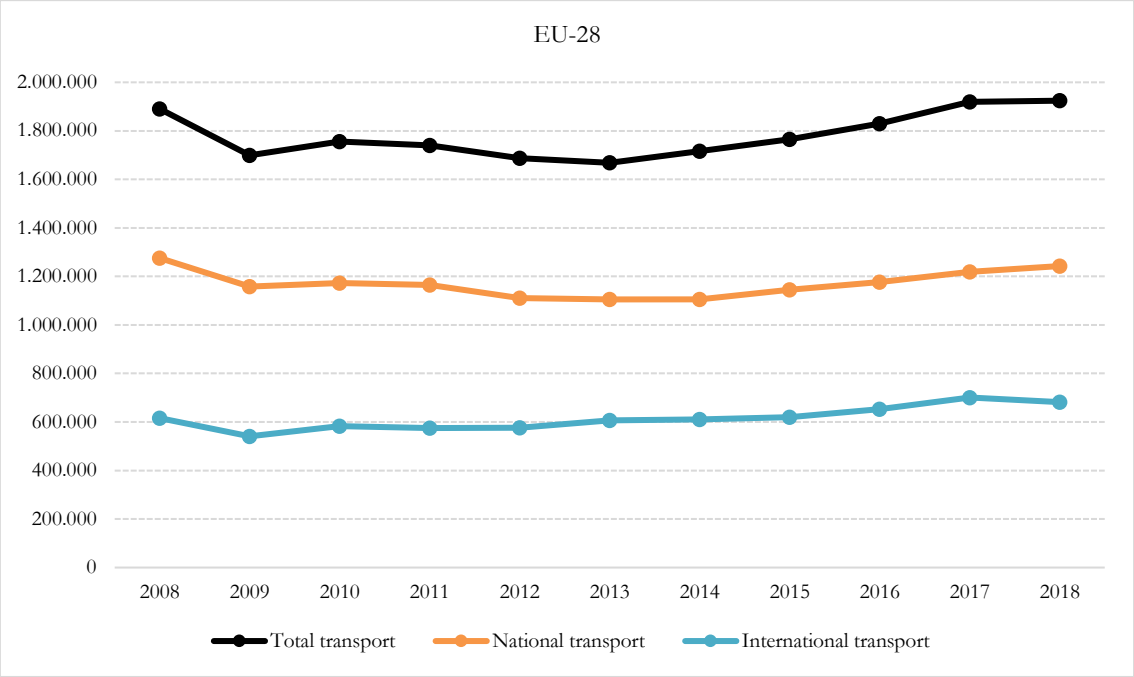
median was 100.6. This indicates that in EU-13 Member States, the transport sector is growing at a similar pace as the GDP, while in EU-15 Member States the transport sector is growing more slowly. Therefore, it can be said that western European transport companies are taking less advantage of the economic growth. In a way, this is an example of how the internal market contributes to a redistribution of economic growth within the EU. Nonetheless, the competitive advance of EU-13 hauliers might result in some unwanted effects. For instance, public investments intend to increase the employment level and the economic growth of a country. However, due to an 'import leakage' (Little & Doeksen, 1968), it might be the case that mainly foreign companies and employers benefit from such a policy.

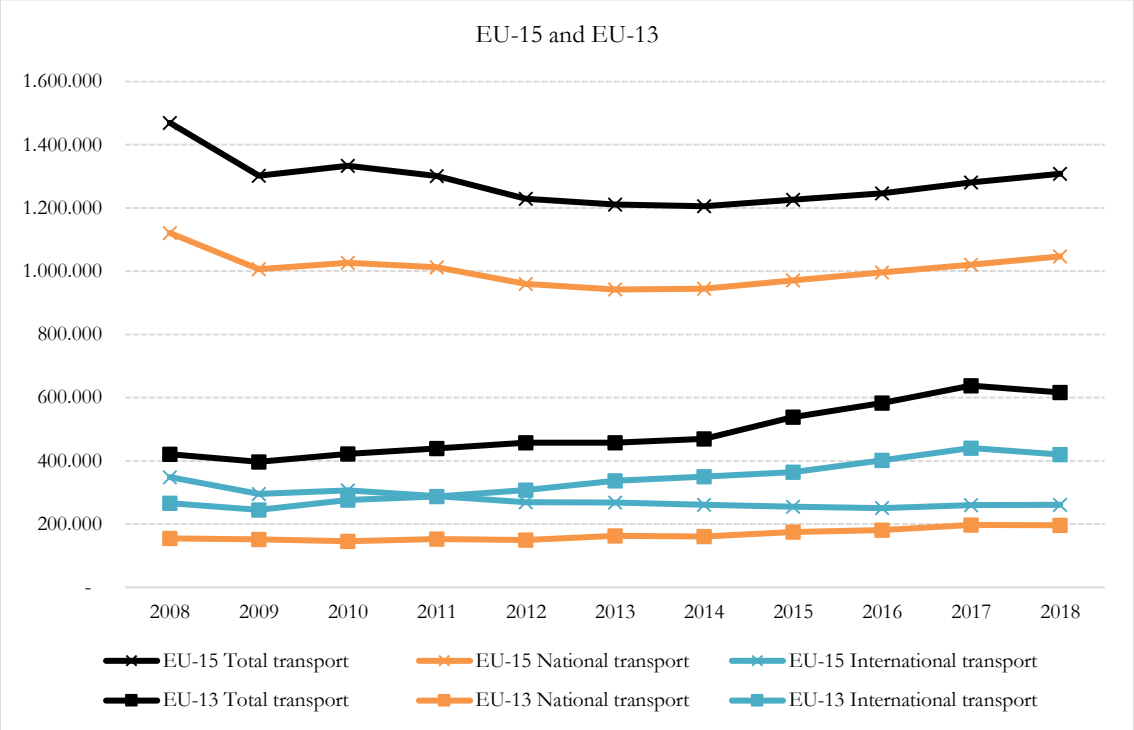
Figure 3.1 gives an overview of the annual road freight transport in the EU-28. This figure shows the amount of million tonne-km that was carried out in road transportation between 2008 and 2018. One tonne-km means that one tonne of goods is transported over a distance of one kilometre. In total in the EU-28, the road freight transport activity in 2018 amounted to 1,924 billion tonne-km. In 2009, there was a clear dip in the amount of transport performed, both international and national. Over the years however, both types of transport picked up again. From 2009 to 2018, EU-28 national transport grew by 7.3% and international transport by 26.0%, indicating that international transport is gaining importance. However, the distribution between both types has remained steady over the years. In 2008, 67% of transport performed by EU-28 Member States was national transport. The distribution in 2018 amounts to 65% national transport and 35% international transport.

The bottom panel of Figure 3.1 highlights the differences between EU-15 and EU-13 Member States. In total, EU-15 Member States still perform the bulk of transport in the EU-28, namely 1,308 billion tonne-km in 2018 versus 616 billion tonne-km by EU-13 Member States. However, the evolution for both groups is clearly contrasting. From 2008 to 2018, the total transport performed by EU-15 dropped by 11%, while the transport performed by the EU-13 grew by 46%. A remarkable point in this figure is the year 2011. From this moment on, the EU-13 international transport surpassed the EU-15 international transport. This means that more international transport operations (in terms of tonne-km) were provided by EU-13 hauliers than by EU-15 hauliers. In 2008, the division of international transport amount to 57% by EU-15 hauliers and 43% by EU-13 hauliers. In 2018, however, the shares amount to 38% and 62% respectively.

A more detailed breakdown of the type of transport is provided in Figure 3.2. In EU-15 Member States, national road freight transport is of greater importance than international transport, namely an 80-20 breakdown in 2018. In EU-13 Member States, the opposite is true, as in 2018, this breakdown was 32% national road freight transport, and 68% international transport. This figure also shows the evolution of the types of transport from 2008 to 2018. As could be seen in Figure 3.1, both types of transport have decreased for EU-15 Member States, but Figure 3.2 shows that national transport has gained importance in total transport, as the market share of international transport has decreased more. In EU-13 Member States, international transport became more important. For instance, some 30% of total international transport is provided by Poland. Furthermore, the share of cabotage performed by EU-13 Member States has increased from around 0.6% in 2008 to 5.0% in 2018, and cross-trade also grew by 7.5 percentage points.

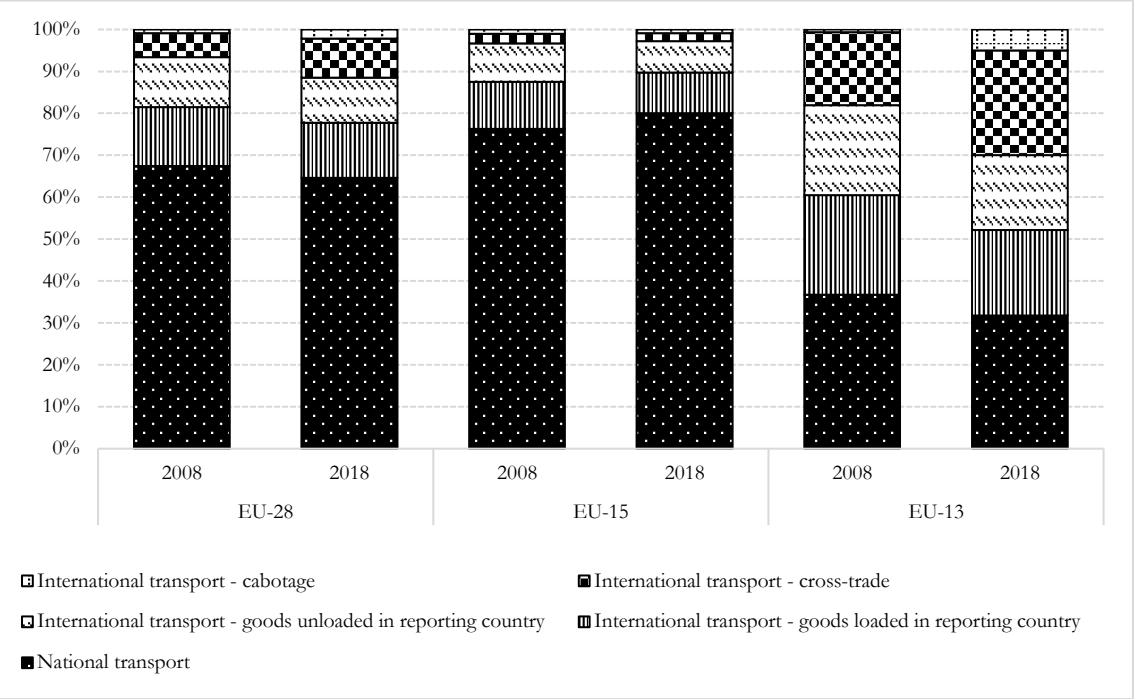
**Figure 3.1** **Annual road freight transport, in million tonne-km, EU-28, EU-15, EU-13, 2008-2018**




**Source** Eurostat [road_go_ta_tott]

**Figure 3.2** **Road freight transport by type of transport, share in total tonne-km, 2008 and 2018, EU-28, EU-15 and EU-13**




**Source** Eurostat [road_go_ta_tott]

In the Eurostat data, international transport consists of 'goods loaded in the reporting country', 'goods unloaded in the reporting country', 'cross-trade', and 'cabotage'. Cross-trade is defined as international road transport between two different countries performed by a road motor vehicle registered in a third country. Cabotage is national transport undertaken by hauliers from another Member State.[37] The evolution of these types of transport from 2008 to 2018 is presented in Table 3.1. Overall, the EU-28 has known a moderate positive trend for transport (+2%), although this is due to the growth in international transport (+11%) instead of national transport (-3%). The main type of transport that increased is cabotage, as it more than doubled (+147%).

However, the evolution is quite contrasting in EU-15 and EU-13 Member States. Whereas the total transport dropped by 11% for EU-15 Member States, it grew by almost 50% in EU-13 Member States. Furthermore, the amount of international transport by EU-15 Member States even decreased by 25%, and all different types also knew a drop. In EU-13 Member States on the other hand, considerable growth can be noticed, especially in international transport (+58%). Additionally, the type of transport that grew the most is cabotage, with a remarkable +1,055%.

Of course, the impact of the financial crisis cannot be forgotten when looking at the evolution from 2008 to 2018. As could be seen in Figure 3.1, there was a serious dip in transport in 2009. It is indeed the case that this crisis had a severe impact on the transport sector, especially the road transport sector, thus indicating the sector's sensitivity to the economy and its fluctuations (Moschovou, 2017; Moschovou & Tyrinopoulos, 2018). Therefore, a recovery seems to be taking place. However, as both Figure 3.1 and Table 3.1 indicate, the EU-13 Member States appear to be bouncing back quicker than the EU-15 Member States. Nevertheless, the COVID-19 crisis will also be demanding for companies to recover from, albeit variously for different subsectors. By the beginning of May 2020, revenues of road freight transport companies had already fallen by 40% (PWC, 2020; IRU, 2020). Furthermore, the number of new contracts had dropped by 60 to 90% compared to 2019 and the number of empty runs increased considerably.

37 This type of transport is classified under 'international transport', as from the point of view of the haulier, it concerns international transport.

**Table 3.1 Evolution of national and international freight transport by road, in tonne-km, EU-28, EU-15 and EU-13, 2008-2018, in %**

| | EU-28 | EU-15 | EU-13 |
|---|---|---|---|
| Total transport | +2 | -11 | +46 |
| National | -3 | -7 | +27 |
| International | +11 | -25 | +58 |
| * Goods loaded in reporting country | -5 | -23 | +25 |
| * Goods unloaded in reporting country | -8 | -28 | +23 |
| * Cross-trade | +65 | -29 | +109 |
| * Cabotage | +147 | -18 | +1,055 |

**Source** Eurostat [road_go_ta_tott]

The Member State where most of cabotage takes place is undoubtedly Germany, as in 2018 46% of all cabotage in the EU occurred in this Member State.[38] France follows in second place with 26%, meaning that almost three quarters of all cabotage operations in the EU take place in these two Member States. However, it is better to look at relative numbers instead of absolute ones in this case. Therefore, Figure 3.3 shows the cabotage penetration rate in 2008 compared to 2018. This rate shows the share of cabotage taking place in a certain country in the total national transport in that country, thus indicating the market share of foreign hauliers in total national transport activities.

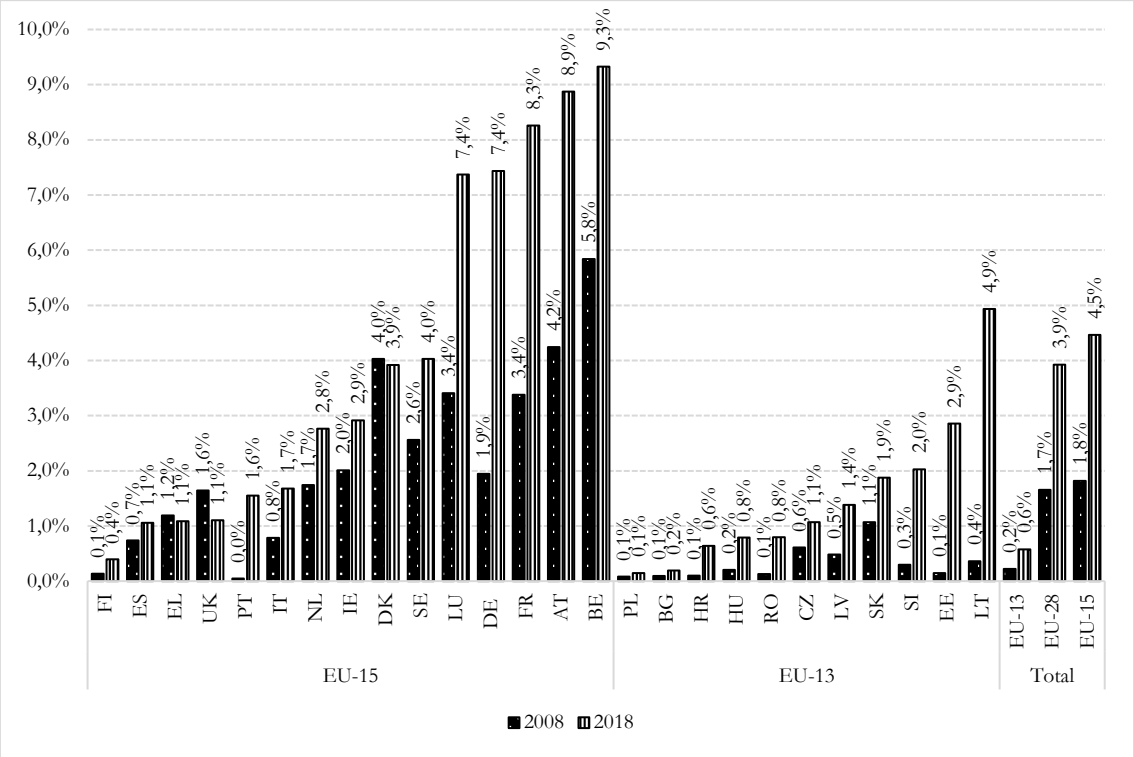
In 2018, the cabotage penetration rate in the EU-28 amounted to 3.9%. However, this average is influenced by certain Member States with a relatively high penetration rate, for instance Belgium (9.3%), Austria (8.9%), France (8.3%), Germany (7.4%), and Luxembourg (7.4%). The median value only amounts to 1.8%. Nevertheless, it is clear that for almost all Member States, the cabotage penetration rate has increased from 2008 to 2018 (with the exception of EL, UK and DK, although the decrease only amounted to less than 1 percentage point for each Member State). In certain Member States, the growth of the cabotage penetration rate is remarkable. For instance, in Lithuania, Germany, France, and Austria, the growth goes beyond 4.5 percentage points.

Furthermore, the figure indicates that in general in the EU-15, the cabotage penetration rate is remarkably higher (4.5%) compared to the EU-13 (0.6%). One exception is Lithuania, where almost 5% of national transport is carried out by foreign hauliers, which is a remarkable growth compared to 2008 when the cabotage penetration rate only amounted to 0.4%. This growth is due to the growth of the cabotage in tonne-km taking place in Lithuania, which grew from 5,415,000 tonne-km to 133,475,000 tonne-km, or a growth of 2,365%.

Overall, it is clear that national transport is still predominantly carried out by domestic road freight transport companies, even though cabotage is on the rise, and its true size is probably still underestimated. However, as was already mentioned in Section 2.3.1 about Eurostat, data on cabotage could be less reliable. Seeing that cabotage itself only takes up a small part of total road transport, its accuracy might be lower than other variables (Eurostat, 2018).

38 Eurostat [road_go_ca_c].

**Figure 3.3 Cabotage penetration rate*, 2008 and 2018, EU-28**




* The cabotage penetration rate is the share of cabotage transport in total national transport, where total national transport is the sum of national transport (for hire and reward) and cabotage transport (in that country).

** CY and MT did not have data available.

**Source** Eurostat [road_go_ta_tott] and [road_go_ca_c]

An import consequence of road transport is its negative effect on the environment. In the last decade, transport accounted for a third of all final energy consumption in the EU, and more than a fifth of greenhouse gas emissions (Alises & Vassallo, 2015:141). Furthermore, road transport is the most energy and carbon intensive mode of transportation. As a result, the concept of 'decoupling' has become an essential goal in road freight transport, and even some sort of 'holy grail'. This means that the traditional link between economic growth and road transport activity is broken (Alises & Vassallo, 2015). As a result, the economy can grow without the need for more transport and its externalities (McKinnon, 2007). Although the European Commission itself also considered decoupling to be a key means to improve sustainability (Alises & Vassallo, 2015), it has now stepped away from this idea. Rather than decoupling economic and transport growth, mobility itself must be disconnected from its negative side effects (Aditjandra, 2018).

Nevertheless, it is possible to investigate whether decoupling has indeed taken place in the road transport sector, by comparing the change in GDP and transport performed by each Member State from 2008-2018, as is done by Alises and Vassallo (2015). The complete analysis including a figure can be found in appendix 2.

In general, the correlation between the change in GDP and transport carried out is very weak (+0.13), which already indicates that the relationship between both variables is not substantial. It seems that in almost all Member States, a decoupling took place. Only in Bulgaria, Latvia, Lithuania, Poland, Slovenia, and Slovakia a (weak) expansive negative decoupling was found, seeing that the GDP grew, and the transport performed even stronger. In all other Member States, there is a (weak) decoupling. This decoupling can be explained by technological changes, transition to more service-oriented economies and efficiency objectives (Alises & Vassallo, 2015).

Additionally, decoupling might also be used to measure the 'flagging out' of companies (as well as the 'import leakage'). Despite the economic growth, the growth of the transport sector did not follow in certain EU-15 Member States, which could indicate the flagging out of companies (and a high 'import leakage'). Seeing that there is a single market for European road haulage, a growth of GDP in a particular Member State does not necessarily lead to a growth in transport performed by that Member State, as the sector operates in a pan-European market (Alises & Vassallo, 2015).

## 3.2 Companies active in the EU road transport sector

In the road transport sector, 571,795 companies were active in the EU-28 in 2017 (Table 3.2). Out of these, 64% were active in the EU-15, and the remaining 36% in the EU-13. Over 103,000 of these companies are active in Spain, or 18% of all EU-28 companies. Furthermore, a high share of companies is located in Poland (15%), Italy (11%), and the United Kingdom (8%). In other Member States, the number of companies active in this sector is rather small, as it is below 1% of all EU-28 companies in the road transport sector (DK, EE, IE, HR, CY, LV, LU and MT).

Although we consider Eurostat to be the most reliable source in terms of number of companies active in a certain sector, it is also possible to look at the number of companies in the Orbis database. In general, the total number of companies in the EU-28 approximates the number of companies found in Eurostat, namely 443,592 in Orbis versus 571,795 in Eurostat. However, when looking at the different Member States, there are considerable differences between the two sources. In the Orbis database, the top 5 countries where most of the road transport companies are located are Poland (14.1% of all companies), Italy (10.9%), Romania (9.3%), France (8.5%), and the United Kingdom (8.2%). This already shows that the data provided by Eurostat and Orbis are quite different, as according to Orbis, 'only' 7.8% of all road transport companies in the EU are located in Spain, whereas Eurostat showed a share of 18.1%. Similarly, in Germany, the share of companies in Eurostat is remarkably higher (6.3%) than in Orbis (1.9%). The opposite can be noticed for Romania as its share amounted to 5.1% in Eurostat and 9.3% in Orbis.

To analyse the different results of both sources further, the absolute difference is provided in the fifth column, as well as the share of the Eurostat companies in Orbis companies in the sixth column. The closer the value in this last column approximates 1, the more equal the coverage between both sources. When the value is below 1, more companies were found in Orbis, whereas if the value exceeds 1, Eurostat reported more companies. To give an example, in Eurostat it was found that 7,494 road freight transport companies are located in Belgium, whereas Orbis found 10,977 companies. Therefore, the absolute difference is -3,483 companies (= 7,494 - 10,977), and the share of Eurostat in Orbis amounts to 0.68 (= 7,494/10,977). This means that in Eurostat, only around 68% of the number of companies in Orbis were reported. In general, 29% more EU-28 companies were found in Eurostat than in Orbis. However, the difference is almost entirely caused by companies located in the EU-15, as 56% more companies were found in Eurostat than in Orbis, whereas for the EU-13 1% fewer companies were found in Eurostat compared to Orbis.

For 15 Member States,[39] the Orbis database returned more companies than were found in Eurostat. Especially in Belgium, Bulgaria, and Luxembourg, the difference is quite impressive, as Eurostat only found 68%, 64% and 67% of the Orbis companies respectively. A possible reason could be the legal forms that are included in both datasets. In Eurostat, it concerns the number of enterprises, which

39 BE, BG, CZ, DK, EE, FR, HR, LV, LT, LU, NL, RO, SI, SK and FI.

according to its definition[40] also include partnerships and sole traders for instance. Therefore, in the Orbis database, all standardised legal forms[41] were included. However, when excluding certain legal forms in Orbis which are not explicitly mentioned in the definition and examples given by Eurostat, it is possible that the number of companies becomes more similar. Hence, an analysis was conducted in Orbis by only including companies active under the forms public limited company, private limited company, partnership, and sole trader. For Belgium and Luxembourg there were still more companies found in Orbis, but the coverage rose considerably, as the numbers now amounted to 90% and 82% of the number of companies found in Eurostat. However, for Bulgaria, almost the same number of companies was found. Thus, another reason could just be that in Orbis, a certain misclassification takes place, for instance concerning the NACE-code. In addition, the Orbis database uses many different sources in order to collect information on companies, for instance from chambers of commerce, local public authorities, and credit institutions. If a company is classified under NACE-code 4941, this company is included in our search, whereas in Eurostat the data are based on a questionnaire executed with companies that are confirmed to work primarily under NACE 4941.

The remaining 13 Member States[42] had more companies according to Eurostat in comparison to Orbis. In certain Member States, the difference is remarkable. For instance, in Spain, Eurostat reported 68,684 companies more than Orbis did, or almost three times as much (2.98). In relative terms, the difference is especially exceptional in Greece, where Eurostat reported almost 44 times more companies than Orbis, as well as in Malta (12 times more), Germany (4 times more), and Ireland (4 times more). The reason for these large differences lies in the coverage of Orbis. This was discussed in Section 2.3.2 and should be repeated: not all companies active in the EU-28 are represented in Orbis. Furthermore, different sources are used in different Member States, which can also give another view.

For this reason, the Orbis database will only be used to analyse certain variables that are not possible to analyse anywhere else (see Section 2.4; for instance foreign majority shareholders or foreign subsidiaries). Eurostat remains superior in terms of coverage and standardisation to give an overview of the EU-28.

40 An enterprise is an organisational unit producing goods or services which has a certain degree of autonomy in decision-making. An enterprise can carry out more than one economic activity and it can be situated at more than one location. An enterprise may consist out of one or more legal units. Legal units include legal persons whose existence is recognised by law independently of the individuals or institutions which may own them or are members of them, such as general partnerships, private limited partnerships, limited liability companies, incorporated companies etc. Legal units as well include natural persons who are engaged in an economic activity in their own right, such as the owner and operator of a shop or a garage, a lawyer or a self-employed handicraftsman.' (Eurostat, n.d-f).

41 Public limited company, private limited company, partnership, sole trader/proprietorship, public authority, nonprofit organisation, branch, foreign company, and other legal form.

42 DE, IE, EL, ES, IT, CY, HU, MT, AT, PL, PT, SE and UK.

**Table 3.2 Number of companies active under NACE 4941 'Freight transport by road', comparison between Eurostat and Orbis data, 2017, EU-28**

| | Eurostat (A) | Column % Eurostat | Orbis (B)* | Column % Orbis | Difference in absolute numbers (A - B) | Share of Eurostat in Orbis (A/B) |
|---|---|---|---|---|---|---|
| **BE** | 7,494 | 1.3 | 10,977 | 2.5 | -3,483 | 0.68 |
| **BG** | 13,245 | 2.3 | 20,724 | 4.7 | -7,479 | 0.64 |
| **CZ** | 30,979 | 5.4 | 34,377 | 7.7 | -3,398 | 0.90 |
| **DK** | 4,644 | 0.8 | 4,939 | 1.1 | -295 | 0.94 |
| **DE** | 35,873 | 6.3 | 8,541 | 1.9 | 27,332 | 4.20 |
| **EE** | 3,101 | 0.5 | 4,284 | 1.0 | -1,183 | 0.72 |
| **IE** | 4,706 | 0.8 | 1,305 | 0.3 | 3,401 | 3.61 |
| **EL** | 16,653 | 2.9 | 379 | 0.1 | 16,274 | 43.94 |
| **ES** | 103,420 | 18.1 | 34,736 | 7.8 | 68,684 | 2.98 |
| **FR** | 31,043 | 5.4 | 37,892 | 8.5 | -6,849 | 0.82 |
| **HR** | 5,304 | 0.9 | 6,018 | 1.4 | -714 | 0.88 |
| **IT** | 62,752 | 11.0 | 48,239 | 10.9 | 14,513 | 1.30 |
| **CY** | 785 | 0.1 | 464 | 0.1 | 321 | 1.69 |
| **LV** | 3,165 | 0.6 | 3,466 | 0.8 | -301 | 0.91 |
| **LT** | 5,822 | 1.0 | 7,502 | 1.7 | -1,680 | 0.78 |
| **LU** | 409 | 0.1 | 607 | 0.1 | -198 | 0.67 |
| **HU** | 14,117 | 2.5 | 12,716 | 2.9 | 1,401 | 1.11 |
| **MT**** | 306 | 0.1 | 25 | 0.0 | 281 | 12.24 |
| **NL** | 10,893 | 1.9 | 11,727 | 2.6 | -834 | 0.93 |
| **AT** | 6,364 | 1.1 | 6,150 | 1.4 | 214 | 1.03 |
| **PL** | 86,834 | 15.2 | 62,618 | 14.1 | 24,216 | 1.39 |
| **PT** | 7,654 | 1.3 | 6,638 | 1.5 | 1,016 | 1.15 |
| **RO** | 29,406 | 5.1 | 41,160 | 9.3 | -11,754 | 0.71 |
| **SI** | 5,549 | 1.0 | 6,029 | 1.4 | -480 | 0.92 |
| **SK** | 9,790 | 1.7 | 11,257 | 2.5 | -1,467 | 0.87 |
| **FI** | 8,987 | 1.6 | 10,251 | 2.3 | -1,264 | 0.88 |
| **SE** | 14,378 | 2.5 | 14,160 | 3.2 | 218 | 1.02 |
| **UK** | 48,122 | 8.4 | 36,410 | 8.2 | 11,712 | 1.32 |
| **EU-28** | **571,795** | **100.0** | **443,592** | **100.0** | **128,203** | **1.29** |
| **EU-15** | **363,392** | **63.6** | **232,951** | **52.5** | **130,441** | **1.56** |
| **EU-13** | **208,403** | **36.4** | **210,641** | **47.5** | **-2,238** | **0.99** |

* The number of companies under Orbis concerns the number of active companies, in the sector NACE 4941 'Freight transport by road', located in the EU-28, incorporated until 2017.

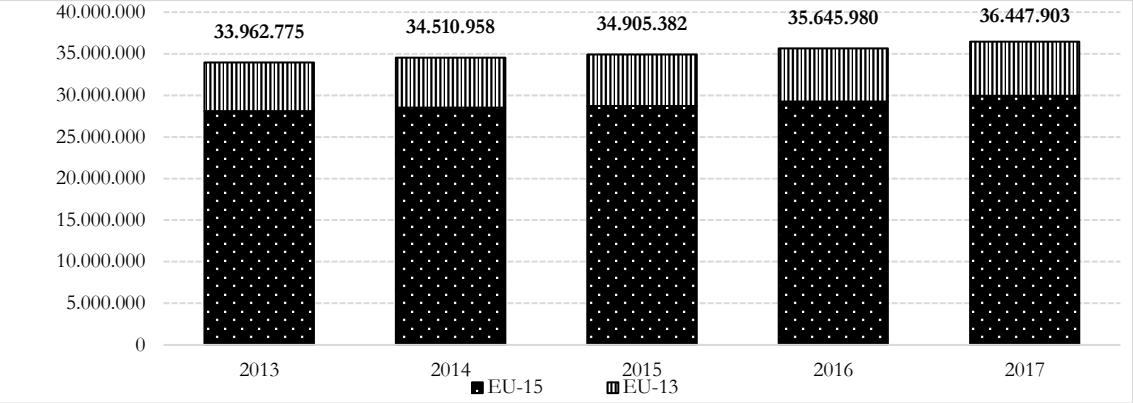
** The Eurostat data for MT concerns the number of companies in 2015. Therefore, for MT, in the Orbis database the year of incorporation was also set on 'to 2015' in order to capture a similar group of companies.

**Source** Eurostat [sbs_na_1a_se_r2] and own elaborations based on Orbis [Data extracted 2 April 2020]

Besides looking at the number of companies, the number of vehicles is an interesting variable to estimate the magnitude of the sector. Eurostat provides data on the total stock of vehicles, where 'lorries/trucks' was selected.

In general, Figure 3.4 shows the evolution of the stock of trucks, which indicates a positive trend. In total in 2017, there were around 36.4 million trucks in the EU-28. The distribution between EU-15 and EU-13 has remained stable over the years, with around 82% and 18% respectively.

**Figure 3.4 Total stock of trucks, 2013-2017, EU-28**




* For EL and PL, data from 2017 were not available. For these Member States, data from 2016 were used.
**Source** Eurostat [tran_r_vehst] and for PT [road_eqs_lormot]

A more detailed overview of the number of trucks per Member State can be found in Table 3.3. Especially France stands out, with more than 6.5 million trucks. Additionally, Italy, the United Kingdom, and Spain have more than 4 million trucks each.

The above statistics concern the total number of trucks, independent of their weight. However, in the transport sector, it is meaningful to look at the type of trucks that are present. An important distinction exists between vehicles with a maximum laden mass of more than 3.5 tonnes, and less than 3.5 tonnes. The first group is referred to as Medium Commercial Vehicles (MCV) (from 3.5t to 16t) and Heavy Commercial Vehicles (HCV) (over 16t), and the latter as Light Commercial Vehicles (LCV) (up to 3.5t). This distinction is of importance as LCV are excluded from certain regulations.[43] For instance, they do not need to comply with rules regarding access to the occupation of road transport operator and market access, as well as social conditions in the road transport sector, and a tachograph does not need to be installed in these types of vehicles (Vitols & Voss, 2019). As a result, Vitols and Voss (2019) fear that LCV will be used to circumvent legal requirements and gain a competitive advantage, at the expense of working and employment conditions.

Table 3.3 provides the distinction between trucks with a weight below or equal to 3.5 tonnes (LCV), and trucks with a weight above 3.5 tonnes (MCV and HCV). Furthermore, the last column provides the share of LCV on the total number of trucks. In all Member States for which this breakdown was available, the share of LCV exceeds 60%. In the EU-28, on average 89% of all trucks are LCV (or - an unweighted average of 85%). There is a clear difference between EU-15 and EU-13 Member States, as in the former proportionally more LCV are present (90.4% versus 78.0%). However, for several EU-13 Member States such breakdown is not available, which makes the EU-13 aggregate less reliable. Furthermore, there is some variation between Member States. For instance, in France and Portugal, more than 94% of all trucks are LCV. In the Czech Republic, Finland, Lithuania and Estonia, on the other hand, this share lies below 75%, meaning that in these Member States proportionally less LCV are in use.

43 However, with the new rules of the Mobility Package approved, rules on access to the European road haulage market, as well as driving and rest-time rules, will be extended to cover vans used in international transport as well (light commercial vehicles of over 2.5 tonnes) (European Council, 2019; https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AL%3A2020%3A249%3ATOC ).

**Table 3.3 Number of trucks, by maximum permissible weight, 2017, EU-28**

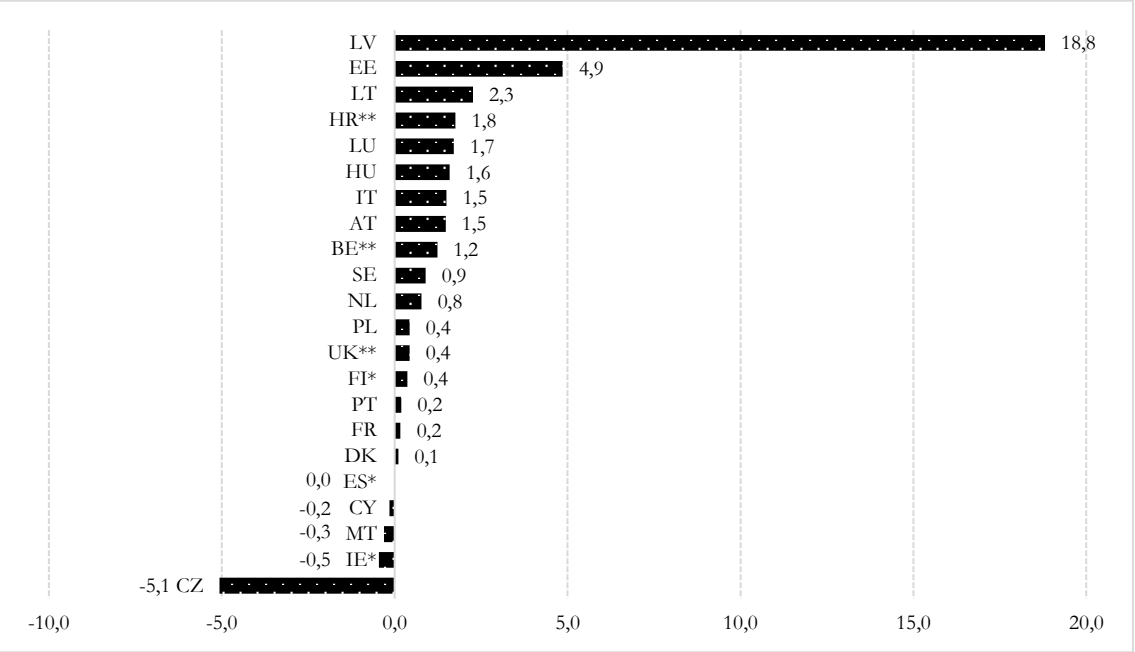
| | =< 3.5t (A) | > 3.5t | Total (B) | % Share LCV (A/B) |
|---|---|---|---|---|
| **Belgium** | 729,424 | 97,318 | 826,742 | 88.2 |
| **Bulgaria** [2] | | | 372,851 | |
| **Czech Republic** | 436,241 | 253,127 | 689,368 | 63.3 |
| **Denmark** | 395,548 | 28,261 | 423,809 | 93.3 |
| **Germany** | 2,272,331 | 528,449 | 2,800,780 | 81.1 |
| **Estonia** | 77,118 | 25,795 | 102,913 | 74.9 |
| **Ireland** | 312,799 | 23,060 | 335,859 | 93.1 |
| **Greece** [3] | | | 1,282,193 [3] | |
| **Spain** | 4,585,923 | 338,553 | 4,924,476 | 93.1 |
| **France** | 6,200,980 | 335,502 | 6,536,482 | 94.9 |
| **Croatia** | 125,731 | 30,993 | 156,724 | 80.2 |
| **Italy** | 3,502,654 | 580,694 | 4,083,348 | 85.8 |
| **Cyprus** | 95,705 | 10,162 | 105,867 | 90.4 |
| **Latvia** | 55,557 | 17,274 | 72,831 | 76.3 |
| **Lithuania** | 61,142 | 23,483 | 84,625 | 72.3 |
| **Luxembourg** | 33,015 | 5,543 | 38,558 | 85.6 |
| **Hungary** | 423,252 | 46,696 | 469,948 | 90.1 |
| **Malta** | 35,120 | 10,820 | 45,940 | 76.4 |
| **Netherlands** | 883,350 | 62,581 | 945,931 | 93.4 |
| **Austria** | 403,984 | 52,924 | 456,908 | 88.4 |
| **Poland** | 2,574,312 | 674,226 | 3,248,538 | 79.2 |
| **Portugal** | 1,240,914 | 50,760 | 1,291,674 | 96.1 |
| **Romania** [2] | | | 846,472 | |
| **Slovenia** [2] | | | 89,005 | |
| **Slovakia** [2] | | | 318,027 | |
| **Finland** | 448,034 | 150,697 | 598,731 | 74.8 |
| **Sweden** | 553,585 | 69,989 | 623,574 | 88.8 |
| **United Kingdom** | 3,892,041 | 366,752 | 4,258,793 | 91.4 |
| **EU-15 weighted** [1] | 25,454,582 | 2,691,083 | 28,145,665 | 90.4 |
| **EU-13 weighted** [1] | 3,884,178 | 1,092,576 | 4,976,754 | 78.0 |
| **EU-28 weighted** [1] | **29,338,760** | **3,783,659** | **33,122,419** | **88.6** |
| **EU-28 unweighted** [1] | | | | **84.8** |

[1] The total for EU-15, EU-13, and EU-28 only includes Member States for which a breakdown by maximum weight was possible.
[2] For BG, EL, RO, SI and SK a breakdown by maximum weight was not possible.
[3] The total number of trucks in EL concerns the number of 2016.
**Source** Eurostat [road_eqs_lormot] and for EL and SI [tran_r_vehst]

To see whether the use of LCV has increased, two statistics are looked at. First, the share of LCV in the total number of trucks (see last column of Table 3.3) was calculated in different years, and the evolution from 2013-2017 is pictured in Figure 3.5. Although for most Member States, the share of LCV has remained rather stable the last 5 years, there are certain exceptions. In the Czech Republic, the share of LCV has decreased by more than 5 percentage points, dropping from approximately 68% in 2013 to 63% in 2017 (see Table 3.3). An opposite evolution can be seen in Latvia, where the share has increased by a remarkable 19 percentage points. This means that whereas in 2013 only

around 57% of all Latvian trucks were LCV, in 2017 this share amounted to 76% (see Table 3.3). Furthermore, the share of LCV also increased by almost 5 percentage points in Estonia.

**Figure 3.5 Evolution of the share of Light commercial vehicles (LCV), 2013-2017, EU-28, in percentage points**

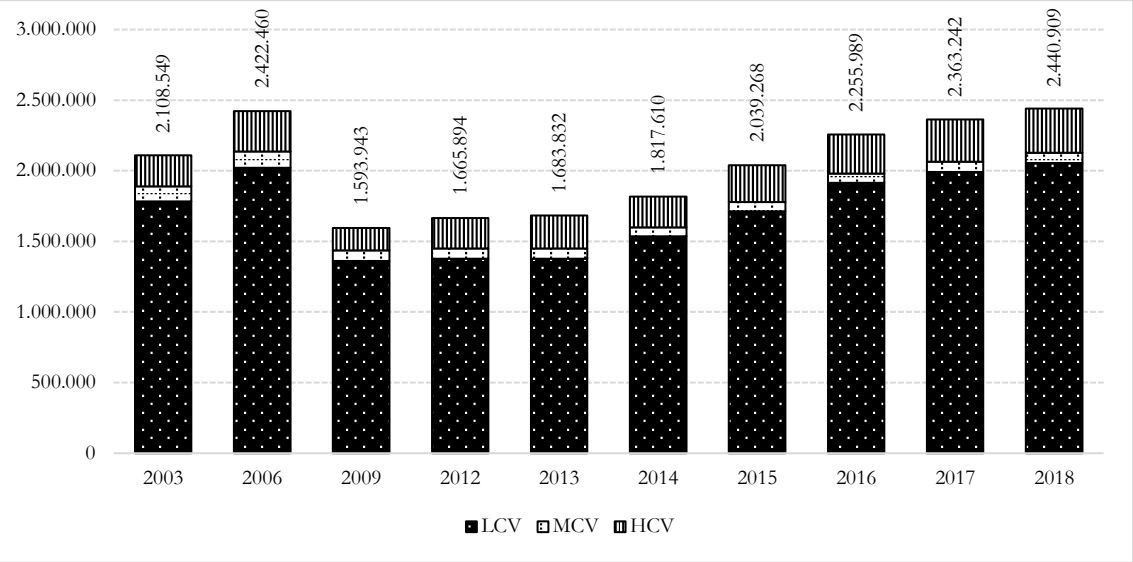



* For FI, ES and IE it concerns the evolution from 2014 to 2017.
** For HR, BE and UK it concerns the evolution from 2015 to 2017.
*** Missing data for BG, EL, RO, SI and SK.
**Source** Eurostat [road_eqs_lormot]

Second, it is possible to look at the evolution of the number of new registrations for each type of vehicle in the EU (Figure 3.6). From 2012 onwards, the number of newly registered vehicles has continually increased. Although the evolution of new registrations is positive for all types of vehicles, it has especially grown for LCV and HCV. From 2012 to 2018, the number of new registrations of LCV has increased by 49.0% and for HCV by 45.7%.

Overall, for certain Member States, the share of LCV has certainly increased (see Figure 3.5). However, as can be seen in Figure 3.6, the total growth in the number of new registrations of LCV is not unique, as new registrations of HCV have grown by almost as much.

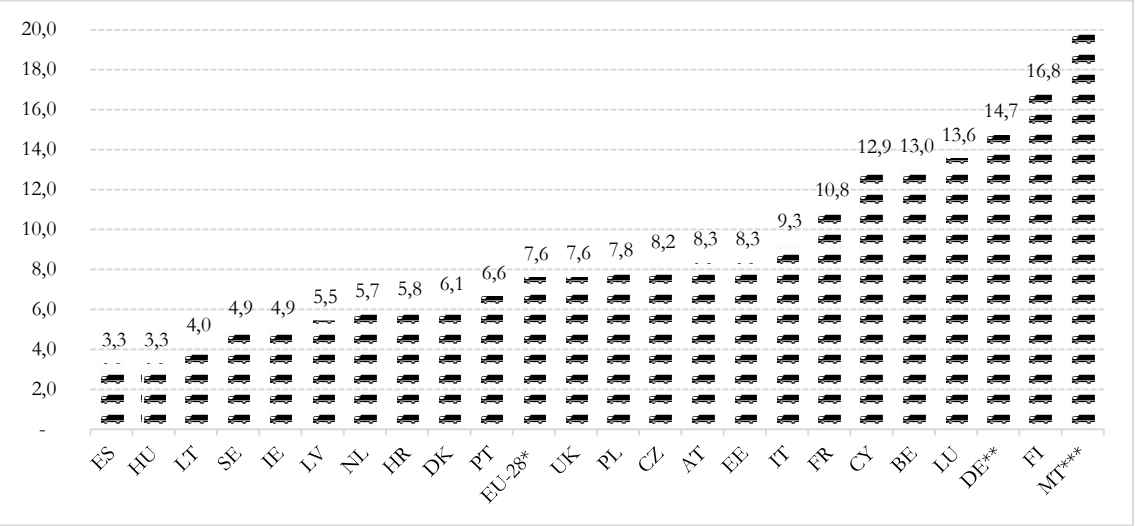
**Figure 3.6 Number of newly registered vehicles, 2003, 2006, 2009, 2012-2018, EU-28**




* Data for CY and MT were not available.
**Source** European Automobile Manufacturers Association [ACEA], 2020

Up until this point, Section 3.2 has only looked at absolute numbers. However, in order to compare Member States with one another it is more meaningful to look at relative numbers. Therefore, the analysis presented in Figure 3.7 focusses on the average number of trucks per company. On average in the EU, a road freight transport company has about 7.6 heavy goods vehicles at its disposal. However, this number varies greatly between Member States. In Malta, it even amounts to 35.4 trucks per enterprise. In France, Cyprus, Belgium, Luxembourg, Germany and Finland, it exceeds 10 trucks per company as well, which might be an indication of larger players in the road transport market. In Spain, Hungary, Lithuania, Sweden and Ireland on the other hand, a road transport enterprise has less than 5 trucks on average. For certain Member States, this analysis was not possible as data were not available. However, another approximation of the average number of trucks per haulier is attempted below, based on the number of Community licences and certified true copies.

**Figure 3.7 Average number of trucks >3.5t per enterprise active under NACE 4941 'Freight transport by road', 2017, EU-28**




* The EU-28 average is a weighted average and does not include data on BG, EL, RO, SI and SK as the number of goods vehicles > 3.5t for these Member States was not available.

** The number of trucks for DE concerns the number for 2016.

*** For MT, the number of enterprises concerns the number of enterprises in 2015. The average number of trucks per enterprise in MT amounts to 35.4.

**Source** Eurostat [sbs_na_1a_se_r2] and [road_eqs_lormot]

In order to carry out international transport and cabotage, a haulier needs to be in possession of a Community licence. This is set out in Article 4 of Regulation 1072/2009.[44] These licences are issued by the competent authorities of the Member State of establishment and are valid for a period of up to 10 years. The original Community licence should be kept by the haulier, and he should have a certified true copy of it for every vehicle at its disposal. An overview of both is given in Figure 3.8.

Overall, the number of Community licences and true copies thereof have known a positive trend from 2012 onwards. In 2018, 299,235 EU-28 hauliers possessed a Community licence with 2,117,994 true copies thereof. The share of community licences and true copies issued to EU-13 hauliers has known an increase, but only slightly. In 2010, 35.0% of Community licences and 28.6% of true copies went to EU-13 hauliers, whereas in 2018 these shares amounted to 42.5% and 34.9% respectively.

In 2018, most licences were issued to Germany (42,718), Poland (35,997), and Romania (32,415), and most true copies were issued to Germany (399,173), France (360,620), and Poland (234,639).

The number of Community licences and true copies could also be interpreted to respectively give an idea of the number of hauliers and vehicles active in international transport. Therefore, one can compare the number of true copies of Community licences with the total number of stock of vehicles excluding LCV.[45] As a result, it is possible to estimate the number of vehicles that are active in international transport. As seen in Table 3.3, in 2017 around 3,783,659 trucks with a weight over 3.5t were active in the EU-28 (excluding BG, EL, RO, SI and SK). At the same time, in 2017, 1,745,430 true copies of Community licenses were issued in the EU-28 (excluding BG, EL, RO, SI and SK). Thus, it can be concluded that around 46% of all trucks larger than 3.5t in the EU-28, excluding BG, EL, RO, SI and SK,[46] are involved in international transport or cabotage. However, it can be excepted that this share will be higher in reality, as the excluded Member States are important players in the

44 Regulation (EC) No 1072/2009 of the European Parliament and of the Council of 21 October 2009 on common rules for access to the international road haulage market.

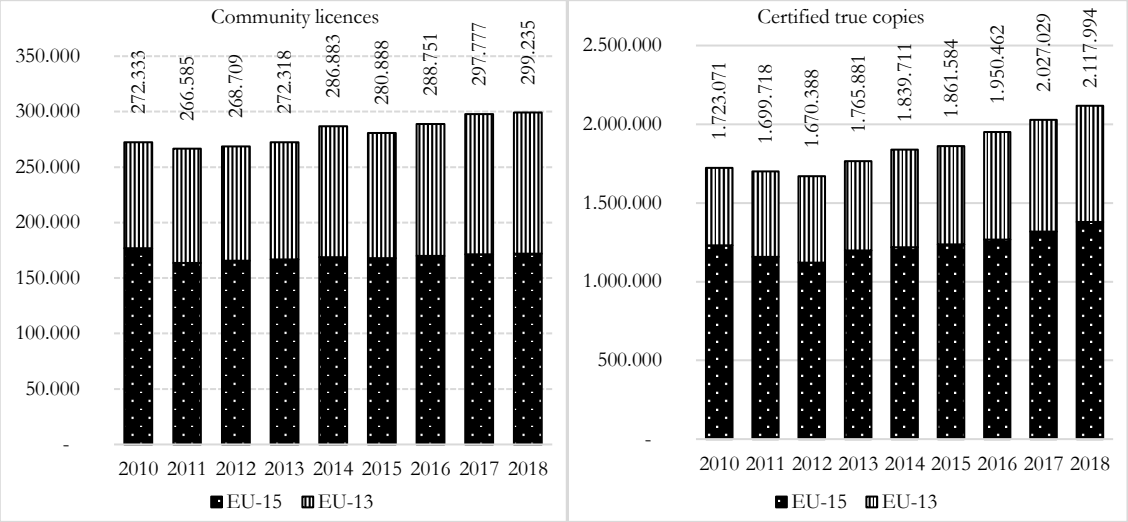
45 As discussed in Section 3.2, LCV (< 3.5t) currently do not need a Community Licence (Article 1 of Regulation 1072/2009).

46 These Member States were excluded as the exact number of trucks > 3.5t was not available.

international transport market, seeing that they hold around 17% of the EU-28 international transport market in terms of tonne-km in 2017.[47]

This distribution can also be compared to the transport performed in tonne-km. Figure 3.1 showed that in 2017, 37% of all transport performed by EU-28 Member States concerned international transport. However, in terms of trucks and licenses, around 46% of trucks are involved in international transport. Thus, proportionally more trucks are active in international transport, seeing that 46% of trucks perform 37% of transport. Of course, it is possible that the extent of international transport is underestimated, and for the share of trucks it is also not beneficial that data on certain Member States are missing, as explained above.

**Figure 3.8 Number of Community licences (left) and certified true copies thereof (right), 2010-2018, EU-28**



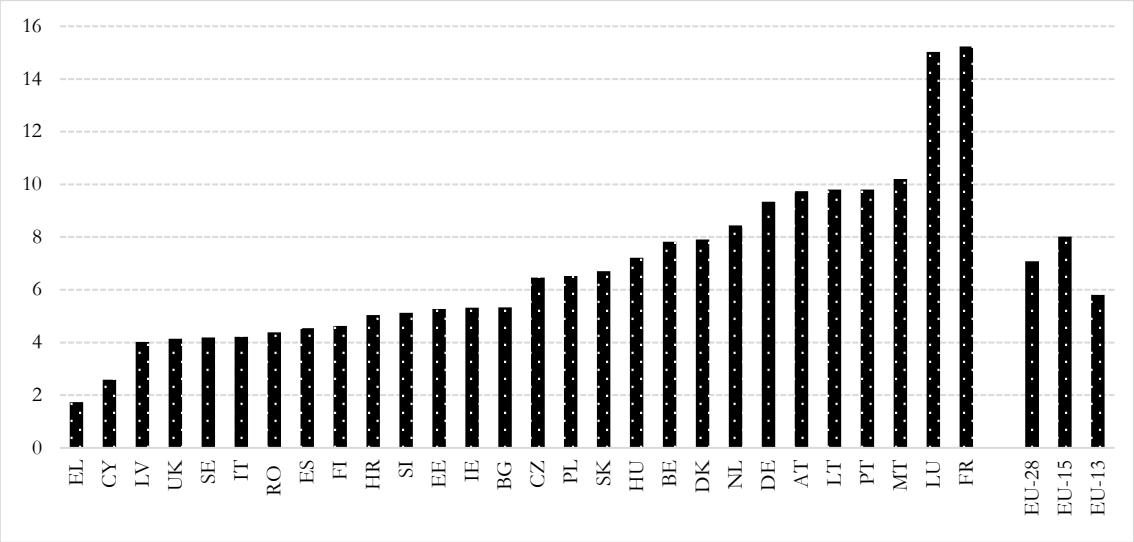

**Source** European Commission (n.d.-e)

These data can also be used to analyse the number of true copies per community licence (Figure 3.9). This might give an indication of the average number of trucks per haulier in international transport, as was also analysed based on the Structural Business Statistics in Figure 3.7. In the EU-28, every haulier has approximately 7 trucks at his disposal. This number is lower for EU-13 hauliers (6 trucks), and higher for EU-15 hauliers (8 trucks).

On the left side, especially Greece and Cyprus stand out, as hauliers from these Member States only have an average of 2 and 3 true copies issued respectively per issued Community licence in 2018. Furthermore, the average lies below 5 for hauliers from Latvia, the United Kingdom, Sweden, Italy, Romania, Spain and Finland. On the other hand, the average number of trucks per haulier is remarkably high in Luxembourg and France, namely around 15 trucks. Nevertheless, this variable is only an indication and more importantly an average. It might be that there are a few large companies active in these Member States, which only need one Community licence, but thousand certified true copies, which strongly influences the average. The more exact number of trucks per road freight transport enterprise was analysed above, in Figure 3.7.

47 Eurostat [road_go_ta_tott].

**Figure 3.9 Average number of certified true copies per Community licence, EU-28, 2018**




**Source** Own elaborations based on European Commission (n.d.-e)

## 3.3 Profile of companies active in the EU road transport sector

In 2017, the road transport sector had a turnover of approximately € 347,115 million.[48] An important indicator of the sector is the turnover per enterprise, which was possible to construct using the variables turnover[49] and number of enterprises of the Structural Business Statistics. The result is pictured in Figure 3.10. The EU-28 average amounts to € 607,000, although the EU-13 average only amounts to € 343,000 and the EU-15 average to € 759,000. The most remarkable outlier is Luxembourg, with over € 3,200,000 turnover per enterprise. The average turnover per company also exceeds € 1,200,000 in Germany, Denmark, France, Belgium, Austria, and the Netherlands. This does not necessarily mean that companies in these Member States are more profitable, as it is also possible that larger players are active in the market of these Member States. Therefore, this figure should be looked at in combination with for instance Figure 3.20 on the average number of persons employed per company. As a result, it can be seen that, indeed, Luxembourg, the Netherlands, Austria, France, and Germany also have the highest average number of persons employed per company, indicating that especially larger companies are active in their road transport market. Additionally, it is possible that companies establish themselves in certain Member States for fiscal reasons, while setting up subsidiaries in other Member States to hire employees, indicating the entanglement of companies in this sector. An example is Luxembourg, which is often considered as a tax haven in the EU, as its effective tax rate is the lowest in the EU (2.2%) (Janský, 2019). Therefore, it is no surprise that the average turnover per enterprise in this Member State is the highest, seeing that companies might shift their profits in order to benefit from its advantageous tax policy. Furthermore, turnover in general is not indicative for a company's profitability. To fully grasp its profitability, the company's costs should also be taken into account.

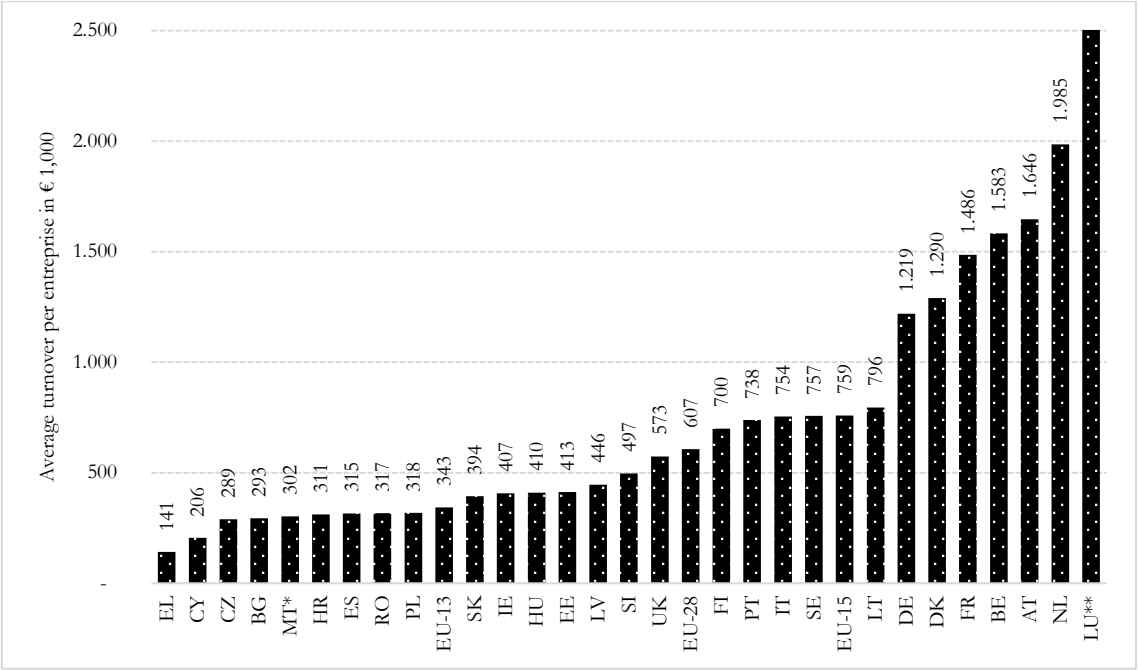
The companies in the Member States on the left side of Figure 3.10 earn proportionally less turnover, with companies in Greece, Cyprus, the Czech Republic, and Bulgaria earning less than € 300,000. However, once again, this is more a sign of the type of companies active in these markets as opposed to their profitability. Seeing for instance that Greece and Cyprus have an average of less

48 Eurostat [sbs_na_1a_se_r2].

49 Turnover comprises the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties; it includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT invoiced by the unit to its customer and other similar deductible taxes directly linked to turnover; it also includes all other charges (transport, packaging, etc.) passed on to the customer. Price reductions, rebates and discounts as well as the value of returned packing must be deducted (Eurostat, n.d.-e).

than 3 persons employed per enterprise (see Figure 3.20), it is no surprise that the average company is smaller and does not earn a high amount of turnover. In other words, we find that the smaller the company in number of employees, the lower the turnover.

**Figure 3.10 Average turnover per enterprise active under NACE 4941 'Freight transport by road', 2017, EU-28, in € 1,000**




* For MT, the variables turnover and number of enterprises of 2015 were used.
** The average turnover per enterprise in LU amounts to € 3,201,000.
**Source** Eurostat [sbs_na_1a_se_r2]

The total EU-28 personnel costs[50] in the road transport sector in 2017 amounted to more than € 76 billion.[51] More than half of these costs originated from 4 Member States, namely France (€ 13.8 billion or 18% of the EU-28 total), Germany (€ 11.7 billion or 15%), Italy (€ 9.3 billion or 12%), and the United Kingdom (€ 7.4 billion or 10%).

The average personnel cost, or personnel cost per employee, for all Member States in 2017 is presented in Figure 3.11. The annual average personnel cost per employee amounts to € 27,100 in the EU-28. However, this cost is remarkably low in Bulgaria, where it is lower than € 5,000. Furthermore, in Romania (€ 5,300), Latvia (€ 7,600), and Poland (€ 9,100) the average remains below € 10,000. Therefore, from a cost perspective, it can be seen that it is very interesting to establish a company in these Member States, as was mentioned in the introduction. On the other hand, the average personnel cost goes beyond € 45,000 in Belgium, Sweden, and the Netherlands. In Denmark, it even surpasses € 58,000. The ratio between the lowest (BG: € 4,800) and highest (DK: € 58,600) annual personnel cost per employee is more than 12-fold. Seeing that this ratio is so high, it is utopian to think this gap will be resolved soon.

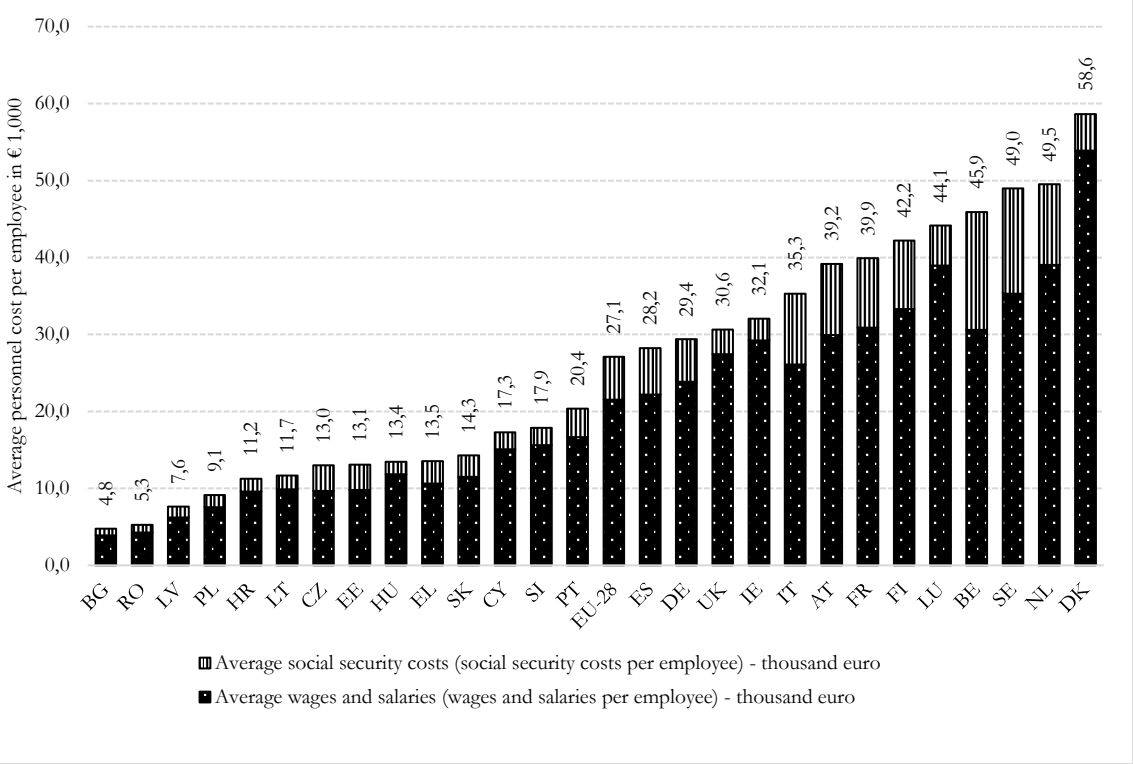
The personnel costs consist of wages and salaries, and social security costs. On average in the EU, 79% (€ 23,900) of the personnel costs is made up of wages and salaries, and 21% (€ 5,500) of social security costs. However, in certain Member States these shares differ remarkably. In Denmark and

50 Personnel costs are defined as the total remuneration, in cash or in kind, payable by an employer to an employee (regular and temporary employees as well as home workers) in return for work done by the latter during the reference period. Personnel costs also include taxes and employees' social security contributions retained by the unit as well as the employer's compulsory and voluntary social contributions. Personnel costs are made up of wages and salaries and employers' social security costs (Eurostat, n.d.-e).

51 Eurostat [sbs_na_1a_se_r2].

Ireland, less than 10% the personnel costs are social security costs. In Belgium, on the other hand more than 33% of personnel costs are social security costs. Also in Estonia, the Czech Republic, Italy and Sweden, the social security costs make up more than 25% of total average personnel costs. This indicates that the level of social security contribution rates is of great importance for overall competitiveness.[52]

**Figure 3.11 Average personnel cost of companies active under NACE 4941 'Freight transport by road', breakdown between wages and salaries and social security costs, 2017, EU-28, in € 1,000**



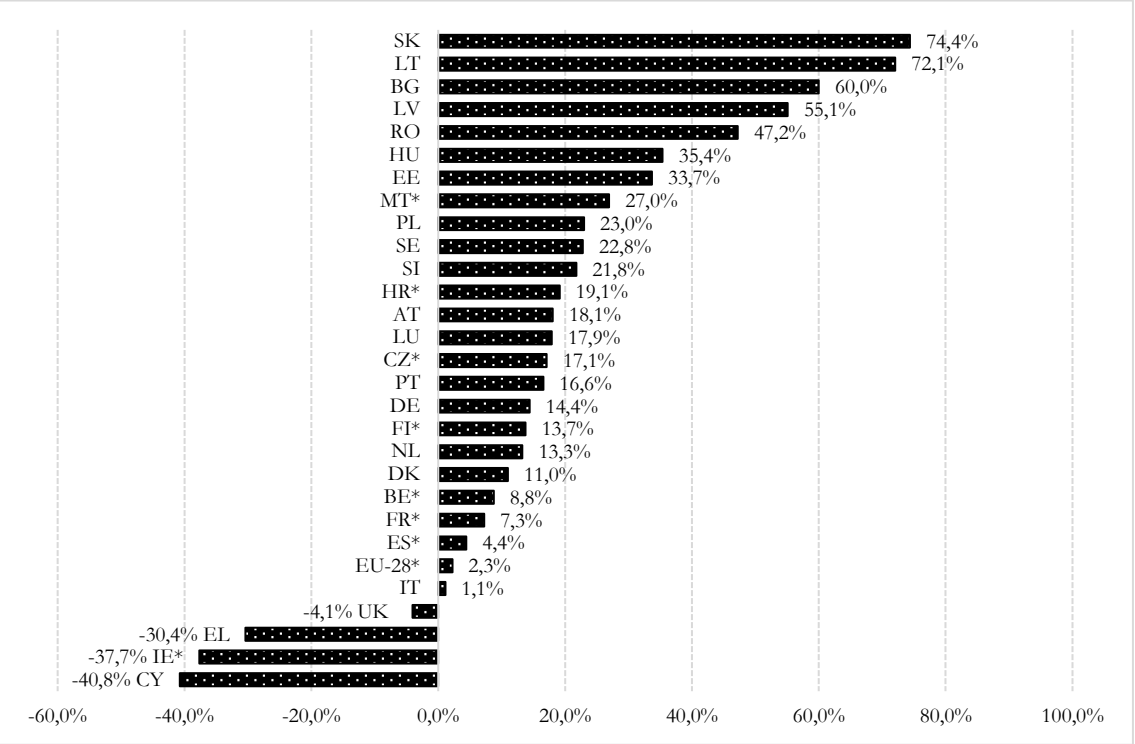

* The number for MT concerns the average personnel cost in 2015.
**Source** Eurostat [sbs_na_1a_se_r2]

The evolution of the personnel cost from 2008 to 2017 is pictured in Figure 3.12. Overall, in the EU-28, the personnel cost has remained relatively constant, with a slight increase of 2.3% from 2011 to 2017. The evolution is very diverse however, in different Member States. Only in a few Member States has the personnel cost decreased from 2008 to 2017, namely Cyprus (-40.7%), Ireland (-37.7% for 2016-2017), Greece (-30.4%) and the United Kingdom (-4.1%). In all other Member States, the average annual personnel cost knew a (serious) increase. In Slovakia and Lithuania, it even increased by more than 70%. This means that while the average personnel cost was only € 6,800 in Lithuania

52 It is also interesting to look at the taxation on wages, as the tax pressure can differ greatly between Member States. The **tax wedge** is defined as the difference between the employer's labour costs and the employee's net take-home pay. This indicator is measured in percentage of labour cost (OECD, 2020c). The tax wedge in 2017 for a single person at 67% of earnings with no children in the total economy is highest in Belgium (47.3% of labour costs), Hungary (46.2%), Germany (45.4%) and Austria (43.1%), and lowest in Cyprus (17.3%), Malta (23.9%), Ireland (24.0%) and the United Kingdom (26.3%) (EC - DG ECFIN - Tax and benefits indicators database, https://europa.eu/economy_finance/db_indicators/tab/#). Furthermore, it is possible to analyse the different elements of the tax wedge. The tax wedge consists of personal income taxes, social security contributions of the employee, and social security contributions of the employer. For most Member States, the employer's social security contributions make up the largest part of the tax wedge. The exceptions are Germany, the Netherlands, Poland, and Slovenia where the employee's social security contributions compromise the greatest part, and Denmark, Ireland and the United Kingdom, where the largest part of the tax wedge is formed by personal income taxes
(See https://stats.oecd.org/viewhtml.aspx?datasetcode=AWCOMP&lang=en#).

and € 8,200 in Slovakia in 2008, it amounted to € 11,700 and € 14,300 in 2017 respectively. Additionally, the average personnel cost grew sharply in Romania (47.2%), Latvia (55.1%) and Bulgaria (60.0%). It can be noted that the Member States that knew the strongest rise in average personnel cost are all EU-13 Member States, which is a very hopeful trend. There is also hope that wages in these countries will rise further because of the increase of GDP per capita in these countries.[53] However, it should also be kept in mind that this wage increase in EU-13 Member States can be explained by the fact that in these Member States, the living costs went up considerably (including the price for utilities). If this had not been matched by an increase in revenue, these countries would have fallen into a social crisis.

**Figure 3.12 Evolution average personnel cost companies active under NACE 4941 'Freight transport by road', 2008-2017, EU-28**




* For MT it concerns the evolution from 2008 to 2015, for FR, BE and FI 2009-2017, for the EU-28 2011-2017, for HR 2012-2017, for CZ 2015-2017, and for IE and ES 2016-2017.

**Source** Eurostat [sbs_na_1a_se_r2]

An interesting variable that is part of the personnel cost is the amount of wages and salaries paid out per employee. In 2017, this annual average amounted to € 21,536 per employee in the EU-28.[54] Figure 3.13 shows the average amount of wages and salaries per employee, both in 2003 and 2017. In 2017, the average amounted to more than € 35,000 in Sweden, Luxembourg, the Netherlands, and Denmark, while it does not reach € 8,000 in Bulgaria, Romania, Latvia and Poland.

A report by van Overbeeke (2020), quoted in the introduction, declared that because of the EU-enlargements, the wage differentials increased from 1:3 to 1:15, resulting in an unfair playing field. This claim can be verified by analysing Figure 3.13. In 2003, the EU only consisted of 15 Member States, with an average of € 24,800 wages and salaries per employee, and a median value of € 25,139. In 2017, however, the average amount of wages and salaries per employee only amounted to € 20,800

53 Before the financial crisis hit in 2008, the wages in CEE were converting to western wages, but afterwards this movement slowed down or stopped completely (Galgóczi, 2017). Although some claim that higher wages lead to countries losing international competitiveness, no link is found to support this claim (Galgóczi, 2017).

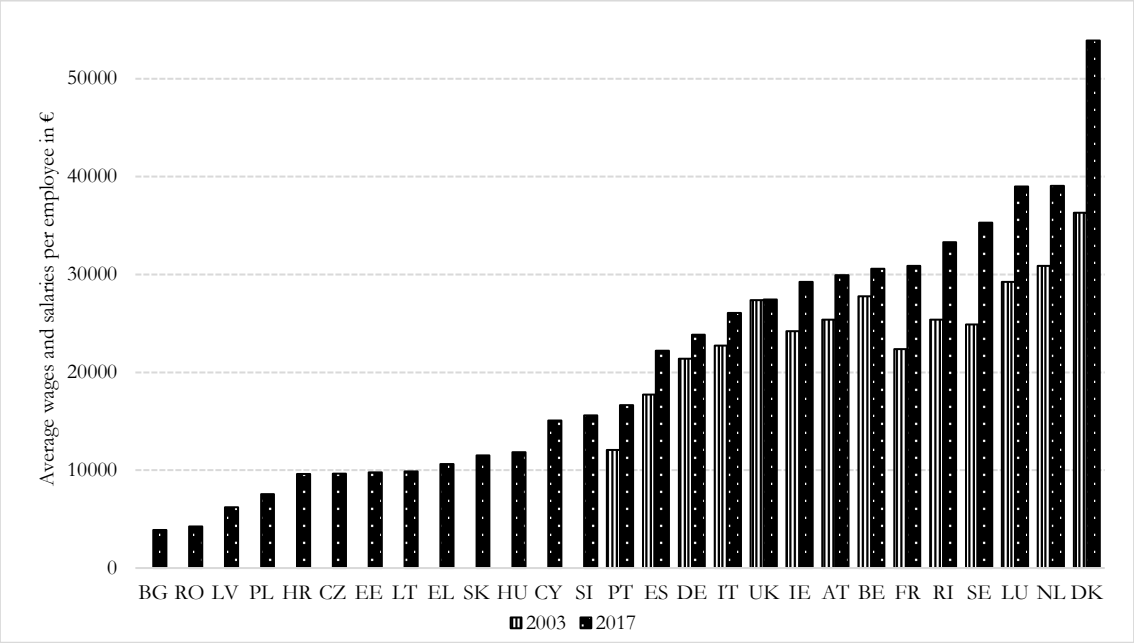
54 Eurostat [sbs_na_1a_se_r2].

and the median value was € 16,600. The wage differentials from 2003 to 2017 evolved from 1:3 to 1:14. This differential is calculated by dividing the highest wage per employee by the lowest wage per employee (DK and PT in 2003, and DK and BG in 2017 respectively).

Thus, it can be seen that the statement by van Overbeeke (2020) holds true. Therefore, it cannot be a surprise that companies will 'flag out' to those Member States where costs are lowest, in order to be as cost efficient as possible. Especially because the transport sector is very price sensitive. One way in which transport suppliers meet this demand is setting up complex transport chains or networks with many layers of sub-contractors. IKEA, for example was discredited for such practices (Borgström, 2017). Drivers for IKEA testified they were living in their trucks for months at a time in inhumane circumstances, being paid Slovakian wages for instance while never working there (Conway, 2017). This is possible because IKEA outsources transport activities to other companies that can then subcontract it further to other subsidiaries or suppliers. Even though IKEA incorporates the transport sector in their code of conduct, it is hard to control all operations, as they do not employ the drivers directly (Borgström, 2017). It seems that because of large networks, which are common in the transport sector, it is easier to shift responsibility. Therefore, one should remember that 'there is no such thing as a free lunch'; seeing that customers request cheap products and suppliers also want to offer them, employees might be the victim of this system designed to cut costs as much as possible. Precisely for this reason, we are pleased to observe that several EU-13 Member States are showing strong growth in wages and personnel costs (see Figure 3.12).

Furthermore, the evolution of the average personnel cost in the road transport sector can be compared to the evolution of the average personnel cost in the total economy. In the EU-28, from 2008 to 2017, the average personnel cost in the total economy grew by 35.4%, while in the road transport sector it grew by 30.9%. However, for EU-13 Member States, the evolution in the road transport sector is even more remarkable. From 2008 to 2017, the average personnel cost in total in the EU-13 increased by 27.2%, while in the transport sector it grew by 40.3%. Furthermore, in the EU-13, the annual growth rate in the total economy was 2.7%, and no less than 3.8% in the transport sector. These numbers indicate a hopeful evolution, namely a certain 'catching up'-effect, even mostly pronounced in the road transport sector. Although inflation should also be taken into account, it is clear that the average personnel costs and thus wages are increasing, especially in the EU-13 in the transport sector.

**Figure 3.13 Average amount of wages and salary per employee in NACE 4941 'Freight transport by road', 2003 and 2017, in €, EU-28**

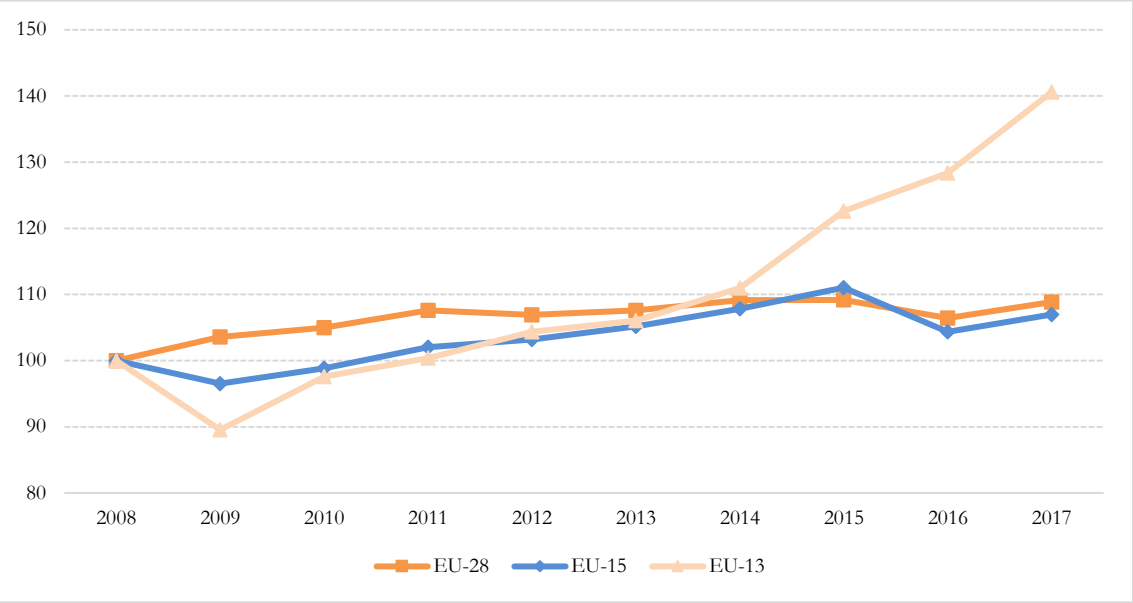



* Data for MT were not available.

**Source** Eurostat [sbs_na_1a_se] and [sbs_na_1a_se_r2]

The evolution of the average amount of wages and salary per employee in the transport sector can also be looked at in more detail. Figure 3.14 shows the evolution of this average in the EU-28, EU-15, and EU-13 with 2008 taken as a base year. From 2008 to 2017, the average wage grew most in EU-13 Member States (41%), as opposed to EU-15 Member States (7%). Although the average decreased in EU-13 Member States in 2009, possibly as a result of the financial crisis, it has been on the rise ever since, especially growing steeply from 2014 onwards. In EU-15 Member States on the other hand, the average was growing steadily until 2015, after which it dropped to a lower level, but it has been growing again from 2016. Therefore, it is clear that we cannot truly speak of a 'race to the bottom' in terms of wages in the transport sector. The wages in EU-15 and EU-13 Member States are growing towards each other, not because EU-15 wages are decreasing, but because EU 13 wages are growing sharply. The annual growth rate for EU-13 Member States is 3.9%, and for EU-15 Member States 0.8%. Nevertheless, as mentioned above, the reason for the wage increase in the EU-13 is a growth in living costs, so although the conclusion of the absence of a 'race to the bottom' holds true, it should be looked at with this nuance in mind. In absolute numbers, however, the average amount of wages and salaries per employee in the road transport sector in 2017 is still remarkably higher in EU-15 Member States (€ 27,564) than in EU-13 Member States (€ 7,951).

**Figure 3.14** **Evolution average amount of wages and salaries per employee in NACE 4941 'Freight transport by road', 2008-2017, 2008=100, EU-28, EU-15, EU-13**




**Source** Eurostat [sbs_na_1a_se_r2]

This of course brings up the question of wage convergence, which was already touched upon above when it was found that the Member States that knew the strongest rise in average personnel cost are EU-13 Member States. For wages and salaries, it is even more interesting to look at the possible convergence. In general, wage convergence occurs when Member State's performance improves to the point that it draws closer to an ideal policy target while at the same time narrowing the gap between itself and other countries (Eurofound, 2019:9). However, measuring convergence is not straightforward. Literature does not find a homogenous picture of convergence, as the empirical evidence is equivocal (Naz *et al.*, 2017). Although convergence is often observed, its extent is frequently disagreed upon (Heichel *et al.*, 2005).

Furthermore, several different methods can be used to calculate convergence, each with its own pros and cons (Eurofound, 2018). The type of convergence we look at is Beta convergence (β-convergence), which is commonly used in research concerning wages (Naz *et al.*, 2017). Beta convergence reflects a negative association between the growth rates of a variable and the initial values of that particular variable (Naz *et al.*, 2017; Paas *et al.*, 2017). Thus, in terms of wages and salaries, Beta convergence postulates that the growth rates of wages are negatively correlated with the initial values of wages and salaries. This implies that the higher the initial value of wages is in a Member State, the lower the growth rate will be. Therefore, low wage Member States will grow faster than high wage Member States (Mester & Simut, 2016). Consequently, this type of convergence is also referred to as 'catching up' convergence (Heichel *et al.*, 2005). Thus, in the long run, all Member States tend to converge towards the same average wage (Naz *et al.*, 2017:41).

This theory of Beta convergence can be investigated for the wages and salaries in the road transport sector. Figure 3.15 shows the relation between the average wages and salaries per employee in 2008 (horizontal axis), and the annual growth rate of the average wages and salaries per employee from 2008 to 2017 (vertical axis). The analysis is performed with 22 Member States, as certain Member States did not have data available,[55] and others were clear outliers.[56] The figure shows that the Beta

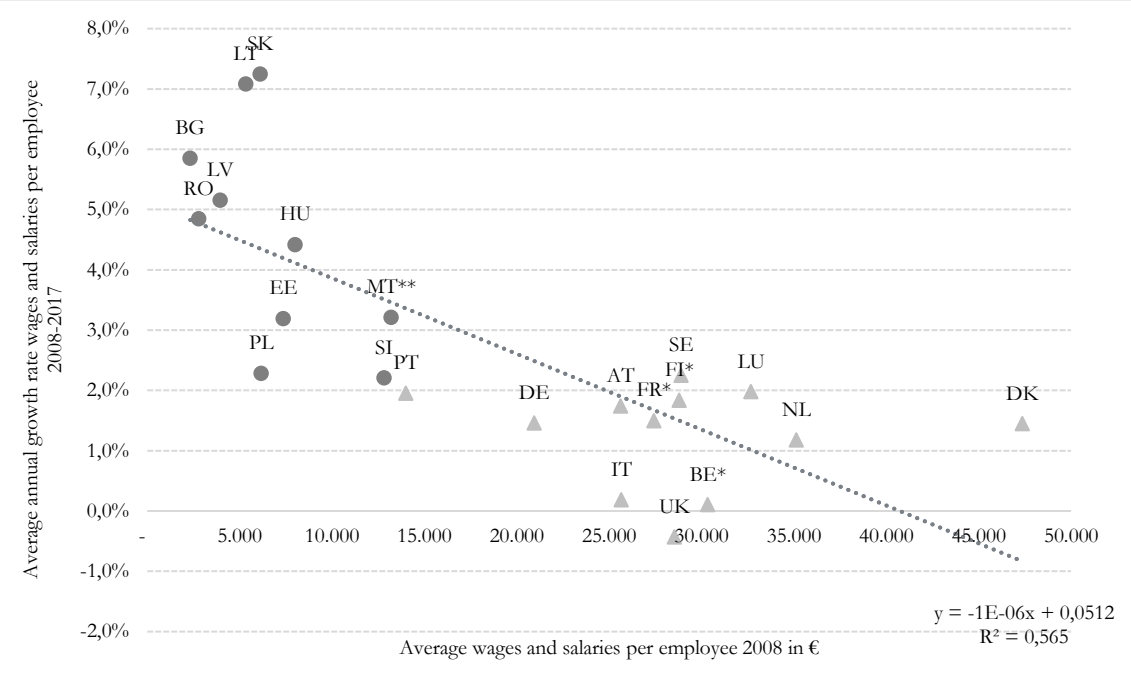
55 The Czech Republic only has data available for 2015-2017, Ireland for 2016-2017, Spain for 2016-2017, and Croatia for 2012-2017.

56 Both Cyprus and Greece were outliers as their average annual growth rate of wages and salaries per employee from 2008 to 2017 was quite negative, namely -6.0% and -3.6% respectively.

convergence theory certainly holds true. The correlation coefficient[57] amounts to -0.56, and even to -0.75 excluding the outliers Cyprus and Greece. This is a very strong negative relation, which indicates that Member States with high average wages will have a low average growth rate of wages. Therefore, Member States where the average wages are rather low in the beginning, namely EU-13 Member States, will grow faster. This is also visualised in the figure, as EU-13 Member States (dark spheres) can be found at the upper left side of the figure, where the average wages in 2008 are low, but the annual growth rate from 2008 to 2017 is high. EU-15 Member States (light triangles), on the other hand, are found at the right bottom side with higher average wages in 2008, but a low growth rate. In conclusion, the convergence theory holds true, meaning that wages in the transport sector are growing towards each other, which is a positive evolution.

In general, this convergence is also noticeable in the global economy, and is therefore not only transport specific, although in the transport sector, this upwards convergence is more pronounced.[58] Nevertheless, it cannot be denied that wages in the CEE still have room to go up, especially after suffering a setback due to the financial crisis (Galgóczi, 2017). Even though wages are moving in the right direction, a further pay rise in the EU-13 Member States is justified.

**Figure 3.15** **Beta convergence of average wages and salaries per employee in NACE 4941 'Freight transport by road', correlation between average wages and salaries per employee in 2008 in € and the average annual growth rate of wages and salaries per employee from 2008 to 2017 in %**




* The average annual growth rate of wages and salaries per employee concerns the evolution from 2009 to 2017 for BE, FR, and FI.

** The average annual growth rate of wages and salaries per employee concerns the evolution from 2008 to 2015 for MT.

*** The correlation coefficient amounts to -0.56 including CY and EL (not shown in the figure), and -0.75 excluding outliers CY and EL.

**Source** Eurostat [sbs_na_1a_se_r2]

57 A correlation coefficient measures the strength of the relationship between two variables. The coefficient ranges from -1 to +1. If the correlation is -1, it means that the two variables move in exactly the opposite direction; whereas if it amounts to +1, they will move in exactly the same direction.

58 In the global economy, the correlation amounts to -0.51 including CY and EL, and -0.64 excluding CY and EL (Eurostat [sbs_na_sca_r2]).

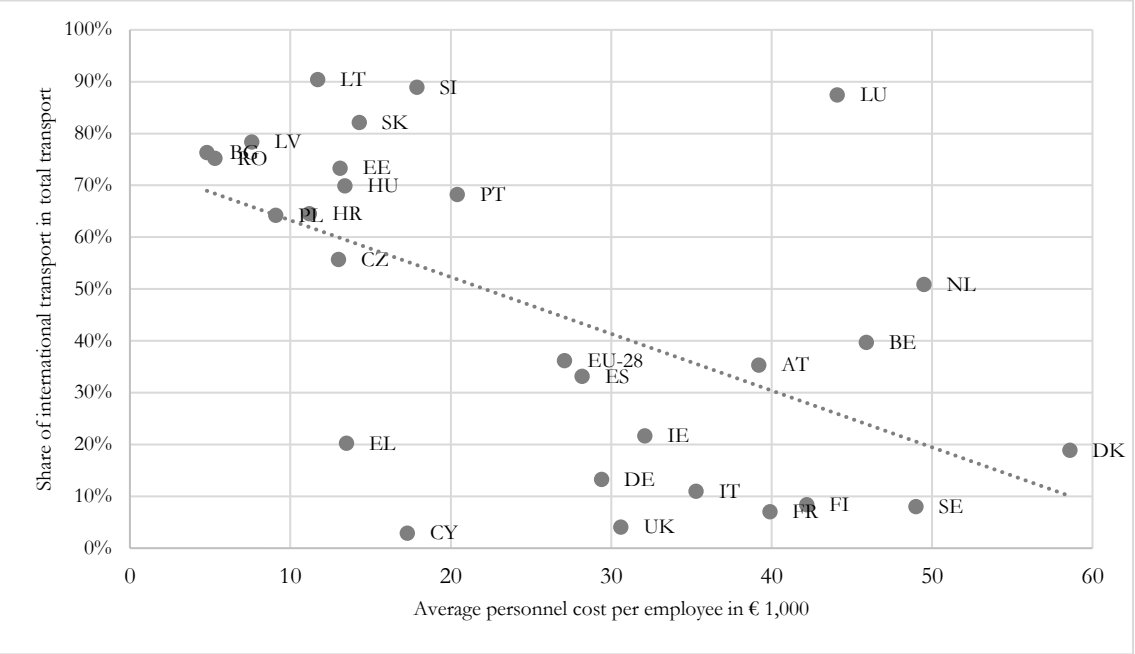
A similar exercise can be performed for the second component of the average personnel cost, namely the average social security costs per employee. In 2017, the average social security costs per employee amount to € 7,269 in the EU-15 and € 1,753 in the EU-13.[59] From 2008 to 2017, this cost increased by 18% in EU-15 Member States and 39% in EU-13 Member States. Furthermore, the average annual growth rate in EU-15 Member States amounts to 1.9% and 3.7% in EU-13 Member States. As a result, a similar figure as Figure 3.14 can be presented for average social security costs (see appendix 3). Nevertheless, this does not necessarily mean that the average social security costs themselves have increased, as they can also increase due to a growth of the wages. Furthermore, upward convergence of social security costs is much less pronounced than the upward convergence of wages and salaries discussed above. This is not because the social security costs in EU-13 Member States are not growing rapidly, but because these costs are also still rising quite steadily in EU-15 Member States and the extent of these costs and their growth over the years is quite divergent in EU-15 Member States. Consequently, one could state that because of the high competitiveness of the transport sector, there is room for social security costs in the EU-15 to decrease. This will cause social security costs to converge rather quickly towards each other, not necessarily through upward convergence, but downward convergence. The complete analysis can be found in appendix 3.

The average personnel cost in its entirety can be linked with several other variables in order to deepen the economic analysis. First, it can be expected that a correlation exists between the average personnel cost of road freight transport companies in a certain Member State and the share of international transport in total transport in that Member State. The assumption is that when the average personnel cost is low in a Member State, companies in this Member State will perform a high share of international transport, as it is cheaper for them, than for companies located in a Member State with high average personnel costs. Thus, we expect a negative correlation coefficient between these two variables, as they will move in opposite directions.

Figure 3.16 shows the correlation between average personnel cost per employee and the share of international transport, which amounted to -0.56, a moderate negative relationship. This indicates that when the average annual personnel cost increases, the share of international transport will drop. Alternatively, the other way around, when the share of international transport increases, the average personnel cost decreases. However, it is important to keep in mind that correlation does not mean causality. It is not the case that international transport diminishes *because* the average personnel cost is higher. This coefficient only indicates that these two variables will move in the opposite direction. Thus, it is clear that in Member States where the average personnel cost is rather high, a low share of international transport takes place, confirming our assumption. An outlier seems to be Luxembourg (Figure 3.16), as in this Member State, the average annual personnel cost is high (€ 44,100; see also Figure 3.11), while the share of international transport in total transport in this Member State is also high (87.4%). Therefore, in Luxembourg, the share of international transport is probably more dependent on other factors than the average personnel cost. When the correlation without Luxembourg is calculated, it amounts to -0.66, an even stronger negative relationship.

59 Eurostat [sbs_na_1a_se_r2].

**Figure 3.16** **Correlation between the average personnel cost per employee in € 1,000, and the share of international transport in total transport in million tonne-kilometre, 2017, EU-28**

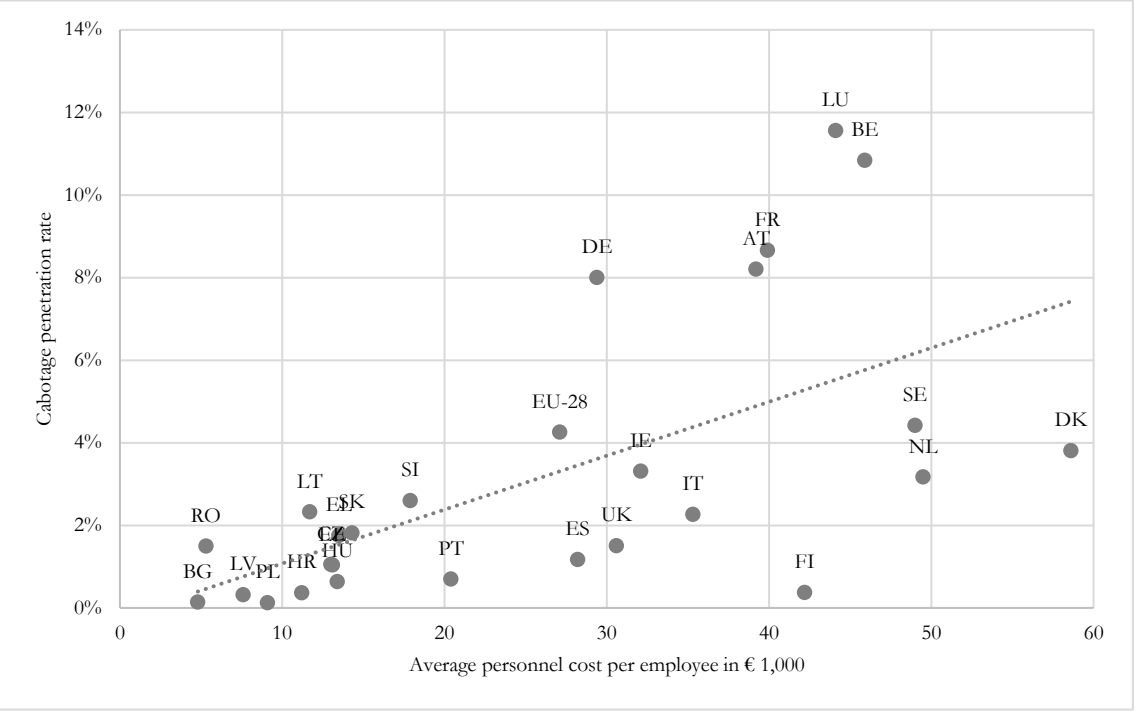



* The correlation coefficient amounts to -0.56, and without the outlier LU to -0.66.
**Source** Eurostat [sbs_na_1a_se_r2] and [road_go_ta_tott]

Second, the relationship between the average personnel cost and the cabotage penetration rate can be analysed. One can expect that when the personnel costs are high in a certain Member State, the cabotage penetration rate will be high as well, as it is cheaper for hauliers from outside this Member State to perform national transport in that Member State (= cabotage), than for national hauliers to perform this national transport. As a result, our hypothesis is that the correlation coefficient will be positive. Figure 3.17 shows the result of this analysis.

The correlation coefficient amounts to +0.62 indicating a strong positive relationship. Our hypothesis thus holds true. When the average personnel cost in Member States is on the low side, the cabotage penetration rate will be low as well, as in these Member States it is beneficial for national hauliers to perform the national transport themselves. On the other hand, when the average personnel cost is high in Member States, the cabotage penetration rate is high as well. This means that the market share of foreign hauliers in their total national transport activities is high, as it is more advantageous for these foreign hauliers to perform national transport in these Member States with a high average personnel cost. Nevertheless, the same remark as above should be made. Correlation is not causality. It is not *because* the average personnel cost is high, that the cabotage penetration rate is high. There might be many other reasons for this. It is only certain that these two variables know a strong positive relationship.

**Figure 3.17 Correlation between the average personnel cost per employee in € 1,000 and the cabotage penetration rate*, 2017, EU-28**




* The cabotage penetration rate is the share of cabotage transport in total national transport, where total national transport is the sum of national transport (for hire and reward) and cabotage transport (in that country). In this figure, it concerns the cabotage penetration rate for 2017 (not 2018, as pictured in Figure 3.3).

** The correlation coefficient amounts to +0.62.

**Source** Eurostat [sbs_na_1a_se_r2], [road_go_ca_c] and [road_go_ta_tott]

## 3.4 Employment in the EU road transport sector

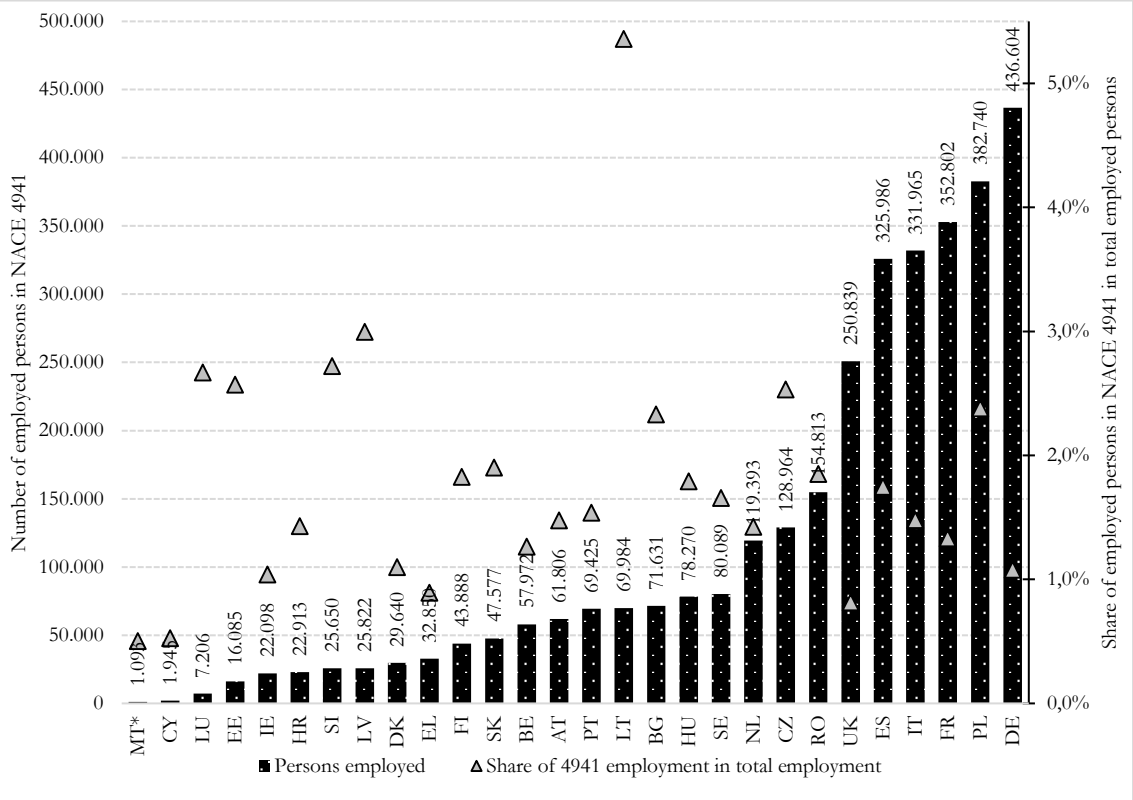
The employment in the sector can be analysed using the structural business statistics. In 2017, approximately 3.3 million persons were employed in the EU road transport sector.[60] The breakdown by Member State is provided in Figure 3.18. In absolute numbers, most persons were employed in Germany (436,604 persons), Poland (382,740) and France (352,802). Furthermore, the road transport sector employed more than 250,000 persons in Italy, Spain, and the United Kingdom.

Additionally, the relative impact of the sector is visualised using the right axis in Figure 3.18. For each Member State, the number of employed persons in NACE-sector 4941 'Freight transport by road' is compared to the total number of employed persons in 2017. This shows for instance that although Germany recorded the highest absolute number of employed persons working in this sector, it only concerns 1.1% of the total number of employed persons.

In the EU-28, the share in total employed persons amounts to 1.5%. Several Member States have a notable higher share. In Lithuania, 5.4% of all employed persons work in the road transport sector. This share also amounts to more than 2.5% in Latvia, Slovenia, Luxembourg, Estonia, and the Czech Republic. In contrast, the share remains below 1% in Malta, Cyprus, Greece, and the United Kingdom.

60 Eurostat [sbs_na_1a_se_r2].

**Figure 3.18 Number of persons employed in NACE 4941 'Freight transport by road' and share in total number of employed persons, 2017, EU-28**




* For MT the number of persons employed in 2015 was used.
** To calculate the total number of employed persons, the number of employed persons from 15 to 64 years old were taken into account.
**Source** Eurostat [sbs_na_1a_se_r2] and [lfsi_emp_a]

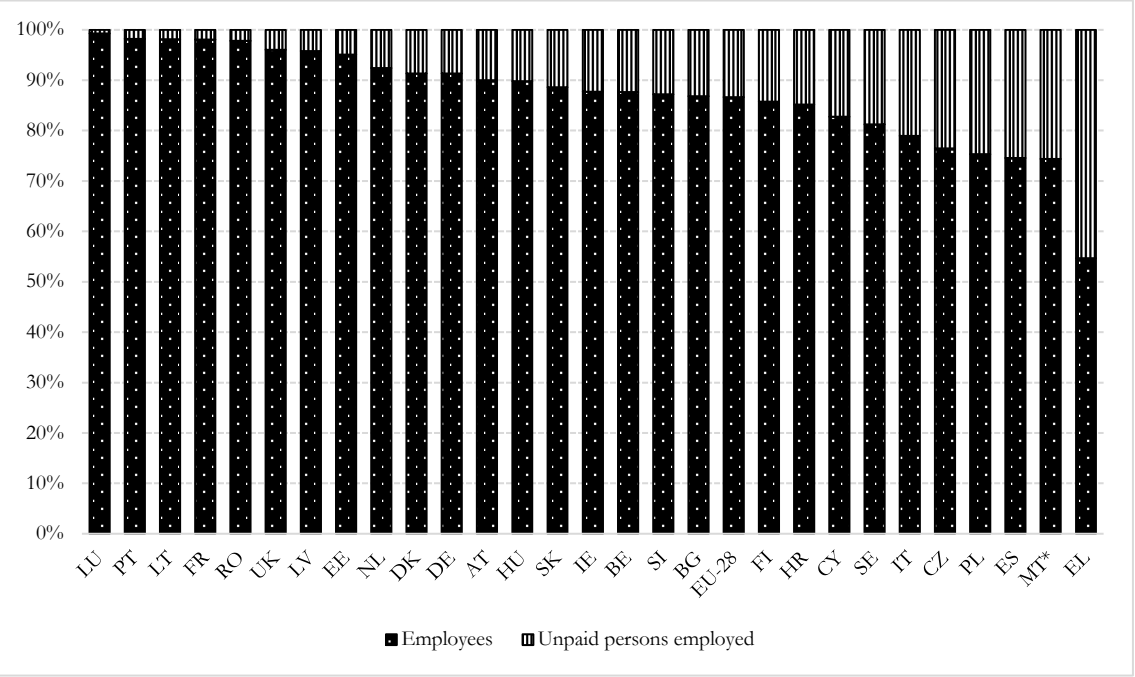
The variable 'persons employed'[61] in the Structural Business Statistics is also broken down in two components: employees[62] and unpaid persons employed.[63] For 2017, this breakdown for every Member State is pictured in Figure 3.19. For all Member States, the majority of persons employed are employees. In the EU-28, the average distribution amounts to 86.7% employees and 13.3% unpaid persons employed. In Greece, the distribution lies at 54.7% employees and 45.3%, which is the most extreme distribution of all EU-28 Member States. Nevertheless, this breakdown in Greece has already known a strong evolution, as it still amounted to 35% employees versus 63% unpaid persons employed in 2008. Since then, the share of employees has been on the rise. In almost all Member States, the same evolution can be seen. For instance, in Cyprus, the share of unpaid persons employed in the sector has dropped from 38% in 2008 to 17% in 2018.

61 Number of 'persons employed' is defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (e.g. sales representatives, delivery personnel, repair and maintenance teams). It excludes manpower supplied to the unit by other enterprises, persons carrying out repair and maintenance work in the enquiry unit on behalf of other enterprises, as well as those on compulsory military service (Eurostat, n.d.-e).

62 Number of 'employees' is defined as those persons who work for an employer and who have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind. A worker from an employment agency is considered to be an employee of that temporary employment agency and not of the unit (customer) in which they work (Eurostat, n.d.-e).

63 Number of 'unpaid persons employed' is defined as the number of persons who work regularly in the observation unit and who do not receive compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind (unpaid family workers, working proprietors not receiving a compensation in the form of wages, salaries, ...) (Commission Regulation 250/2009).

**Figure 3.19 Breakdown of persons employed in NACE 4941 'Freight transport by road', by employees and unpaid persons employed, 2017, EU-28**



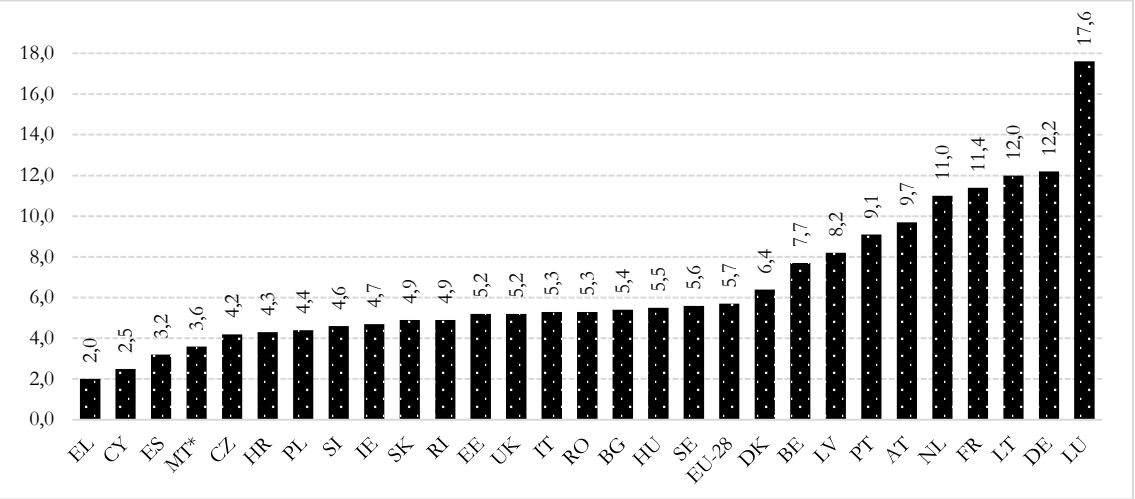

* For MT the number of persons employed in 2015 was used.
**Source** Eurostat [sbs_na_1a_se_r2]

The Eurostat data also provide the opportunity to look at the average number of employed persons per company. In the EU-28, approximately 5.7 persons are employed per enterprise active in the road transport sector (Figure 3.20). In Luxembourg, this number lies remarkably higher than in all other Member States, with 17.6 persons employed per enterprise. This could also be expected when looking at the average turnover per enterprise (Section 3.3), as it seems that in this Member State especially large companies are active with many employed persons and a high turnover. In the Netherlands, France, Lithuania, and Germany, the average also exceeds 10 persons. This is in contrast to Greece, Cyprus, Spain, and Malta, where the average persons employed per enterprise is below 4.

The data also make it possible to look at the evolution of the average number of persons employed per enterprise, from 2008 to 2017. In Hungary and Portugal, the average has increased by more than 40%, whereas in Slovakia it decreased by more than 60%.[64] This is an indication that whereas in the former Member States larger enterprises became active with more persons employed, the opposite is true for the latter Member State. Furthermore, the decrease of the number of employees could also be a sign of the existence of a letterbox company. For instance, when a company creates a high amount of turnover, but has (almost) no employees, this can be considered a 'red flag', as will be explained in Section 3.6.1.

64 Eurostat [sbs_na_1a_se_r2].

**Figure 3.20 Average number of persons employed per enterprise active under NACE 4941 'Freight transport by road', 2017, EU-28**




* The number of MT concerns the number for 2015.
**Source** Eurostat [sbs_na_1a_se_r2]

As discussed in the introduction, the labour shortage seems to be a pressing issue in the sector. This is a result of the growing demand, the unattractiveness of the job, as well as the ageing labour force. Nevertheless, there is also a reinforcing effect at play: social dumping, pressure on wages, and worsened working conditions make the job less attractive, with the result that many nationals do not want to become a driver anymore (Vandaele, 2019). As a result, third country drivers are hired to fill the demand. On the other hand, it is also stated that third country drivers are pushing out nationals, which then results in worse working conditions and a pressure on wages. Thus, it is a clear vicious circle, where cause and effect are hard to distinguish.

Paradowska and Platje (2016) stated that the labour force in this sector is ageing more quickly than in other sectors. This claim can be investigated by using Eurostat data. In general, it is possible to look at the share of employed persons over 50 years old in this sector. In 2018, more than 50% of persons employed in NACE H 49[65] 'Land transport and transport via pipelines' in Denmark, Germany, Estonia, and Ireland were over 50 years old.[66] Furthermore, the share lies above 40% in many other Member States (BG, IT, CY, LV, LT, HU, NL, FI, SE, and UK). In 2008, on the other hand, the share of employed persons over 50 years old only exceeded 40% in Cyprus (42.6%) and Sweden (41.8%). However, in order to truly see whether this is characteristic to this sector or whether it is happening in general, the evolution of the share of persons employed over 50 years old in the total economy should be looked at as well.

In a first step, the share of employed persons over 50 years old in the total number of persons employed was calculated, for 2008 and 2018, and both for the total and for NACE-code H49 'Land transport and transport via pipelines'. In a next step, the difference between the shares in 2008 and 2018 was calculated, resulting in the evolution in percentage points, as pictured in Figure 3.21. An example will clarify what exactly can be seen in this figure. In Romania, the share of 50+ persons employed in total has increased by 0.4 percentage points from 2008-2018 (going from 29.0% to 29.4%). In the same time period however, the share of 50+ persons employed in the sector of land transport and transport via pipelines grew by 7.4 percentage points (from 20.2% to 27.6%). Thus, it can be concluded that the labour force in Romania in this sector is indeed ageing more rapidly than in general.

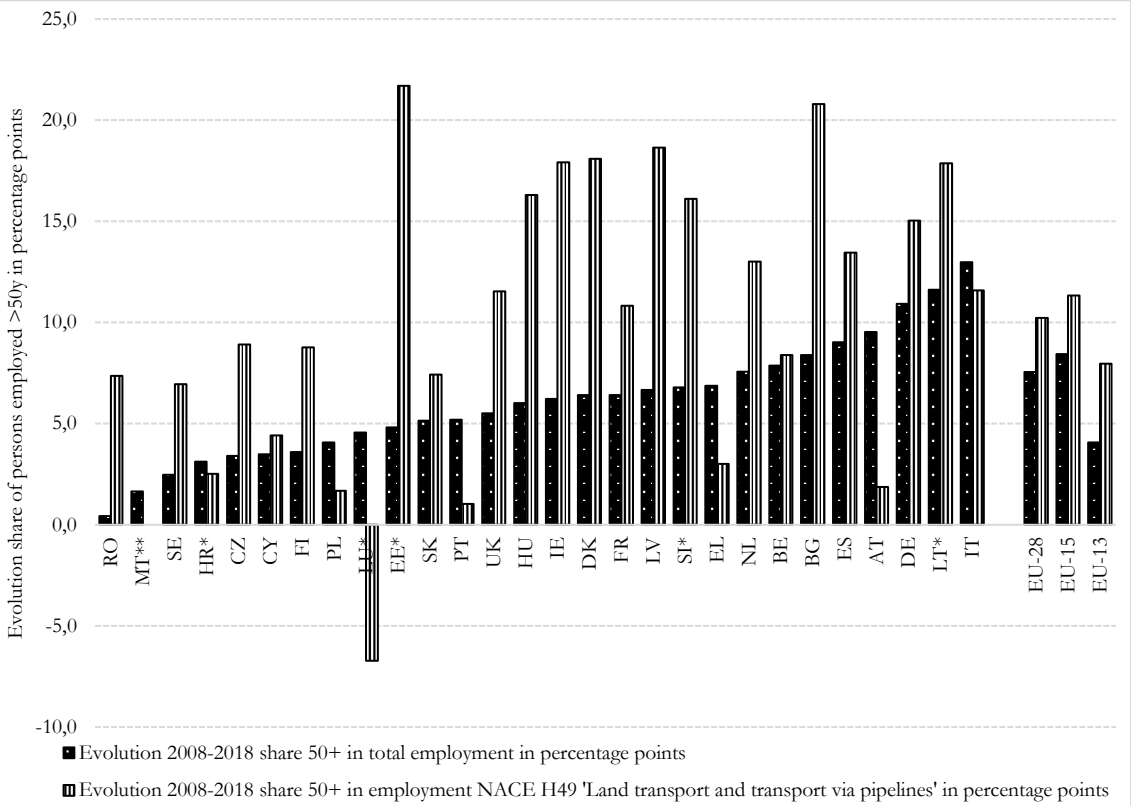
65 NACE H49 includes NACE H491 'Passenger rail transport, interurban', NACE 492 'Freight rail transport', NACE 493 'Other passenger land transport', NACE 494 'Freight transport by road and removal services', and NACE 495 'Transport via pipelines'. As NACE H49 also includes railway and passenger transport, it is only indicative of Freight transport by road, which is a part of NACE 494.

66 Eurostat [lfsq_egdn2].

Overall, it is clear that in the EU-28 the share of older persons employed is increasing (+7.6 percentage points), especially in the EU-15 Member States (+8.4 percentage points), but also in EU-13 Member States (+4.1 percentage points). However, the share of over-50s has been increasing even more in the transport sector, namely +10.2 percentage points in the EU-28, +11.3 in the EU-15 and +8.0 in the EU-13. Only in seven Member States, the opposite was true, meaning that the share of 50+ persons employed grew slower in the NACE-sector H 49 than in general (the striped bars are lower than the black bars). This is the case for Croatia, Poland, Luxembourg, Portugal, Greece, Austria and Italy.[67] For all other Member States, the work force in the transport sector is indeed ageing more quickly than in general. The difference is especially remarkable for Estonia, Bulgaria, Latvia, Ireland and Denmark, as in these countries the share of the older transport workforce increased much more than in general. In Bulgaria for instance, the share of 50+ persons employed increased by 8.4 percentage points in general (from 26.0% to 34.4%) whereas it grew by 20.8 percentage points in the transport sector (from 22.3% to 43.1%).

In conclusion, the claim made by Paradowska and Platje (2016) seems to hold true that in the majority of Member States the workforce in the transport sector is ageing more quickly than in general.

**Figure 3.21 Evolution of share of persons employed over 50 years old in total and in NACE H 49 'Land transport and transport via pipelines', in percentage points, 2008-2018, EU-28**




* Eurostat reported that the data concerning the employment in NACE H 49 'Land transport and transport via pipelines' (used for the calculation of the black bars) might be unreliable for HR, LU, EE, SI, and LT.

** Data for the employment in NACE H 49 'Land transport and transport via pipelines' were not available for MT.

**Source** Eurostat [lfsq_egdn2] and [lfsq_egan22d]

67 However, for HR and LU the data on NACE H 49 might be unreliable, as reported by Eurostat. This is also the case for EE, SI and LT.

An interesting aspect to look at concerning employment is the profile of labour force in the transport sector. It is estimated that in 2017 in NACE sector H 'Transportation and storage', around 9% of the labour forces has another nationality than the Member State where they are employed (LFS data).

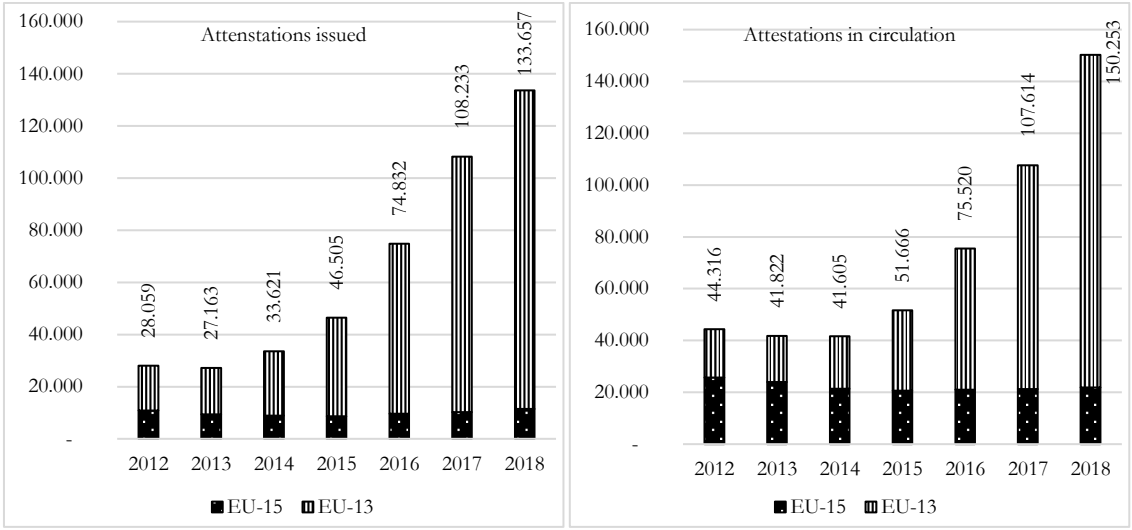
A specific group of employees in the road transport sector can be identified by looking at the number of Driver attestations. This is a uniform document certifying that the driver of a vehicle carrying out road haulage operations between Member States is either lawfully employed by the EU transport operator concerned in the Member State in which the operator is established, or lawfully placed at the disposal of that operator (European Commission, n.d.-f). Thus, this document is needed for drivers who are not a national, neither a long-term resident of an EU Member State, so that their employment status can be checked, and irregular and illegal employment is combatted. This will allow us to get an idea of the number of third country nationals working in this sector.

A driver attestation will only be issued to hauliers with a Community licence, a licence for international journeys for hire or reward within the 27 EU Member States and 5 other countries.[68] The attestation has a maximum validity of 5 years, as set out in Article 5 of Regulation 1072/2009.

An overview of the number of driver attestations issued and in circulation is provided in Figure 3.22.[69] An impressive growth is visible, especially starting from 2014. In 2012, 28,059 attestations were issued in the EU-28, whereas in 2018, 133,657 attestations were issued, almost a five-fold. A shift between EU-15 and EU-13 Member States is also visible. In 2012, 39% of attestations were issued for EU-15 hauliers, while this share only amounted to 9% in 2018. Furthermore, in 2012 out of the total number of driver attestations in circulation, 58% was in the hands of EU-15 hauliers, whereas in 2018 this dropped to 15%.

This overall growth could indicate a growth of the sector. However, it could also be connected to the driver shortage, which was discussed in the introduction. It is clear that EU-hauliers are employing more and more third country nationals in the road haulage sector, be it for cost reasons, labour shortage, or other reasons.

**Figure 3.22 Number of driver attestations issued (left) and in circulation (right), 2012-2018, EU**



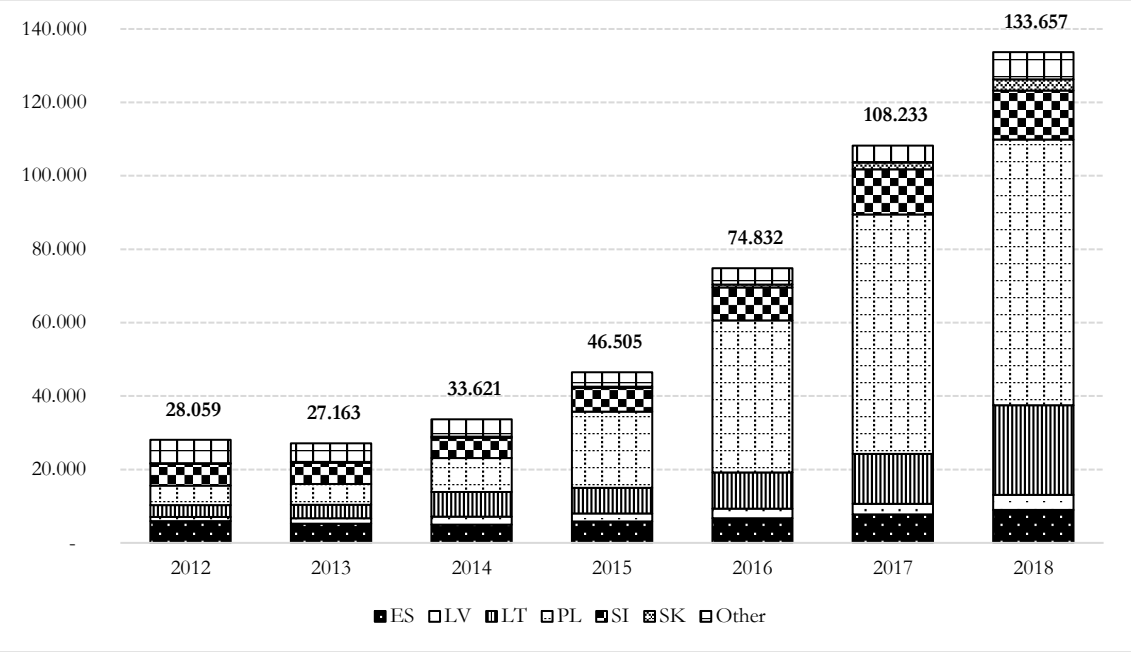

**Source** Own elaborations based on European Commission (n.d.-h)

68 These countries are Iceland, Liechtenstein, Norway, Switzerland, and the United Kingdom.

69 Recently, figures for 2019 have been published by the European Commission. In 2019, 153,127 driver attestations were issued, or a growth of 14.6% compared to 2018. Furthermore, 199,003 attestations were in circulation in 2019, which is an increase of 32.4% compared to 2018. The shares that were issued and in circulation for EU-13 and EU-15 Member States remained stable. In 2019, 9.1% of attestations were issued for EU-15 Member States (compared to 8.6% in 2018), and 11.2% of attestations in circulation were in the hands of EU-15 hauliers (compared to 14.5% in 2018)
(See https://ec.europa.eu/transport/sites/transport/files/driver-attestations-in-road-freight-transport.pdf).

A more detailed graph of the driver attestations issued from 2012 to 2018 is shown in Figure 3.23. There are six Member States that clearly issue the majority of driver attestations, namely Spain, Latvia, Lithuania, Poland, Slovenia and Slovakia. In 2012, they issued 78% of all driver attestations issued by EU-28 Member States, and in 2018, this share even amounted to 94%. The most remarkable Member State in this respect is Poland. In 2012, 19% of all driver attestations were issued by this Member State. However, in 2018, 72,390 out of the 133,657 driver attestations were issued by Poland, or an impressive 54% of all attestations issued by the EU-28. In addition, Lithuania (18.3%) and Slovenia (10.0%) issued a high share of driver attestations in 2018.[70]

**Figure 3.23 Number of driver attestations issued, 2012-2018, EU-28**



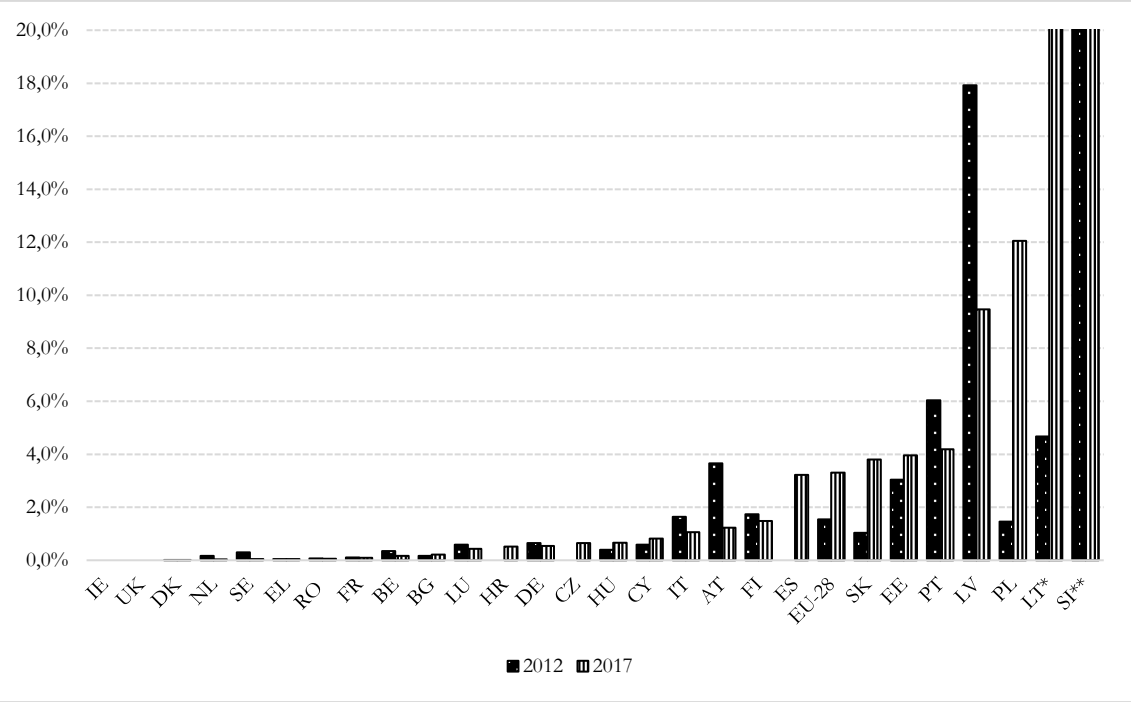

**Source** Own elaborations based on European Commission (n.d.-h)

The number of driver attestations can also be compared to the total employment in the sector in order to analyse the ratio of third country nationals. Figure 3.24 shows for every Member State the share of driver attestations in circulation on the total number of persons employed in the road transport sector, in 2012 and 2017. It can be seen that in 2017, a high share of drivers employed in Lithuania (31.9%) and Slovenia (43.8%) are third country nationals with a driver attestation. Furthermore, the share is on the high side in Latvia (9.5%) and Poland (12.1%). In the EU-28, the share of persons employed with a driver attestation amounts to 3.3%. Compared to Figure 3.23 it is striking to see that for Slovakia and Spain, two of the Member States which issued most of driver attestations, the share in total employment only amounts to 3.8% and 3.2% respectively. The other four Member States which issued most driver attestations (LV, PL, LT, and SI) are also the top Member States regarding the share in total employment.

70 The numbers for 2019 for these Member States (ES, LV, LT, PL, SI and SK) remained rather stable. Together, these six Member States issued 93.5% of all driver attestations in 2019, compared to 94.5% in 2018. In all six Member States, a growth in the absolute number of driver attestations issued can be noticed (ES: +26.8%, LV: +87.3%, LT: +22.4%, PL: +1.8%, SI: +23.9%, and SK: +30.1%). Furthermore, the shares of driver attestations issued by these different Member States in the total number of attestations issued by all EU Member States remained steady. In Spain (from 6.7% in 2018 to 7.4% in 2019), Latvia (from 3.1% to 5.0%), Lithuania (from 18.3% to 19.5%), Slovenia (from 10.0% to 10.8%) and Slovakia (from 2.3% to 2.6%) the share (slightly) grew, while in Poland it decreased (from 54.2% to 48.1%).
(See https://ec.europa.eu/transport/sites/transport/files/driver-attestations-in-road-freight-transport.pdf).

For most Member States, the evolution of the share from 2012 to 2017 is minimal. However, there are certain exceptions. In Portugal (-1.9 percentage points), Austria (-2.4), and Latvia (-8.5), the share of third country nationals was higher in 2012 than in 2017. In Poland, Slovenia, and Lithuania on the other hand, the growth of the share of third country nationals is exceptional, with a growth of 10.6, 15.9, and 27.2 percentage points respectively. This evolution indicates that in these Member States, third country nationals are becoming increasingly important in the EU road transport sector.

**Figure 3.24 Share of driver attestations in circulation on total number of persons employed in NACE 4941 'Freight transport by road', 2012 and 2017, EU-28**




* The share for LT in 2017 amounts to 31.9%.
** The share for SI in 2012 amounts to 27.9% and in 2017 to 43.8%.
**Source** European Commission (n.d.-h), Eurostat [sbs_na_1a_se_r2]

With regard to employment, a final interesting variable to look at is the number of truck drivers providing services abroad. However, posting in the road transport sector remains a strongly debated issue. It is stated that the Posting of Workers Directive is not adequate when applied to the road transport sector, as it does not take into account the sector's highly mobile workforce, transnational character and enforcement difficulties. Legal issues especially come up when the link between the driver and the host country is weak. Consequently, the rules on posting are interpreted quite differently in Member States, which is an obstacle to the smooth operation of the internal market (Scordamaglia, 2020). Therefore, new rules have been adopted, which should provide fairer competition, better legal certainty and enforcement. [71] The issue of whether a driver is posted or not depends on 'the degree of connection with the territory of the host Member State'.[72] Consequently, drivers

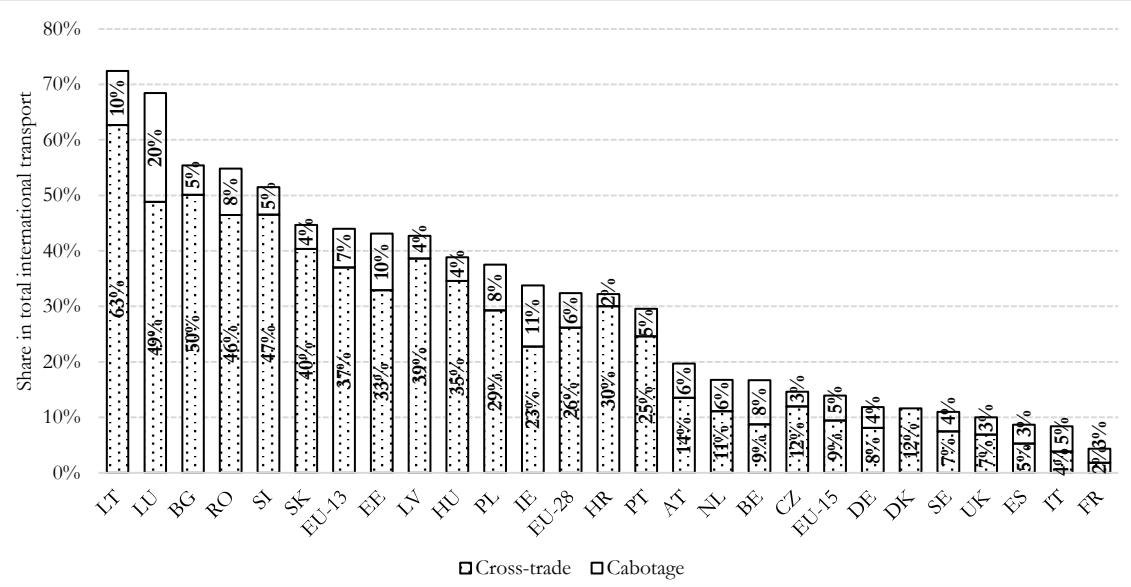
71 Directive (EU) 2020/1057 of the European Parliament and of the Council of 15 July 2020 laying down specific rules with respect to Directive 96/71/EC and Directive 2014/67/EU for posting drivers in the road transport sector and amending Directive 2006/22/EC as regards enforcement requirements and Regulation (EU) No 1024/2012. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2020.249.01.0049.01.ENG&toc=OJ:L:2020:249:TOC

72 Directive (EU) 2020/1057 of the European Parliament and of the Council of 15 July 2020 laying down specific rules with respect to Directive 96/71/EC and Directive 2014/67/EU for posting drivers in the road transport sector and amending Directive 2006/22/EC as regards enforcement requirements and Regulation (EU) No 1024/2012.

performing cabotage or cross-trade will be considered posted workers, as they have a strong connection to the host Member State.[73] Bilateral and transit transport on the other hand, is not considered to be posted work.[74]

It is estimated that a third of the international transport operations in the EU are subject to the Posting of Workers Directive. This mainly concerns cross-trade (26%) and to a lesser extent cabotage (6%) operations (Figure 3.25). Nonetheless, there are strong differences between Member States. For instance, more than 50% of international transport operations carried out by truck drivers from Lithuania, Luxembourg, Bulgaria, Romania and Slovenia will be covered by the Posting of Workers Directive. Furthermore, as EU-13 hauliers carry out much more cross-trade and cabotage operations, truck drivers from these Member State will be considered much more to be posted for the purpose of the Posting of Workers Directive.

**Figure 3.25 Application of Directive 96/71/EC to international road transport operations in the EU, estimated share in total**




* In some cases, the Posting of Workers Directive should not be applied to cross-trade operations.
**Source** Own calculations based on Eurostat [road_go_ta_tott] (in tonne-km)

To analyse posting from a sending perspective, it is possible to look at the number of PDs A1 issued, both according to Article 12 and 13 of Regulation 883/2004 (i.e. 'Basic Regulation'). The former is used when a person is posted to another Member State, whereas the latter is used for persons pursuing activities in two or more Member States. Table 3.4 shows the total number of PDs A1 issued for Article 12 and 13 BR as well as the number and share issued specifically for activities under NACE H494 'Freight transport by road and removal services'. The figures show that most PDs A1 for persons employed in the road freight transport are issued according to Article 13 and not according to Article 12. In 2018, some 180,000 PDs A1 according to Article 13 were issued by Poland to persons

73 See recital 13: 'Where a driver performs other types of operations, notably cabotage operations or non-bilateral international transport operations, there is a sufficient link to the territory of the host Member State.' However, there is an exemption for cross-trade: see Article 1.3 – third paragraph: '… Member States shall apply the exemption for bilateral transport operations in respect of goods set out in the first and second subparagraphs of this paragraph also where, in addition to performing a bilateral transport operation, the driver performs one activity of loading and/or unloading in the Member States or third countries that the driver crosses, provided that the driver does not load goods and unload them in the same Member State.' (see also van Overbeeke, forthcoming).

74 See Article 1.3 – second paragraph: 'For the purpose of this Directive, a bilateral transport operation in respect of goods means the movement of goods, based on a transport contract, from the Member State of establishment, as defined in Article 2(8) of Regulation (EC) No 1071/2009, to another Member State or to a third country, or from another Member State or a third country to the Member State of establishment. Furthermore, see recital 11: 'International carriage in transit across the territory of a Member State does not constitute a posting situation'.

employed in the road transport sector. Based on the statistics published by Eurostat on road freight transport in the EU, we observed already that Poland is by far the largest international transport Member State in the EU. Consequently, the finding that a high number of PDs A1 related to Article 13 are issued to truck drivers, mainly to those with a headquarter in Poland, is no surprise. Half of the PDs A1 issued according to Article 13 were issued to persons employed in the road transport sector. This was especially the case in Lithuania (76.2%), Croatia (63.8%), Slovakia (61.4%), and Poland (51.0%). Furthermore, the number of individual persons covered by Article 13 could be compared to the total number of employed persons in the sending Member States to know the relative importance of this activity.[75] This exercise makes it clear that a high percentage of truck drivers employed in Luxembourg (more than 60%), Slovakia (more than 40%), Poland and Croatia (around 40%) is active in two or more Member States (see also De Wispelaere *et al.*, 2020).

The right-hand side of Table 3.4 shows posting data from a receiving perspective. It concerns the number of notifications[76] received in the prior notification tools, as well as the number of posted persons.[77] Furthermore, there is a breakdown but only until the level of NACE H 'Transporting and storage'. It seems that Italy received the highest share of notifications and persons in the transport and storage market, as it amounts to 19% and 20% respectively. Furthermore, around 11% of all posted persons received by Luxembourg were active in this market.

It is clear that the data on the provision of services abroad are still incomplete. Table 3.4 illustrates this itself, as many cells remain empty. As a result, these data sources do not allow us to get a complete overview of the provision of services abroad in the freight transport by road sector. Furthermore, the data limitations for these types of data were already discussed in Section 2.3.3. Nevertheless, the data show that the road transport sector in certain Member States (PL, HR, LV, LT and SK) strongly focus on the provision of services abroad. Data on the export of services from Eurostat (Balance of Payments - BOP) is used in the Section 3.5.2 for the EU as a whole and in each of the six Member States' chapter in order to get a more complete view on the provision of services abroad.

Above results from the PD A1 data could be compared to other data on cross-border services in the EU. For instance, data on service exports and intermediate economic networks in Europe is provided by the World Input Output Database (WIOD). Based on an analysis of these data, Fritsch and Bertenrath (2019) observed that cross-border services are very important for some labour-intensive sectors in Poland like wholesale trade and the transport sector. For instance, 19% of the employees in the Polish transport sector depend on the sale of cross-border services.

75 The exact calculation is as follows: first, the individual number of persons covered by Article 13 BR (see Table 16 in De Wispelaere *et al.*, 2020) is multiplied by the share of NACE H494 in the total number of PDs A1 issued according to Article 13 BR (see 7th column of Table 3.4). Then, this is divided by the total number of persons employed in NACE 4941, using Eurostat (sbs_na_1a_se_r2) as a source. As a result, the estimated share of persons employed in two or more Member States in freight transport by road is identified (see Figure 11 in the report by De Wispelaere *et al.* (2020)).

76 A notification by a posting undertaking to the national declaration tool of the host Member State. In most host Member States, a single notification may include several postings.

77 A worker registered in the prior notification tool who worked at least one day in the reference year as posted worker in the host Member State. It is possible that workers were posted several times during the reference year. In that case, they are only counted once.

**Table 3.4** **Number of PD A1 issued according to Article 12 and art 13 of Regulation 883/2004, and number of notifications and persons registered in the prior notification tools, 2018**

| | PD A1 | | | | | | Prior notification tools | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Issued Art. 12 BR | | | Issued Art. 13 BR | | | Notifications | | | Persons | | |
| | Total number issued | Of which NACE 4941 | % Share for NACE H494 | Total number issued | Of which NACE H494 | % Share for NACE H494 | Total number received | Of which NACE H | % Share for NACE H | Total number received | Of which NACE H | % Share for NACE H |
| **BE** | 72,905 | 661 | 0.9 | 51,256 | 15,336 | 29.9 | | | | | | |
| **BG** | | | | | | | 1,051 | 10 | 1.0 | 733 | 10 | 1.4 |
| **CZ** | 10,264 | 350 | 3.4 | | | | | | | | | |
| **DK** | | | | | | | 27,202 | 1,227 | 4.5 | 27,219 | 636 | 2.3 |
| **DE** | | | | | | | | | | | | |
| **EE** | 6,915 | 40 | 0.6 | 12,712 | 818 | 6.4 | | | | | | |
| **IE** | | | | | | | | | | | | |
| **EL** | | | | 228 | | | | | | 2,284 | | |
| **ES** | | | | | | | | | | | | |
| **FR** | 100,426 | 249 | 0.2 | 330 | 0 | 0.0 | 413,658 | | | | | |
| **HR** | 48,613 | 87 | 0.2 | 13,428 | 8,561 | 63.8 | | | | | | |
| **IT** | | | | | | | 57,781 | 10,924 | 18.9 | 22,126 | 4,566 | 20.6 |
| **CY** | 81 | | | 3,868 | 224 | 5.8 | | | | | | |
| **LV** | 753 | | | 16,959 | 8,162 | 48.1 | | | | | | |
| **LT** | 30,798 | 52 | 0.2 | 46,825 | 35,659 | 76.2 | | | | 2,702 | 18 | 0.7 |
| **LU** | 63,885 | 78 | 0.1 | 13,027 | 4,876 | 37.4 | | | | 25,480 | 2,913 | 11.4 |
| **HU** | 54,326 | | | | | | | | | | | |
| **MT** | 252 | | | 1,202 | 475 | 39.5 | | | | | | |
| **NL** | 19,166 | 193 | 1.0 | | | | | | | | | |
| **AT** | 39,395 | 15 | 0.0 | 9,112 | 507 | 5.6 | | | | | | |
| **PL** | 238,509 | 3,282 | 1.4 | 350,597 | 178,636 | 51.0 | | | | | | |
| **PT** | 51,905 | 48 | 0.1 | | | | 391 | 5 | 1.3 | | | |
| **RO** | 41,948 | | | | | | | | | | | |
| **SI** | 64,104 | | | 933 | | | 11,466 | 385 | 3.4 | 4,049 | 268 | 6.6 |
| **SK** | 93,316 | 1,274 | 1.4 | 41,419 | 25,442 | 61.4 | | | | 9,017 | 450 | 5.0 |
| **FI** | 3,222 | 23 | 0.7 | 2,685 | 387 | 14.4 | | | | | | |
| **SE** | 2,862 | | | 4,712 | | | | | | | | |
| **UK** | | | | | | | | | | | | |

**Source** De Wispelaere *et al.* (2020)

## 3.5 Cross-border elements in the EU road transport sector

### 3.5.1 Companies with foreign majority shareholders and foreign subsidiaries

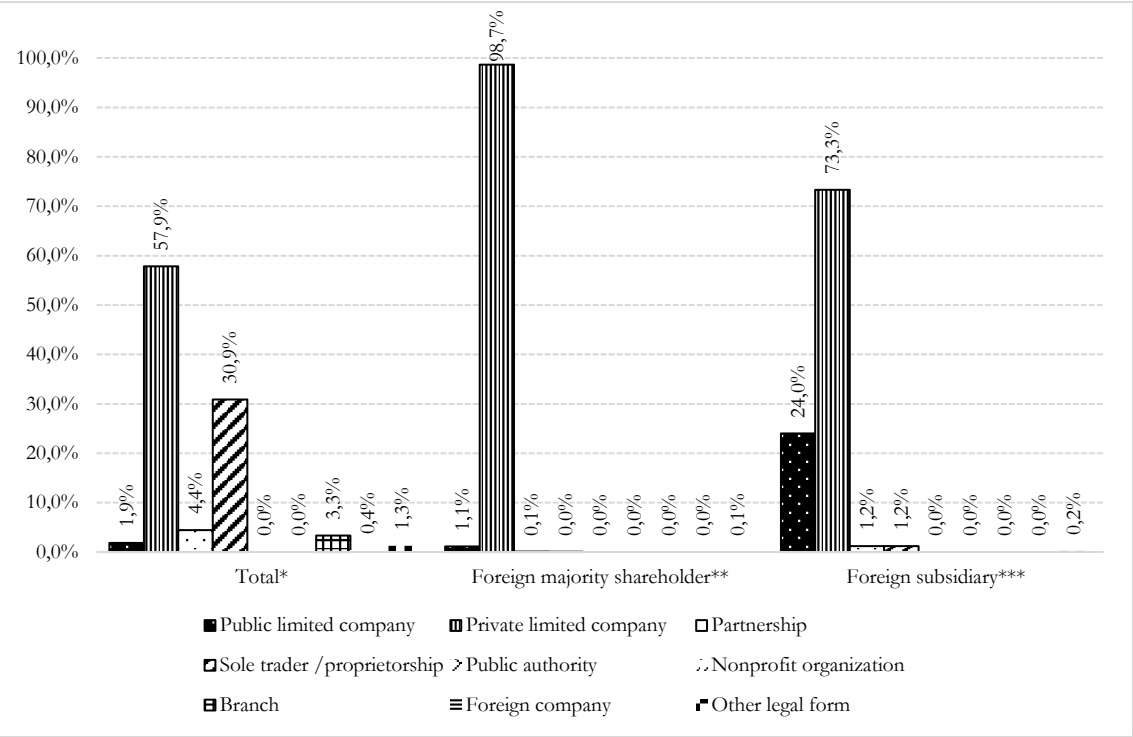
To get an idea of the cross-border network of companies active in the road transport sector, an analysis of foreign majority shareholders and foreign subsidiaries is carried out using the Orbis database. However, this analysis is only preformed on a certain group of companies, as having foreign

shareholders or subsidiaries does not apply to every type of company. Therefore, the legal forms of companies active in the road transport sector are evaluated in Figure 3.26.

In general, companies active under NACE-code 4941 are predominantly private limited companies (58%) and sole traders (31%). However, when looking at companies with a foreign majority shareholder, it is clear that one legal form stands out, namely private limited company, as 99% of all companies can be found under this legal form. Furthermore, companies with a foreign subsidiary are also mainly private limited companies (73%), followed by public limited companies (24%).

Consequently, the analysis of companies with a foreign majority shareholder and foreign subsidiary is only performed on companies with the legal form of public limited company and private limited company. This gives a more accurate image of the cross-border network of road transport companies, especially when looking at the share of companies with a foreign shareholder or subsidiary in the total number of companies. For instance, when including self-employed persons (sole traders) in the total number of companies (the denominator), the share of companies with a foreign shareholder or subsidiary would be very low, whereas this is not a correct comparison, as no self-employed persons will be included in the numerator seeing that practically no self-employed persons have a foreign majority shareholder or subsidiary.

**Figure 3.26 Legal form of companies in Orbis active under NACE 4941 'Freight transport by road', EU-28**




* The total concerns the number of active companies in NACE 4941 'Freight transport by road', located in the EU-28. (n=542,594).

** The companies with a foreign majority shareholder are the active companies in NACE 4941 'Freight transport by road', located in the EU-28, with a foreign majority shareholder located anywhere in the world, excluding those with a shareholder of which the location is unknown. (n=35,580).

*** The companies with a foreign subsidiary are the active companies in NACE 4941 'Freight transport by road', located in the EU-28, with a foreign subsidiary located anywhere in the world, excluding those with a subsidiary of which the location is unknown. (n=825).

**Source** Own elaborations based on Orbis [Data extracted 2 April 2020]

The transport sector is by definition a mobile sector. Therefore, the cross-mobility of the companies identified in Orbis is looked at further. First, companies with a foreign majority shareholder are analysed. In Orbis, having a foreign majority shareholder is defined by the concept of the 'Ultimate

Owner', meaning a shareholder who holds a minimum of 51% in the company. Second, companies with a foreign subsidiary are looked at. As discussed in the introduction, the presence of a foreign element in a company could be a preliminary indicator of a letterbox company. For instance, a company established in Member State A sets up a subsidiary in a low-wage Member State B from where it hires employees. These employees get paid the wage of Member State B, while they are predominantly working in Member State A. Nevertheless, it is not claimed that all companies with a foreign majority shareholder or subsidiary are letterbox companies. It could also be a sign of 'flagging out', which is a lawful manner to cut costs.

Table 3.5 looks at the number of transport companies with a foreign majority shareholder. As discussed above, only public and private limited companies are taken into account. In the EU-28, there are 325,208 companies active under NACE-code 4941 'Freight transport by road', and the selected legal forms. Around 203,000 are active in the EU-15, whereas 122,000 are active in the EU-13.

When looking at companies with a foreign majority shareholder, Orbis gives the possibility to include or exclude companies of which the location of the shareholder is not available. This means that column B provides the upper bound of companies with a foreign shareholder, as all companies of which the location of the shareholder was unknown, are included. On the other hand, column C (excl. n.a.) gives the lower bound of companies with a foreign shareholder, as all companies of which the location of the shareholder is unknown, are considered to be domestic shareholders. Thus, the 'real' number of EU-28 companies with a foreign majority shareholder in the road freight transport lies between 35,637 and 82,506, or 11% and 25% of all companies respectively.

This shows that there is a considerable group of companies with a 'foreign' shareholder for which the location is not available. This share is analysed in the fifth column ((B-C)/B) to get an idea of the magnitude of this problem in each Member State. In many Member States, the location of the foreign shareholder is not available for more than half of the companies (BG, EE, IE, EL, ES, FR, HR, LV, MT, PL, PT, RO, SI, SK and FI). As a result, only looking at companies with a foreign majority shareholder excluding the ones for which the location is unknown, would lead to a serious underestimation of the true extent of companies with a foreign majority shareholder. Therefore, to get an estimation of the 'real' number a share of the number of companies of which the location of the foreign shareholder is not available should also be included. In a first step, the total number of companies with a foreign shareholder excluding the unknown ones was divided by the total number of companies minus the number of companies with a foreign shareholder of which the location of the shareholder is not available. This represents the share of companies with foreign shareholders of which it is certain the shareholder is actually foreign. Second, the number of companies for which the location of the shareholder is unknown was multiplied by this share. Third, the number of companies with a foreign shareholder excluding the ones of which the location of the shareholder was not available was increased with the outcome of the previous steps. A concrete example might make this calculation easier to understand (Figure 3.27; example for Belgium).

**Figure 3.27 Calculation estimation number of companies with a foreign majority shareholder, Belgium**

Estimation number of companies with a foreign majority shareholder
= step 3 + [step 2 * step 1]
= total number of companies with a foreign shareholder excl. country n.a. +
[number of companies with a foreign shareholder of which the location is unknown
* (total number of companies excl. country n.a. / (total number of companies - number of companies with country n.a.))]
= 407 + [(523-407) * (407/(6,717-(523-407))]
= 407 + [116 * (407/(6,717-116))]
= 414

**Source** Own calculations based on Orbis [Data extracted 3 April 2020]

As a result, it is estimated there are 41,638 hauliers in the EU-28 with a foreign majority shareholder located anywhere in the world. For each Member State, this estimated number of companies with a foreign majority shareholder is compared to the total number of companies in the seventh column (D/A) (see also Figure 3.28). Of all EU-15 companies in the road transport sector, around 17% has a foreign majority shareholder, with the foreign majority shareholder located anywhere in the world, while this share only amounts to 5% for EU-13 companies. This is quite an interesting finding, as one might expect that the share of EU-13 companies with a foreign shareholder might be higher than EU-15 companies, while the opposite is true. However, the bottom row of Table 3.5 presents the EU-14, which equals the EU-15 Member States excluding the United Kingdom, which already takes the Brexit into account. This row shows that of all EU-14 transport companies, only 3.4% has a foreign majority shareholder, indicating the immense impact the figures for the United Kingdom have on the EU-15 average. Consequently, the common assumption does seem to hold true, namely that a higher share of EU-13 transport companies has a foreign majority shareholder than EU-14 companies.

Certain Member States have a remarkably high share of companies with a foreign majority shareholder. This is the case in Luxembourg (50.1% of all road freight transport companies), the United Kingdom (43.8%), Estonia (34.7%), and Slovakia (31.7%). On the other hand, certain Member States have almost no companies with a foreign majority shareholder, for instance in Greece (0.3%), Spain (0.7%), France (0.8%), Hungary (0.8%), and Sweden (0.8%).

It is also possible to look at the distribution of the total number of EU-28 companies with a foreign majority shareholder, as is done in the eighth column which calculates the column percentage. Consequently, it is clear that the large majority of EU-28 companies with a foreign majority shareholder are located in the EU-15 (84%) as opposed to the EU-13 (16%). More specifically, 73% of all EU-28 companies with a foreign majority shareholder are located in the United Kingdom. Furthermore, 7% is located in Slovakia, 5% in Romania, and 4% in Estonia. Consequently, when taking the United Kingdom out of the equation, the distribution becomes different, namely 58% in the EU-13 and 41% in the EU-14. Thus, it seems that the majority of companies with a foreign majority shareholder is indeed located in the EU-13, when taking into account all EU-27 Member States.

In the analysis that follows, the exact location of the foreign majority shareholder is looked at in more detail. However, this can of course only be done for companies for which the location of the foreign shareholder is known (column C). Therefore, the sum of the breakdown by location (located in EU-15, EU-13 and extra-EU; column 10, 11 and 12) equals the number of companies with a foreign majority shareholder excluding the ones for which the location was not available (column C).

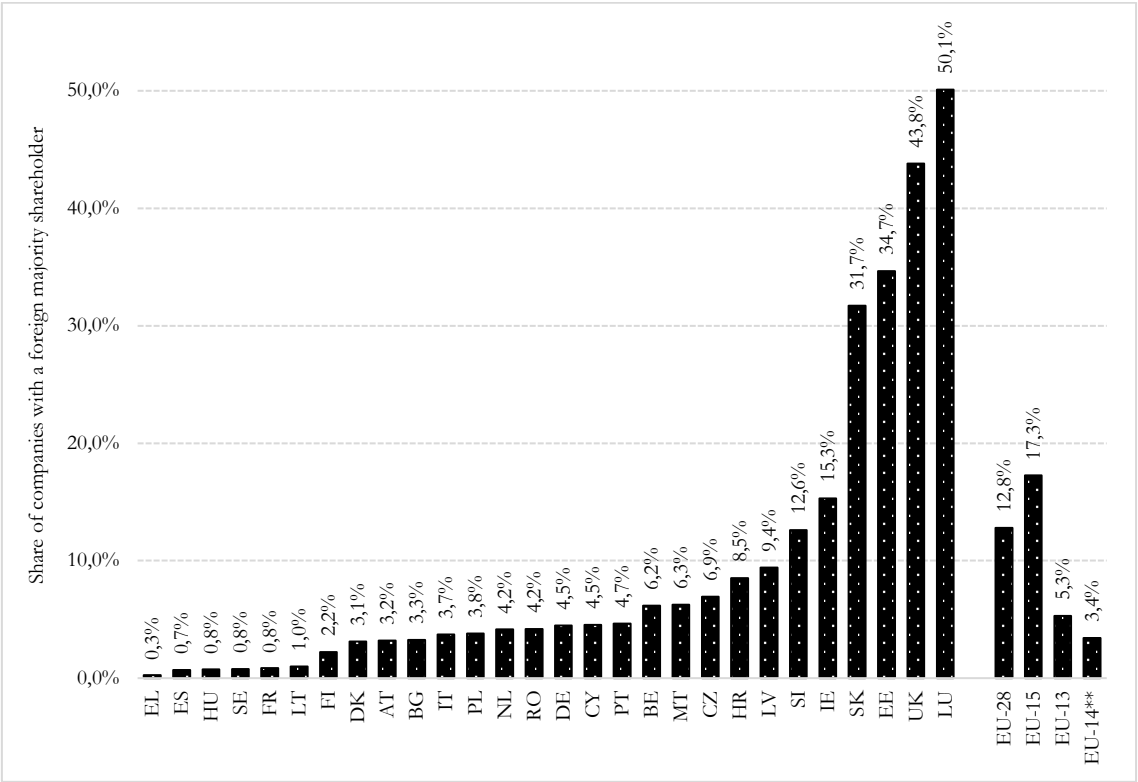
A distinction is made between foreign majority shareholders located in the EU-28, which is further broken down in EU-15 and EU-13, and extra-EU-28. The final column shows the share of companies with a foreign majority shareholder located outside the EU-28 (column E/C). In the EU-28, 10.7% of all transport companies with a foreign majority shareholder have a shareholder located outside the EU-28. For companies located in the EU-15 this share amounts to 7.9% and for EU-13 companies to 26.2%. This makes it clear that in general, the majority of companies with a foreign majority shareholder have a shareholder located in the EU-28. This holds true for almost all Member States, with the exception of Croatia, Italy, and Latvia where more than 50% of companies with a foreign majority shareholder have a shareholder located outside the EU-28. For Croatia and Latvia, this does not come as a surprise, as they are periphery countries and border several non-EU countries. Italy only borders one non-EU country, Switzerland, but also lies close to other non-EU countries, albeit separated by sea.

For all other Member States, the majority of companies with a foreign shareholder have a shareholder located in the EU-28. More specifically, for almost all Member States, the majority of these shareholders are located in EU-15 Member States. The only exceptions are Slovakia, Finland, and the United Kingdom. For companies located in these Member States with a foreign majority shareholder in the EU-28, more than 50% have a shareholder located in the EU-13 as opposed to the EU-15.

Especially the United Kingdom stands out, as out of the 25,916 companies with a foreign majority shareholder in the EU-28, 24,058 have a shareholder located in the EU-13, or 93%. As a result, when only taking EU-27 Member States into account, 70% of companies with a foreign majority shareholder in the EU-28 have a foreign majority shareholder in the EU-15, and only 30% in the EU-13.

Furthermore, it is interesting to see that in general when looking at companies with a foreign majority shareholder in the EU-28, companies located in the EU-15 have most foreign shareholders located in the EU-13, and companies located in the EU-13 have most foreign shareholders located in the EU-15. For EU-15 companies the division is 12% with a foreign majority shareholder in the EU-15 (3,290/27,758) and 88% in the EU-13 (24,468/27,758). For EU-13 companies the breakdown equals 66% with a foreign majority shareholder in the EU-15 (2,678/4,056) and 34% in the EU-13 (1,378/4,056). Furthermore, for EU-14 companies, the breakdown equals 78% with a foreign majority shareholder in the EU-15 (1,432/1,842) and 22% with a foreign majority shareholder in the EU-13 (410/1,842).

**Figure 3.28 Estimation of share of companies with a foreign majority shareholder in total number of companies active in NACE 4941 'Freight transport by road', EU-28**




* This is a visual representation of the seventh column (D/A) of Table 3.5.
**The EU-14 represent the EU-15 excluding the United Kingdom, as a consequence of Brexit.
**Source** Own elaborations based on Orbis [Data extracted 3 April 2020]

**Table 3.5 Companies active under NACE 4941 'Freight transport by road' with a foreign majority shareholder, EU-28**

| | Number of companies (A) | Foreign majority shareholder (incl. n.a.) (B) | Foreign majority shareholder (excl. n.a.) (C) | % Share of location n.a. ((B-C)/B) | Estimation foreign majority shareholder (C + ((B-C)* C/(A-(B-C)) (D) | % Share foreign majority shareholder (D/A) | Column % estimation foreign majority shareholder | Foreign majority shareholder EU-28 | Foreign majority shareholder EU-15 | Foreign majority shareholder EU-13 | Foreign majority shareholder extra EU-28 (E) | % Share of foreign majority shareholder extra EU-28 (E/C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BE** | 6,717 | 523 | 407 | 22.2 | 414 | 6.2 | 1.0 | 229 | 194 | 35 | 178 | 43.7 |
| **BG** | 19,007 | 3,663 | 518 | 85.9 | 621 | 3.3 | 1.5 | 304 | 280 | 24 | 214 | 41.3 |
| **CZ** | 8,249 | 608 | 569 | 6.4 | 572 | 6.9 | 1.4 | 407 | 208 | 199 | 162 | 28.5 |
| **DK** | 2,247 | 75 | 70 | 6.7 | 70 | 3.1 | 0.2 | 61 | 56 | 5 | 9 | 12.9 |
| **DE** | 7,293 | 344 | 327 | 4.9 | 328 | 4.5 | 0.8 | 254 | 171 | 83 | 73 | 22.3 |
| **EE** | 4,433 | 4,269 | 87 | 98.0 | 1,537 | 34.7 | 3.7 | 53 | 43 | 10 | 34 | 39.1 |
| **IE** | 1,275 | 1,098 | 32 | 97.1 | 195 | 15.3 | 0.5 | 29 | 29 | - | 3 | 9.4 |
| **EL** | 397 | 5 | 1 | 80.0 | 1 | 0.3 | 0.0 | 1 | 1 | - | - | 0.0 |
| **ES** | 35,550 | 7,905 | 191 | 97.6 | 244 | 0.7 | 0.6 | 175 | 172 | 3 | 16 | 8.4 |
| **FR** | 30,337 | 4,961 | 217 | 95.6 | 257 | 0.8 | 0.6 | 120 | 119 | 1 | 97 | 44.7 |
| **HR** | 2,919 | 986 | 180 | 81.7 | 249 | 8.5 | 0.6 | 87 | 52 | 35 | 93 | 51.7 |
| **IT** | 18,702 | 734 | 692 | 5.7 | 694 | 3.7 | 1.7 | 319 | 107 | 212 | 373 | 53.9 |
| **CY** | 463 | 22 | 21 | 4.5 | 21 | 4.5 | 0.1 | 18 | 18 | - | 3 | 14.3 |
| **LV** | 3,408 | 677 | 284 | 58.1 | 321 | 9.4 | 0.8 | 130 | 65 | 65 | 154 | 54.2 |
| **LT** | 6,340 | 79 | 63 | 20.3 | 63 | 1.0 | 0.2 | 50 | 41 | 9 | 13 | 20.6 |
| **LU** | 534 | 271 | 264 | 2.6 | 268 | 50.1 | 0.6 | 249 | 244 | 5 | 15 | 5.7 |
| **HU** | 7,047 | 54 | 53 | 1.9 | 53 | 0.8 | 0.1 | 52 | 52 | - | 1 | 1.9 |
| **MT** | 25 | 10 | 1 | 90.0 | 2 | 6.3 | 0.0 | 1 | 1 | - | - | 0.0 |
| **NL** | 5,822 | 245 | 242 | 1.2 | 242 | 4.2 | 0.6 | 162 | 157 | 5 | 80 | 33.1 |
| **AT** | 2,030 | 67 | 65 | 3.0 | 65 | 3.2 | 0.2 | 56 | 41 | 15 | 9 | 13.8 |
| **PL** | 10,183 | 2,031 | 323 | 84.1 | 388 | 3.8 | 0.9 | 294 | 266 | 28 | 29 | 9.0 |
| **PT** | 7,568 | 5,806 | 86 | 98.5 | 352 | 4.7 | 0.8 | 78 | 73 | 5 | 8 | 9.3 |
| **RO** | 48,668 | 4,012 | 1,947 | 51.5 | 2,033 | 4.2 | 4.9 | 1,427 | 1,251 | 176 | 520 | 26.7 |
| **SI** | 3,087 | 2,075 | 146 | 93.0 | 389 | 12.6 | 0.9 | 77 | 64 | 13 | 69 | 47.3 |
| **SK** | 8,498 | 5,691 | 1,303 | 77.1 | 2,694 | 31.7 | 6.5 | 1,156 | 337 | 819 | 147 | 11.3 |
| **FI** | 5,629 | 1,902 | 85 | 95.5 | 126 | 2.2 | 0.3 | 60 | 20 | 40 | 25 | 29.4 |
| **SE** | 9,336 | 73 | 72 | 1.4 | 72 | 0.8 | 0.2 | 49 | 48 | 1 | 23 | 31.9 |
| **UK** | 69,444 | 34,320 | 27,391 | 20.2 | 30,427 | 43.8 | 73.1 | 25,916 | 1,858 | 24,058 | 1,475 | 5.4 |
| **EU-28** | **325,208** | **82,506** | **35,637** | **56.8** | **41,638** | **12.8** | **100.0** | **31,814** | **5,968** | **25,846** | **3,823** | **10.7** |
| **EU-15** | 202,881 | 58,329 | 30,142 | 48.3 | 35,005 | 17.3 | 84.1 | 27,758 | 3,290 | 24,468 | 2,384 | 7.9 |
| **EU-13** | 122,327 | 24,177 | 5,495 | 77.3 | 6,485 | 5.3 | 15.6 | 4,056 | 2,678 | 1,378 | 1,439 | 26.2 |
| **EU-14*** | 133,437 | 24,009 | 2,751 | 88.5 | 4,578 | 3.4 | ** | 1,842 | 1,432 | 410 | 909 | 33.0 |

* EU-14 equals the EU-15 Member States minus the United Kingdom, which already takes the Brexit into account.

** When only the EU-27 is taken into account, the distribution amounts to 41% EU-14 companies and 58% EU-13 companies.

**Source** Own elaborations based on Orbis [Data extracted 3 April 2020]

A similar analysis can be done for companies with a foreign subsidiary, as shown in Table 3.6. Again, an upper bound of companies with a foreign subsidiary is pictured (column B) and a lower bound (column C), as for some subsidiaries, the exact location is not available. However, compared to the previous table, it is clear that the location of 'foreign' subsidiaries is more often available than the location of 'foreign' shareholders. The fifth column ((B-C)/B) shows that only in Ireland (12.5%), France (7.1%), and Finland (4.0%) a significant share of companies with a 'foreign' subsidiary do not have the exact location of the subsidiary available. As a result, when estimating the real number of companies with a foreign subsidiary, by using the same formula as explained above for companies with a foreign majority shareholder (see Figure 3.27), the numbers stay exactly the same.

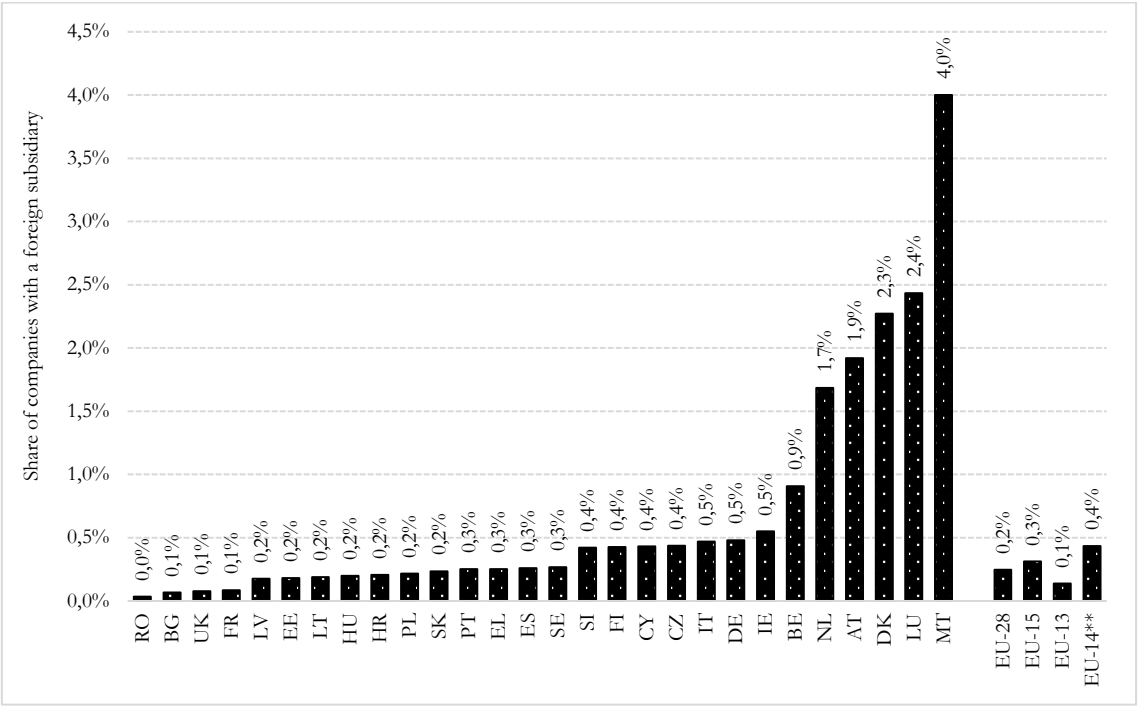
In general, it is estimated that there are 803 EU-28 hauliers with a foreign subsidiary. This only equals 0.2% of all road freight transport companies (see column D/A, and Figure 3.29). Malta knows the highest share of companies with a foreign subsidiary (4.0%), followed by Luxembourg (2.4%), and Denmark (2.3%). Out of these 803 companies, 79% is located in the EU-15 and only 21% in the EU-13. More specifically, 12.2% of all EU-28 transport companies with a foreign subsidiary are located in the Netherlands, 11.5% in Spain, and 11.0% in Italy, as shown in the eighth column.

For every Member State, the majority of companies with a foreign subsidiary have a subsidiary located in the EU-28. The last column shows the share of companies with a foreign subsidiary located outside the EU-28. In total, this share amounts to 10.3% for companies located in the EU-28, 10.7% for companies located in the EU-15 and 8.8% for companies located in the EU-13. Only in Sweden (36.0%), Slovenia (30.8%), Estonia (25.0%), and Finland (20.8%) the share of companies with a foreign subsidiary outside the EU-28 in the total number of companies with a foreign subsidiary is relatively high.

Finally, it is possible to have a look at the location of subsidiaries located in the EU-28 by looking at the distribution of EU-15 and EU-13. Of the 720 EU-28 companies with a foreign subsidiary located in the EU-28, 489 companies, or 68%, are located in the EU-15. For companies located in the EU-15 with a foreign subsidiary, this subsidiary is mostly located in the EU-15 itself (416 companies out of 565, or 74%). For companies located in the EU-13 with a foreign subsidiary, the distribution is more even, as for 82 companies out of the 155, or 53%, the subsidiary is located in the EU-13, while for the remaining 73 companies, the subsidiary is located in the EU-15. For a majority of companies located in the Czech Republic, Estonia, Greece, Croatia, Latvia, Hungary, Malta, and Slovakia, with a foreign subsidiary located in the EU-28, the subsidiary is located in the EU-13.

In the analysis of companies with a foreign subsidiary, the United Kingdom does not have such a strong impact compared to companies with a foreign majority shareholder. The share of EU-14 companies with a foreign subsidiary is even slightly higher (0.4%) than the share of EU-15 companies with a foreign subsidiary (0.3%), indicating that in the United Kingdom, proportionally less companies have a foreign subsidiary. Of all the EU-27 companies with a foreign subsidiary, 77% are located in the EU-14 and 23% in the EU-13.

**Figure 3.29 Estimation of share of companies with a foreign subsidiary in total number of companies active in NACE 4941 'Freight transport by road', EU-28**




* This is a visual representation of the seventh column (D/A) of Table 3.6.
**The EU-14 represent the EU-15 excluding the United Kingdom, as a consequence of Brexit.
**Source** Own elaborations based on Orbis [Data extracted 3 April 2020]

**Table 3.6 Companies active under NACE 4941 'Freight transport by road' with a foreign subsidiary, EU-28**

| | Number of companies (A) | Foreign subsidiary (incl. n.a.) (B) | Foreign subsidiary (excl. n.a.) (C) | % Share of location n.a. ((B-C)/B) | Estimation foreign subsidiary (C + ((B-C)* C/(A-(B-C)) (D) | % Share foreign subsidiary (D/A) | Column % estimation foreign subsidiary | Foreign subsidiary EU-28 | Foreign subsidiary EU-15 | Foreign subsidiary EU-13 | Foreign subsidiary extra EU-28 (E) | % Share of foreign subsidiary extra EU-28 (E/C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BE** | 6,717 | 62 | 61 | 1.6 | 61 | 0.9 | 7.6 | 60 | 48 | 12 | 1 | 1.6 |
| **BG** | 19,007 | 13 | 13 | 0.0 | 13 | 0.1 | 1.6 | 12 | 6 | 6 | 1 | 7.7 |
| **CZ** | 8,249 | 36 | 36 | 0.0 | 36 | 0.4 | 4.5 | 35 | 10 | 25 | 1 | 2.8 |
| **DK** | 2,247 | 52 | 51 | 1.9 | 51 | 2.3 | 6.4 | 48 | 39 | 9 | 3 | 5.9 |
| **DE** | 7,293 | 36 | 35 | 2.8 | 35 | 0.5 | 4.4 | 35 | 22 | 13 | - | 0.0 |
| **EE** | 4,433 | 8 | 8 | 0.0 | 8 | 0.2 | 1.0 | 6 | 2 | 4 | 2 | 25.0 |
| **IE** | 1,275 | 8 | 7 | 12.5 | 7 | 0.5 | 0.9 | 6 | 6 | - | 1 | 14.3 |
| **EL** | 397 | 1 | 1 | 0.0 | 1 | 0.3 | 0.1 | 1 | - | 1 | - | 0.0 |
| **ES** | 35,550 | 93 | 92 | 1.1 | 92 | 0.3 | 11.5 | 75 | 59 | 16 | 17 | 18.5 |
| **FR** | 30,337 | 28 | 26 | 7.1 | 26 | 0.1 | 3.2 | 22 | 17 | 5 | 4 | 15.4 |
| **HR** | 2,919 | 6 | 6 | 0.0 | 6 | 0.2 | 0.7 | 5 | 2 | 3 | 1 | 16.7 |
| **IT** | 18,702 | 88 | 88 | 0.0 | 88 | 0.5 | 11.0 | 75 | 41 | 34 | 13 | 14.8 |
| **CY** | 463 | 2 | 2 | 0.0 | 2 | 0.4 | 0.2 | 2 | 1 | 1 | - | 0.0 |
| **LV** | 3,408 | 6 | 6 | 0.0 | 6 | 0.2 | 0.7 | 5 | 1 | 4 | 1 | 16.7 |
| **LT** | 6,340 | 12 | 12 | 0.0 | 12 | 0.2 | 1.5 | 12 | 6 | 6 | - | 0.0 |
| **LU** | 534 | 13 | 13 | 0.0 | 13 | 2.4 | 1.6 | 13 | 11 | 2 | - | 0.0 |
| **HU** | 7,047 | 14 | 14 | 0.0 | 14 | 0.2 | 1.7 | 14 | 4 | 10 | - | 0.0 |
| **MT** | 25 | 1 | 1 | 0.0 | 1 | 4.0 | 0.1 | 1 | - | 1 | - | 0.0 |
| **NL** | 5,822 | 101 | 98 | 3.0 | 98 | 1.7 | 12.2 | 92 | 72 | 20 | 6 | 6.1 |
| **AT** | 2,030 | 39 | 39 | 0.0 | 39 | 1.9 | 4.9 | 36 | 18 | 18 | 3 | 7.7 |
| **PL** | 10,183 | 22 | 22 | 0.0 | 22 | 0.2 | 2.7 | 22 | 14 | 8 | - | 0.0 |
| **PT** | 7,568 | 19 | 19 | 0.0 | 19 | 0.3 | 2.4 | 18 | 17 | 1 | 1 | 5.3 |
| **RO** | 48,668 | 17 | 17 | 0.0 | 17 | 0.0 | 2.1 | 15 | 12 | 3 | 2 | 11.8 |
| **SI** | 3,087 | 13 | 13 | 0.0 | 13 | 0.4 | 1.6 | 9 | 7 | 2 | 4 | 30.8 |
| **SK** | 8,498 | 20 | 20 | 0.0 | 20 | 0.2 | 2.5 | 17 | 8 | 9 | 3 | 15.0 |
| **FI** | 5,629 | 25 | 24 | 4.0 | 24 | 0.4 | 3.0 | 19 | 12 | 7 | 5 | 20.8 |
| **SE** | 9,336 | 25 | 25 | 0.0 | 25 | 0.3 | 3.1 | 16 | 10 | 6 | 9 | 36.0 |
| **UK** | 69,444 | 55 | 54 | 1.8 | 54 | 0.1 | 6.7 | 49 | 44 | 5 | 5 | 9.3 |
| **EU-28** | **325,208** | **815** | **803** | **1.5** | **803** | **0.2** | **100.0** | **720** | **489** | **231** | **83** | **10.3** |
| **EU-15** | 202,881 | 645 | 633 | 1.9 | 633 | 0.3 | 78.8 | 565 | 416 | 149 | 68 | 10.7 |
| **EU-13** | 122,327 | 170 | 170 | 0.0 | 170 | 0.1 | 21.2 | 155 | 73 | 82 | 15 | 8.8 |
| **EU-14*** | 133,437 | 590 | 579 | 1.9 | 579 | 0.4 | ** | 516 | 372 | 144 | 63 | 10.9 |

* EU-14 equals the EU-15 Member States minus the United Kingdom, which already takes the Brexit into account.

** When only the EU-27 is taken into account, the distribution amounts to 77% EU-14 companies and 23% EU-13 companies.

**Source** Own elaborations based on Orbis [Data extracted 3 April 2020]

Overall, this analysis of the number of foreign majority shareholders and foreign subsidiaries has not shown extraordinary figures. Only 12.8% of EU-28 transport companies has a foreign majority shareholder, and 0.2% has a foreign subsidiary. This might give the impression that 'flagging out' is not that common, even though we know this is a reality in the road transport sector. Therefore, not only the number of companies was looked at, but also the turnover and number of employees were analysed. The result is pictured in Table 3.7.

Although the shares of companies with a foreign majority shareholder and foreign subsidiary are slightly divergent from the analysis above because of the different downloading time, the usefulness of this table is to look at the difference in shares between the number of companies and the turnover and number of employees. For instance, it can be seen that while around 12.8% of EU-28 companies have a foreign majority shareholder, these companies account for 21.6% of the turnover created and 16.5% of the persons employed in the sector. For EU-13 companies with a foreign majority shareholder, this difference is even more pronounced. Only 5.3% of EU-13 transport companies has a foreign majority shareholder. Nevertheless, they employ almost 16% of persons working in the sector, and account for almost a fourth of the turnover created. Consequently, it is clear that especially large companies have a foreign majority shareholder.

The same goes for companies with a foreign subsidiary, and in this case, the figures are even more remarkable, as such a small share of companies has a foreign subsidiary. Of all the EU-15 transport companies, only 0.3% has a foreign subsidiary. However, these companies represent a fifth of all the turnover created in the sector and employ 13.4% of all persons. Therefore, this analysis makes it abundantly clear that especially large companies are 'flagging out'.

**Table 3.7 Share of companies active under NACE 4941 'Freight transport by road' with a foreign majority shareholder and foreign subsidiary, number of companies, turnover, and employees, EU-28, EU-15, and EU-13**

| | % Share of companies with a foreign majority shareholder concerning … | | | % Share of companies with a foreign subsidiary concerning … | | |
|---|---|---|---|---|---|---|
| | Number of companies* | Turnover | Number of employees | Number of companies** | Turnover | Number of employees |
| EU-28 | 12.8 | 21.6 | 16.5 | 0.2 | 18.1 | 10.9 |
| EU-15 | 17.3 | 21.1 | 16.7 | 0.3 | 20.9 | 13.4 |
| EU-13 | 5.3 | 23.4 | 15.9 | 0.1 | 6.8 | 4.5 |

* To find the shares concerning turnover and number of employees, new Orbis data needed to be downloaded. Therefore, the share of companies with a foreign majority shareholder also differed in this new data download (namely 11.3% EU-28, 15.3% EU-15, 4.7% EU-13). However, for clarity and consistency the shares found above in Table 3.5 were maintained.

** To find the shares concerning turnover and number of employees, new Orbis data needed to be downloaded. Therefore, the share of companies with a foreign subsidiary also differed in this new data download (namely 0.3% EU-28, 0.3% EU-15, 0.1% EU-13). However, for clarity and consistency the shares found above in Table 3.6 were maintained.

**Source** Own elaborations based on Orbis [Data extracted 7 July 2020]

The cross-border elements of companies in the road transport sector can also be related to other variables for further analysis.[78] In a first attempt, the correlation between the average personnel cost or wages and salaries and the share of companies with a foreign majority shareholder was calculated. The idea for this was that in Member States where the average personnel cost or wage is lower, the share of companies with a foreign majority shareholder would be higher, seeing that it is interesting for shareholders to own a company in Member States where the average costs are lowest. However, the calculated correlation coefficients were all close to zero and thus did not indicate a significant

78 In addition to the analyses below, the correlation between 'reallocation' and the import of services could also be calculated. The hypothesis here is that a country from which a lot of companies reallocate their activities to a specific country, this specific country will often export a lot of services to that country of origin.

relationship. Although we did not find a strong correlation between personnel costs and the share of companies with a foreign majority shareholder, this does not indicate that personnel costs are of no importance. It is even stated that labour costs are the decisive competitive factor in European road haulage (Sedlacek & Steinacher, 2019; Ruziczka, 2020). Consequently, it occurs that transport companies search for the most favourable social security law and locate themselves in these Member States (Cremers, 2019; 2020; Rennuy, forthcoming).[79] Nonetheless, this might not be the decisive reason to flag out. There are indeed many other (financial) reasons (e.g. corporate taxes, subsidies, geographical location, administrative and legislative burden (e.g. incorporation requirements), infrastructure and technology, quantity/quality/productivity of the labour force etc.) besides the level of gross wages and social security contribution rates for employers to own a company in another Member State (Kummer *et al.*, 2014; Yannopoulos, 1988).[80] Therefore, a multivariate analysis with the share of companies flagging out as the dependant variable and the aforementioned reasons to flag out as independent variables would be of great interest, but this would take us too far in this report.

In a second step, the correlation between the average personnel cost or wages and salaries and the share of companies with a foreign subsidiary was looked at. The assumption is that we will find a positive correlation between these variables. When the average personnel cost or wages and salaries in a Member State are high, it is interesting for companies to have foreign subsidiaries in Member States where the costs are possibly lower.

The correlation between the average personnel cost and the estimation of the share of companies with a foreign subsidiary in the total number of companies active under NACE 4941 (see 7th column of Table 3.6) is shown in Figure 3.30. The correlation amounted to +0.41, which indicates a moderate positive relationship. However, as was already noticed in Table 3.6 and Figure 3.29, and now can be seen in Figure 3.30, Malta is a clear outlier in terms of share of companies with a foreign subsidiary (with 4.0%). When Malta is taken out of the calculation, the correlation amounts to +0.67, indicating a strong positive relationship. This indicates that indeed, when the average personnel costs are high in a Member State, a higher share of companies located in this Member State have a foreign subsidiary.

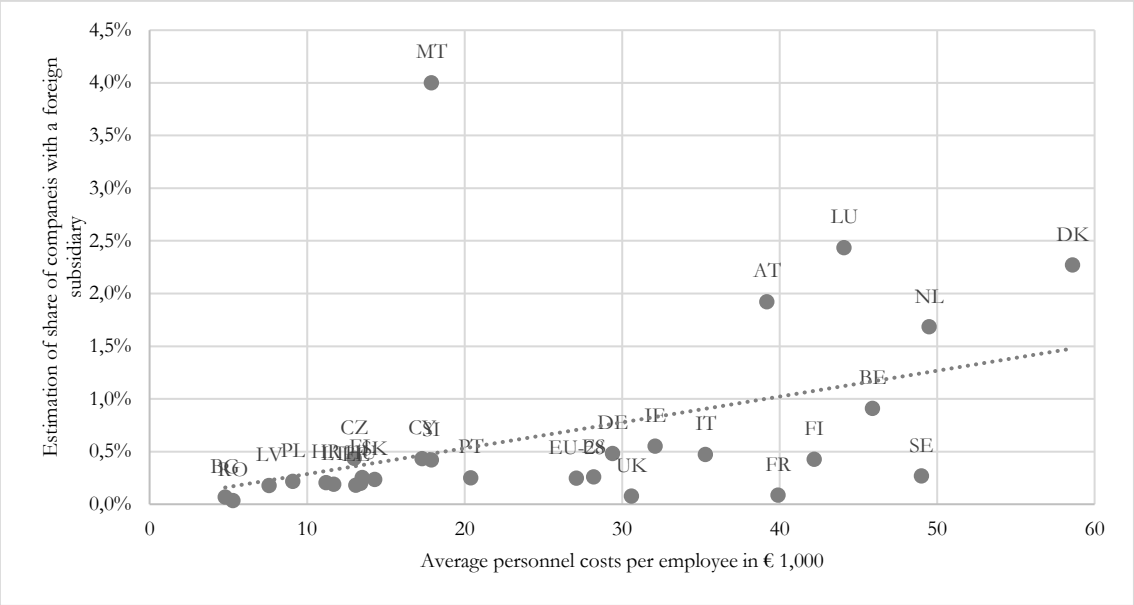
A similar analysis can be conducted by looking at the relationship between the average amount of wages and salary per employee (see Figure 3.13) and the share of companies with a foreign subsidiary. As data for Malta for the variable of wages and salaries were not available, this outlier in terms of share of companies with a foreign subsidiary was immediately excluded. The result of this analysis is pictured in Figure 3.31. The correlation coefficient equals +0.72, which reveals a strong positive relationship. This means that in Member States where the average wages and salaries per employee are high, the share of companies with a foreign subsidiary is high as well. Alternatively, in Member States where the average wages and salaries are low, a smaller share of transport companies has a foreign subsidiary.

Once again, however, it should be stressed that this does not indicate causality. It cannot be stated that *because* the average personnel costs or wages are low in a Member State, companies will have less foreign subsidiaries or vice versa.

79 'Firms can and do 'regime shop' for the lowest percentage of social security contributions' (Cremers, 2020: 140).

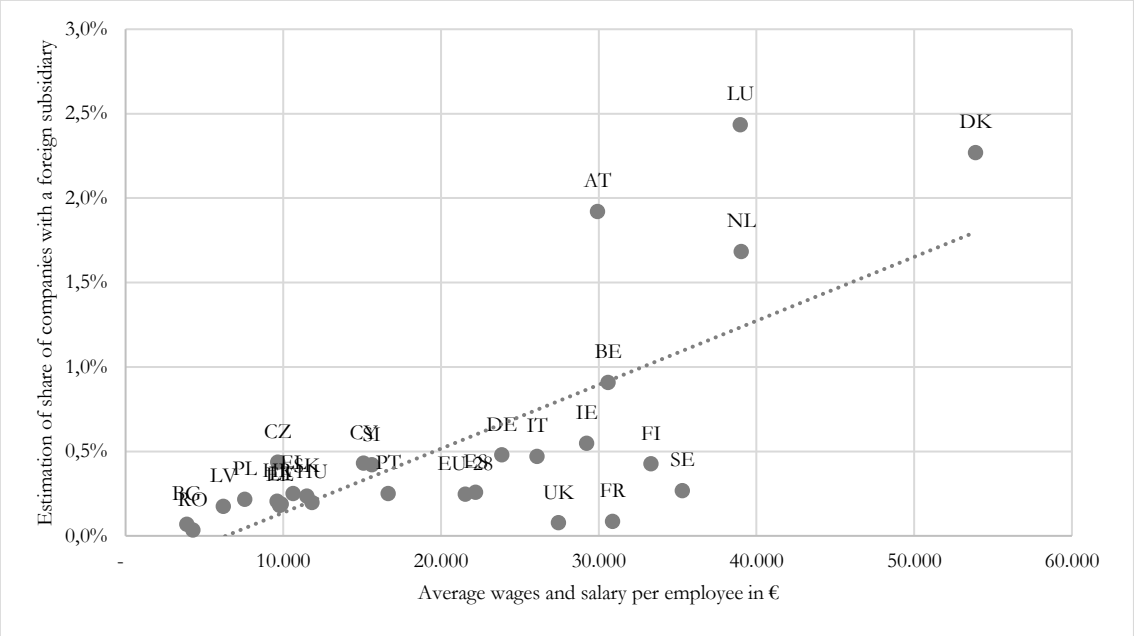
80 In general, company law, taxation law, labour and social security law as well as criminal law defined at the European, national and sectoral level might play an important role in the decision to 'flag out'.

**Figure 3.30** **Correlation between the average personnel cost per employee in € 1,000 in 2017 and the estimation of the share of companies with a foreign subsidiary in the total number of companies active under NACE 4941 'Freight transport by road'**




* The correlation coefficient amounts to +0.4103, and without the outlier MT to +0.6696.
**Source** Eurostat [sbs_na_1a_se_r2] and Orbis [Data extracted 3 April 2020]

**Figure 3.31** **Correlation between the average amount of wages and salary per employee in € in 2017 and the estimation of the share of companies with a foreign subsidiary in the total number of companies active under NACE 4941 'Freight transport by road' (excluding MT)**




* The correlation coefficient amounts to +0.7173.
**Source** Eurostat [sbs_na_1a_se_r2] and Orbis [Data extracted 3 April 2020]

### 3.5.2 International trade in services

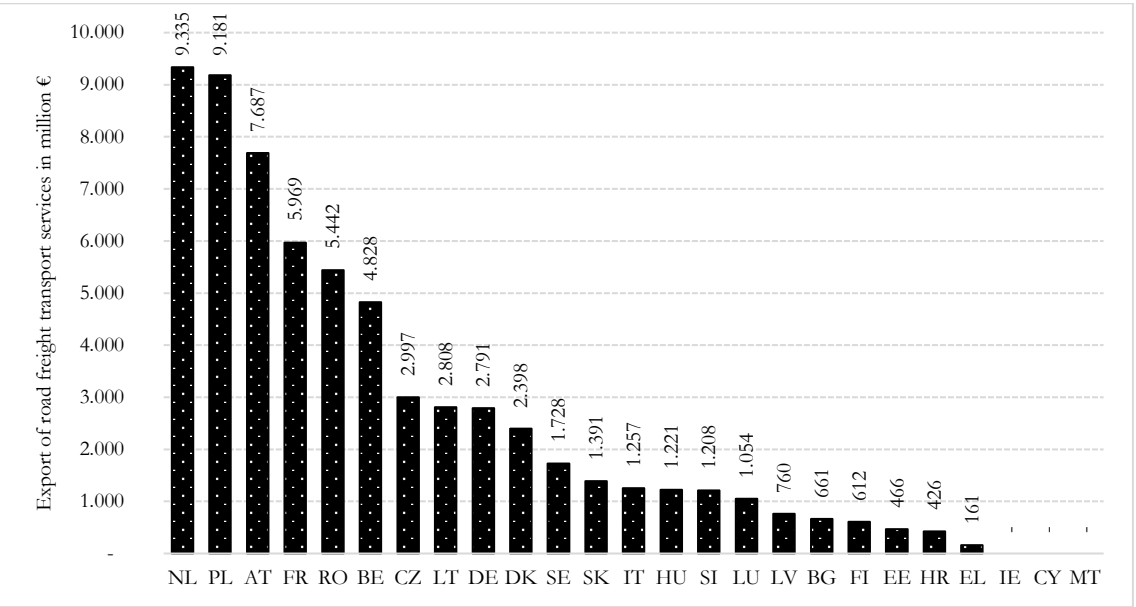
#### 3.5.2.1 Export, import and balance of road freight transport services

The Balance of Payments data (BOPS) allow us to look at the international trade in services. More specifically, we are able to analyse the export, the import, and the balance of road freight transport services. This can give a more accurate idea of the transnational dimension in road freight transport than data on PDs A1. First, the export of services is analysed in more detail. Second, we look at the import of services, and finally at the balance between both. In appendix 4, cross-tables including all EU-28 Member States are enclosed. The values of the services are indicated in market prices[81] (IMF, 2009; Department of Economic and Social Affairs, 2011).

In 2018, this total export of road transport services of EU-28 Member States to the rest of the world amounted to € 71,508 million (see Table a4.1 in appendix 4) (no data available for ES, PT and UK). Figure 3.32 indicates the distribution between the different Member States for 2018. It can be seen that the largest share of export of services is carried out by Dutch hauliers, namely € 9,335 million or 15% of the total. The Netherlands are followed by Poland (€ 9,181 million or 14%), and Austria (€ 7,687 million or 12%).

The distribution below strongly differs from the one which can be calculated based on the number of million tonne-km (Eurostat [road_go_ta_tott]). According to the latter, the most important Member States are Poland, Spain, Germany, Romania and Lithuania. This is an indication that the cost at which international transport is carried out is different among Member States. For instance, Poland's share in international transport amounts to some 30% in terms of million tonne-kilometres, but only to some 14% in terms of exports of services.

**Figure 3.32 Export of services of road freight transport, in million €, 2018, EU-28**




* No data available for ES, PT, and UK.

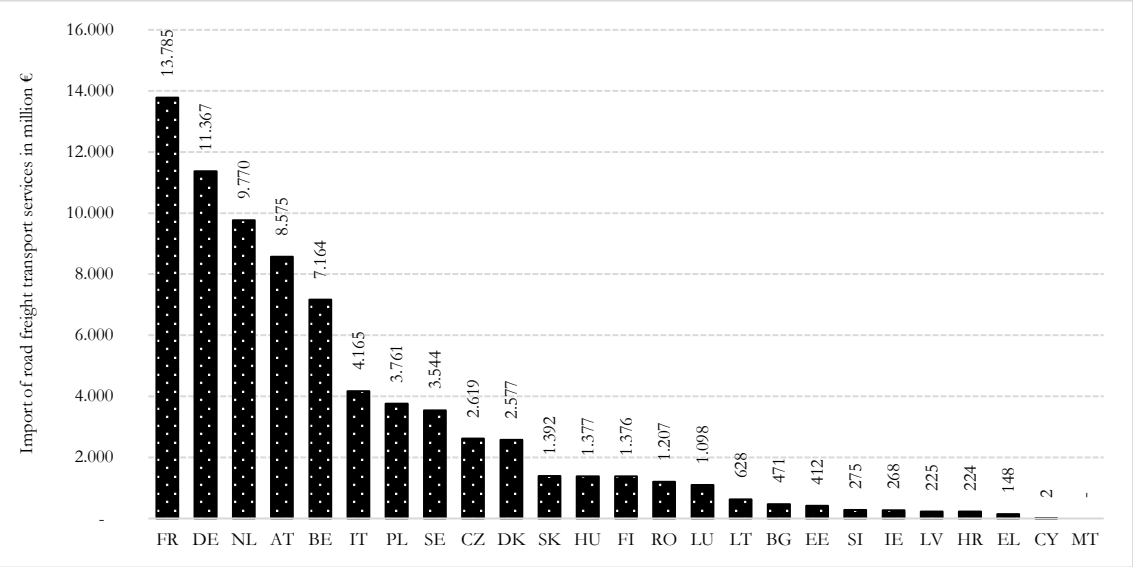
**Source** Eurostat [bop_its6_det]

In addition to the export of services, the import of services is looked at. In 2018, the EU-28 Member States imported € 81,516 million in road freight transport services (see Table a4.2 in appendix 4). For

81 'The market price is used as the basis for valuation of transactions in international trade in services. Market prices for transactions are defined as amounts of money that willing buyers pay to acquire something from willing sellers. The exchanges are made between independent parties and based on commercial considerations only and are sometimes called 'at arm's length' transactions.' (Department of Economic and Social Affairs, 2011:34).

the different Member States, the absolute amount of import of services is pictured in Figure 3.33. France and Germany each import more than € 10,000 million of road freight transport services. Furthermore, the Netherlands, Austria and Belgium also import more than € 7,000 million. Together, these five Member States import about two thirds of all the road transport services imported by the EU-28 Member States. On the opposite side of the graph, Slovenia, Ireland, Latvia, Croatia, Greece, Cyprus, and Malta import less than € 300 million of road freight transport services.

**Figure 3.33 Import of services of road freight transport, in million €, 2018, EU-28**




* No data available for ES, PT, and UK.
**Source** Eurostat [bop_its6_det]

For the export and import of road transport services it is of interest to see to or from where services are provided. Table 3.8 shows the breakdown by EU-28 and extra EU-28. The EU-28 Member States export on average 90% to other EU-28 Member States, and 10% outside the EU-28. Furthermore, they import around 87% of road freight transport services from the EU-28, and 13% from outside the EU-28. However, for some Member States, this breakdown is rather divergent.

For the export of road transport services, especially Estonia, Latvia, and Sweden stand out as they each export more than 23% of road transport services to the extra EU-28. On the other hand, Hungary (96.8%) and Romania (97.0%) almost only exclusively export road transport services to EU-28 Member States.

The majority of Member States import the greatest part of road transport services from EU-28 Member States. Belgium, Germany, Italy, Luxembourg, Hungary, Romania and Finland even import more than 90% of services from the EU-28. However, some Member States import most of services from outside the EU-28. This is the case for the Czech Republic (57.3%), Ireland (63.8%) and Lithuania (63.1%), as they import more than 50% of services from the extra-EU.

**Table 3.8** **Export and import of road freight transport services, in million €, breakdown by location where services are export to and imported from, 2018, EU-28**

| | Export | | | Import | | |
|---|---|---|---|---|---|---|
| | Total in million € | To the EU-28 (in %) | To the Extra EU-28 (in %) | Total in million € | From the EU-28 (in %) | From the Extra EU-28 (in %) |
| **EU-28** | 71,508.3 | 89.6 | 10.4 | 81,516.1 | 86.8 | 13.2 |
| **BE** | 4,828.0 | 90.2 | 9.8 | 7,164.0 | 91.1 | 8.9 |
| **BG** | 661.4 | 83.5 | 16.5 | 471.1 | 89.7 | 10.3 |
| **CZ** | 2,997.1 | 82.0 | 18.0 | 2,619.4 | 42.7 | 57.3 |
| **DK** | 2,397.5 | 78.1 | 21.9 | 2,576.7 | 86.0 | 14.0 |
| **DE** | 2,791.0 | 87.9 | 12.1 | 11,367.0 | 93.6 | 6.4 |
| **EE** | 465.5 | 72.4 | 27.6 | 411.9 | 87.2 | 12.9 |
| **IE*** | 0.0 | | | 268.0 | 35.8 | 63.8 |
| **EL** | 161.3 | 90.5 | 9.5 | 147.7 | 86.5 | 13.5 |
| **ES** | | | | | | |
| **FR** | 5,969.0 | 86.9 | 13.0 | 13,785.0 | 88.9 | 11.1 |
| **HR** | 426.1 | | | 224.2 | | |
| **IT** | 1,256.9 | 92.9 | 7.1 | 4,164.7 | 93.2 | 6.8 |
| **CY*** | 0.0 | | | 2.0 | 50.0 | 50.0 |
| **LV** | 760.0 | 76.3 | 23.7 | 225.0 | 89.8 | 10.2 |
| **LT** | 2,808.1 | 90.1 | 9.9 | 628.2 | 36.9 | 63.1 |
| **LU** | 1,054.0 | 91.7 | 8.3 | 1,098.0 | 95.0 | 5.1 |
| **HU** | 1,221.4 | 96.8 | 3.2 | 1,377.2 | 91.2 | 8.8 |
| **MT*** | 0.0 | | | 0.0 | | |
| **NL** | 9,334.6 | | | 9,770.1 | | |
| **AT** | 7,687.0 | 89.7 | 10.3 | 8,575.0 | 89.9 | 10.1 |
| **PL** | 9,181.0 | 91.3 | 8.7 | 3,760.9 | 76.8 | 23.2 |
| **PT** | | | | | | |
| **RO** | 5,441.8 | 97.0 | 3.0 | 1,206.5 | 92.9 | 7.1 |
| **SI** | 1,208.4 | 91.0 | 9.0 | 274.5 | 77.9 | 22.1 |
| **SK** | 1,391.4 | 91.6 | 8.4 | 1,391.8 | 85.5 | 14.5 |
| **FI** | 612.0 | 79.9 | 20.1 | 1,376.0 | 90.2 | 9.8 |
| **SE** | 1,728.3 | 71.8 | 28.2 | 3,544.2 | 87.5 | 12.5 |
| **UK** | | | | | | |

* For IE, CY[82] and MT the export reported is € 0.0 million. Seeing that these Member States are islands it is not unimaginable that their export is smaller than € 0.1 million. Both Ireland and Malta have reported € 0.0 million export in previous reference years, whereas Cyprus reported € 1.0 million in 2015. For Malta, the import has also been equal to € 0.0 million in previous reference years.

**Source** Eurostat [bop_its6_det]

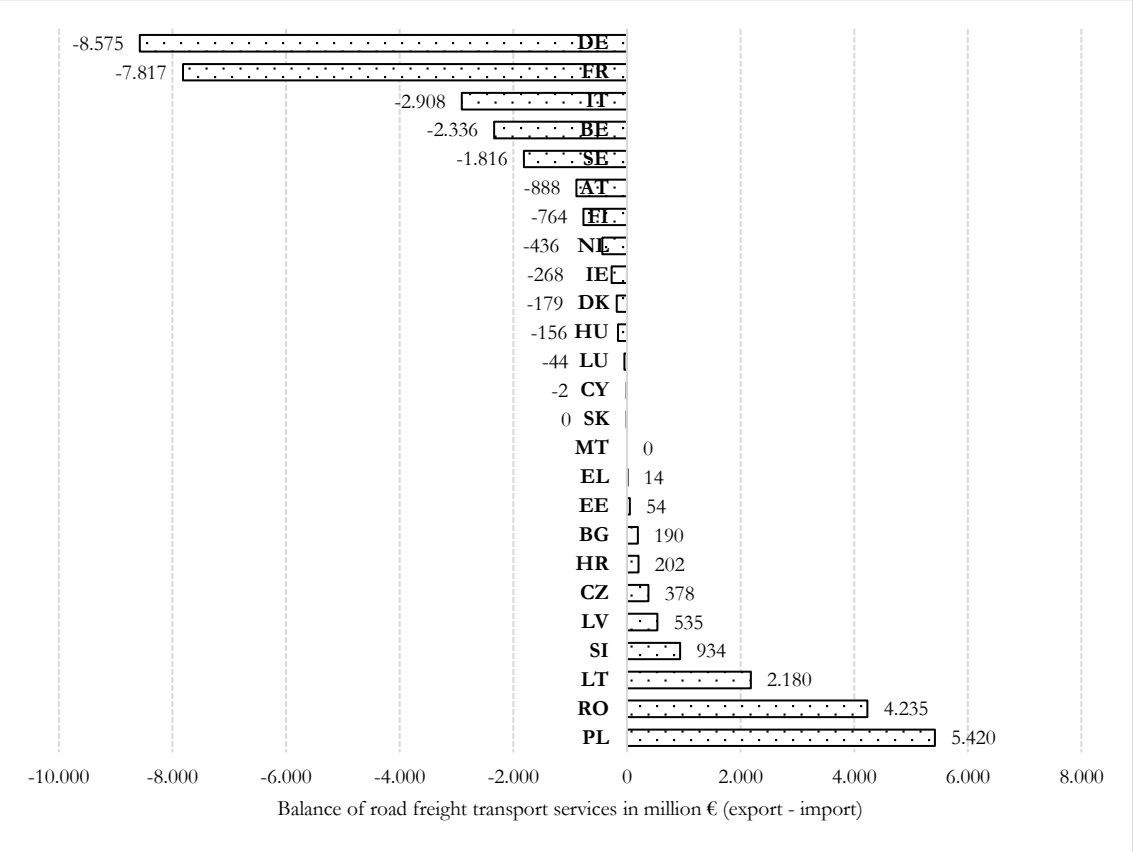
The export and import of services can also be combined to look at the balance of international trade in services, more specifically this concerns the export of road freight transport services minus the import (Figure 3.32 for export, Figure 3.33 for import).

82 This is an indication that the *AFMB* case might be an exception and that there is no 'Cyprus route'.

For the EU-28 in general, the balance amounts to -€ 10,008 million in 2018, which indicates that EU-28 Member States imported more road freight transport services than they exported (see Table a4.3 in appendix 4). The balance for all Member States is shown in Figure 3.34. There are 11 'net exporting' Member States,[83] that export more transport services than they import, and 14 'net importing' Member States,[84] where the opposite holds true. The most remarkable net exporting Member States are Poland, Romania, and Lithuania. On the other hand, Germany, France, Italy, and Belgium are the most important net importing Member States.[85] For certain Member States, the balance closely leans to 0, which indicates that they export around the same amount of road freight transport services as they import. This is the case for Malta, Greece, Slovakia, Cyprus, and Luxembourg.

Finally, it is worth noticing that the six Member States of interest in this report are divided equally between net 'exporting' and 'importing' Member State. Furthermore, it is the case that one tandem country can be considered a 'net exporting' Member State, while the corresponding tandem Member State is a 'net importing' Member State. Poland, Slovenia and the Czech Republic are 'net exporting' Member States, whereas Germany, Austria, and Belgium are 'net importing' Member States.

**Figure 3.34 Balance of road freight transport services (= export – import), in million €, 2018, EU-28**




* No data available for ES, PT, UK.
**Source** Eurostat [bop_its6_det]

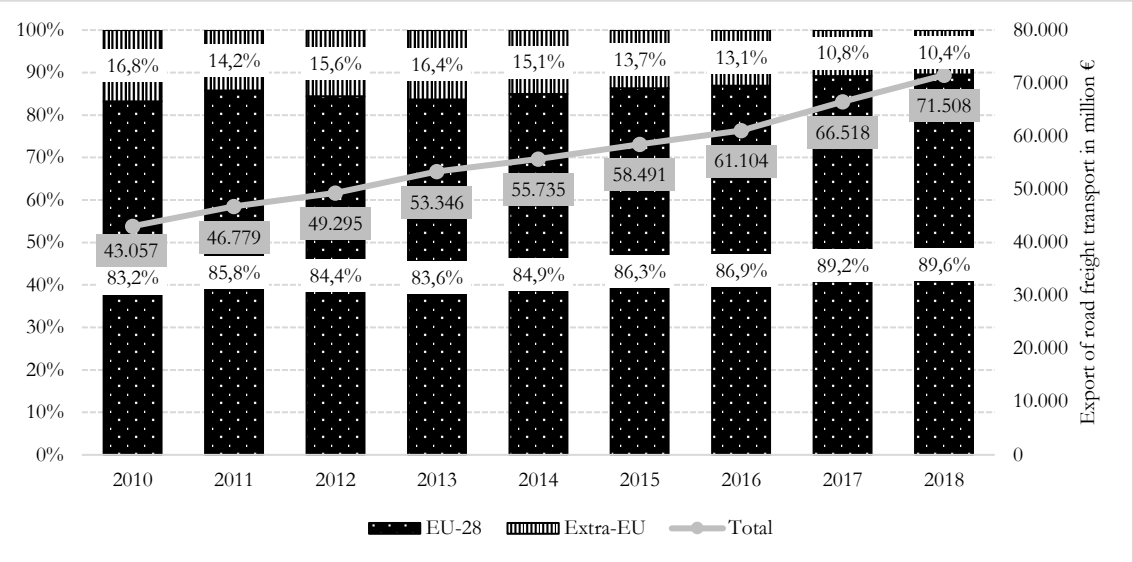
83 PL, RO, LT, SI, LV, CZ, HR, BG, EE, EL, and MT.
84 SK, CY, LU, HU, DK, IE, NL, FI, AT, SE, BE, IT, FR, and DE.
85 Member States with a high 'import leakage'.

### 3.5.2.2 Importance of export of road freight transport services

This paragraph focusses in more detail on the export of road freight transport services, as this concerns international transportation and is of great importance for the research report. First, the evolution of the export of services is looked at. Then, its importance in turnover created in the sector is analysed. Finally, the two different ways in which international transport is analysed, namely in million tonne-km and the export of services, are compared to each other in order to gain further insights in the cost of international transport.

The evolution of the export of services in the road transport sector can be analysed using Figure 3.35. The distribution of where the services are provided is shown as well, namely inside or outside the EU-28. In total, the export of services has continuously been on the rise. From 2010 to 2018, the export of services increased from € 43,000 million to € 71,500 million or an increase of 66%. Over the years, it seems that exporting to the EU-28 itself has become more important, as this share went up from 83.2% in 2010 to 89.6% in 2018.

**Figure 3.35 Export of services of road freight transport, breakdown by location where services are provided, in million €, 2010-2018, EU-28**

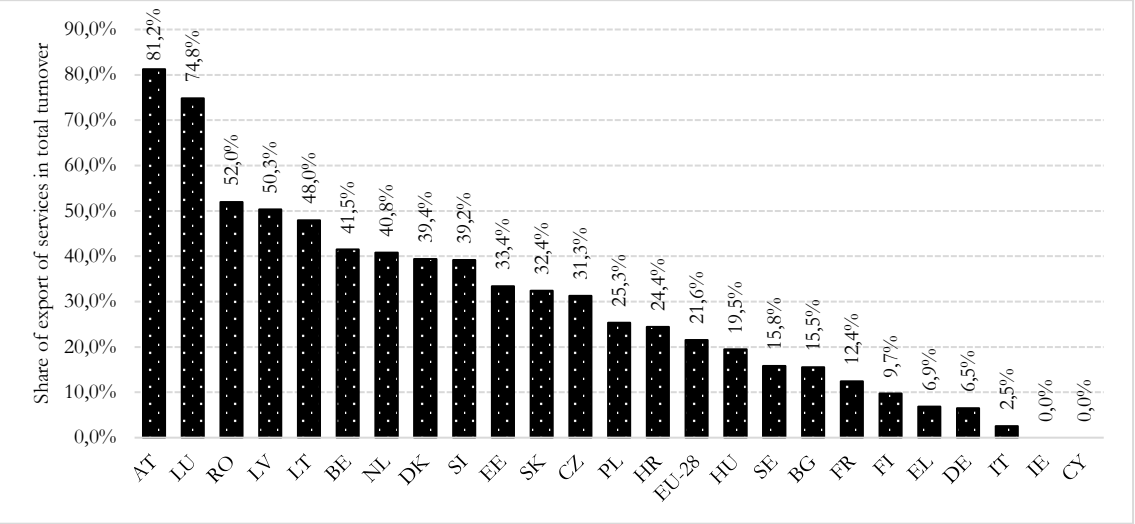



**Source** Eurostat [bop_its6_det]

The absolute numbers of the export of road freight transport (see Figure 3.32) can be compared to the total turnover created in the road transport sector to get an idea of the relative importance of the export of services.[86] This is shown in Figure 3.36. For instance, in the Netherlands, the export of services accounts for 40.8% of all turnover created, while in Poland this share only amounts to 25.3%. Especially in Austria (81.2%) and Luxembourg (74.8%) exporting road freight transport services abroad is of great importance, as these exports account for more than 70% of all turnover created in the sector. Furthermore, in Romania (52.0%), and Latvia (50.3%), exporting services creates the majority of turnover in the road transport sector. In the EU-28, on average 21.6% of all turnover created in the road transport sector originates from the export of services. However, the median lies higher at 25.3%.

86 At micro level, this could be used as a risk indicator for the evaluation of the existence of a letterbox company.

**Figure 3.36 Export of services in road freight transport, share in total turnover created, 2018, EU-28**




* No data available for ES, MT, PT and UK.
** For IE, EL and FI the total turnover concerns 2017.
**Source** Eurostat [bop_its6_det] and [sbs_na_1a_se_r2]

Table 3.9 displays this analysis for the EU-28, EU-15 and EU-13. In general, the export of services has indeed gained importance in the EU-28. The export of services in the total turnover created in the sector went from 12.6% in 2010 to 22.1% in 2018. Furthermore, it can be seen that international transport has always been of more significance in the EU-13 compared to the EU-15. Whereas in 2018, 18% of the turnover created by the EU-15 in the road transport sector originated from the export of services, this share amounts to 31% for EU-13 Member States. However, for both groups, an increase in the export of road transport services is noticeable over time.

**Table 3.9 Importance of export of road freight transport services, by EU-28, EU-15 and EU-13, 2010-2018**

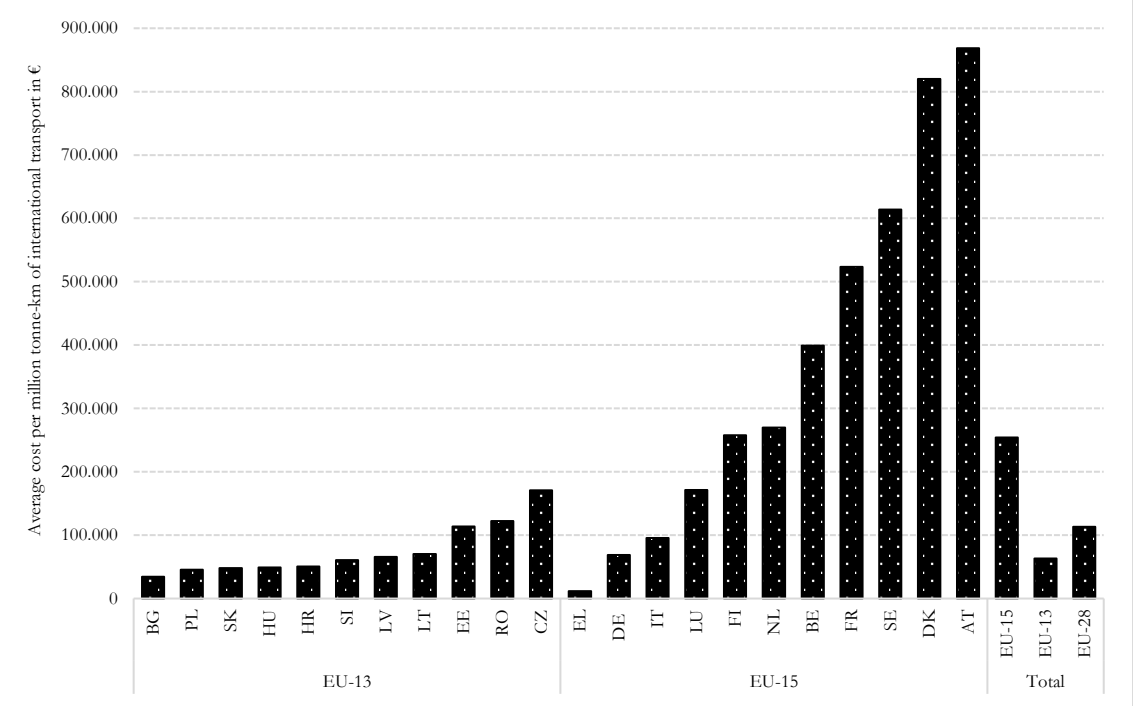
| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| **EU-28** | **Export of services (million €)** | 17,115 | 23,858 | 31,203 | 37,341 | 47,117 | 52,185 | 54,814 | 59,624 | 63,609 |
| | **Total turnover (million €)** | 135,483 | 187,964 | 199,917 | 215,196 | 237,477 | 253,320 | 264,951 | 281,193 | 288,067 |
| | **% Share export** | 12.6 | 12.7 | 15.6 | 17.4 | 19.8 | 20.6 | 20.7 | 21.2 | 22.1 |
| **EU-15** | **Export of services (million €)** | 9,921 | 15,645 | 21,908 | 23,630 | 31,602 | 32,928 | 33,673 | 35,905 | 37,046 |
| | **Total turnover (million €)** | 107,047 | 155,860 | 164,164 | 168,910 | 188,417 | 191,161 | 200,277 | 209,882 | 203,133 |
| | **% Share export** | 9.3 | 10.0 | 13.3 | 14.0 | 16.8 | 17.2 | 16.8 | 17.1 | 18.2 |
| **EU-13** | **Export of services (million €)** | 7,194 | 8,213 | 9,295 | 13,711 | 15,515 | 19,257 | 21,141 | 23,719 | 26,562 |
| | **Total turnover (million €)** | 28,436 | 32,105 | 35,753 | 46,286 | 49,060 | 62,159 | 64,674 | 71,311 | 84,934 |
| | **% Share export** | 25.3 | 25.6 | 26.0 | 29.6 | 31.6 | 31.0 | 32.7 | 33.3 | 31.3 |

* Only Member States for which both the export of services and the total turnover were available, were included in the reported totals. Therefore, the totals reported in this table do not match the totals mentioned above. More specifically, no data were available for the following Member States in the following years: **2010**: CZ, IE, ES, FR, HR, MT, NL, AT, PT, RO, SK, FI, UK; **2011**: CZ, EE, IE, ES, HR, MT, NL, AT, PT, RO, SK, FI, UK; **2012:** CZ, IE, ES, MT, NL, PT, RO, SK, FI, UK; **2013**: CZ, IE, ES, MT, NL, PT, UK; **2014**: CZ, IE, ES, MT, PT, UK; **2015**: IE, ES, MT, PT, UK; **2016**: ES, MT, PT, UK; **2017**: ES, MT, PT, UK; **2018**: IE, EL, ES, MT, PT, FI, UK.
**Source** Eurostat [bop_its6_det] and [sbs_na_1a_se_r2]

Of course, the importance of exporting transport services, or international transport, was already looked at in Section 3.1 by analysing its share in total tonne-km performed. We compare both perspectives to develop further insights about the sector.

When we divide the export of services in million euros by the international transportation in million tonne-km, this gives us an idea of the average charged cost per million tonne-km of international transport.[87] As a result, it is possible to see which Member States are able to offer 'cheap' services in international transportation. Figure 3.37 shows the clear difference between EU-13 Member States and EU-15 Member States, with the former one having a much lower average charged cost, indicating that they are able to offer cheaper services in international transport. However, it is remarkable to see that for instance Germany and Luxembourg are also able to offer rather cheap services in international transport. This shows that these Member States are particularly competitive in international road transport. In particular Bulgaria and Poland can offer the cheapest services in the EU-28, whereas the average charged cost for international transport performed by Denmark and Austria is the highest in the EU-28.

**Figure 3.37 Average charged cost per million tonne-km of international transport, in €, EU-28, 2018**




* This indicator is calculated by dividing the export of road freight transport services to the rest of the world in million € by the international transport performed in million tonne-km.

** No data available for IE, ES, MT, CY, PT and UK.

**Source** Eurostat [road_go_ta_tott] and [bop_its6_det]

87 The export of services is defined at market prices. As a result, it is not directly about costs. However, we assume that when the prices are higher, the costs will be higher as well. Therefore, we can make conclusions about the average charged cost of international transport for the EU Member States. Furthermore, an in-depth analysis of the international trade in services would require us to take into account the intermediate inputs, and an analysis of input-output tables, but this goes beyond the purpose of this report.

### 3.6 Infringements in the EU road transport sector

As highlighted in the introduction, the road transport sector has to deal with certain erroneous and fraudulent practices.[88] However, to truly understand the extent of these issues, a quantification is desirable. Therefore, in this section the focus will be on these occurrences on a European level.

At the EU level, social rules in road transport are established by four interrelated acts. The first is Regulation (EC) No 561/2006[89] (also known as the Driving Time Regulation), which sets out minimum requirements on daily and weekly driving times, breaks and daily and weekly rest period. Directive 2002/15/EC[90] (also known as the Road Transport Working Time Directive) lays down the rules on the organisation of the working time of mobile workers. The third is Directive 2006/22/EC[91] (also known as the Enforcement Directive) which establishes minimum levels of roadside checks and controls at the premises of transport undertakings to verify compliance with the provisions of the Driving Time Regulation. Finally, there is Regulation (EU) No 165/2014[92] (also known as the Tachograph Regulation), which sets the requirements on the installation and the use of tachographs in vehicles in scope of the Driving Time Regulation.

Interesting publications by the Commission are the reports on how these different acts are implemented.[93] These reports include for instance the number of inspections performed and infringements found. The average percentage of checked working days for road transport workers in the EU is 6.3% in the period of 2015-2016, which is above the set requirement of a minimum of 3% of the worked days (only NL (2.2% of working days), MT (2.8%), and EL (0.1%) did not meet this goal). In total, in the EU, 8,162,703 vehicles and 5,846,011 drivers were checked on the roadside. Overall, 32% of the vehicles checked originated from another EU Member State, and 5% of outside the EU.

Of all the infringements found, both during road checks and checks at premises, the most common ones are offences for rest periods (24% of all infringements), followed by driving time records (24%), recording equipment (11%), and the lack of/availability of records for other work (7%).

A relevant minimum requirement set by Article 5 of Directive 2006/22/EC is that Member States are obliged to undertake at least six concerted roadside checks per year with at least one other Member State. However, only 15 Member States[94] met this requirement.

An organisation that was set up with this requirement in mind is the Euro Contrôle Route (ECR). This is a group of European Transport Inspection Services working together to improve road safety, sustainability, fair competition, and labour conditions in road transport by activities related to compliance with existing regulations (Euro Contrôle Route [ECR], 2017). This group has 14 members (BE, NL, LU, FR, DE, IE, UK, PL, AT, RO, BG, HU, HR and ES) and 2 observers (CZ and SI). In 2017, ECR checked 242,758 vehicles of which 53,960 (22.2%) were found to have at least one infringement. Additionally, a fifth of the vehicles with infringements, 11,133 (20.6%) had infringements serious enough to immobilise the vehicles. The most common offences found involved

88 It has also become clear that international truck drivers, all too often live and work in precarious conditions, which sometimes tend towards labour exploitation.

89 Regulation (EC) No 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport and amending Council Regulations (EEC) No 3821/85 and (EC) No 2135/98 and repealing Council Regulation (EEC) No 3820/85.

90 Directive 2002/15/EC of the European Parliament and of the Council of 11 March 2002 on the organisation of the working time of persons performing mobile road transport activities.

91 Directive 2006/22/EC of the European Parliament and of the Council of 15 March 2006 on minimum conditions for the implementation of Council Regulations (EEC) No 3820/85 and (EEC) No 3821/85 concerning social legislation relating to road transport activities and repealing Council Directive 88/599/EEC.

92 Regulation (EU) No 165/2014 of the European Parliament and of the Council of 4 February 2014 on tachographs in road transport, repealing Council Regulation (EEC) No 3821/85 on recording equipment in road transport and amending Regulation (EC) No 561/2006 of the European Parliament and of the Council on the harmonisation of certain social legislation relating to road transport.

93 Retrieved from https://op.europa.eu/en/publication-detail/-/publication/aadde8b5-d2ea-11e8-9424-01aa75ed71a1/language-nl/format-PDF and https://op.europa.eu/en/publication-detail/-/publication/3f2a8a07-d2eb-11e8-9424-01aa75ed71a1

94 Austria, Czech Republic, Germany, France, Hungary, Ireland, Latvia, Lithuania, Luxembourg, the Netherlands, Romania, Slovakia, Spain, Sweden, and the United Kingdom.

driver's hours offences (27.4% of all infringements found), tachograph offences (20.3%) and technical offences (18.6%).

In order to combat this high share of tachograph offences, a 'smart tachograph' was introduced by EC Regulation 165/2014, which replaced EC Regulation 3821/85. Furthermore, the Mobility Package introduced a new software update for this 'smart tachograph', as Regulation (EEC) No 3821/8595 has been updated by Regulation (EU) No 165/201496 and Regulation EU 2016/79997 defines the technical specifications for the smart tachograph (DG Mobility and Transport, 2020a). From 15 June 2019, newly registered trucks must be equipped with these smart tachographs. Certain features of this smart tachograph are an interface with the satellite navigation systems, a remote communication facility to communicate the tachograph data to a police enforcer on the roadside when the vehicle is moving, thus avoiding unnecessary stops for checking, and better security mechanisms to make fraud more difficult and reduce the administrative burden (DG Mobility and Transport, 2020). Furthermore, these tachographs are used to register border-crossings in order to tackle fraud, and LCV above 2.5 tonnes will now also be required to be equipped with a tachograph[98] (European Parliament, 2020). Furthermore, from 31 December 2024 onwards, the records on-board will have to be kept for 56 days instead of the current 28 days (ETF, 2020j).

Although these new technologies aim to improve enforcement, there is also a need for trained officers who know how to work with these devices and notice irregularities (Szokało & Rychter, 2018). However, in the 2015-2016 report on the implementation of the social legislation, a decrease was found in the number of inspectors trained to analyse the digital tachograph by 5.7% compared to 2013-2014, as it went from approximately 25,077 in 2013-2014 to 23,725 in 2015-2016 (European Commission, 2018).

Nevertheless, the European Registers of Road Transport Undertaking (ERRU)[99] was introduced to better monitor the compliance of road transport with the rules in force, for instance regarding the usage of digital tachographs (Szokało & Rychter, 2018). The ERRU has been operational since 1 January 2013 and provides a better exchange of information between Member States, so that the competent authorities can better monitor the compliance of road transport undertakings with the rules in force (DG Mobility and Transport, 2020b). For instance, if a transport undertaking does not adhere to the rules when operating abroad, it will face the consequences in the Member State of registration. Although it is stated that previously Member States did not adequately use this register for inspection purposes at the road side, seeing that it had not yet been sufficiently implemented (Haidinger, 2018), a new implementing regulation[100] has now been introduced which came into effect from 30 January 2019. As a result, the three important functionalities of ERRU are highlighted, namely checking good repute of transport undertakings, infringement notifications, and checking community licences (as discussed in Section 3.2). Thus, this system has a lot of potential to combat fraud and error in the transport sector.

95 Council Regulation (EEC) No 3821/85 of 20 December 1985 on recording equipment in road transport.

96 Regulation (EU) No 165/2014 of the European Parliament and of the Council of 4 February 2014 on tachographs in road transport, repealing Council Regulation (EEC) No 3821/85 on recording equipment in road transport and amending Regulation (EC) No 561/2006 of the European Parliament and of the Council on the harmonisation of certain social legislation relating to road transport

97 Commission Implementing Regulation (EU) 2016/799 of 18 March 2016 implementing Regulation (EU) No 165/2014 of the European Parliament and of the Council laying down the requirements for the construction, testing, installation, operation and repair of tachographs and their components.

98 See also Position of the Council at first reading with a view to the adoption of a Regulation of the European Parliament and of the Council amending Regulation (EC) No 561/2006 as regards minimum requirements on maximum daily and weekly driving times, minimum breaks and daily and weekly rest periods and Regulation (EU) No 165/2014 as regards positioning by means of tachographs - Adopted by the Council on 7 April 2020.

99 A link to the registers of each Member State can be found at https://www.niwo.nl/pagina/247/search-companies/erru-in-other-countries.html.

100 Commission Implementing Regulation (EU) 2016/480 of 1 April 2016 establishing common rules concerning the interconnection of national electronic registers on road transport undertakings and repealing Regulation (EU) No 1213/2010.

Furthermore, in terms of implementation of the Mobility Package, there might also be a role to play by the recently established European Labour Authority (ELA).[101] From August 2020, Member States have the obligation to publish information on penalties on driving and rest times that apply.[102] In addition, from February 2022, concerning the posting of drivers, the employers have to make sure that drivers are aware of their rights and obligations, and Member States must publish information on applicable terms and conditions.[103] Therefore, ELA could take on the role to facilitate access to information by making the information available online and help presenting it (Maillart, 2020). Besides these controls involving driving and working times, tachograph information, and technical requirements, critical fields for the road transport sector are the payment of (minimum) wages and social security contributions, seeing that many fraudulent activities, such as letterbox companies and social dumping, are intertwined with both fields.

The key challenge regarding these infringements is the collaboration between Member States. The cross-border cooperation of authorities needs to be developed further, and more targeted, strategic and risk assessment based inspections as well as additional training and education of inspectors are necessary (Haidinger, 2018). Furthermore, continuous training for enforcers and clarity on liability for infringements would improve enforcement of social legislation (Scordamaglia, 2020).

### 3.6.1 How to detect letterbox companies

One type of a fraudulent practice that is said to be common in the road transport sector are letterbox companies. The 'idea' of a letterbox company is to be a kind of intermediary with no or only symbolic activities in the country of registration in order to recruit workers, outsource activities, and avoid regulation (Cremers, 2019). An example that comes up again is the practices found at drivers for IKEA (see Section 3.3). Brings, which is a haulier for IKEA, opens a subsidiary in a low-cost labour country, and then recruits workers from there without them being active there (Haidinger *et al.*, 2017). It recruits drivers mainly from Romania, employed on Slovak contracts, despite not having any activity in Slovakia and Romania.

Identifying letterbox companies, however, is not an easy task as they are especially designed to remain undetected and the structures involved become increasingly complex. Furthermore, there is little regulation on EU level concerning the registration of a company and whether or not it is a genuine undertaking, which makes it easy for a 'virtual office' to handle these requirements and comply with them (Cremers, 2019). For instance, the real activities of a company are usually only checked when there is a suspicion of (financial) crimes, not when registering the company (Cremers, 2019). Nevertheless, for the transport sector specifically, certain regulations are set out to combat the occurrence of letterbox companies. Article 3 of Regulation No 1071/2009 (which was recently amended by the 'Mobility Package' (European Council, 2020)) stipulates that undertakings engaged in the occupation of road transport operator should:

- have an effective and stable establishment in a Member State;
- be of good repute;

101 ELA ensures that EU rules on labour mobility and social security coordination are enforced in a fair and effective way and makes it easier for citizens and businesses to reap the benefits of the internal market. It was established in 2019 and is expected to be fully operational by 2024 (European Labour Authority [ELA], 2020).

102 According to Article 19 of Regulation 2020/1054 of the European Parliament and of the Council of 15 July 2020 amending Regulation (EC) No 561/2006 as regards minimum requirements on maximum daily and weekly driving times, minimum breaks and daily and weekly rest periods and Regulation (EU) No 165/2014 as regards positioning by means of tachographs.

103 According to Article 8 of Directive 2020/1057 of the European Parliament and of the Council of 15 July 2020 laying down specific rules with respect to Directive 96/71/EC and Directive 2014/67/EU for posting drivers in the road transport sector and amending Directive 2006/22/EC as regards enforcement requirements and Regulation (EU) No 1024/2012, and Article 1(9) of Directive 2020/1054 and Provisions in Directive 2014/67 f the European Parliament and of the Council of 15 May 2014 on the enforcement of Directive 96/71/EC concerning the posting of workers in the framework of the provision of services and amending Regulation (EU) No 1024/2012 on administrative cooperation through the Internal Market Information System ('the IMI Regulation').

- have appropriate financial standing; and
- have the requisite professional competence.

In order to satisfy the first requirement, 'having an effective and stable establishment in a Member State', Article 5 specifies that an undertaking should:

(a) have premises at which it is able to access the originals of its core business documents, whether in electronic or any other form, in particular its transport contracts, documents relating to the vehicles at the disposal of the undertaking, accounting documents, personnel management documents, labour contracts, social security documents, documents containing data on the dispatching and posting of drivers, documents containing data relating to cabotage, driving time and rest periods, and any other document to which the competent authority must have access in order to verify the undertaking's compliance with the conditions laid down in this Regulation;
(b) organise its vehicle fleet's activity in such a way as to ensure that vehicles that are at the disposal of the undertaking and are used in international carriage return to one of the operational centres in that Member State at least within eight weeks after leaving it;
(c) be registered on the register of commercial companies of that Member State or on a similar register whenever required under national law;
(d) be subject to tax on revenues and, whenever required under national law, have a valid value added tax registration number;
(e) once an authorisation has been granted, have at its disposal one or more vehicles which are registered or put into circulation and authorised to be used in conformity with the legislation of that Member State, regardless of whether those vehicles are wholly owned or, for example, held under a hire-purchase agreement or under a hire or leasing contract;
(f) effectively and continuously conduct its administrative and commercial activities with the appropriate equipment and facilities at premises as referred to in point (a) situated in that Member State and manage its transport operations effectively and continuously using the vehicles referred to in point (g) with the appropriate technical equipment situated in that Member State;
(g) on an ongoing basis, have at its regular disposal a number of vehicles that comply with the conditions laid down in point (e) and drivers who are normally based at an operational centre in that Member State, in both cases proportionate to the volume of transport operations carried out by the undertaking.

In addition to these seven requirements, Member States may require an undertaking to have, in the Member State of establishment: (a) proportionate to the size of the activity of the undertaking, duly qualified administrative personnel at the premises or the transport manager reachable during customary business hours; (b) proportionate to the size of the activity of the undertaking, operational infrastructure other than the technical equipment referred to in point (f) of paragraph 1 in the territory of that Member State, including an office which is open during customary business hours.

Two other provisions set out in the Mobility Package which are significant measures against letterbox companies are the return of the truck and the return of the driver (ETF, 2020j). An undertaking shall organise its vehicle fleet's activity in such a way as to ensure that vehicles that are at the disposal of the undertaking and are used in international carriage return to one of the operational centres in that Member State at least within eight weeks after leaving it. Furthermore, it is now stated that transport undertakings should organise the work of drivers in such a way that the drivers are able to return to the employer's operational centre where the driver is normally based and where the driver's weekly rest period begins, in the Member State of the employer's establishment, or to return to the drivers' place of residence, within each period of four consecutive weeks.

Based on these elements, certain indicators can be developed which could signal 'red flags' suggesting the occurrence of a letterbox company. One important group of such indicators are financial indicators, seeing that the lack of economic activity lies at the root of the definition of letterbox

companies. However, in the Orbis database it is not possible to see where the turnover was created. Therefore, it is not possible to capture the lack of economic activity. Nevertheless, a report by the OECD (2020a, 2020b) about MNE's has found a misalignment between the location where profits are reported and the location where economic activities occur. This was detected as companies reported a high share of profits, but a low share of employees and tangible assets. Thus, although we cannot check this ourselves in the Orbis database,[104] there are ways to investigate whether there is a lack of economic activity.

Another type of indicator is looking at the data availability and filing of annual accounts. When the reporting obligations are not fulfilled or certain information is missing from annual accounts, this could indicate the existence of a letterbox company. Not providing any information is a simple but efficient technique to not be noticed. This may be particularly relevant for letterbox companies engaging in abusive behaviours. Although many data were indeed missing in the Orbis database, the question remains whether this is indeed the sign of a letterbox company, or a sign of less strict filling obligations. Rungi *et al.* (2018) note that the filing of more detailed financial accounts often occurs on a voluntary basis when firms fall below a certain threshold concerning their size, in order to reduce the administrative burden. An example is Belgium, where smaller companies only have to file a shortened annual account, in which certain information is not present (Merlevelde *et al.*, 2015). Furthermore, Orbis relies on administrative information in public business registries (collected by Chambers of Commerce throughout the world) (Damgaard *et al.*, 2019). However, in some countries these are very comprehensive, whereas in other countries, public registers are more limited. In terms of overall coverage, Johansson *et al.* (2017) found that larger firms were often better represented in the database. Therefore, the data availability could also not be used thoroughly to identify letterbox companies.

A third indicator that could be used is the address of companies. When multiple companies are located at the same address, it is possible that no substantial activities are going on at this location. Especially with the new provisions set out in the Mobility Package concerning the return of the driver and the return of the truck every four and eight weeks respectively, this is an interesting variable to identify letterbox companies. When the company is only a letterbox and no real company is established at this address, where are the drivers and trucks going to return to?

In general, not transport specific, especially the United Kingdom stood out, as it was found that at more than 250 addresses, more than 100 companies with a foreign majority shareholder in the EU-28 were located. At certain addresses in the United Kingdom, more than 15,000 companies were housed, with one address even housing more than 30,000 companies. More specifically, when looking at transport companies in particular,[105] the United Kingdom also certainly stands out. At one address, 500 road freight transport companies were located. Furthermore, the highest number of transport companies located at one address amounted to 130 in Slovakia, 113 in Bulgaria, 101 in Poland, and 83 in France. The address with the most transport companies also housed more than 40 companies in Romania, Slovenia, Portugal, Italy, and the Czech Republic. In only eight Member States, there were addresses where more than 50 transport companies were located. In seven of these Member States (FR, BG, CZ, PL, SK, IT and PT) less than 5 address housed more than 50 transport companies. However, in the United Kingdom, there were 76 addresses where more than 50 transport companies were located. Considering that not all companies are included in the Orbis database, and also non-transport companies will be located at these addresses, the real number of companies located at these addresses will be even higher. Therefore, it is clear that the requirement of an effective and

104 This exercise was attempted in the Orbis database. The average profit per employee was calculated for active companies under NACE 4941 'Freight transport by road' located in the EU-28 under the standardised legal form Public limited company or Private limited company. The EU-28 average amounted to € 4,968 average profit per employee, the EU-15 average to € 6,392 and the EU-13 average to € 3,313. Especially in the United Kingdom (€ 48,461), Ireland (€ 52,583), and Luxembourg (€ 309,457), the average profit per employee was remarkably higher than in other Member States. However, these results cannot be considered as representative, as for many Member States, the data availability was too low. Nevertheless, it paints a first picture of the Member States where the average profit per employee is remarkably high and might therefore signal a red flag. [Orbis Data extracted 2 December 2020].

105 Orbis database [Data extracted 7 July, 2020].

stable establishment cannot possibly be fulfilled for these transport companies.[106] The address variable will therefore be analysed in more detail for each of the six Member States.

Another type of fraud and error is often encountered with the determination of the competent Member State for social security. An important judgement has recently been pronounced by the Court of Justice of the European Union, namely in the case C-610/18, which concerns the employment agency AFMB, active in international road transport. The drivers involved in this case live in the Netherlands and are active in the international road transport. They were originally employed by Dutch companies, until they were offered a contract from AFMB, which is established in Cyprus (Kaldenberg, 2020; Rennuy, forthcoming). Consequently, seeing that AFMB became the formal employer, they believed that the Cyprian social security law should apply to the drivers.[107] However, the situation of the drivers remained the same: they were still doing the same job under the same employer, only under a different contract. The question thus arose which employer is the 'valid' one: the formal employer in Cyprus or the material employer in the Netherlands which de facto still exercises the employer's authority (De Pauw, 2020). In this case, the Court decided that 'the employer of an international long-distance lorry driver, is the undertaking which has actual authority over that long-distance lorry driver, which bears, in reality, the costs of paying his or her wages, and which has the actual power to dismiss him or her, and not the undertaking with which that long-distance lorry driver has concluded an employment contract and which is formally named in that contract as being the employer of that driver'.[108] Thus, in this case, AFMB should not be regarded as the employer, and Dutch social security law applies to the drivers instead of Cyprian law. However, it is important to stress that it certainly does not concern letterbox companies in the strict sense of the definition, seeing that the company performs genuine activities, but not in the Member State of incorporation (De Pauw, 2020). This type of construction is common in the road transport sector, as it allows companies to take advantage of the low social security costs in the country of establishment without performing any activities there (ANP, 2020). However, with this judgement, it will be interesting to see what the future might bring regarding these types of constructions.

### 3.6.2 Fraud in the field of intra-EU posting

Almost no statistics from labour inspectorates are available on the volume of fraudulent posting of workers (in the road transport sector).[109] [110] This might come as a surprise, especially since the phenomenon is often associated with cross-border social fraud.

The Network FMSSFE focusses specifically on fraud and error in the field of social security coordination, of which applicable legislation is an important part (Jorens *et al.*, 2019).[111] Although data from this report do not specifically concern the road transport sector, they are important to understand general problems and issues encountered with the determination of the applicable legislation. For reference year 2018, 13 EU and EFTA Member States[112] reported cases of fraud and error

106 It is also interesting to see that certain addresses resurface when examining possible letterbox companies. Addresses found by De Wispelaere and Pacolet (2018a) in their study about the Belgian road transport sector within a European context, and by the Belgian transport union in their study on social dumping in Slovakia (BTB, 2017) were once again encountered in this research.

107 AFMB even advertised this method as the 'Cyprus route', meaning that companies can put their employees on the Cyprian payroll, after which the drivers are 'lend out' again to the original company (Kaldenberg, 2020). This could create savings of at least 30% on labour costs, and AFMB itself claims that it is *the* answer to the competition from eastern European transport companies (AFMB Limited, n.d.).

108 C-610/18 - AFMB and Others (see http://curia.europa.eu/juris/liste.jsf?language=en&td=ALL&num=C-610/18).

109 However, it is/was not always clear to which situations the Posting of Workers Directive applies in the road transport sector.

110 Moreover, by means of the Orbis database, one could analyse the average labour cost of transport companies with a foreign majority shareholder or foreign subsidiary in order to see whether wages are respected (De Wispelaere & Pacolet, 2018a). If companies perform international transport activities and the average labour costs are too low, these companies would then receive a 'red flag'. However, such an analysis is too extensive for the scope of this report.

111 In that respect, the EU-rules on the coordination of social security systems are important in the fight against letterbox companies.

112 Belgium, Bulgaria, Czech Republic, Denmark, Germany, Greece, Italy, Hungary, Netherlands, Slovenia, Slovakia, Finland and Norway.

regarding applicable legislation, whereas 4 Member States[113] did not encounter any cases. The most common reasons for cases of fraud and error entail the absence of a direct relationship between the posted worker and the employer, no substantial activities in the sending Member State, and the provision of incorrect information. Furthermore, there is false self-employment, the wrong status of the person concerned is sometimes provided, and documents are occasionally falsified. This last element was also mentioned in the report by Haidinger *et al.* (2017) regarding fraudulent work in the road transport sector specifically, namely that it is rather easy to manipulate a PD A1. Additionally, seeing that the application procedure for a PD A1 is not regulated, a great variety among Member States exists in this regard (Jorens & De Wispelaere, 2019; Rennuy, 2020; Verschueren, 2020). It is also important to point out that while the Member State of origin has almost the exclusive power and duties regarding enforcement, it is the Member State of destination which has the strongest incentive to control, thus indicating a misalignment between incentives, capacities and competences to monitor (Jorens & De Wispelaere, 2019; Rennuy, 2020).

A critical problem concerning postings in the transport industry is the enforcement of the applicable wage standards. Neither the definitions nor the grading of serious infringements is homogenous across Member States (Scordamaglia, 2020). Furthermore, cross-border enforcement in this regard is lacking, as well as joint controls by Member States.

113 Ireland, Latvia, Malta, and Iceland.

# 4 | Focus on six Member States

In this chapter, the focus is on the six Member States: Austria, Belgium, the Czech Republic, Germany, Poland, and Slovenia. For each Member State, different variables are looked at: the kind of transport, the profile of companies active in this sector, the employment, the cross-border elements such as foreign majority shareholders and subsidiaries, and the export of services, and infringements. This gives an idea of the business structures of road freight transport companies in each Member State.

For every Member State, the same structure of paragraphs is retained. Moreover, in appendix 6, country fiches of each country can be found. They give an overview of the most important variables and make a comparison between Member States easier.

## 4.1 Austria

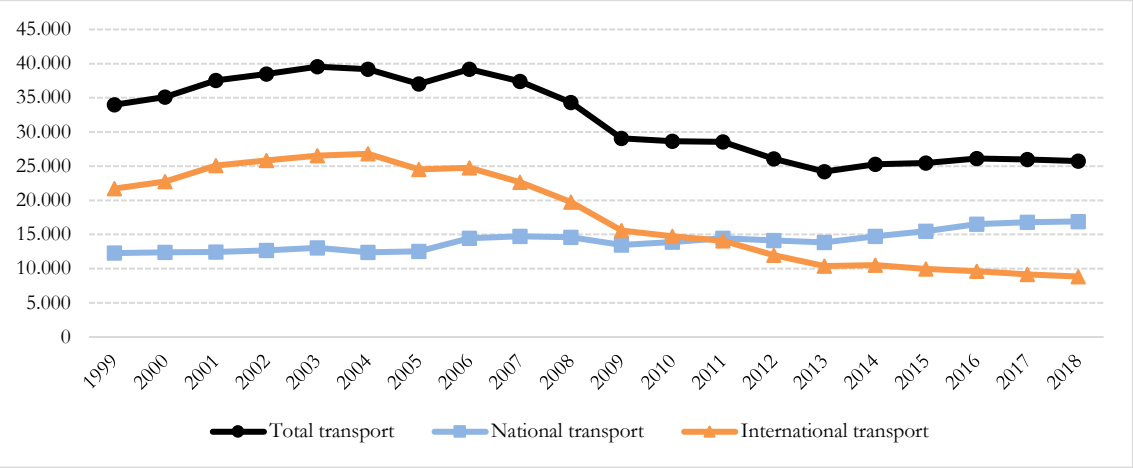
### 4.1.1 Type of transportation

In Austria, the total annual road freight transport decreased from 34,000 million tonne-km in 1999 to 25,700 million tonne-km in 2018 (Figure 4.1). Although national road transport knew an increase, international road transport has been decreasing ever since 2006. From 2006 to 2018 it declined by 64%. A turning point for Austria is the year 2011, as from that moment forward, more national transport was performed than international transport.

The loss of tonne-kms in international transport seems to have been compensated in recent years by an increase in tonne-kms in national transport. As a result, the evolution of total annual road freight has remained relatively stable over the past 5 years. Nevertheless, growth in national transport could have been even higher if the cabotage penetration rate in Austria had not been so high.

Although international transport has decreased overall, certain types of international transport have been growing. The evolution of the share of types of international transport can be seen in Table 4.1. Both goods loaded in Austria and cabotage have increased by around 5.2 percentage points. On the other hand, the share of cross-trade in international transport dropped by more than 13 percentage points.

**Figure 4.1 Annual road freight transport, in million tonne-km, 1999-2018, Austria**




**Source** Eurostat [road_go_ta_tott]

**Table 4.1 Road freight transport by type of transport, share in total tonne-km, 1999, 2008 and 2018, Austria, in %**

| | 1999 | 2008 | 2018 |
|---|---|---|---|
| International transport total | 100.0 | 100.0 | 100.0 |
| Goods loaded in reporting country | 37.2 | 40.1 | 42.3 |
| Goods unloaded in reporting country | 35.0 | 36.6 | 37.9 |
| Cross-trade | 26.9 | 20.0 | 13.5 |
| Cabotage | 1.0 | 3.3 | 6.2 |

**Source** Eurostat [road_go_ta_tott]

Seeing that cabotage in Austria is an often-discussed topic, it is looked at in more detail. From 1999 to 2018, the amount of cabotage taking place in Austria has increased by more than 635%.[114] The cabotage penetration rate has been on the rise, from 1.9% in 1999 to 8.9% in 2018.[115] This shows that although the market share of foreign hauliers in total national transport activities is growing, it is still rather limited. Nevertheless, certain studies estimate that the share of cabotage in national transport in Austria amounts to more than 21% (Vitols & Voss, 2019).

Experts criticise that cabotage numbers are highly underestimated by figures provided by Eurostat. Cabotage operations do not have to be announced in advance, hence there are no administrative numbers of cabotage journeys available, only estimates based on questionnaires. An Austrian study (Kummer *et al.*, 2016a) based on calculations with dynamic data from the high-level road network estimates that between 18.5% and 23.7% off all domestic traffic in Austria is cabotage traffic (EU estimates: 7.9%). The study also estimated the incidence of irregular cabotage: at least 3.3% of national transports in the Austrian commercial freight traffic with trucks over 3.5 tonnes (MCV and HCV) are estimated to be illegal cabotage operations.[116] Based on the counting of individual journeys, some foreign vehicles were detected that have made more than 300 journeys, and many between 30-50 journeys within one month on Austrian territory.

In Eurostat, it is also possible to look at the breakdown of Member States performing cabotage in a certain Member State. Figure 4.2 shows this breakdown in 2008 and 2018. There are two special groups in this figure: 'Unidentified' and 'other Member States'. The former refers to the share of

114 Eurostat [road_go_ca_c].

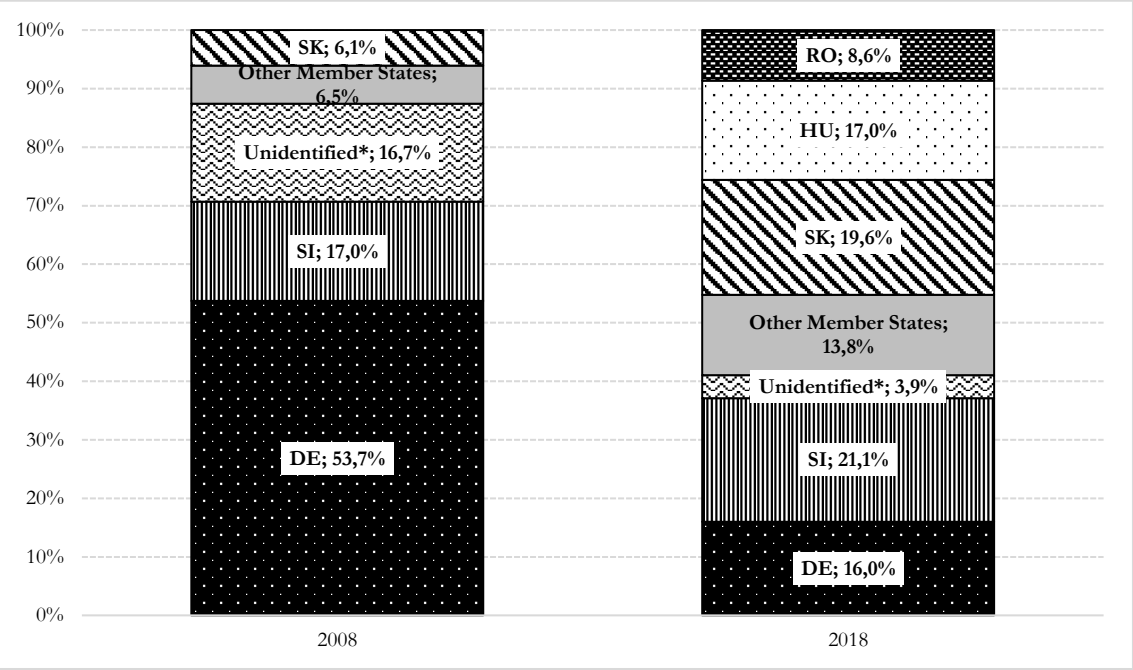
115 Eurostat [road_go_ca_c] and [road_go_ta_tott].

116 This estimate is based on the evaluation of more than 35 million individual journeys of tolled vehicles over 3.5 tonnes from January to July 2016 on the Austrian motorway network (Kummer *et al.*, 2016b).

cabotage for which it is not known which Member States performed it, as data are incomplete.[117] The latter on the other hand, indicates the share of cabotage for which the performing Member States are known, but their shares are too small to mention individually. In the case of Austria, this group entails Luxembourg, Hungary and the Netherlands in 2008, and Bulgaria, the Czech Republic, Croatia, and Poland in 2018.

In 2008, more than half of all cabotage in Austria was carried out by German hauliers. Although these hauliers are still important in Austrian cabotage in 2018 with 16%, the majority of cabotage is now carried out by Slovenian (21%) and Slovakian (20%) hauliers. The share of Slovakian hauliers has grown especially, from 6% in 2008 to 20% in 2018. Furthermore, Hungarian hauliers also play a significant role in cabotage performed in Austria with 17% in 2018.

**Figure 4.2 Share in cabotage transport in total tonne-km in Austria, 2008 and 2018**




* The share of 'unidentified' is included, as the total amount of cabotage reported in [road_go_ca_hac] did not match the amount reported in [road_go_ca_c]. This means that for a certain amount of cabotage, it is not known by which Member States it was performed. For Austria, this is the case for 16.7% of cabotage in 2008 and 3.9% in 2018. For the share of 'Other Member States', on the other hand, it is known by which Member States the cabotage is performed, but their share is too small to mention individually.

**Source** Eurostat [road_go_ca_hac] and [road_go_ca_c]

### 4.1.2 Profile of companies active in the road transport sector

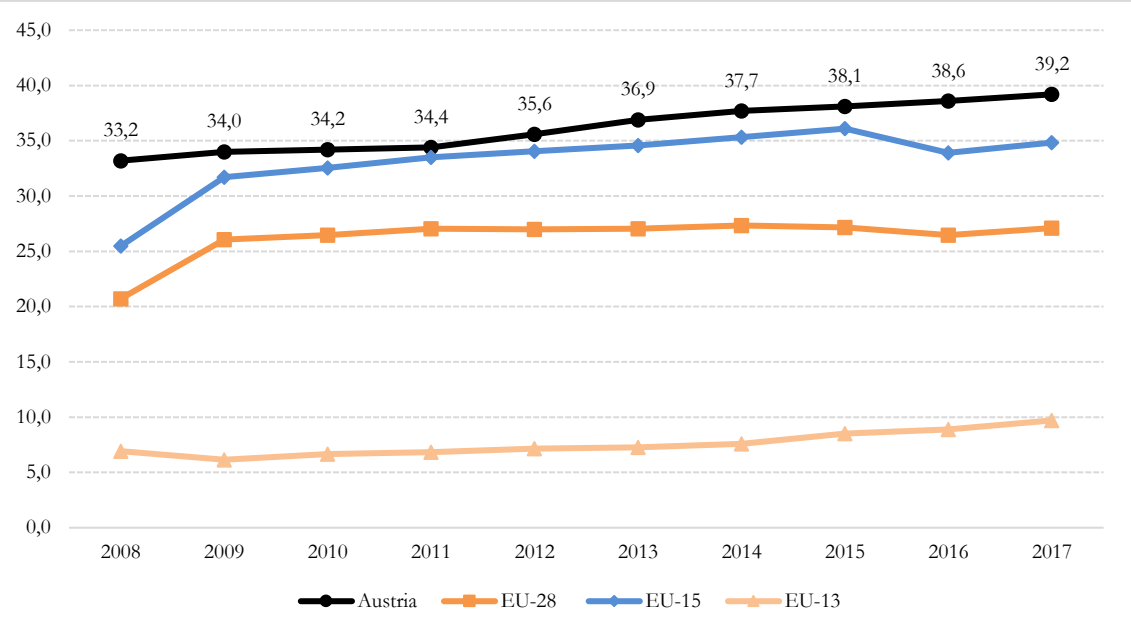
Over the years, the number of Austrian companies active in the road transport sector has decreased, from 7,080 in 2008 to 6,364 in 2017.[118] This is a decrease by more than 10%. Nevertheless, the total turnover created by these companies has grown by almost 17% in the same period. As a result, the average turnover per enterprise increased as well, by 30%, going from € 1,266,000 in 2008 to € 1,646,000 in 2017. This means that the companies in this sector in Austria have grown in size over time, as they create more and more turnover.

117 This was noticed when the total amount of cabotage reported by Eurostat [road_go_ca_hac] 'Road cabotage by reporting country and country in which cabotage takes place' did not match the total in Eurostat [road_go_ca_c] 'Road cabotage transport by country in which cabotage takes place', as the former was lower. Thus, for the difference in cabotage between these two data sources, it is unknown by whom it is performed.

118 Eurostat [sbs_na_1a_se_r2].

The average personnel cost gives an idea of how 'expensive' it is to employ a person. Figure 4.3 shows the average personnel cost of persons employed in the road freight sector, from 2008 to 2017. The average cost in Austria has been increasing constantly over the years. From 2008 to 2017, it grew from € 33,200 to € 39,200, an increase of 18%. The Austrian average personnel cost in the road transport sector has always been higher than the EU-28 average and the EU-15 average, albeit only slightly.

**Figure 4.3** **Average personnel cost of companies active in NACE 4941 'Freight transport by road', Austria, EU-28, EU-15, EU-13, 2008-2017, in € 1,000**




**Source** Eurostat [sbs_na_1a_se_r2]

It can also be interesting to put the average labour cost in perspective, by comparing the average annual labour cost in the road transport sector with the average annual labour cost in the total economy (Table 4.2). In Austria, the average personnel cost in the total economy has been higher than the average personnel cost in the transport sector over the last few years. Furthermore, the personnel cost in the total economy has grown more than in the road transport sector from 2008 to 2017 (19.5% versus 18.1%).

**Table 4.2** **Average personnel cost of companies in the total economy and active in NACE 4941 'Freight transport by road', Austria, 2008-2017, in € 1,000**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Evolution 2008-2017 (in %) | Annual growth rate (in %) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total economy | 38.9 | 39.5 | 40.0 | 41.1 | 42.5 | 43.7 | 44.3 | 45.2 | 46.4 | 46.5 | 19.5 | 2.0 |
| NACE 4941 | 33.2 | 34.0 | 34.2 | 34.4 | 35.6 | 36.9 | 37.7 | 38.1 | 38.6 | 39.2 | 18.1 | 1.9 |

**Source** Eurostat [sbs_na_sca_r2] and Eurostat [sbs_na_1a_se_r2]

Paragraph 3.6.1 clarified how letterbox companies in the road transport sector can be identified using Article 3 of Regulation No 1071/2009. This makes it clear that road transport companies need

to have an establishment at their disposal where its administrative and commercial activities are carried out. Furthermore, at this establishment, one or more vehicles have to be at its disposal as well as the appropriate technical equipment. Therefore, one indicator to investigate whether the company is acting legitimately is the address. When multiple companies are located at one address, this could indicate that there are no substantial activities going on at this location, and that the company merely functions as a 'letterbox'.

Therefore, for transport companies active in Austria, we looked at the address to see if multiple companies were located at a single address. However, Table 4.3 shows that the highest amount of transport companies at one address was six, in 'Himberg bei Wien'. Nevertheless, at this address 25 companies were located in total, indicating that the existence of an effective and stable establishment for these six transport companies might not be fulfilled. The address in Vienna even housed 30 companies, of which 3 road freight transport companies. Especially the address in 'Haid bei Ansfelden' seems to be 'popular' for transport companies, as almost 60% of the companies located there are active under NACE 4941. Overall, however, the numbers presented in Table 4.3 are not alarming, as these addresses are the top five addresses where most road transport companies are located. Then again, it should be kept in mind that not every company is included in the Orbis database.

**Table 4.3 Addresses of companies active under NACE 4941 'Freight transport by road' where multiple companies are located, Austria**

| Address | Number of companies active under NACE 4941* (A) | Total number of companies** (B) | % Share in total (A/B) |
|---|---|---|---|
| Gutenhoferstrasse 19, Himberg bei Wien | 6 | 25 | 24.0 |
| Kremstalstr. 30, Haid bei Ansfelden | 4 | 7 | 57.1 |
| Grossmarktstrasse 7 B, Wien | 3 | 30 | 10.0 |
| Molkereistrasse 6, Wiener Neustadt | 3 | 9 | 33.3 |
| Gewerbepark 1, Woergl | 3 | 10 | 30.0 |

* This includes active companies active under NACE 4941 'Freight transport by road' with the standard legal form of private limited company or public limited company.

** This includes active companies with all standard legal forms. Therefore, it is possible that a company active under NACE 4941 with a standard legal form other than private/public limited company is included in this number.

Source Orbis database [Data extracted 15 May 2020]

### 4.1.3 Employment in the road transport sector

In Austria, around 61,800 persons were employed in the road transport sector in 2017, of which 6,193 or 10% unpaid (Table 4.4). The employment has remained rather stable over the years, as from 2008 to 2018 the number of persons employed has increased by only 1.8%. However, from 2013 onwards, the number of persons employed has continually increased. The growth from 2013 to 2017, from 56,877 to 61,806 persons, amounts to 8.7%.

As a share in total employment, the road transport sector amounts to 1.5% in 2017. This share has remained stable, although in 2008 it still reached 1.6%.

**Table 4.4 Employment in NACE 4941 'Freight transport by road', Austria, 2008-2017**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Persons employed** | **60,735** | **57,076** | **56,322** | **57,648** | **57,724** | **56,877** | **58,156** | **58,535** | **60,759** | **61,806** |
| Unpaid persons employed | 6,397 | 6,101 | 6,138 | 6,150 | 6,203 | 6,160 | 6,396 | 6,231 | 6,151 | 6,193 |
| Employees | 54,338 | 50,975 | 50,184 | 51,498 | 51,521 | 50,717 | 51,760 | 52,304 | 54,608 | 55,613 |
| **% Share in total employment** | **1.6** | **1.5** | **1.4** | **1.5** | **1.4** | **1.4** | **1.4** | **1.4** | **1.5** | **1.5** |

**Source** Eurostat [sbs_na_1a_se_r2] and [lfsi_emp_a]

The variable 'Persons employed per enterprise' in the Structural Business Statistics gives the opportunity to look at the changing profile of transport companies. In Austria, this average grew from 8.6 in 2008 to 9.7 in 2017.[119] This indicates that the average road freight transport company might be growing in size, as was already posited above, when analysing the growing turnover that companies earn.

As already discussed in general in Section 3.4, the ageing labour force in the road transport sector seems to be a problem. In Austria, the share of persons employed above 50 in NACE H49 'Land transport and transport via pipelines' has increased from 30.8% in 2008 to 37.1% in 2019.[120] When looking at all NACE-codes, this share increased from 21.8% in 2008 to 31.6% in 2019.[121] Thus, although the growth in 50+ persons employed in the total economy was larger than in the transport sector, the share of 50+ is bigger in this sector than in total.

A specific group of employees in the road transport sector are third country nationals. One way to identify them is by looking at the number of driver attestations. This document is needed for drivers who are not a national, neither a long-term resident of an EU Member State. Table 4.5 shows that Austria only issued a limited number of driver attestations in 2018, namely 112, or 0.1% of all driver attestations issued by EU-28 Member States. Although in 2012, Austria still issued more than 800 driver attestations, which compromised 2.9% of all driver attestations issued.

The number of driver attestation in circulation in Austria also decreased, as fewer attestations were issued. It even decreased by 73%, going from 2,114 in 2012 to 563 in 2018. As a result, when comparing the number of driver attestations in circulation to the total number of persons employed in NACE-sector 4941 'Freight transport by road', it can be seen that its share decreased from 3.7% in 2012 to 1.2% in 2017.

**Table 4.5 Driver attestations issued and in circulation, Austria, 2012-2018**

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| Number of driver attestations issued | 805 | 384 | 374 | 242 | 217 | 149 | 112 |
| % Share in total driver attestations issued by EU-28 | 2.9 | 1.4 | 1.1 | 0.5 | 0.3 | 0.1 | 0.1 |
| Number of driver attestations in circulation | 2,114 | 1,876 | 1,590 | 1,289 | 1,040 | 761 | 563 |
| % Share in total number of persons employed in NACE 4941 | 3.7 | 3.3 | 2.7 | 2.2 | 1.7 | 1.2 | n.a. |

**Source** Own elaborations based on European Commission (n.d.-h) and Eurostat [sbs_na_1a_se_r2]

119 Eurostat [sbs_na_1a_se_r2].
120 Eurostat [lfsq_egan22d].
121 Eurostat [lfsq_egdn2].

### 4.1.4 Cross-border elements

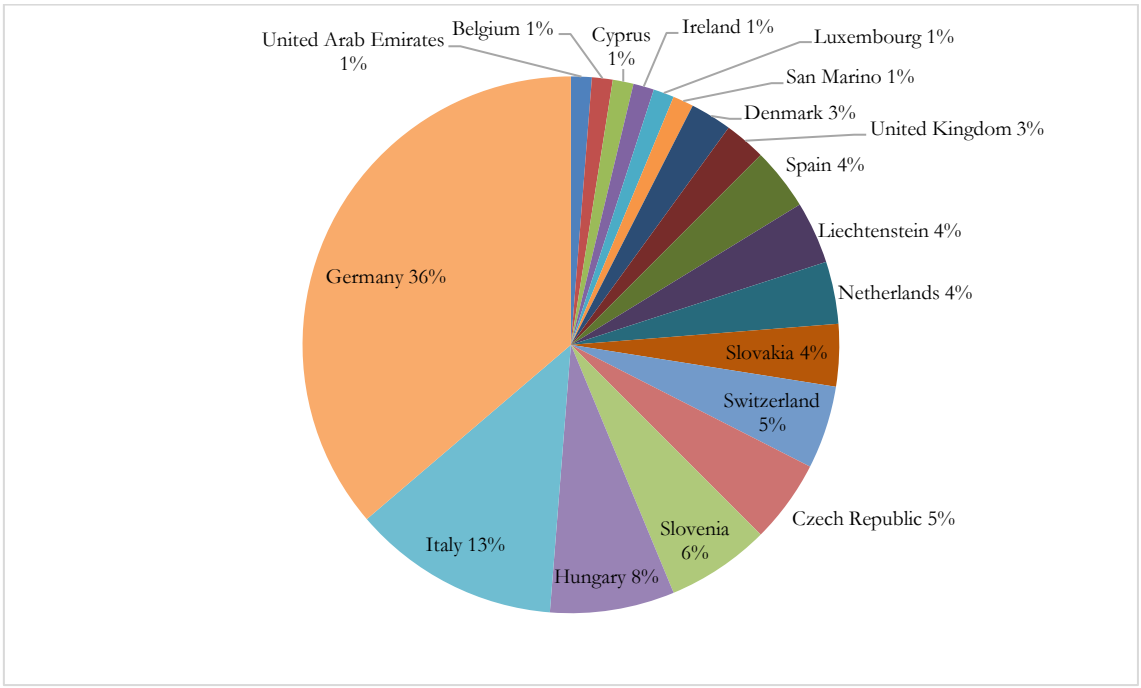
The analysis of cross-border elements in road freight transport companies encompasses companies with a foreign majority shareholder and companies with a foreign subsidiary. As discussed in Section 3.5, only active companies with the legal form of public limited company and private limited company are taken into consideration. Additionally, the export of services is analysed in more detail.

#### 4.1.4.1 Companies with a foreign majority shareholder

In Austria, 68 road transport companies were found to have a foreign majority shareholder,[122] or 3.3% of all the road freight transport companies.[123] Nevertheless, the companies with a foreign majority shareholder account for 9.3% of all turnover created by Austrian transport companies and 7.8% of the employees.

Out of these 68 companies with a foreign majority shareholder, 16 were located in Vienna, or almost a fourth of all companies with a foreign majority shareholder. However, more interesting might be the location of the foreign majority shareholders. The division between EU and extra-EU is 89% and 11% respectively. More specifically, 65% of the foreign majority shareholder are located in the EU-15, 24% in the EU-13, and 11% outside of the EU. The exact distribution per country can be seen in Figure 4.4. The largest share of shareholders is located in Germany (36%), Italy (13%), and Hungary (8%). Furthermore, many are located in Slovenia, the Czech Republic, Switzerland, and Slovakia, other neighbouring countries of Austria. All neighbouring countries of Austria[124] taken together account for 80% of all foreign majority shareholders.

**Figure 4.4 Location of foreign majority shareholder of Austrian companies active under NACE 4941 'Freight transport by road'**




**Source** Orbis database [Data extracted 12 May 2020]

122 This concerns the exact number of companies with a majority shareholder of which the location is known and the majority shareholder is located outside of Austria.

123 Orbis database [Data extracted 15 May 2020].

124 Germany, Italy, Czech Republic, Slovakia, Slovenia, Hungary, Liechtenstein and Switzerland.

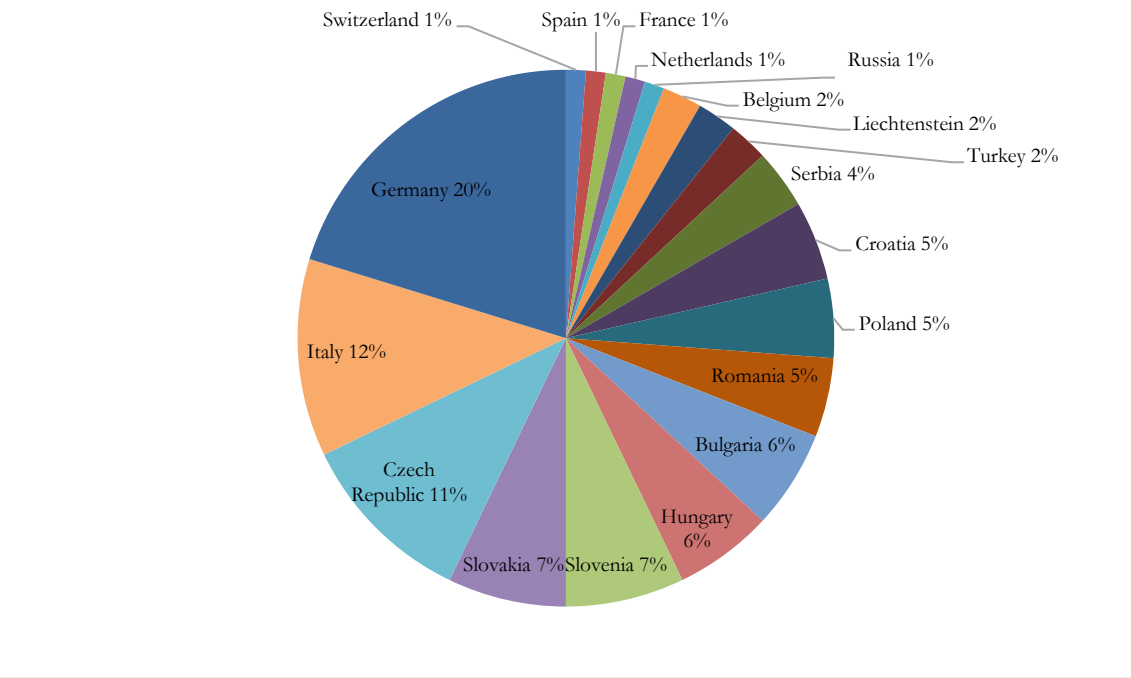
#### 4.1.4.2 Companies with a foreign subsidiary

Of all the 2,068 Austrian transport companies, only 39 companies, or 1.9%, has a foreign subsidiary.[125] The share of turnover they represent on the other hand is more than four times as big, namely 8.0%. Furthermore, they account for 6.5% of all employees. This indicates that especially the larger companies are flagging out and establishing subsidiaries abroad.

Nevertheless, these 39 companies have 115 subsidiaries in total. The average number of subsidiaries is 2.95, although the median only amounts to 2 subsidiaries per company. Around three quarters of the companies with a subsidiary had three or fewer subsidiaries, and 26% of the companies had four or more subsidiaries. However, not all subsidiaries are located abroad, as the criterion for a company to be selected was to have *at least one* foreign subsidiary. Thus, the 39 companies have 84 subsidiaries located abroad in total.

Almost 90% of the foreign subsidiaries are located in the EU; the remaining 11% is located outside of the EU. More specifically, 51.2% are located in the EU-13 and 38.1% in the EU-15. Figure 4.5 shows that 20% of the foreign subsidiaries are located in Germany, 12% in Italy, and 11% in the Czech Republic. Furthermore, 7% are located in Slovakia, 7% in Slovenia, and 6% in Hungary. As these are all neighbouring countries of Austria, it is logical that many subsidiaries are located here. In fact, 67% of all foreign subsidiaries are located in its neighbouring countries.[126]

**Figure 4.5** **Location of foreign subsidiaries of Austrian companies active under NACE 4941 'Freight transport by road'**




**Source** Orbis database [Data extracted 13 May 2020]

To illustrate the complexity of networks of transport companies better, one company was picked out of the group of 39 Austrian companies with a foreign subsidiary. In this case, it concerns Frikus Transportlogistik GMBH, a company with 6 subsidiaries, of which one is also located in Slovenia. However, when looking at the corporate ownership of this company in the Orbis database, it was found that it is part of a corporate group of 49 companies, ultimately owned by Lagermax Lagerhaus und Speditions Aktiengesellschaft. Table 4.6 shows the entire corporate group, including the country

125 Orbis database [Data extracted 15 May 2020].
126 Germany, Italy, Czech Republic, Slovakia, Slovenia, Hungary, Liechtenstein and Switzerland.

where the company is located, the number of employees, its turnover, and its NACE-code. This is just one example of how complex the structure of a company can be. For instance, Frikus Bulgaria EOOD is a subsidiary of a subsidiary of a subsidiary of a subsidiary of the global ultimate owner. In total, the global ultimate owner has 49 subsidiaries, which are located in 11 different countries (AT, BG, RS, RO, SK, HR, CZ, SI, TR, HU, and DE). Furthermore, companies in this corporate group are not only active in road freight transport, but also in many other sectors such as warehousing, courier activities, and real estate. This structure indicates that transport companies are often inter-woven in a complex network of companies established in different countries and sectors.

**Table 4.6 Corporate group of Frikus Transportlogistik GMBH, Austria**

| Level | Name | Country | Number of employees | Turnover (in million €) | NACE-code** |
|---|---|---|---|---|---|
| GUO * | Lagermax Lagerhaus und Speditions Aktiengesellschaft | AT | n.a. | 539 | 7010 |
| 1 | Detvianska, S.R.O. | SK | n.a. | 1 | 6831 |
| 1 | Lagermax Autologistik International GMBH | AT | 3 | 1 | 7010 |
| 2 | ↳Friedrich Holding GMBH | AT | 2 | n.a. | 7010 |
| **3** | **↳Frikus Transportlogistik GMBH** | **AT** | **147** | **60** | **4941** |
| 4 | ↳Frikus Bulgaria EOOD | BG | 17 | 1 | 4941 |
| 4 | ↳Frikus Liquids GMBH | AT | 33 | 5 | 4941 |
| 4 | ↳Frikus Romania S.R.L. | RO | n.a. | n.a. | 4941 |
| 4 | ↳LKW - Service Betriebsgesellschaft M.B.H. | AT | 25 | 2 | 4520 |
| 4 | ↳Avtoservis Koper, Vzdrzevanje in Popravilo Motornih Vozil, D.O.O. | SI | 33 | 5 | 4520 |
| 4 | ↳Frikus Hungaria Fuvarozasi KFT | HU | 80 | 8 | 4941 |
| 2 | ↳Lagermax Autotransport D.O.O. | HR | 97 | 10 | 5229 |
| 2 | ↳Lagermax Autotransport Slovakia, S.R.O. | SK | n.a. | 13 | 4941 |
| 2 | ↳Lagermax Autotransport SRL | RO | 261 | 41 | 5229 |
| 3 | ↳Lagermax Maritime Services SRL | RO | n.a. | 0 | 5222 |
| 2 | ↳Lagermax Autotransport Bulgaria OOD | BG | 30 | 3 | 4941 |
| 2 | ↳Lagermax Elitte DOO Sibnica-Rekovac - U Likvidaciji | RS | 25 | 1 | 4941 |
| 1 | Lagermax autotransport GMBH | AT | 360 | 85 | 4941 |
| 2 | ↳Autoservice Wien Assembling und Logistik GMBH | AT | 25 | 4 | 4520 |
| 1 | Lagermax Bulgaria EOOD | BG | 1 | 0 | 6810 |
| 2 | ↳Lagermax Autotransport Bulgaria OOD | BG | 30 | 3 | 4941 |
| 1 | Lagermax Internationale Spedition Gesellschaft M.B.H. | AT | 303 | 93 | 5229 |
| 2 | ↳Engelbert Prietl Gesellschaft M.B.H. | AT | 2 | 0 | 7739 |
| 2 | ↳Lagermax AED International GMBH | AT | n.a. | n.a. | 6420 |
| 3 | ↳ITM AED Serbia DOO Pecinci, Simanovci | RS | 32 | 2 | 5210 |
| 3 | ↳Lagermax AED Croatia, D.O.O. | HR | 232 | 25 | 5229 |
| 3 | ↳Lagermax AED Czech, S.R.O. | CZ | 12 | 9 | 5229 |
| 3 | ↳Lagermax AED DOO Simanovci | RS | 145 | 8 | 5210 |
| 3 | ↳Lagermax AED GMBH | AT | 35 | 40 | 4941 |
| 3 | ↳Lagermax AED Romania SRL | RO | 85 | 12 | 4941 |
| 3 | ↳Lagermax AED, Mednarodna Spedicija, D.O.O. | SI | 9 | 2 | 5229 |

**Table 4.6 Corporate group of Frikus Transportlogistik GMBH, Austria (continued)**

| Level | Name | Country | Number of employees | Turnover (in million €) | NACE-code** |
|---|---|---|---|---|---|
| 3 | ↳Lagermax Timesped DOO Simanovci | RS | n.a. | 1 | 5229 |
| 3 | ↳Lagermax Timesped, D.O.O. | HR | n.a. | 0 | 5229 |
| 3 | ↳KCS, S.R.O. | SK | 75 | 7 | 4941 |
| 2 | ↳Lagermax DLS GMBH | AT | 7 | 3 | 5229 |
| 2 | ↳Lagermax Paketdienst GMBH | AT | 89 | 45 | 5320 |
| 2 | ↳Lagermax Spedice a Logistika, S.R.O. | CZ | 305 | 27 | 5229 |
| 3 | ↳Lagermax Slovakia, S.R.O. | SK | n.a. | 11 | 5229 |
| 2 | ↳Lagermax Spedicio Bulgaria EOOD | BG | 107 | 7 | 4941 |
| 3 | ↳Kliper - TK EOOD | BG | 1 | 0 | 7712 |
| 2 | ↳Lagermax Wien Internationala Spedition GMBH | AT | 35 | 15 | 5229 |
| 2 | ↳Timesped Austria Spedition GMBH | AT | 5 | n.a. | 5229 |
| 3 | ↳Lagermax Internationale Spedition Germany GMBH | DE | 4 | n.a. | 5229 |
| 2 | ↳Conzept Container Modulbau & Handel GMBH | AT | 16 | 4 | 4669 |
| 2 | ↳Lagermax Uluslararasi Nakliyat Lojistik Ithalat Ihracat Insaat Limited Sirketi | TR | 3 | n.a. | 5229 |
| 1 | Lagermax Romania SRL | RO | 13 | 2 | 4120 |
| 1 | Lagermax Zagreb D.O.O. | HR | n.a. | 2 | 5229 |
| 1 | Privredno Drustvo Lagermax Kragujevac | RS | n.a. | 0 | 6810 |
| 1 | Ruve, A.S. | CZ | 4 | 1 | 6820 |
| 1 | TS Werbeagentur GMBH | AT | 90 | n.a. | 5229 |

* GUO stands for Global Ultimate Owner.

** The descriptions of the NACE-codes are: **4120** Construction of residential and non-residential buildings, **4520** Maintenance and repair of motor vehicles, **4669** Wholesale of other machinery and equipment, **4941** Freight transport by road, **5210** Warehousing and storage, **5222** Service activities incidental to water transportation, **5229** Other transportation support activities, **5320** Other postal and courier activities, **6420** Activities of holding companies, **6810** Buying and selling of own real estate, **682**0 Renting and operating of own or leased real estate, **6831** Real estate agencies, **7010** Activities of head offices, **7712** Renting and leasing of trucks, **7739** Renting and leasing of other machinery, equipment and tangible goods n.e.c.

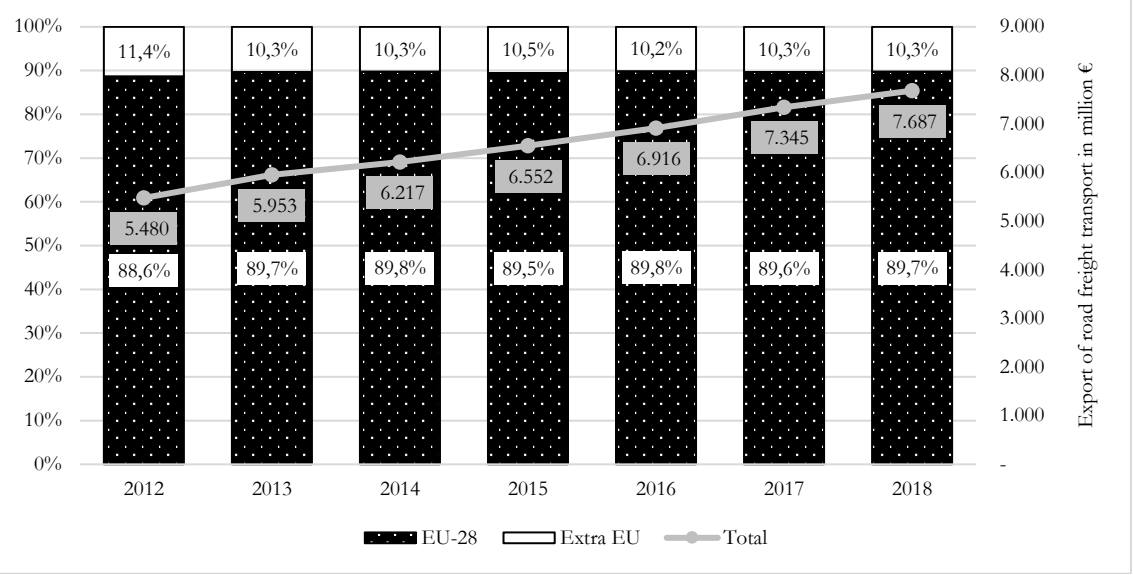
**Source** Orbis database [Data extracted 17 June 2020]

#### 4.1.4.3 Export of services

In this section, the export of road freight transport services is looked at, namely the international road transport. Figure 4.6 shows the evolution of the export of transport services from Austria. It is clear that this has been on the rise continuously, with a 40.3% increase from 2012 to 2018. Furthermore, it can be seen that the location where the services are being provided has remained rather stable. Around 90% of Austrian export of road transport services is provided in the EU-28, and only 10% outside of the EU-28.

A detailed cross-table of the six Member States can be found in appendix 5. This table allows us to look at the exact location of where the services are provided. Consequently, it can be seen that Germany has always been the most prominent Member State of destination for Austrian export of transport services, with 41% of total services going to this Member State. Furthermore, in 2018, 11.2% of international transport went to Italy, 6.7% to Switzerland (not reported in the table), and 5.2% to the Netherlands.

**Figure 4.6** **Export of services of road freight transport, breakdown by location where services are provided, in million €, 2012-2018, Austria**




**Source** Eurostat [bop_its6_det]

The importance of international transport was already analysed by looking at the annual road freight transport in tonne-km. Therefore, it might be interesting to compare the share of international transport based on turnover and based on tonne-km. Table 4.7 shows the total export of services, as discussed above, and compares this to the total turnover earned in the road transport sector to get an idea of the importance of international transport. Then, it also looks at the share of international transport based on the amount of tonne-km in international transport on the total transport carried out.

In terms of turnover created by exporting services, Austria knew a strong increase. In 2012, 58% of all turnover created in the road transport sector originated from exporting services, while in 2017 this share amounted to 70%. However, this growth cannot be noticed in terms of tonne-km performed. The share of international transport in total transport performed went down from 51% in 2010 to 34% in 2018. This indicates that Austria is performing less international transport, but they are earning more from it.

**Table 4.7** **Comparison share international road freight transport in total road freight transport based on total turnover created and total tonne-km performed, 2010-2018, Austria**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|
| **Based on turnover (in million €)** | | | | | | | | | |
| Export of services | | | 5,480 | 5,953 | 6,217 | 6,552 | 6,916 | 7,345 | 7,687 |
| Total turnover | 8,507 | 9,213 | 9,417 | 9,016 | 9,288 | 9,476 | 9,836 | 10,478 | |
| % Share export of services | | | 58.2 | 66.0 | 66.9 | 69.1 | 70.3 | 70.1 | |
| **Based on tonne-km (in million tonne-km)** | | | | | | | | | |
| International transport | 14,745 | 14,067 | 11,970 | 10,360 | 10,539 | 9,977 | 9,634 | 9,175 | 8,849 |
| Total transport | 28,659 | 28,542 | 26,089 | 24,213 | 25,260 | 25,458 | 26,138 | 25,978 | 25,763 |
| % Share international transport | 51.4 | 49.3 | 45.9 | 42.8 | 41.7 | 39.2 | 36.9 | 35.3 | 34.3 |

**Source** Eurostat [bop_its6_det], [sbs_na_1a_se_r2], and [road_go_ta_tott]

### 4.1.5 Infringements/fraud and error

The enforcement of social rules in road transport in EU regulations discussed in Section 3.6 can now be looked at in more detail for Austria specifically. In total, Austria had to check 1,409,760 working days in 2015-2016 to reach the requirement of a minimum of 3% of total working days. However, they checked 5,059,469 working days, which is 3.5 times as much. Therefore, they checked 10.8% of total working days, which is the fourth highest share in the EU, after France (11.9%), Bulgaria (11.2%) and Germany (11.4%). Of the working days checked, 85% were at a roadside and 15% at premises.

Concerning the roadside checks, the majority of vehicles checked were registered in another EU Member State (61%), followed by Austrian trucks (35%), and only 4% of trucks were registered in a non-EU country. Furthermore, Austria almost exclusively checked vehicles carrying goods (99%), as opposed to passengers (1%).

An overview of the offences in 2015-2016 found by Austria is pictured in Table 4.8. Overall, an astounding 97% of all offences were found at roadside checks, while only 85% of all days checked took place at the roadside. Offences involving rest periods are the most common ones found at roadside checks (28.5%). Furthermore, for all six Member States this type of offence is in the top 2 most common offences, both at roadside checks and checks at premises. The rules to be followed on rest periods are set out in Article 8 and 9 of Regulation (EC) No 561/2006.[127] It is for instance stated that a daily rest period has to be at least 11 hours, with an exception of going down to 9 hours maximum three times a week. Daily rest can be split into 3 hours rest followed by 9 hours rest to make a total of 12 hours daily rest. Additionally, weekly rest is 45 continuous hours, which can be reduced every second week to 24 hours. Compensation arrangements apply for reduced weekly rest periods. Weekly rest is to be taken after six days of working, except for coach drivers engaged in a single occasional service of international transport of passengers who may postpone their weekly rest period after 12 days in order to facilitate coach holidays. The Mobility Package also clarified that weekly rest of more than 45 hours cannot be taken in a vehicle, but in suitable accommodation with adequate facilities, paid for by the employer (European Parliament, 2020b).

Furthermore, Table 4.8 indicates that a majority of offences found at premises involve breaks, of which the rules are set out in Article 7 of Regulation (EC) No 561/2006. Drivers have to take breaks of at least 45 minutes (separable into 15 minutes followed by 30 minutes) after 4 ½ hours at the latest. Thus, it seems that these rules are the ones most found to be bypassed, for instance by taking too short breaks or not enough breaks.

**Table 4.8 Type of offences found at roadside and premises, Austria, 2015-2016**

| | | Driving time | Breaks | Rest periods | 28 days record sheet | Lack/ availability of records | Incorrect functioning | Misuse and manipulation | Total offences |
|---|---|---|---|---|---|---|---|---|---|
| Roadside | Number | 70,229 | 96,841 | 106,648 | 54,543 | 37,650 | 3,212 | 4,531 | 373,654 |
| | % Share in total | 18.8 | 25.9 | 28.5 | 14.6 | 10.1 | 0.9 | 1.2 | 100 |
| Premises | Number | 1,414 | 5,783 | 2,571 | 11 | 444 | 18 | - | 10,241 |
| | % Share in total | 13.8 | 56.5 | 25.1 | 0.1 | 4.3 | 0.2 | 0.0 | 100 |

**Source** Report from the Commission to the European Parliament and the Council on the 2015-2016 implementation of Regulation (EC) No 561/2006 on the harmonisation of certain social legislation relating to road transport and of Directive 2002/15/EC on the organisation of the working time of persons performing mobile road transport activities

127 Regulation (EC) No 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport and amending Council Regulations (EEC) No 3821/85 and (EC) No 2135/98 and repealing Council Regulation (EEC) No 3820/85.

Coordination between Member States is obligated by Directive 2006/22/EC,[128] which states that Member States have to undertake at least 6 concerted roadside checks a year with at least one other Member State. Austria met this requirement, as in 2015-2016 it performed 6 checks a year with ECR/TIPSOL Member States. The Euro Contrôle Route (ECR) was already discussed in more detail in Section 3.6, as an organisation in which transport inspection services are working together to improve road safety, sustainability, fair competition, and labour conditions in road transport by activities related to compliance with existing regulations. TISPOL is the European Traffic Police Network, in which members[129] work together to help foster safe roads, speeds, vehicles, and road users (TISPOL, 2020). It was recently announced that TISPOL will change its name to ROADPOL, the European Roads Policing Network (Spencer, 2020). The checks carried out by Austria in cooperation with other Member States involve driving time checks, manipulation of recording equipment, technical checks, and securing of loads.

With regard to the inappropriate use of the PD A1, Austria has continuously reported the PD A1 as a problem area, as it can be issued retroactively, and there is a lack of an actual enforceable possibility of challenging the form (Jorens *et al.*, 2019). In addition, a recommendation made by Austria is the obligation to provide detailed information about inter-State facts, including a binding declaration to confirm that the data are accurate and complete.

## 4.2 Belgium

### 4.2.1 Type of transportation

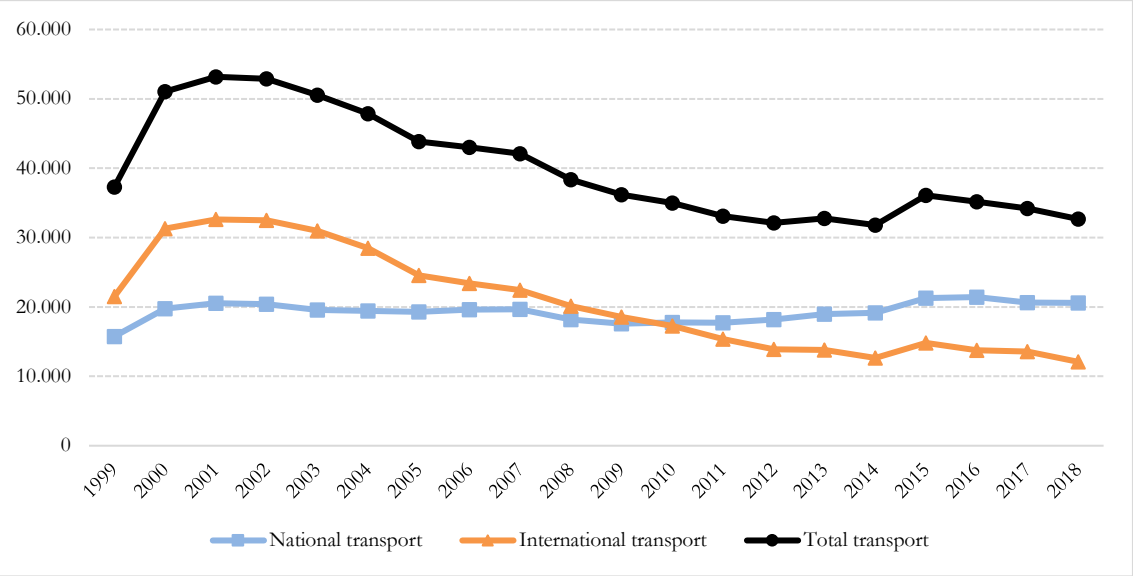
Road transport in Belgium has decreased by over 12% from 1999 to 2018 (Figure 4.7). However, as can be seen, the evolution from 2001 to 2018 is even more impressive (-38.5%), as the total road transport in million tonne-km was on a height in 2001. As is the case in Austria, Belgium knows a certain turning point, namely 2010. That year marks the surpassing of national road transport over international transport. In general, it is also clear that especially the drop in international road transport caused the overall decline in total road transport, as national transport has remained stable over the years with even a slight increase.

Table 4.9 indicates that the share of cross-trade in international road transport has almost halved, whereas the share of cabotage almost doubled from 1999 from 2018. This shows a clear shift in the type of international road transport performed by Belgium.

128 Directive 2006/22/EC of the European Parliament and of the Council of 15 March 2006 on minimum conditions for the implementation of Council Regulations (EEC) No 3820/85 and (EEC) No 3821/85 concerning social legislation relating to road transport activities and repealing Council Directive 88/599/EEC.

129 Its members are Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Poland, Romania, Serbia, Slovenia, Spain, Sweden, Switzerland, Netherlands, Turkey, and United Kingdom (Convention for the constitution of ROADPOL-European Roads Policing Network, 2019).

**Figure 4.7 Annual road freight transport, in million tonne-km, 1999-2018, Belgium**




**Source** Eurostat [road_go_ta_tott]

**Table 4.9 Road freight transport by type of transport, share in total tonne-km, 1999, 2008 and 2018, Belgium, in %**

| | 1999 | 2008 | 2018 |
|---|---|---|---|
| International transport total | 100.0 | 100.0 | 100.0 |
| Goods loaded in reporting country | 46.9 | 48.6 | 51.0 |
| Goods unloaded in reporting country | 33.3 | 32.1 | 32.3 |
| Cross-trade | 15.5 | 11.6 | 8.7 |
| Cabotage | 4.4 | 7.7 | 8.0 |

**Source** Eurostat [road_go_ta_tott]

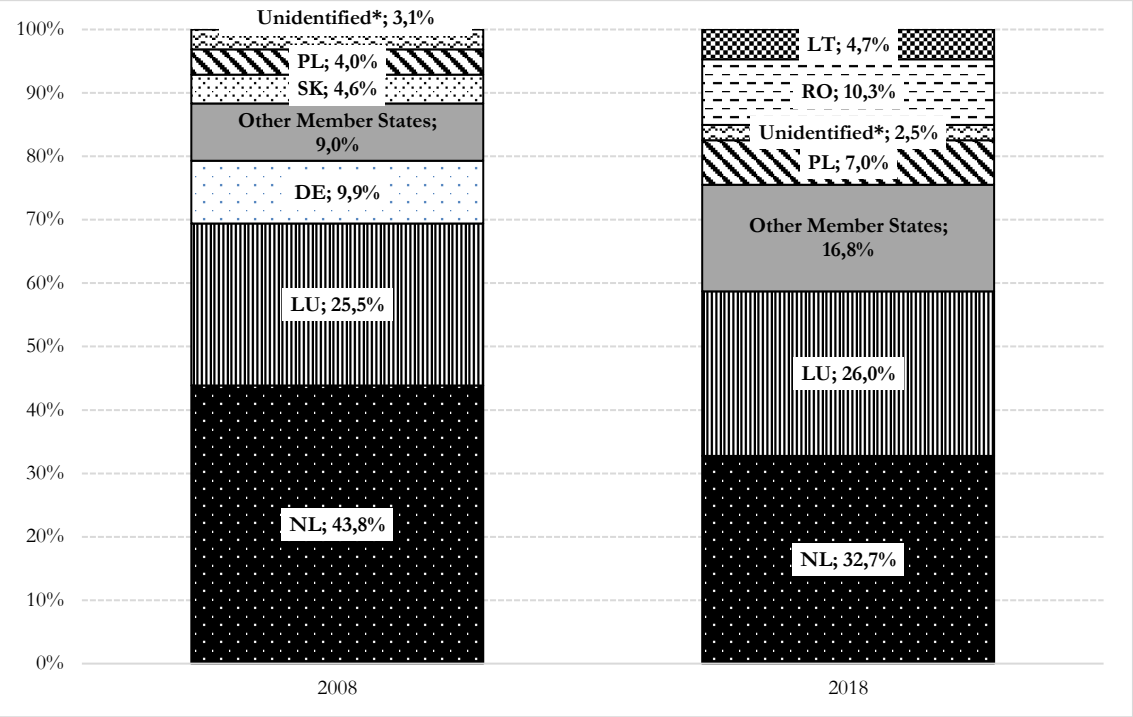
The road cabotage taking place in Belgium has increased from 419,000 thousand tonne-km in 1999 to more than 1,600,000 thousand tonne-km in 2018.[130] The cabotage penetration rate in Belgium is also the highest of the six discussed Member States, amounting to 9.3% in 2018, while it only amounted to 3.8% in 1999.[131] Nevertheless, this means that in 2018, more than 90% of all domestic transport in Belgium is still performed by national hauliers.

An overview of the origin of hauliers performing cabotage in Belgium is provided in Figure 4.8. Both in 2008 and 2018, more than half of all cabotage operations in Belgium are performed by hauliers from the Netherlands (44% in 2008 vs 33% in 2018) and Luxembourg (26% in both 2008 and 2018). This is a result of the agreement between the Benelux countries[132] to fully liberalise cabotage. This means for instance that a Dutch haulier can perform domestic transportation in Belgium without any limits (Rekenhof, 2015). The agreement was reached in 1991 and has been extended ever since (De Wispelaere & Pacolet, 2018a).

Germany still had approximately 9% of the cabotage market in Belgium in 2008 but seems to have disappeared in 2018.[133] In 2018, Romania stands out (10%) as well as Poland (7%) although the latter already had a share of 4% in the Belgian cabotage market in 2008.

130 Eurostat [road_go_ca_c].
131 Eurostat [road_go_ca_c] and [road_go_ta_tott].
132 Belgium, the Netherlands and Luxembourg.
133 Its share amounted to 3.5% in 2018 and is included in the share of 'Other Member States'.

**Figure 4.8 Share in cabotage transport in total tonne-km in Belgium, 2008 and 2018**




* The share of 'unidentified' is included, as the total amount of cabotage reported in [road_go_ca_hac] did not match the amount reported in [road_go_ca_c]. This means that for a certain amount of cabotage, it is not known by which Member States it was performed. For Belgium, this is the case for 3.1% of cabotage in 2008 and 2.5% in 2018. For the share of 'Other Member States', on the other hand, it is known by which Member States the cabotage is performed, but their share is too small to mention individually.

**Source** Eurostat [road_go_ca_hac] and [road_go_ca_c]

### 4.2.2 Profile of companies active in the road transport sector

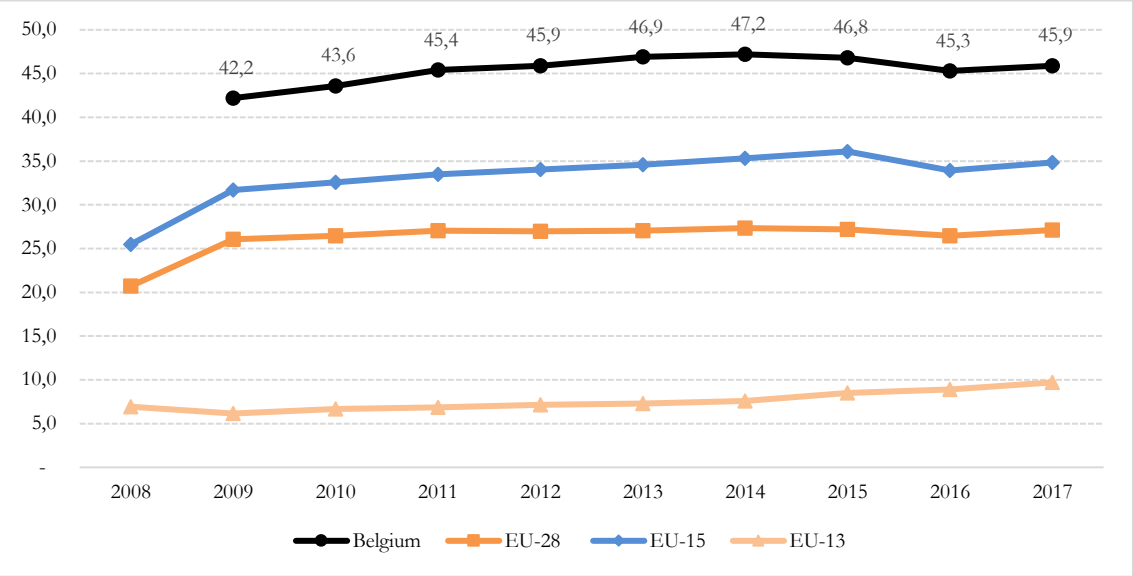
The number of companies in Belgium active in the road transport sector has somewhat decreased from 2008 to 2017, from 7,788 to 7,494.[134] Furthermore, the total turnover in this sector also decreased over time, albeit only slightly, from € 11,938 million in 2008 to € 11,864 million in 2017. However, seeing that the number of companies decreased more sharply (-3.8%) than the total amount of turnover (-0.6%), the average turnover per enterprise still increased (+3.3%) from 2008 to 2017. In 2008, a road freight transport company earned approximately € 1,533,000 turnover, while in 2017 this amounted to € 1,583,000.

As already discussed in Section 3.3 and Figure 3.11, the average personnel cost in Belgium is one of the highest in the EU, after Sweden, the Netherlands, and Denmark. Approximately 33% of personnel costs are social security costs, indicating its importance for the competitiveness of companies. Figure 4.9 shows that the average personnel cost has always been high in Belgium over the period from 2009 to 2017. In general, from 2009 to 2017 the average personnel cost in Belgium has only increased by 8.8%. Nevertheless, the figure makes it clear that it remains far above the EU-28 and EU-15 average.

Although there was a small drop in the average in 2016, as was the case for the EU-28 and EU-15 average, the personnel cost seems to be rising again afterwards. In general, these high personnel costs can lead to difficulties in competing with other Member States and companies moving abroad to establish themselves somewhere cheaper. A study on the competitive position of Belgian companies in inland shipping also showed that especially the employer contributions in Belgium are high (Instituut voor het Transport langs de Binnenwateren [Institute for inland waterway transport], 2015).

134 Eurostat [sbs_na_1a_se_r2].

**Figure 4.9** **Average personnel cost of companies active in NACE 4941 'Freight transport by road', Belgium, EU-28, EU-15, EU-13, 2008-2017, in € 1,000**




**Source** Eurostat [sbs_na_1a_se_r2]

Nonetheless, the average personnel cost of companies active in NACE 4941 is considerably lower than of companies in the total economy (Table 4.10). Furthermore, the average personnel cost in general has grown more than in the transport sector, namely 9.1% versus 5.3% from 2010 to 2017, and it is also growing faster in general (1.3% per year) than in the transport sector (0.7%). The fact that personnel costs and wages in the Belgian transport sector hardly increased over the past 10 years, apart from the correction for inflation, reflects the response from the sector to the increased competition from other Member States. Nevertheless, it might be an option to negotiate a decrease of social security costs as these account for some one third of the personnel costs in the Belgian road freight sector.[135]

**Table 4.10** **Average personnel cost of companies in the total economy and active in NACE 4941 'Freight transport by road', Belgium, 2008-2017, in € 1,000**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Evolution 2010-2017 | Annual growth rate* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total economy | 46.6 | | 48.1 | 48.7 | 50.9 | 51.9 | 52.2 | 52.4 | 52.0 | 52.5 | 9.1% | 1.3% |
| NACE 4941 | | 42.2 | 43.6 | 45.4 | 45.9 | 46.9 | 47.2 | 46.8 | 45.3 | 45.9 | 5.3% | 0.7% |

* The annual growth rate was calculated based on data from 2010 to 2017.

**Source** Eurostat [sbs_na_sca_r2] and Eurostat [sbs_na_1a_se_r2]

The profile of companies active in the road transport sector can also be analysed using the address variable. When multiple companies are located at one address, this could be an indication of a letter-box company, seeing that for companies active in the road transport sector, certain requirements exist with regard to an effective and stable establishment[136] (see Section 3.6.1 for a complete explanation). Table 4.11 shows the top five addresses where a multitude of road transport companies was located. Although the number of transport companies at one address remains limited, namely around 10, (even though this is already a red flag), the total number of companies at one address seems

135 As negotiated some years ago by the Belgium construction sector (in the fight against 'social dumping').
136 Article 3 Regulation (EC) No 1071/2009.

remarkable. At the Rue de Grand-Bigard and the Avenue de la Chasse in Brussels, more than 200 companies each are established. However, this cannot be a surprise, as a look on Google street view reveals a banner in front of the house at Rue de Grand-Bigard 14, stating 'real and virtual offices to let'.[137] It can be concluded that the road transport companies located at these addresses probably have difficulties fulfilling the requirement of an effective and stable establishment. Especially at the address in Diegem, the share of transport companies located there is high, with more than one fifth of the total companies located there.

**Table 4.11 Addresses of companies active under NACE 4941 'Freight transport by road' where multiple companies are located, Belgium**

| Address | Number of companies active under NACE 4941 (A)* | Total number of companies (B)** | % Share in total (A/B) |
|---|---|---|---|
| Rue Theodore Verhaegen 196-202, Bruxelles | 13 | 188 | 6.9 |
| Rue de Grand-Bigard 14, Bruxelles | 12 | 212 | 5.7 |
| Avenue de la Chasse 135, Bruxelles | 10 | 218 | 4.6 |
| Oude Haachtsesteenweg 59, Diegem | 9 | 41 | 22.0 |
| Avenue des Croix de Guerre 94, Bruxelles | 9 | 121 | 7.4 |

* This includes active companies active under NACE 4941 'Freight transport by road' with the standard legal form of private limited company or public limited company.

** This includes active companies with all standard legal forms. Therefore, it is possible that a company active under NACE 4941 with a standard legal form other than private/public limited company is included in this number.

**Source** Orbis database [Data extracted 15 May 2020]

### 4.2.3 Employment in the road transport sector

In Belgium, around 57,900 persons were employed in the road transport sector (Table 4.12). The number of persons employed in this sector was at its highest in 2011 with more than 60,900 persons, and at its lowest in 2015 with 55,100 persons. However, in the period from 2009 to 2017, the number remained rather stable, and even decreased by 1.4% from 58,700 to 57,900.

In relation to the total employment, this drop is also visible, as the share in total employment went from 1.3% in 2009 to 1.2% in 2015. Furthermore, this share lies below the EU-28 average of 1.5% in 2017, indicating that the road transport sector is of less importance in Belgium than in other EU Member States, at least in terms of employment. Additionally, this could be an indication of the shortage of workers, which according to Vitols and Voss (2019) is a growing challenge in the Belgian transport sector.

**Table 4.12 Employment in NACE 4941 'Freight transport by road', Belgium, 2009-2017**

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|
| **Persons employed** | **58,769** | **59,183** | **60,985** | **59,976** | **59,207** | **56,857** | **55,141** | **57,498** | **57,972** |
| Unpaid persons employed | 6,561 | 7,500 | 7,638 | 7,381 | 8,069 | 6,838 | 6,807 | 7,135 | 7,161 |
| Employees | 52,208 | 51,683 | 53,347 | 52,595 | 51,138 | 50,019 | 48,334 | 50,363 | 50,811 |
| **% Share in total employment** | **1.3** | **1.3** | **1.4** | **1.3** | **1.3** | **1.3** | **1.2** | **1.3** | **1.3** |

**Source** Eurostat [sbs_na_1a_se_r2] and [lfsi_emp_a]

137 With a reference to https://ohof.be/

The average number of persons employed per company has remained stable over the years. In 2009, approximately 7.6 persons were employed per company, and in 2017, this average amounted to 7.7.[138] However, an element that did change is the average age of the persons employed. In Belgium, the share of workers older than 50 years old has grown, both in general and in the transport sector. From 2008 to 2019, it increased from 22.9% to 30.8% in general,[139] and from 30.6% to 36.4% in NACE H49 'Land transport and transport via pipelines'.[140] This shows that although the growth in general was larger (+7.9 percentage points versus +5.9 percentage points), it is clear that the share of older persons employed in the transport sector is more substantial than in the whole economy, again demonstrating the ageing workforce in Belgian transport.

The number of driver attestations issued by Belgium is shown in Table 4.13. This indicates the number of truck drivers who are third country nationals. The number has always been on the low side, and although it grew over the years, from 72 in 2012 to 128 in 2018, it still only accounts for less than 0.5% of all driver attestations issued by EU-28 Member States.

Furthermore, the number of driver attestations in circulation in relation to the total number of persons employed in the road transport sector shows that only a limited number of the workforce consists of third country nationals, namely around 0.2%.

**Table 4.13 Driver attestations issued and in circulation, Belgium, 2012-2018**

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| Number of driver attestations issued | 72 | 100 | 120 | 125 | 125 | 103 | 128 |
| % Share in total driver attestations issued by EU-28 | 0.3 | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 | 0.1 |
| Number of driver attestations in circulation | 208 | 141 | 114 | 99 | 72 | 94 | 83 |
| % Share in total number of persons employed in NACE 4941 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | n.a. |

**Source** Own elaborations based on European Commission (n.d.-h) and Eurostat [sbs_na_1a_se_r2]

### 4.2.4 Cross-border elements

#### 4.2.4.1 Companies with a foreign majority shareholder

In Belgium, 6.0% of all road freight transport companies have a foreign majority shareholder.[141] However, these companies account for 15.2% of all turnover and 18.9% of all employees, therefore indicating that especially the larger companies have a foreign majority shareholder.

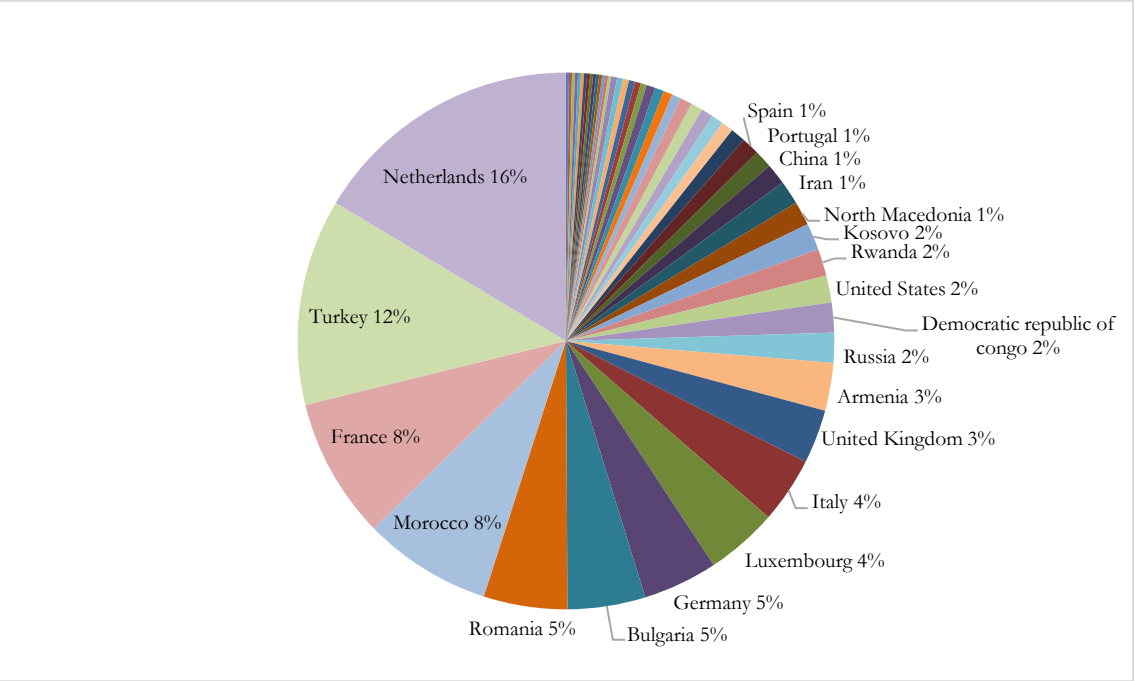
Many of the companies with a foreign majority shareholder are located in large cities such as Brussels (111 companies or 27.5% of all companies with a foreign majority shareholder), Antwerp (33 companies or 8.2%), and Ghent (12 companies or 3.0%).

The location of the foreign majority shareholder is rather equal between EU and outside the EU. Around 55.5% of all shareholders are located in the EU, with 45.0% in the EU-15 and 10.5% in the EU-13. The remaining 44.5% are located outside the EU. A detailed analysis of the location of foreign majority shareholder is provided in Figure 4.10. It is clear that the foreign majority shareholders come from a large variety of countries, as the pie chart is divided in many parts. The majority of shareholders is still located in the Netherlands (16%), a neighbouring country of Belgium. Furthermore,

138 Eurostat [sbs_na_1a_se_r2].
139 Eurostat [lfsq_egdn2].
140 Eurostat [lfsq_egan22d].
141 Orbis database [Data extracted 15 May 2020].

8% is located in France, 5% in Germany, and 4% in Luxembourg. However, 12% is also located in Turkey and a further 8% in Morocco.

**Figure 4.10 Location of foreign majority shareholder of Belgian companies active under NACE 4941 'Freight transport by road'**




* The labels of countries where less than 1% of shareholders is located were removed for clarity. Together they account for 12% of all foreign majority shareholders. The countries consist of Ireland, New Zealand, Congo, Burundi, Bosnia and Herzegovina, Austria, Lebanon, Japan, Hong Kong, Switzerland, Poland, Pakistan, Kazakhstan, Algeria, Cameroon, Albania, Virgin Islands, Uganda, Ukraine, Slovakia, Mali, Moldova, Greece, Guinea, Georgia, Denmark, Czech Republic, Curacao, Central African Republic, Bermuda, and Afghanistan.

**Source** Orbis database [Data extracted 12 May 2020]

#### 4.2.4.2 Companies with a foreign subsidiary

Only 0.9% of the Belgian transport companies have a foreign subsidiary, which equals 61 companies out of 6,747.[142] These companies represent 5.2% of turnover created by road freight transport companies and 6.9% of its employees, which proves that especially larger companies flag out.

In total, these 61 companies have a remarkable 317 subsidiaries. On average, a Belgian road transport company with a subsidiary has 5.6 subsidiaries, which is very high. Nevertheless, the median number of subsidiaries only amounts to 2. This indicates that there are a few companies with a high number of foreign subsidiaries. Indeed, around 79% of the companies had three or less subsidiaries. However, the remaining 21%, or 13 companies, had four subsidiaries or more. Four companies even had more than 20 different subsidiaries.[143] In conclusion, out of the 317 subsidiaries, the location of 220 was available. Out of these 220 subsidiaries, 170 were located abroad.

The majority of subsidiaries is located in the EU (78.8%), more specifically the EU-15 (52.4%). Furthermore, 26.5% are located in the EU-13, and 21.2% outside of the EU.

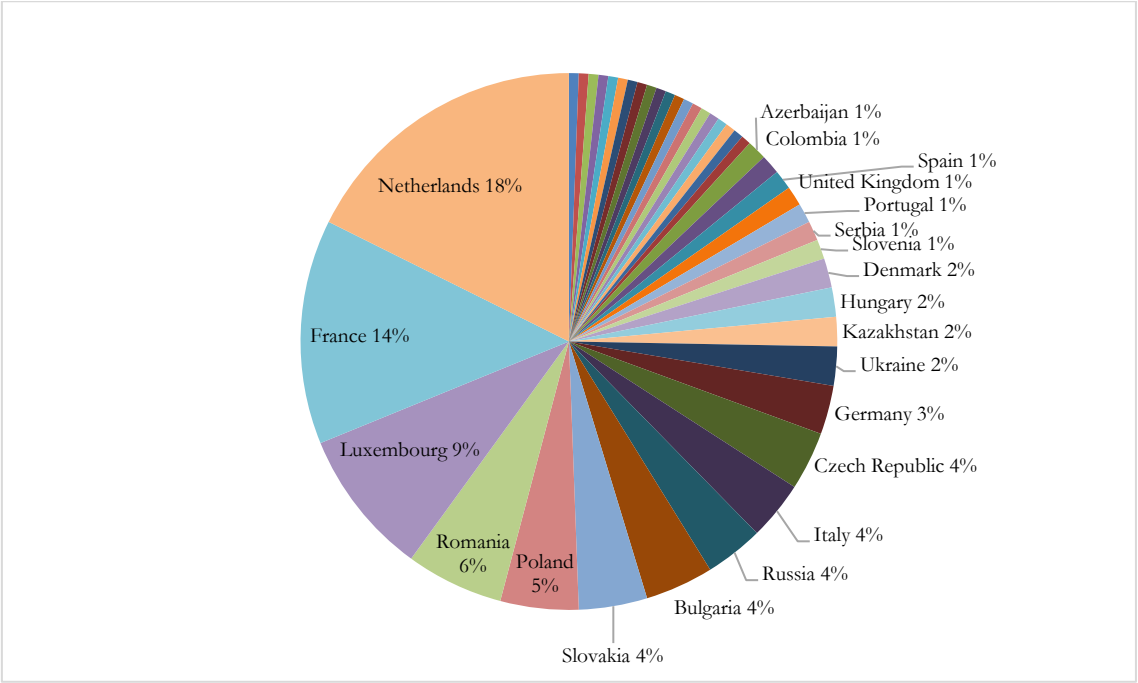
The most important locations for the foreign subsidiaries are Belgium's neighbouring countries the Netherlands (18%), France (14%), and Luxembourg (9%) (Figure 4.11). However, the fourth neighbouring country, Germany, only comes in eleventh place, with 3% of foreign subsidiaries located in

142 Orbis database [Data extracted 15 May 2020].

143 Unfortunately, when a company has more than 20 subsidiaries, only the first 20 subsidiaries are pictured in the Orbis database. Although it is in theory possible to download information on the remaining subsidiaries, the researchers were unable to do this, as their account did not allow this.

this Member State. A large share of foreign subsidiaries is also located in countries further away like Romania (6%), Poland (5%), Slovakia (4%), or Bulgaria (4%). Nonetheless, as stated above, more than half of foreign subsidiaries are still located in EU-15 Member States.

**Figure 4.11 Location of foreign subsidiaries of Belgian companies active under NACE 4941 'Freight transport by road'**




* The labels of countries where less than 1% of subsidiaries is located were removed for clarity. Together they account for 12% of all foreign subsidiaries. The countries consist of Uruguay, Peru, Norway, Mozambique, Malaysia, Mauritius, Moldova, Latvia, South Korea, Iraq, Croatia, Greece, Georgia, Egypt, Algeria, Chile, Belarus, Brazil, South Africa, and Morocco.

**Source** Orbis database [Data extracted 13 May 2020]

To illustrate the complexity of the networks involved in transport companies, one company was picked out to analyse further. This company is called Continental Cargo Carriers and it has two subsidiaries, one in the United Kingdom and one in the Czech Republic. However, when analysing this company in the Orbis database, it was found that this company itself is already on the fifth level in a corporate group. Table 4.14 shows the corporate group consists of 21 companies in 5 countries (GB, HK, BG, BE, and CZ). Therefore, although this analysed Belgian company is not the one with most subsidiaries, it shows how 'deep' certain networks can go.

**Table 4.14 Corporate group of Continental Cargo Carriers, Belgium**

| Level | Name | Country | Number of employees | Turnover (in million €) | NACE-code** |
|---|---|---|---|---|---|
| GUO* | Mr. Andrew Neville Baxter | GB | | | |
| 1 | Symmetry Logistics Holdings Limited | GB | 679 | 195 | 7010 |
| 2 | ↳Symmetry Logistics Limited | GB | 4 | 1 | 7010 |
| 3 | ↳Europa Worldwide Group Limited | GB | 675 | 195 | 4941 |
| 4 | ↳Europa Air & Sea (Asia) Limited | HK | n.a. | n.a. | n.a. |
| 4 | ↳Europa Air & Sea Limitted | BG | 40 | 20 | 5020 |
| 4 | ↳Europa European Express Limited | GB | n.a. | n.a. | 4941 |
| 4 | ↳Europa Freight corporation Limited | GB | 2 | n.a. | 7010 |
| 5 | ↳Europa Road Limited | GB | 401 | 120 | 4941 |
| 4 | ↳Europa Freight Group Limited | GB | n.a. | n.a. | 4941 |
| 4 | ↳Europa Freight Holdings Limited | GB | n.a. | n.a. | 5229 |
| 4 | ↳Europa Showfreight Limited | GB | 3 | 0 | 5229 |
| 4 | ↳Europa Warehouse Limited | GB | 146 | 17 | 5210 |
| 4 | ↳Europa Air & Sea (Hong Kong) Limited | HK | n.a. | n.a. | n.a. |
| 4 | ↳Europa Symmetry Limited | GB | n.a. | n.a. | 5210 |
| **5** | **↳Continental Cargo Carriers** | **BE** | **22** | **23** | **4941** |
| 6 | ↳ Continental Cargo Carriers LTD | GB | 4 | 1 | 4941 |
| 6 | ↳ Petratrans S.R.O. | CZ | n.a. | 5 | 4941 |
| 7 | ↳ Petratrans Invest S.R.O. | CZ | n.a. | 0 | 6820 |
| 3 | ↳Europa Air & Sea (Asia) Limited | HK | n.a. | n.a. | n.a. |
| 2 | ↳Europa Air & Sea (Asia) Limited | HK | n.a. | n.a. | n.a. |
| 2 | ↳Europa Air & Sea (Hong Kong) Limited | HK | n.a. | n.a. | n.a. |

* GUO stands for Global Ultimate Owner.
** The descriptions of the NACE-codes are: **4941** Freight transport by road, **5020** Sea and coastal freight water transport, **5210** Warehousing and storage, **5229** Other transportation support activities, **6820** Renting and operating of own or leased real estate, **7010** Activities of head offices.
**Source** Orbis database [Data extracted 17 June 2020]

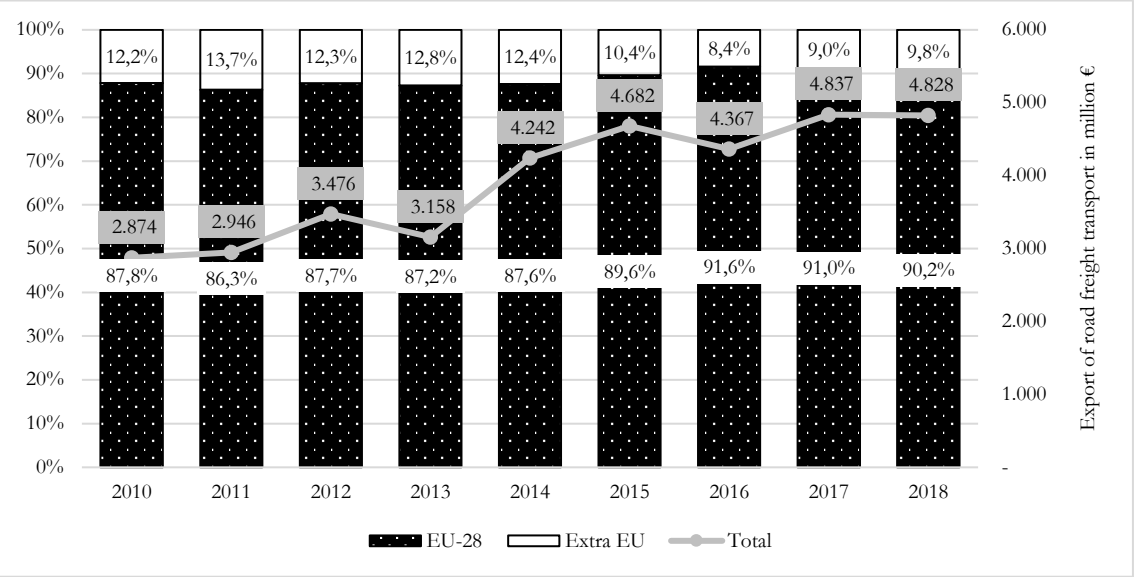
#### 4.2.4.3 Export of services

The evolution of the export of road freight transport services by Belgium shows an eventful road. Figure 4.12 indicates that there is an overall increase from 2010 to 2018, but there were also two dips in 2013 and 2016, and the absolute amount of services seems to be stable from 2017 to 2018. In 2018, Belgium exported € 4,828 million road transport services to the rest of the world.

The distribution between intra- and extra-EU shows that providing services outside of the EU-28 has lost some importance. In 2010, 12.2% of services were provided outside the EU, whereas in 2018, this share only amounted to 9.8%.

appendix 5 gives a detailed overview of the Member States to where the services are provided. From 2010 to 2018, around 45% of all services provided by Belgium went to France and the Netherlands, as they rotate on the first and second place of leading country of destination. In 2018, 26% of services were provided to the Netherlands, and 20% to France. Furthermore, 16% went to Germany, another neighbouring country of Belgium, and 7.7% to the United Kingdom.

**Figure 4.12 Export of services of road freight transport, breakdown by location where services are provided, in million €, 2010-2018, Belgium**




**Source** Eurostat [bop_its6_det]

In addition to analysing the share of international transport based on the export of services in total turnover, this can be done based on the share of international transport in tonne-km in total transport performed in tonne-km. Both methods are compared in Table 4.15. It can be seen that both shares are rather moving towards each other. In 2010, almost 50% of transport performed in tonne-km was international transport, while the export of services made up 28% of total turnover in the sector. However, in 2017, the share of international transport in tonne-km in total transport performed in total tonne-km has dropped to 40%, while the export of services accounts for 41% of total turnover. Thus, although they perform less international transport based on tonne-km, both in absolute and relative terms, the turnover it creates has increased.

**Table 4.15 Comparison share international road freight transport in total road freight transport based on total turnover created and total tonne-km performed, 2010-2018, Belgium**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|
| **Based on turnover (in million €)** | | | | | | | | | |
| Export of services | 2,874 | 2,946 | 3,476 | 3,158 | 4,242 | 4,682 | 4,367 | 4,837 | 4,828 |
| Total turnover | 10,367 | 11,352 | 11,275 | 11,244 | 10,997 | 11,055 | 11,545 | 11,864 | |
| % Share export of services | 27.7 | 26.0 | 30.8 | 28.1 | 38.6 | 42.4 | 37.8 | 40.8 | |
| **Based on tonne-km (in million tonne-km)** | | | | | | | | | |
| International transport | 17,246 | 15,358 | 13,919 | 13,816 | 12,641 | 14,800 | 13,764 | 13,588 | 12,092 |
| Total transport | 35,002 | 33,107 | 32,105 | 32,796 | 31,808 | 36,078 | 35,192 | 34,220 | 32,685 |
| % Share international transport | 49.3 | 46.4 | 43.4 | 42.1 | 39.7 | 41.0 | 39.1 | 39.7 | 37.0 |

**Source** Eurostat [bop_its6_det], [sbs_na_1a_se_r2], and [road_go_ta_tott]

### 4.2.5 Infringements/fraud and error

Regarding the enforcement of social rules in road transport set out in EU regulations discussed in Section 3.6, Belgium had to check at least 1,620,095 working days in 2015-2016 in order to reach the

goal of 3%. They achieved this goal, as they checked 1,626,823 working days, of which 69% at the roadside and the remaining 31% at premises.[144]

Of all the vehicles checked on the roadside, 34% were Belgian, 62% were registered in another EU Member State, and 3% were third nationals. Furthermore, 92% of the controls carried out at the roadside involved vehicles transporting goods.

The type of infringements found can be seen in Table 4.16. While a majority of working days were checked at the roadside (69%), more offences were found at premises than at the roadside (21,277 versus 15,505 respectively). The most common offence found at roadside checks involves not respecting rest periods. For offences found at premises, it concerns breaks.

**Table 4.16 Type of offences found at roadside and premises, Belgium, 2015-2016**

| | | Driving time | Breaks | Rest periods | 28 days record sheet | Lack/ availa-bility of records | Incorrect func-tioning | Misuse and mani-pulation | Total offences |
|---|---|---|---|---|---|---|---|---|---|
| Roadside | Number | 3,612 | 2,101 | 5,634 | 696 | 239 | 540 | 2,683 | 15,505 |
| | % Share in total | 23.3 | 13.6 | 36.3 | 4.5 | 1.5 | 3.5 | 17.3 | 100 |
| Premises | Number | 4,189 | 8,802 | 7,231 | 745 | 90 | 220 | - | 21,277 |
| | % Share in total | 19.7 | 41.4 | 34.0 | 3.5 | 0.4 | 1.0 | 0.0 | 100 |

**Source** Report from the Commission to the European Parliament and the Council on the 2015-2016 implementation of Regulation (EC) No 561/2006 on the harmonisation of certain social legislation relating to road transport and of Directive 2002/15/EC on the organisation of the working time of persons performing mobile road transport activities

In Belgium, so-called 'arrondissementscellen' (district cells) were established as a part of the Social Intelligence and Investigation Service (SIOD - Sociale Inlichtingen- en Opsporingsdienst) (SIOD, 2017). Their core task is to organise and coordinate inspections on the compliance with various social laws related to illegal work and social fraud. An annual goal set by these cells for the transport sector specifically is to perform at least 700 checks.[145] This goal was more than achieved, as in 2019, they performed 906 controls in the freight transport sector.

These 906 controls constitute 6.2% of all controls performed in 2019 by these district cells.[146] The controls in the freight transport sector included 1,417 persons in total, of which 1,108 employees and 309 self-employed persons. Furthermore, out of the 906 controls, 219 were 'positive', meaning that infringements were found. Although the share of positive controls might seem high, namely 24%, the average share over all sectors amounts to 39%, being especially high in the catering (51%), cleaning (45%), and meat industry (51%). On average, 0.31 infringements were found per control in the freight transport industry. These infringements include violations against part-time work, social security, unemployment, foreign employees without the proper documents, etc.

A prominent problem for the Belgian road transport sector is the existence of letterbox companies (Vitols, & Voss, 2019). Belgian companies set up letterbox companies in low-wage Eastern European Member States from where they will post workers (Willemen *et al.*, 2019). The Belgian transport trade union BTB even made a 'black book' regarding social dumping practices and letterbox companies in Slovakia specifically, as it was found that this Member State is often used for this kind of practices (BTB, 2017). Once these practices became apparent and were condemned, more complex corporate structures were set up to better 'hide' letterbox companies (Willemen *et al.*, 2019). This was also found

144 Retrieved from https://op.europa.eu/en/publication-detail/-/publication/3f2a8a07-d2eb-11e8-9424-01aa75ed71a1

145 Retrieved from https://www.sirs.belgique.be/nl/publicaties

146 Retrieved from https://www.sirs.belgique.be/nl/publicaties

in the new version of the black book published by BTB in 2019 (BTB, 2019). Several companies that were scrutinised in their previous black book appeared to now have relocated. This seems to be a general trend, as often changing the address could be a way to evade inspections. One company even had five different addresses in the time span of just over 10 years. Consequently, it also happens that companies are not only well hidden, but are even non-existent, causing the term 'phantom company' to come up.

Of course, one should question why this problem is so prominent or at least investigated intensely for Belgian transport companies specifically. One of the main drivers are the high wages and labour standards set in Belgium in a mobile and price-competitive industry (Willemen *et al.*, 2019). As discussed in Section 3.3 and 4.2.2, Belgium has one of the highest labour costs in the EU. The plan for fair competition in the transport sector (2016)[147] also indicates that the labour costs in Belgium are high, as in Eastern Member States, the same services can be offered at way lower prices. For instance, it is found that Romanian drivers cost about € 8,000 annually, while in the Belgian transport sector the gross annual salary amounts to € 45,000, or more than five-fold (De Neubourg, 2020). This is also a way of identifying possible fraudulent practices. For instance, De Wispelaere and Pacolet (2018a) looked at the annual labour cost per employee employed in a foreign road transport company with a Belgian majority shareholder in 2016. It was found that 64% of the Romanian transport companies with a Belgian shareholder paid a labour cost of less than € 5,000. However, in order to truly know whether wages were not respected by these companies, it should be found out whether transport activities were mainly carried out in Belgium, which was not yet the case.

We need to make a distinction between the reasons why Belgian companies flag out, for which the high labour cost in Belgium is certainly a reason, and the reasons why they set up a letterbox company. For the latter, we mainly look at the policy in the country of establishment itself, and in particular the lack of inspections. For instance, the principle of sincere cooperation obliges the competent institutions of all Member States to carry out a proper assessment of the facts relevant to the application of the rules for determining the applicable social security legislation and, consequently, to guarantee the correctness of the information contained in the PD A1. Despite the importance of the internal assessment procedure, Jorens and De Wispelaere (2019) observed that several Member States solely rely on the answer to the questions included in the application forms. Moreover, several Member States do not or cannot verify the conditions formulated in the Coordination Regulations (i.e. Regulations 883/2004 and 987/209) and the Enforcement Directive (i.e. Directive 2014/67).

It is clear that cooperation between different Member States is essential in the fight against transnational social fraud in the road transport sector (Willemen *et al.*, 2019). Additionally, not only cooperation between Member States is essential, but also between public authorities, for instance, for Belgium, between the Federal Public Service Mobility (FOD Mobiliteit), labour inspectorates (including these responsible for OSH) and customs (see plan for fair competition in the transport sector, 2016). An example of effective cooperation between Member States can be found in the Benelux[148] countries. Jorens *et al.* (2019) highlight the Treaty of Liège, which was concluded on 3 October 2014, consisting of cooperation in the field of road transport inspections. A first common inspection by Belgian and Dutch inspectorates took place in 2017 and was highly successful.

147 This is a partnership agreement between many different institutions (including Federal Public Service of Employment, Labor and Social Dialogue, Federal Public Service of Social Security, Federal Public Service of Mobility and Transport, the Social Intelligence and Investigation Service, National Social Security Office, and several transport unions). See for the report (in Dutch): https://www.tommelein.com/wp-content/uploads/bsk-pdf-manager/Plan_voor_eerlijke_concurrentie_in_de_transportsector_+_protocol__03_02_2016_NL_167.pdf

148 Belgium, the Netherlands, and Luxembourg.

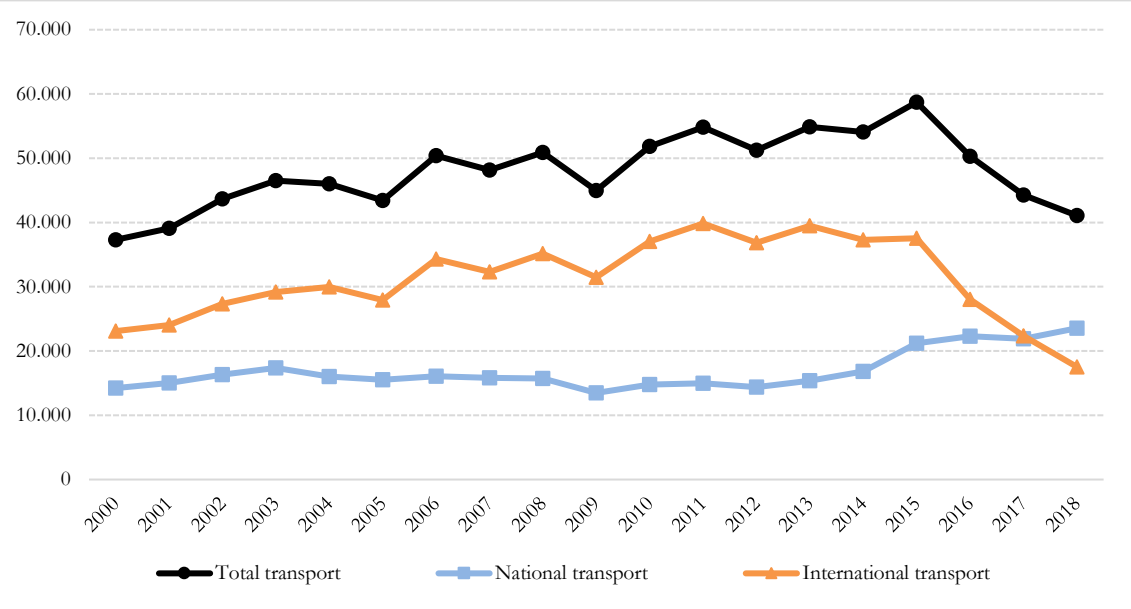
## 4.3 Czech Republic

### 4.3.1 Type of transportation

In the Czech Republic, the amount of annual road freight transport has known some fluctuations over the years (Figure 4.13). In 2015, total road freight transport peaked at 58,700 million tonne-km, whereas in 2018 it dropped to 41,000 million tonne-km. Although both international and national road transport were on the rise from 2000 to 2015, the international road transport knew a serious drop from 2015 onwards, even going below the national road transport in 2018. The reason for this drop is unclear.

Table 4.17 shows that the types of international road transport have remained relatively constant from 2004 to 2018, with the exception of cross-trade, which knew a small decrease, and cabotage which increased by 2.6 percentage points.

**Figure 4.13 Annual road freight transport, in million tonne-km, 2000-2018, Czech Republic**




**Source** Eurostat [road_go_ta_tott]

**Table 4.17 Road freight transport by type of transport, share in total tonne-km, 2004, 2008 and 2018, Czech Republic, in %**

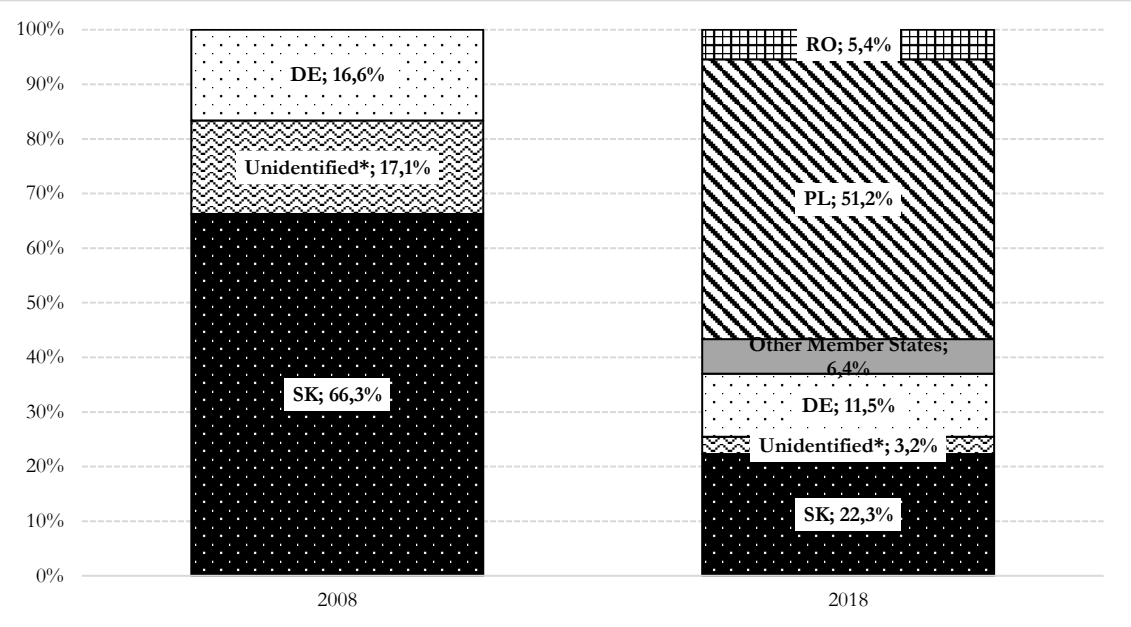
| | 2004 | 2008 | 2018 |
|---|---|---|---|
| International transport total | 100.0 | 100.0 | 100.0 |
| Goods loaded in reporting country | 46.2 | 36.9 | 45.7 |
| Goods unloaded in reporting country | 39.3 | 34.6 | 39.7 |
| Cross-trade | 14.5 | 27.6 | 11.9 |
| Cabotage | 0.0 | 0.8 | 2.6 |

**Source** Eurostat [road_go_ta_tott]

Cabotage in the Czech Republic has increased tremendously, from 18,000 thousand tonne-km in 1999 to almost 200,000 tonne-km in 2018, a growth of over 1,000%.[149] However, the cabotage penetration rate, indicating the market share of foreign hauliers in total national transport activities, is still low at 1.1% in 2018.[150]

An interesting variable to look at concerning cabotage is which Member States perform cabotage in the Czech Republic. This breakdown is provided for 2008 and 2018 in Figure 4.14. In 2008, Slovakian hauliers carried out two thirds of cabotage in the Czech Republic. In 2018, on the other hand, the share of Slovakia has diminished to 22%. German hauliers are still important for Czech cabotage in 2018 (17% in 2008 vs 12% in 2018), but the main provider of cabotage in the Czech Republic is certainly Poland, with 51%. In 2008, no data for Poland were reported. However, the share of unidentified is only 17% in 2008, so even when this solely encompasses cabotage from Polish hauliers, it is still a remarkably growth to arrive at 51% of all cabotage performed in the Czech Republic in 2018.

**Figure 4.14 Share in cabotage transport in total tonne-km in the Czech Republic, 2008 and 2018**




* The share of 'unidentified' is included, as the total amount of cabotage reported in [road_go_ca_hac] did not match the amount reported in [road_go_ca_c]. This means that for a certain amount of cabotage, it is not known by which Member States it was performed. For the Czech Republic, this is the case for 17.1% of cabotage in 2008 and 3.2% in 2018. For the share of 'Other Member States', on the other hand, it is known by which Member States the cabotage is performed, but their share is too small to mention individually.

**Source** Eurostat [road_go_ca_hac] and [road_go_ca_c]

### 4.3.2 Profile of companies active in the road transport sector

In the Czech Republic, the number of companies active in the road transport sector increased from 30,085 companies in 2015 to 30,979 in 2017.[151] Furthermore, the total turnover also increased, even more strongly, by around 12%. Consequently, the average turnover per enterprise increased from € 265,000 in 2015 to € 289,000 in 2017. Although this could indicate that the road transport sector in the Czech Republic is growing, the overview of the total transport carried out (see Section 4.3.1 and Figure 4.13), shows that the amount of transport carried out is not growing at all. Only national

149 Eurostat [road_go_ca_c].

150 Eurostat [road_go_ca_c] and [road_go_ta_tott].

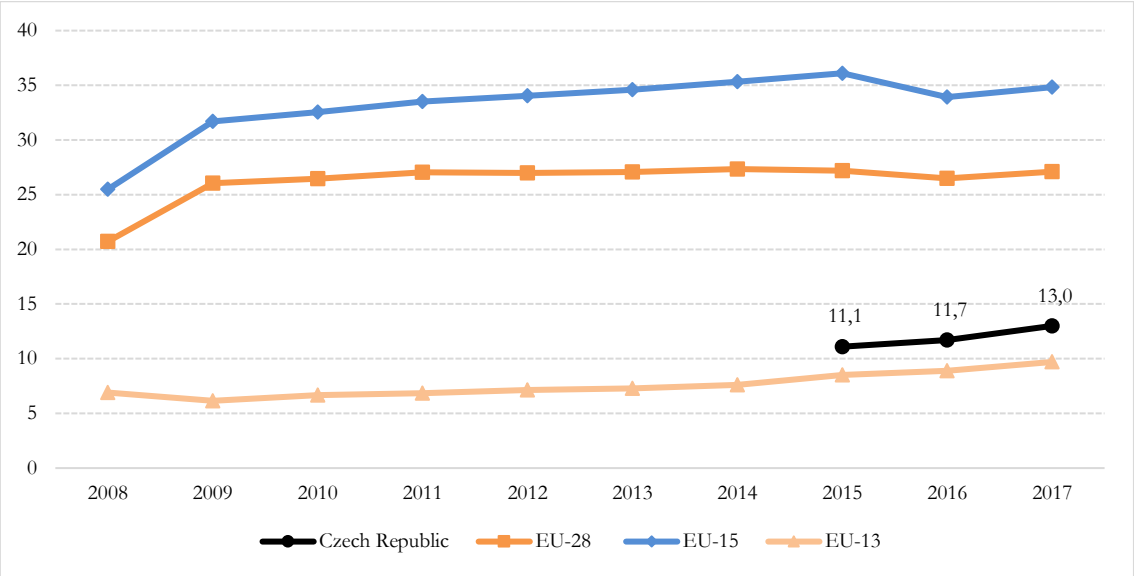
151 Eurostat [sbs_na_1a_se_r2].

transport has grown in recent years. Although it might sound contradictory that the total transport carried out decreased, whereas the number of companies and total turnover increased, it could indicate that companies are becoming more profitable, not by carrying out more transport, but by other means such as for instance working more efficiently.

Unfortunately, data on the average personnel cost in the Czech Republic in this sector are only available from 2015 onwards. Nevertheless, Figure 4.15 shows that this average lies above the EU-13 average, but still far below the EU-28 average. This low personnel cost seems to confirm the claim made by Vitols and Voss (2019) who state that the main problem in the Czech road transport sector are the low wages, causing professional drivers to be in the lower segment of income groups.

From 2015 to 2017, the average personnel cost increased by 17%, from € 11,100 to € 13,000. This indicator for the Czech Republic also followed the trend of the EU-13 average. Although a slight decrease is visible for the EU-28 and EU-15 average from 2015 to 2016, this is not the case for the EU-13 average. The average personnel cost in the EU-13 increased by 4.6% in this period. For the Czech Republic, the average even increased by 5.4% in that same period.

**Figure 4.15 Average personnel cost of companies active in NACE 4941 'Freight transport by road', Czech Republic, EU-28, EU-15, EU-13, 2008-2017, in € 1,000**




**Source** Eurostat [sbs_na_1a_se_r2]

In the Czech Republic, the average personnel cost in the total economy is higher than in the transport sector (€ 18,300 in general versus € 13,000 in NACE 4941 in 2017) (Table 4.18). However, it can be seen that the personnel cost in the transport sector is growing more steeply and quickly. This indicates that the wages in the transport sector are growing more rapidly than on average. Nevertheless, the claim by Vitols and Voss (2019) about the low wages in the transport sector is certainly correct.

**Table 4.18 Average personnel cost of companies in the total economy and active in NACE 4941 'Freight transport by road', Czech Republic, 2008-2017, in € 1,000**

| | 2008 | 2009 | 201 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Evolution 2015-2017 | Annual growth rate* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total economy | 14.9 | 14.4 | 15.4 | 16.2 | 16.1 | 15.7 | 15.2 | 15.9 | 16.7 | 18.3 | 15.1% | 7.3% |
| NACE 4941 | | | | | | | | 11.1 | 11.7 | 13.0 | 17.1% | 8.2% |

* The annual growth rate was calculated based on data from 2015 to 2017.
**Source** Eurostat [sbs_na_sca_r2] and Eurostat [sbs_na_1a_se_r2]

A possible indicator to detect letterbox companies is looking at the address variable. When multiple road transport companies are located at one address, it is unlikely they fulfil the requirement of an effective and stable establishment, as set out by Regulation No 1071/2009 (see Section 3.6.1). Table 4.19 shows the five most common addresses when analysing road transport companies in the Czech Republic. It is already remarkable that each address houses 30 road transport companies or more. However, the total number of companies is even more impressive, with over 1,000 companies at each address. A search on the internet shows that the first address, at 'Rybna 716/24', is managed by Simply Office, a company that 'specialise[s] in the sale of ready-made companies, virtual office services and the establishment of companies (sro) on a turnkey basis.'[152] Consequently, it cannot be a surprise that many companies are located at this address. Even though it is not necessarily the case that all companies located at these addresses are letterbox companies, concerning the transport companies it is certainly a 'red flag', as the requirement of a stable establishment can hardly be fulfilled.

**Table 4.19 Addresses of companies active under NACE 4941 'Freight transport by road' where multiple companies are located, Czech Republic**

| Address | Number of companies active under NACE 4941 (A)* | Total number of companies (B)** | % Share in total (A/B) |
|---|---|---|---|
| Rybna 716/24, Praha Stare Mesto | 73 | 6,608 | 1.1 |
| Jaurisova 515/4, Praha Michle (Praha 4) | 56 | 3,033 | 1.8 |
| Kaprova 42/14, Praha Stare Mesto | 39 | 3,940 | 1.0 |
| Belehradska 858/23, Praha Vinohrady (Praha 2) | 35 | 1,046 | 3.3 |
| Lidicka 700/19, Brno | 30 | 2,190 | 1.4 |

* This includes active companies active under NACE 4941 'Freight transport by road' with the standard legal form of private limited company or public limited company.
** This includes active companies with all standard legal forms. Therefore, it is possible that a company active under NACE 4941 with a standard legal form other than private/public limited company is included in this number.
**Source** Orbis database [Data extracted 15 May 2020]

### 4.3.3 Employment in the road transport sector

Unfortunately, data concerning the Czech Republic in the Eurostat dataset [sbs_na_1a_se_r2] are only available from 2015 onwards. Nevertheless, it is worth looking at the employment in the sector, as shown in Table 4.20. The total number of persons employed has grown from around 120,600 in 2015 to 128,900 in 2017, a growth of 6.9%. This is mainly the result of the growth of the number of employees from 91,200 to 98,600 (+8.1%), not as much from the number of unpaid persons employed going from 29,300 to 30,300 (+3.3%).

152 See https://www.firmy.cz/detail/12732565-simply-office-praha-stare-mesto.html and https://www.simplyoffice.cz/en/

The road transport sector is an important sector in the Czech Republic in terms of employment, as the share in total employment amounts to 2.5%. Furthermore, it increased from 2.4% in 2015, to 2.5% in 2017. Seeing that the EU-28 average share of this sector in total employment equalled 1.5% in 2017, it is clear that a large share of Czech employment takes place in the sector.

**Table 4.20 Employment in NACE 4941 'Freight transport by road', Czech Republic, 2015-2017**

| | 2015 | 2016 | 2017 |
|---|---|---|---|
| **Persons employed** | **120,612** | **124,890** | **128,964** |
| Unpaid persons employed | 29,353 | 29,925 | 30,331 |
| Employees | 91,259 | 94,965 | 98,633 |
| **% Share in total employment** | **2.4** | **2.5** | **2.5** |

**Source** Eurostat [sbs_na_1a_se_r2] and [lfsi_emp_a]

In the Czech Republic, the average number of persons employed in a road freight transport company equalled 4.2 in 2017, only a small increase compared to 2015, when the average was 4.0.[153] Seeing that the EU-28 average in 2017 was 5.7, it seems that the companies in the Czech Republic are smaller, in terms of persons employed.

In 2008, the share of persons employed over 50 years was almost equal in the economy as a whole (28.5%)[154] and in NACE H49 'Land transport and transport via pipelines' (28.7%).[155] However, over the years, the share of older persons employed in the transport sector has been growing more sharply than in general. In 2019, the share of persons employed over 50 amounted to 32.3% in general (+3.8 percentage points), and 36.0% in NACE H49 (+7.3 percentage points). This indicates that the ageing workforce in the Czech Republic might become a more pressing issue in the transport sector than in general.

Table 4.21 illustrates that the Czech Republic issued around 2.8% of all EU-28 driver attestation in 2012. Although the absolute number increased to 2,301 in 2018, the share in total EU-28 attestations issued decreased to 1.7%. When comparing the total number of driver attestations in circulation to the total road freight transport workforce in the Czech Republic, it is clear that third country nationals make up less than 1%.

**Table 4.21 Driver attestations issued and in circulation, Czech Republic, 2012-2018**

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| Number of driver attestations issued | 797 | 631 | 455 | 530 | 561 | 533 | 2,301 |
| % Share in total driver attestations issued by EU-28 | 2.8 | 2.3 | 1.4 | 1.1 | 0.7 | 0.5 | 1.7 |
| Number of driver attestations in circulation | 1,068 | 981 | 727 | 813 | 1,121 | 835 | 2,321 |
| % Share in total number of persons employed in NACE 4941 | n.a. | n.a. | n.a. | 0.7 | 0.9 | 0.6 | n.a. |

**Source** Own elaborations based on European Commission (n.d.-h) and Eurostat [sbs_na_1a_se_r2]

153 Eurostat [sbs_na_1a_se_r2].
154 Eurostat [lfsq_egdn2].
155 Eurostat [lfsq_egan22d].

### 4.3.4 Cross-border elements

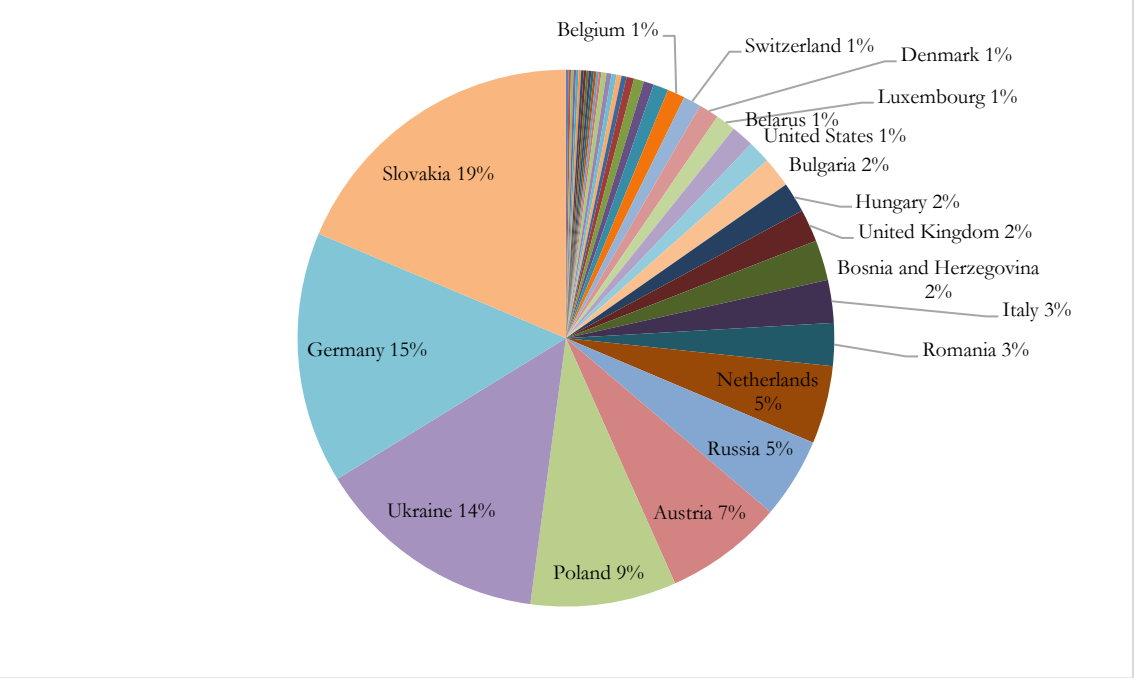
#### 4.3.4.1 Companies with a foreign majority shareholder

Almost 7% of the road freight transport companies in the Czech Republic have a foreign majority shareholder.[156] However, these companies account for a fifth of the turnover created by transport companies, and around 18% of the employees working in this sector. This makes it clear that especially large companies, which earn a lot of turnover and employ many persons, have a foreign majority shareholder.

More than 40% of these companies with a foreign majority shareholder are located in Prague, its capital. Furthermore, another 9% is located in Brno. Most of the foreign shareholders are located in the EU (71%), as opposed to outside the EU (29%). The division between foreign shareholders in EU-15 Member States and EU-13 Member states is rather equal, with 37% and 35% respectively. Figure 4.16 shows the detailed location of the foreign majority shareholders.

Three countries clearly stand out, as they house almost half of all foreign majority shareholders of transport companies located in the Czech Republic. The countries in question are Slovakia (19%), Germany (15%), and Ukraine (14%). Furthermore, another 25% of shareholders are located in Poland, Austria, Russia, and the Netherlands combined.

**Figure 4.16 Location of foreign majority shareholder of Czech companies active under NACE 4941 'Freight transport by road'**




* The labels of countries where less than 1% of shareholders is located were removed for clarity. Together they account for 6% of all foreign majority shareholders. The countries consist of Seychelles, Turkey, Moldova, France, Marshall Islands, Ireland, Greece, Cyprus, United Arab Emirates, Slovenia, Serbia, Portugal, Montenegro, Latvia, Lithuania, Kazakhstan, Israel, Croatia, Guinea, Gibraltar, Finland, Spain, and Azerbaijan.

**Source** Orbis database [Data extracted 12 May 2020]

156 Orbis database [Data extracted 15 May 2020].

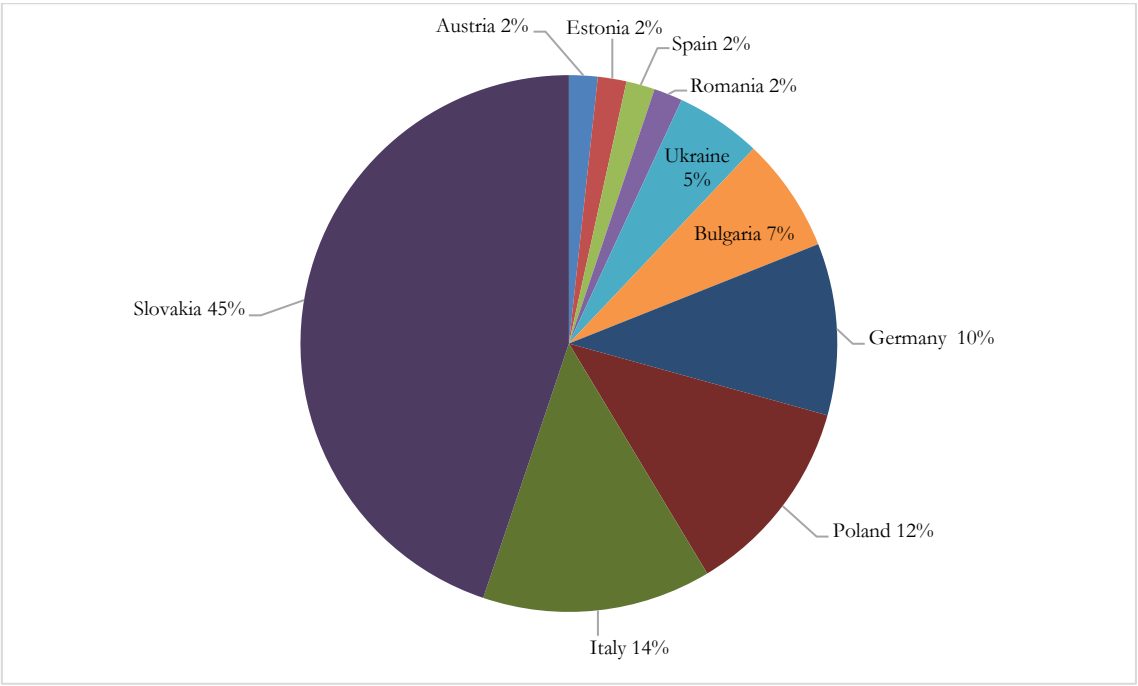
#### 4.3.4.2 Companies with a foreign subsidiary

Less than 0.5% of Czech road freight transport companies has a foreign subsidiary.[157] More specifically, it concerns 38 companies out of 8,450. These companies account for 7.5% of all turnover and 5.1% of employees in the freight road transport sector.

The average Czech haulier with a subsidiary has 2.5 subsidiaries. The median company has 2 subsidiaries. In total, these 38 companies have 95 subsidiaries, of which 58 are located abroad. It is noteworthy to see that 95% of these foreign subsidiaries are located in the EU, while only 5% is located outside of the EU. The majority of subsidiaries is located in EU-13 Member States (67%), and a smaller share in EU-15 Member States (28%).

Figure 4.17 shows the exact location of the 58 foreign subsidiaries. A notable 45% of subsidiaries are located in Slovakia. Other neighbouring countries of the Czech Republic also house a high share of subsidiaries, namely 12% in Poland, 10% in Germany, and 2% in Austria. However, it is interesting to see that 14% of subsidiaries are located in Italy, 7% in Bulgaria, and 5% in Ukraine, as they are geographically further away from the Czech Republic.

**Figure 4.17 Location of foreign subsidiaries of Czech companies active under NACE 4941 'Freight transport by road'**




**Source** Orbis database [Data extracted 13 May 2020]

#### 4.3.4.3 Export of services

The export of services in the road transport sector can be analysed by looking at the BOPS data from Eurostat. These data show that the Czech Republic exported € 2,997 million of road freight transport in 2018 (Figure 4.18). Apart from a decline in 2013, the export of services has been growing continuously. From 2010 to 2018, the increase amounted to 48.2%.

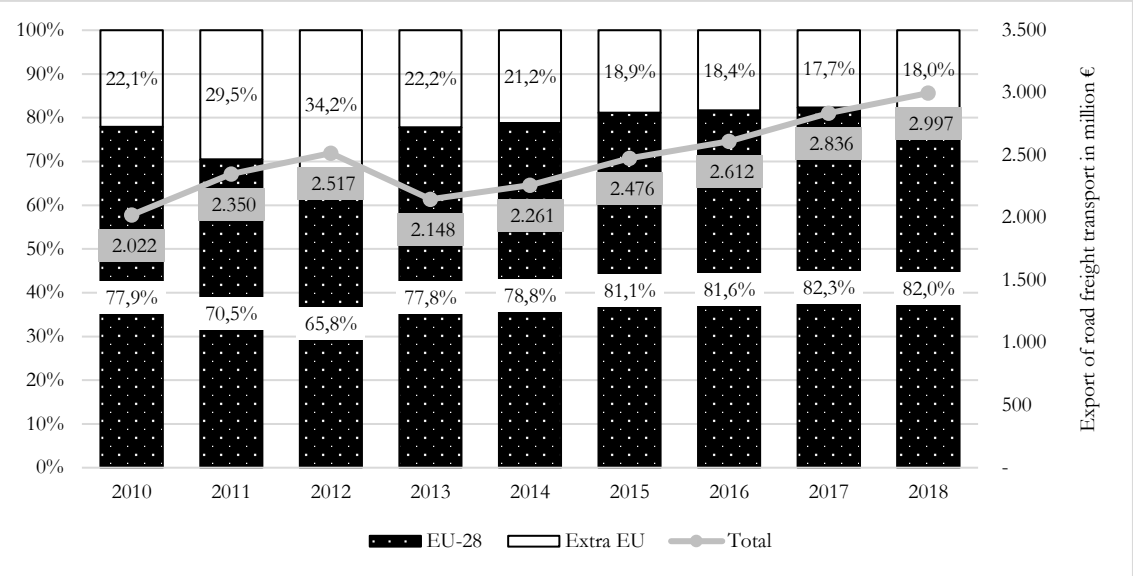
Furthermore, it can be seen that a rather important share of services is provided outside the EU. In 2010, this share amounted to 22%, it then knew a height in 2012 with 34% and in 2018, it is back at 18%. Thus, it can be said that countries outside the EU are rather important for the Czech Republic. Seeing that a detailed analysis of countries outside the EU-28 is not provided in 0, an analysis of

157 Orbis database [Data extracted 15 May 2020].

the Czech Republic in Eurostat showed for instance that in 2018, 3.8% of total services exported went to Russia.

appendix 5 does show the cross-table with all EU-28 Member States as country of destination. This table shows that Germany is the most popular Member State, with 17% of total Czech export of services. Furthermore, 8.6% was exported to the United Kingdom, 7.6% to France, 6.7% to Spain, and 6.2% to Italy.

**Figure 4.18 Export of services of road freight transport, breakdown by location where services are provided, in million €, 2010-2018, Czech Republic**




**Source** Eurostat [bop_its6_det]

In a next step, the export of road freight transport services can be compared to the total turnover created in this sector to get an idea of the importance of international transport. Additionally, one can look at the share of tonne-km of international transport performed in total transport. Therefore, Table 4.22 compares both methods of calculation.

As was already seen in Section 4.3.1, the share of international road transport in terms of tonne-km performed in total transport has been declining since 2015. However, in terms of turnover, the share of export of services seems to be stable, as it stays at around 32%. This means that 32% of all turnover created in this sector originated from the export of road freight transport services. This also indicates that both shares are moving towards each other. In 2015, 64% of all tonne-kms performed concerned international transport, while the export of services accounted for 31% of all turnover created in the sector. In 2017, however, only 51% of all tonne-kms performed was international transport, whereas the export of services still generated 32% of all turnover in the sector, thus indicating that prices might have gone up for international transport.

**Table 4.22 Comparison share international road freight transport in total road freight transport based on total turnover created and total tonne-km performed, 2010-2018, Czech Republic**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|
| **Based on turnover (in million €)** | | | | | | | | | |
| Export of services | 2,022 | 2,350 | 2,517 | 2,148 | 2,261 | 2,476 | 2,612 | 2,836 | 2,997 |
| Total turnover | | | | | | 7,984 | 8,165 | 8,960 | |
| % Share export of services | | | | | | 31.0 | 32.0 | 31.7 | |
| **Based on tonne-km (in million tonne-km)** | | | | | | | | | |
| International transport | 37,070 | 39,845 | 36,825 | 39,500 | 37,279 | 37,531 | 28,010 | 22,374 | 17,530 |
| Total transport | 51,832 | 54,830 | 51,228 | 54,893 | 54,092 | 58,715 | 50,315 | 44,274 | 41,073 |
| % Share international transport | 71.5 | 72.7 | 71.9 | 72.0 | 68.9 | 63.9 | 55.7 | 50.5 | 42.7 |

**Source** Eurostat [bop_its6_det], [sbs_na_1a_se_r2] and [road_go_ta_tott]

### 4.3.5 Infringements/fraud and error

The Czech Republic checked 3,281,320 working days according to the EU regulations outlined in Section 3.6. However, to meet the set requirement of 3% of all working days, it only had to check 1,200,698 working days, meaning that the requirement is more than met, as they checked 8.2% of all working days. Around 3 out of 10 checks took place at premises (28%), and the remaining ones at the roadside (72%).

Regarding roadside checks, more than half of the vehicles checked were registered in the Czech Republic itself (55%), while 41% was registered in another EU Member State, and 4% outside of the EU. The majority of vehicles checked were carrying goods (95%) as opposed to passengers (5%).

The number of infringements found amounts to 85,776 in total in 2015-2016 of which 72% at roadside checks and 28% at premises (Table 4.23). For both types of checks, the 28 days record sheet is the offence most found, namely 46% of roadside offences and 54% of offences found at premises. Article 16 of Regulation (EC) No 561/2006[158] specifies that each driver has to carry an extract from the duty roster and a copy of the service timetable which shows, in respect of each driver, the name, place where he is based and the schedule laid down in advance for various periods of driving, other work, breaks and availability. This duty roster has to cover a minimum period of at least 28 days and has to be updated regularly, at least once a month. However, it seems that in the Czech Republic, many transport undertakings do not follow these rules.

158 Regulation (EC) No 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport and amending Council Regulations (EEC) No 3821/85 and (EC) No 2135/98 and repealing Council Regulation (EEC) No 3820/85.

**Table 4.23 Type of offences found at roadside and premises, Czech Republic, 2015-2016**

| | | Driving time | Breaks | Rest periods | 28 days record sheet | Lack/ availability of records | Incorrect functioning | Misuse and manipulation | Total offences |
|---|---|---|---|---|---|---|---|---|---|
| Roadside | Number | 6,178 | 9,970 | 13,468 | 28,155 | 1,985 | 815 | 842 | 61,413 |
| | % Share in total | 10.1 | 16.2 | 21.9 | 45.8 | 3.2 | 1.3 | 1.4 | 100 |
| Premises | Number | 2,269 | 3,572 | 3,779 | 13,071 | 68 | 1,054 | 550 | 24,363 |
| | % Share in total | 9.3 | 14.7 | 15.5 | 53.7 | 0.3 | 4.3 | 2.3 | 100 |

**Source** Report from the Commission to the European Parliament and the Council on the 2015-2016 implementation of Regulation (EC) No 561/2006 on the harmonisation of certain social legislation relating to road transport and of Directive 2002/15/EC on the organisation of the working time of persons performing mobile road transport activities

The Czech Republic met the required number of 6 concerted roadside checks with other Member States in 2015-2016. They performed joint inspections with Germany, Poland, Slovakia, and Hungary. Furthermore, experiences were exchanged between Poland, France, the Netherlands, Belgium, Germany, and Hungary. Although the Czech Republic is only an observer at the ECR, they cooperate intensively within this group, focusing for instance on the exchange of experiences relating checks on social legislation and the detection of manipulation and fraud involving tachographs.

A novel situation regarding Directive 2002/15/EC,[159] the Road Transport Working Time Directive was signalled by the Czech Republic. It seems that a new work pattern is arising in which one employee (driver) works for two employers (transport undertakings).[160] This gave rise to difficulties in implementing the Directive, seeing that such practices are difficult to prove as only a transport undertaking subject to Regulation (EC) No 561/2006 is required to request a copy of a working-time record from another employer.

In order to combat fraud and error in the field of applicable legislation, the Social Security Administration of the Czech Republic stated that upon the initiative of the State Labour Inspectorate Office, cooperation was established regarding Ukrainian employees of Polish companies who pursue activities on the territory of the Czech Republic (Jorens *et al.*, 2019). The Social Security Administration (CSSA) obtains information from the State Labour Inspectorate Office including lists of employees who often submit incomplete or otherwise suspicious PDs A1. The CSSA then contacts ZUS, the Polish Social Insurance Institution, in order to verify if the Ukrainian employees are registered in the Polish social security system, if ZUS has determined the applicable legislation and if a PD A1 form was issued. Although this cooperation happens on a general scale, not specifically targeted at the transport sector, fraud and error in this field probably also occurs in the road transport sector, particularly concerning Ukrainian employees. For instance, Section 4.3.4.1 showed that 14% of foreign majority shareholders of Czech road transport companies are located in Ukraine. Furthermore, 5% of foreign subsidiaries of Czech companies were located in Ukraine (Section 4.3.4.2). Thus, this highlights the importance of business relations to third countries.

159 Directive 2002/15/EC of the European Parliament and of the Council of 11 March 2002 on the organisation of the working time of persons performing mobile road transport activities.

160 Report from the Commission to the European Parliament and the Council on the implementation in 2015-2016 of Regulation (EC) No 561/2006 on the harmonisation of certain social legislation relating to road transport and of Directive 2002/15/EC on the organisation of the working time of persons performing mobile road transport activities.

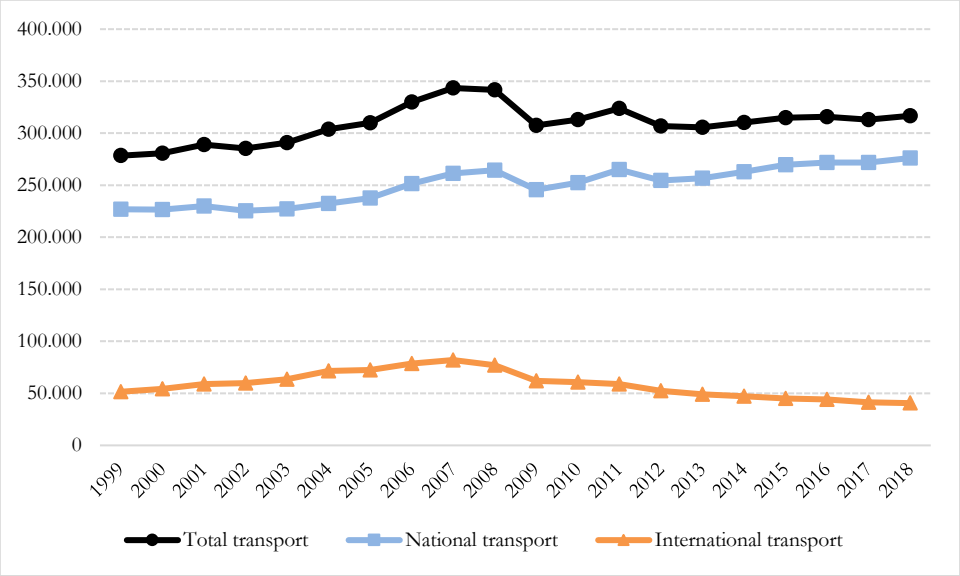
## 4.4 Germany

### 4.4.1 Type of transportation

Total road freight transport in Germany has remained relatively constant over the years, with a small peak around 2007 (Figure 4.19). From 1999 to 2018, total road freight transport increased with 13.8% from around 278,400 million tonne-km in 1999 to 316,700 million tonne-km in 2018. It is clear that it is national road transportation (+21.7%) which caused this growth, and not international road transport, which even decreased over the years.

Table 4.24 shows that the types of international road transportation performed remained more or less stable over the year. There are small increases for goods loaded in Germany and cabotage, whereas goods unloaded in Germany and cross-trade have decreased slightly.

**Figure 4.19 Annual road freight transport, in million tonne-km, 1999-2018, Germany**




**Source** Eurostat [road_go_ta_tott]

**Table 4.24 Road freight transport by type of transport, share in total tonne-km, 1999, 2008 and 2018, Germany, in %**

| | 1999 | 2008 | 2018 |
|---|---|---|---|
| International transport total | 100.0 | 100.0 | 100.0 |
| Goods loaded in reporting country | 47.4 | 46.9 | 50.7 |
| Goods unloaded in reporting country | 41.2 | 38.4 | 37.5 |
| Cross-trade | 8.4 | 11.2 | 8.1 |
| Cabotage | 3.0 | 3.6 | 3.8 |

**Source** Eurostat [road_go_ta_tott]

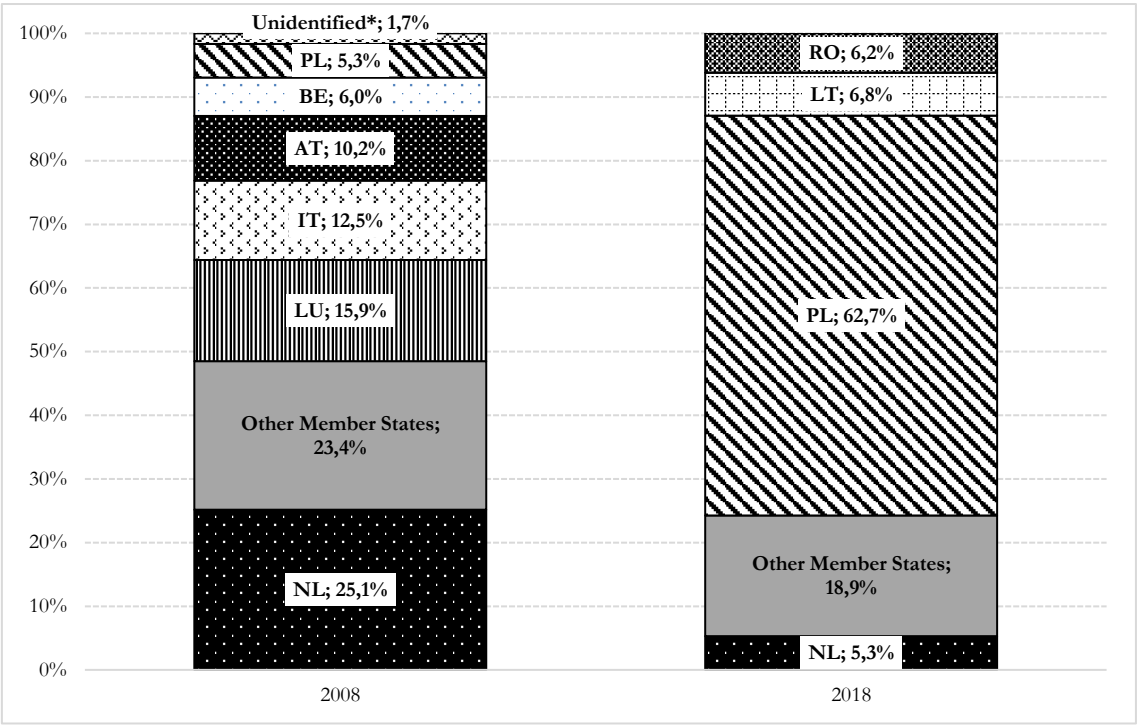
In Germany, the amount of cabotage taking place increased sharply from 1999 to 2018. It amounted to 2,500,000 thousand tonne-km in 1999 and more than 19,176,609 thousand tonne-km in 2018, or an increase of 656%.[161] The cabotage penetration rate also increased over this period, going from

161 Eurostat [road_go_ca_c].

1.6% to 7.4%.[162] Nevertheless, as already stated above, the share of cabotage might be an under-estimation (Sternberg *et al.*, 2015). Sternberg, Hofmann and Overstreet (2020) state that the Germany cabotage penetration rate in 2018 is more closely to 9.9%, and this rate could potentially increase to 25% by 2025 in many EU-15 Member States, particularly in Germany.

Figure 4.20 shows the nationalities of hauliers performing cabotage in Germany. In 2008, hauliers came from many different neighbouring Member States of Germany, namely the Netherlands (25%), Luxembourg (16%), Austria (10%), Belgium (6%) and Poland (5%). More than 12% of all cabotage in Germany was also performed by Italian hauliers. Furthermore, almost a fourth of all cabotage was carried out by other Member States (these include CZ, DK, EE, ES, FR, LV, LT, HU, SI, SK, SE and UK). However, the bar for 2018 shows a different picture. The patchwork of Member States has disappeared, and in its place, one Member State has come forward, namely Poland. In 2018, Polish hauliers performed 63% of all cabotage in Germany. In addition, Lithuania (7%), Romania (6%) and the Netherlands (5%) carried out a significant share of German cabotage. Again, a large share of cabotage is still performed by Other Member States (including BE, BG, CZ, DK, EE, IE, ES, FR, HR, IT, LV, LU, HU, AT, PT, SI, SK, SE and UK) but they each carry out less than 3% of German cabotage.

**Figure 4.20 Share in cabotage transport in total tonne-km in Germany, 2008 and 2018**




* The share of 'unidentified' is included, as the total amount of cabotage reported in [road_go_ca_hac] did not match the amount reported in [road_go_ca_c]. This means that for a certain amount of cabotage, it is not known by which Member States it was performed. For Germany, this is the case for 1.7% of cabotage in 2008 and 0.0% in 2018. For the share of 'Other Member States', on the other hand, it is known by which Member States the cabotage is performed, but their share is too small to mention individually.

**Source** Eurostat [road_go_ca_hac] and [road_go_ca_c]

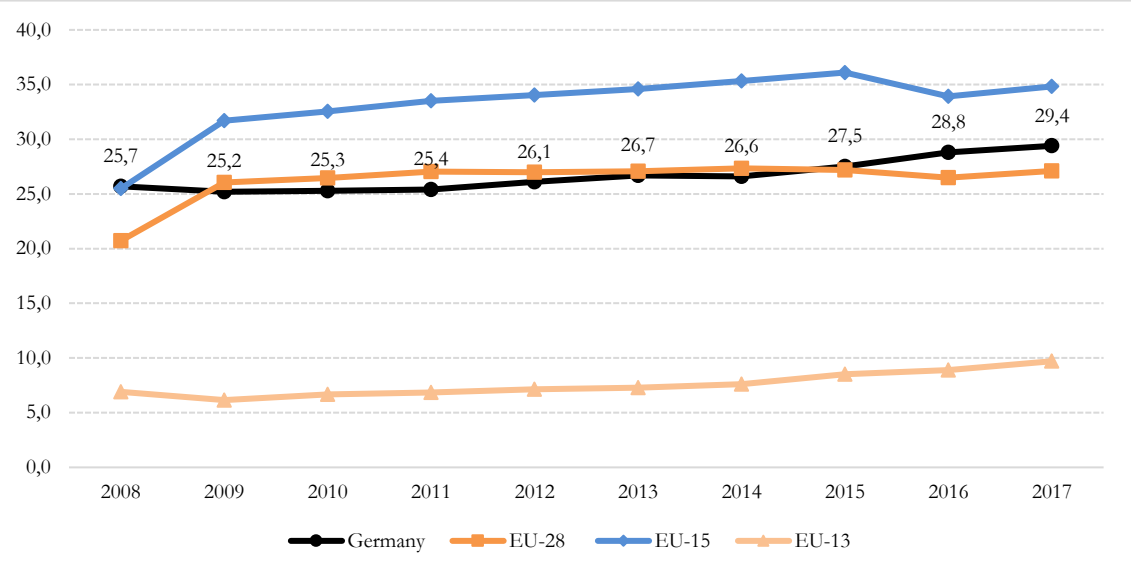
162 Eurostat [road_go_ca_c] and [road_go_ta_tott].

### 4.4.2 Profile of companies active in the road transport sector

The number of German transport companies remained rather stable over the years, around 35,500.[163] Meanwhile, the total turnover increased strongly, from € 35,781 million in 2008 to € 43,737 million in 2017, or an increase of 22.2%. Consequently, the average turnover per enterprise also increased by around 20%, from € 1,01,000 in 2008 to € 1,219,000 in 2017. Figure 4.19 suggests that this increase in total turnover is especially owing to the increase in national road transport in Germany.

The average personnel cost for companies active in the road transport sector in Germany is quite similar to the EU-28 average (Figure 4.21). Only in 2008, and from 2015 onwards, the German average lies above the EU-28 average. From 2008 to 2017, the German average personnel cost increased by 14.4%, from € 25,700 to € 29,400. This figure is very interesting, especially when comparing it to the figure for Austria and Belgium (Figure 4.3 and Figure 4.9 respectively). Although all three are EU-15 Member States, the German average personnel cost (€ 29,400) is noticeably lower than the Austrian (€ 39,200) and Belgian (€ 45,900) one in 2017. Therefore, although the Austrian and Belgian average personnel cost lie (far) above the EU-15 average, the German average personnel cost lies under the EU-15 average and follows the EU-28 average closely. Seeing that the German wages stayed more competitive, by more closely leaning to EU-13 Member States, this can be one explanation why the German transport sector has managed to keep its market share.[164] As could be seen in Figure 4.16, the German annual road freight transport has remained stable over the years, and even increased, whereas in Austria (Figure 4.1) and Belgium (Figure 4.7) the total transport decreased, and they lost market share especially in international road transport.

**Figure 4.21 Average personnel cost of companies active in NACE 4941 'Freight transport by road', Germany, EU-28, EU-15, EU-13, 2008-2017, in € 1,000**




**Source** Eurostat [sbs_na_1a_se_r2]

It is clear that in Germany, the average personnel costs in the transport sector are especially low compared to the total economy. In 2017, the average annual personnel cost in the total economy was € 40,300, while it only amounted to € 29,400 in the transport sector (Table 4.25). This reinforces the statement made above that Germany keeps the average personnel costs in the road transport sector

163 Eurostat [sbs_na_1a_se_r2].

164 The fact that Germany has kept its market share can also be due to other reasons, for instance the quality of service for specific transport modes, its specialisation, or its geographical location, etc.

rather low in order to stay competitive.[165] The annual growth rate and the evolution of the personnel cost are similar in the total economy and the road transport sector specifically.

**Table 4.25 Average personnel cost of companies in the total economy and active in NACE 4941 'Freight transport by road', Germany, 2008-2017, in € 1,000**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Evolution 2008-2017 | Annual growth rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total economy | 35.7 | 34.6 | 34.9 | 35.4 | 36.3 | 37.2 | 37.9 | 38.8 | 39.1 | 40.3 | 12.9% | 1.4% |
| NACE 4941 | 25.7 | 25.2 | 25.3 | 25.4 | 26.1 | 26.7 | 26.6 | 27.5 | 28.8 | 29.4 | 14.4% | 1.5% |

**Source** Eurostat [sbs_na_sca_r2] and Eurostat [sbs_na_1a_se_r2]

As discussed in detail in Section 3.6.1, the number of companies at one address can be an indicator to detect letterbox companies. When multiple road transport companies are located at the same address, it is unlikely they fulfil the requirement of an effective and stable establishment, set out in Regulation No 1071/2009. Therefore, the most common addresses for German transport companies are looked at in Table 4.26.

Overall, the number of transport companies at one address is not particularly high, with the most common address only housing 8 road transport companies. However, it should also be noted that for more than 760 Germany road transport companies in Orbis, the exact address was not available, or 8.8% of all German road transport companies. Only for two out of the five most common transport company addresses, the total number of companies exceeds 25. The address in Appen and Bendorf seems particularly favoured by road transport companies.

**Table 4.26 Addresses of companies active under NACE 4941 'Freight transport by road' where multiple companies are located, Germany**

| Address | Number of companies active under NACE 4941 (A)* | Total number of companies (B)** | % Share in total (A/B) |
|---|---|---|---|
| Otto-Lilienthal-Str. 5, Rommerskirchen | 8 | 27 | 29.6 |
| Grothwisch 3, Appen | 4 | 4 | 100.0 |
| Georg-Wilhelm-Str. 305, Hamburg | 4 | 29 | 13.8 |
| Regnitzstr. 18 a, Bamberg | 3 | 7 | 42.9 |
| August-Thyssen-Str. 3 b, Bendorf | 3 | 5 | 60.0 |

* This includes active companies active under NACE 4941 'Freight transport by road' with the standard legal form of private limited company or public limited company.

** This includes active companies with all standard legal forms. Therefore, it is possible that a company active under NACE 4941 with a standard legal form other than private/public limited company is included in this number.

**Source** Orbis database [Data extracted 15 May 2020]

### 4.4.3 Employment in the road transport sector

From 2009 onwards, the number of persons employed in the NACE-sector 4941 in Germany has increased constantly (Table 4.27). In that period, the number of persons employed grew by 28.5%, consisting of a strong growth in the number of employees (+31.3%), and a smaller growth in the

165 However, this is true for the wage level in the entire service sector, not specifically for the road transport sector.

number of unpaid persons employed (+4.8%). In 2017, more than 436,600 persons were employed in the sector of freight transport by road.

The share in total employment also shows that the sector has gained importance, albeit a little bit, as it went from around 0.9% in total employment in 2008 to 1.1% in 2017.

**Table 4.27 Employment in NACE 4941 'Freight transport by road', Germany, 2008-2017**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Persons employed** | **348,267** | **339,797** | **343,251** | **372,537** | **380,629** | **393,053** | **402,631** | **412,414** | **413,817** | **436,604** |
| Unpaid persons employed | 38,710 | 36,152 | 36,340 | 37,647 | 36,540 | 36,995 | 39,518 | 36,968 | 36,110 | 37,873 |
| Employees | 309,557 | 303,646 | 306,911 | 334,890 | 344,089 | 356,058 | 363,113 | 375,446 | 377,707 | 398,731 |
| **% Share in total employment** | **0.9** | **0.9** | **0.9** | **1.0** | **1.0** | **1.0** | **1.0** | **1.0** | **1.0** | **1.1** |

**Source** Eurostat [sbs_na_1a_se_r2] and [lfsi_emp_a]

In 2017, approximately 12.7 persons were employed per road freight transport company in Germany.[166] This is well above the EU-average of 5.7 persons employed per company. Furthermore, it increased from around 9.9 in 2008. This indicates that the average road transport company is becoming bigger, as the number of companies remained stable, while the total turnover earned increased (see Section 4.4.2) and the average number of persons employed per company grew as well.

Especially in Germany, the ageing workforce in the transport sector is a pressing issue. Sternberg *et al.* (2015) estimate that because of the constantly increasing average age of drivers, about 250,000 German drivers, or 40% of all German drivers, are expected to retire in the next 10 years. In addition, Vitols and Voss (2019) have emphasised an acute lack of drivers. For all NACE-codes, the share of persons employed over 50 years old increased from 28.0% in 2008 to 39.9% in 2019, an already impressive growth of 11.9 percentage points.[167] However, when analysing the workforce in NACE H49 'Land transport and transport via pipelines', even more remarkable figures can be noticed. In 2008, already 38.8% of all employed persons were over 50 years old in this NACE-code, while this share increased to 51.5% in 2019.[168] Seeing that over half of all persons employed in the transport sector are over 50 years old, it is clear that the ageing workforce is indeed a serious issue in Germany.

Table 4.28 shows the number of driver attestations issued and in circulation, a document needed for non-EU drivers. The number issued by Germany has been decreasing from over 1,100 in 2012 to 732 in 2018. As a share in the total number of persons employed, only around 0.5% have a driver attestation, meaning that third country nationals are not a major group of persons employed in the freight road transport sector.

166 Eurostat [sbs_na_1a_se_r2].
167 Eurostat [lfsq_egdn2].
168 Eurostat [lfsq_egan22d].

**Table 4.28 Driver attestations issued and in circulation, Germany, 2012-2018**

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| Number of driver attestations issued | 1,184 | 1,223 | 956 | 714 | 832 | 708 | 732 |
| % Share in total driver attestations issued by EU-28 | 4.2 | 4.5 | 2.8 | 1.5 | 1.1 | 0.7 | 0.5 |
| Number of driver attestations in circulation | 2,462 | 3,040 | 2,886 | 2,578 | 2,562 | 2,380 | 2,430 |
| % Share in total number of persons employed in NACE 4941 | 0.6 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | n.a. |

**Source** Own elaborations based on European Commission (n.d.-h) and Eurostat [sbs_na_1a_se_r2]

### 4.4.4 Cross-border elements

#### 4.4.4.1 Companies with a foreign majority shareholder

Approximately 4.1% of German transport companies have a foreign majority shareholder.[169] However, these companies with a foreign majority shareholder account for over 10% of total turnover and 7% of total employees.

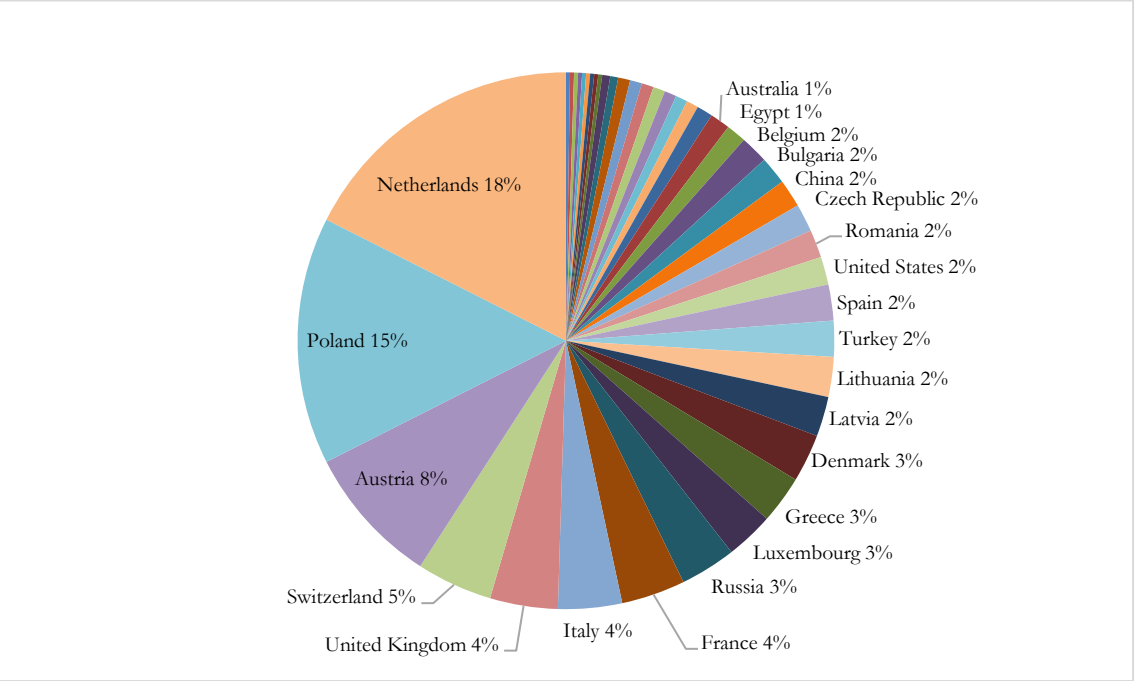
These companies with a foreign majority shareholder are mostly located in large cities like Hamburg (5.3%), Berlin (3.9%), Munich (3.6%), Frankfurt (2.5%), or Cologne (2.5%). However, it is also remarkable to see that 16 companies, or 4.4% of all companies with a foreign majority shareholder, did not have an address available.

More than half of the foreign majority shareholders are located in the EU-15 (51.0%). Another 27.4% are located in the EU-13, and the remaining 21.6% are located outside the EU.

Figure 4.22 indicates that most of the foreign shareholders are either located in the Netherlands (18%) or Poland (15%). Furthermore, a high share is located in Austria (8%) and Switzerland (5%). However, the chart also shows that the foreign shareholders are located in many different countries, 42 to be exact.

169 Orbis database [Data extracted 15 May 2020].

**Figure 4.22 Location of foreign majority shareholder of German companies active under NACE 4941 'Freight transport by road'**




* The labels of countries where less than 1% of shareholders is located were removed for clarity. Together they account for 9% of all foreign majority shareholders. The countries consist of Moldova, Ukraine, Slovakia, Portugal, Hungary, Croatia, Bosnia and Herzegovina, Azerbaijan, Kazakhstan, Belarus, Syria, Slovenia, Sudan, Norway, Liechtenstein, India, Hong Kong, Cyprus, and Argentina.

**Source** Orbis database [Data extracted 12 May 2020]

#### 4.4.4.2 Companies with a foreign subsidiary

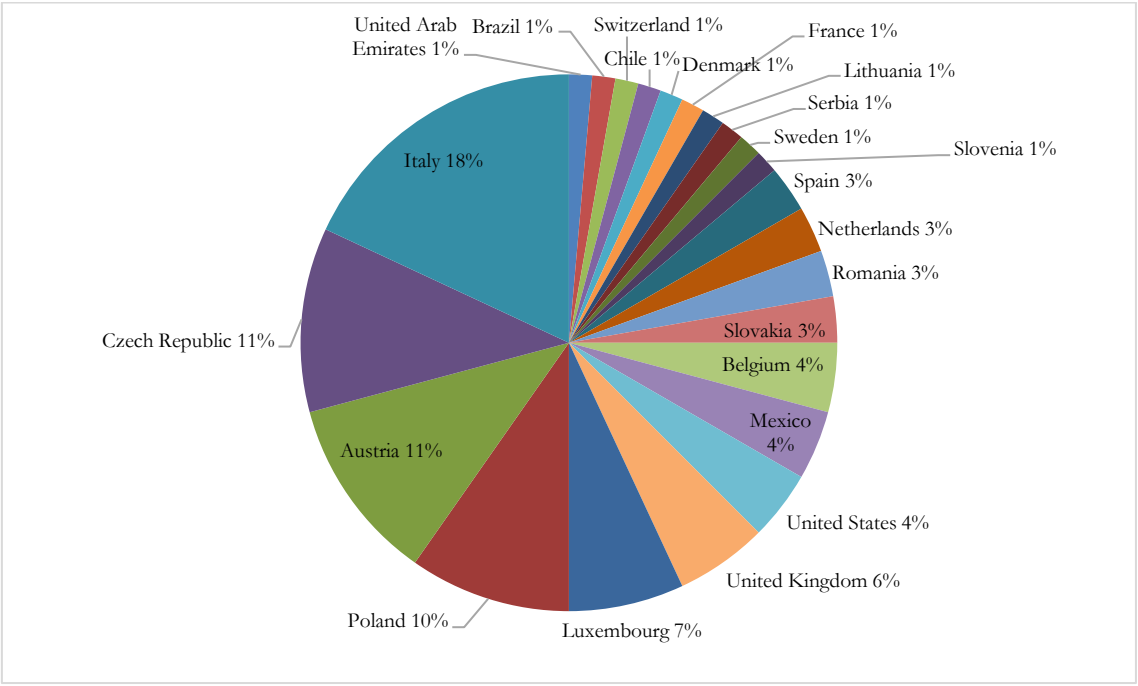
In Germany, 36 companies out of the 8,724 had a foreign subsidiary, or 0.4%.[170] Remarkably, these 36 companies account for 48% of all turnover created and 17% of all employees of the road transport companies found in Orbis. However, this can be explained by one outlier. This company is one of these 36 companies and earned a turnover of over € 8.8 billion and employed 34,604 persons. As a result, a distorted image might occur.

On average, these 36 companies have 6 subsidiaries each. This is the highest average of all six Member States. However, when looking at the median number (2 foreign subsidiaries), it is clear that the average is highly influenced by certain outliers. In this case, it concerns the company mentioned above with a turnover of over € 8.8 billion, as this company has 122 subsidiaries. Therefore, it is no surprise that these 36 companies have an astounding number of 217 subsidiaries. As we only know the location of the first 20 subsidiaries of a company, and not all these subsidiaries are located abroad, the analysis of the foreign subsidiaries can be performed on 72 subsidiaries. Almost 85% of these 72 subsidiaries are located in the EU, with a division of 56% in the EU-15 and 29% in the EU-13. The remaining 11 subsidiaries, or 15%, are located outside of the EU.

The exact distribution of the location of the 72 subsidiaries is pictured in Figure 4.23. As can be expected, many subsidiaries are located in neighbouring countries of Germany. Around 11% are located in the Czech Republic, 11% in Austria, 10% in Poland, and 7% in Luxembourg. However, it is remarkable that most subsidiaries are located in Italy (18%). Furthermore, a high share is located in countries in other continents, such as 4% in the United States and 4% in Mexico. This is due to certain large transport companies, as the three subsidiaries in the United States are from a company with 14 subsidiaries, and the three subsidiaries in Mexico are from the company with 122 subsidiaries. Thus, in this case, it concerns global multinationals.

170 Orbis database [Data extracted 15 May 2020].

**Figure 4.23 Location of foreign subsidiaries of German companies active under NACE 4941 'Freight transport by road'**

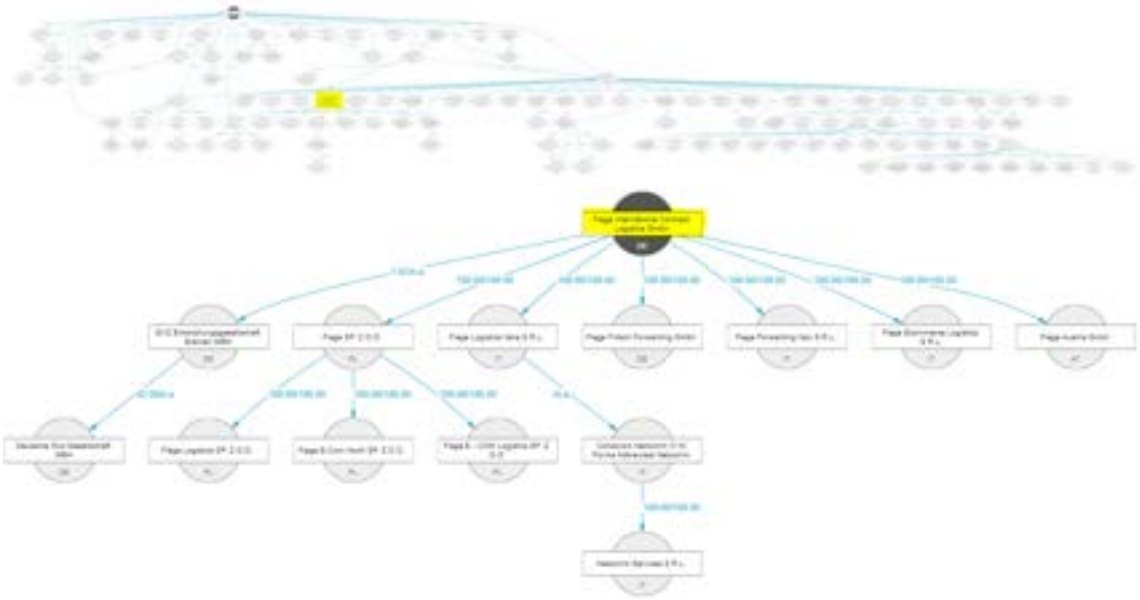



**Source** Orbis database [Data extracted on 13 May 2020]

The above example of the company with 122 subsidiaries already indicates the complexity of transport company networks. This company, Kion Group AG, is the global ultimate owner of a corporate group of 194 companies, which are located in 39 different countries. Analysing this company would take up too many pages in the report, therefore a different company's structure is looked at, namely Fiege International Contract Logistics GmbH. This German transport company has 7 subsidiaries: 3 in Italy, 2 in Germany, 1 in Austria, and 1 in Poland. The top panel of Figure 4.24 shows this structure. It can be seen that 3 of its subsidiaries have subsidiaries of their own, and it even goes down one more level. However, the Orbis database allows us to look at the corporate group Fiege International Contract Logistics GmbH is a part of as well. This is shown in the bottom panel of Figure 4.24. It turns out that this company is owned by Fiege Logistik Holding Stiftung & Co. KG, the global ultimate owner of a corporate group of 86 companies.

Thus, although we started out by looking at a German company with 'only' 7 subsidiaries, now an entire network of companies becomes visible. Figure 4.24 only serves to demonstrate the extreme complexity than can arise. Although this might be an exceptional example, the fact that the average number of subsidiaries of German transport companies is six indicates that large corporate groups are not that uncommon in this sector.

**Figure 4.24 Corporate group of Fiege International Contract Logistics GmbH, Germany**



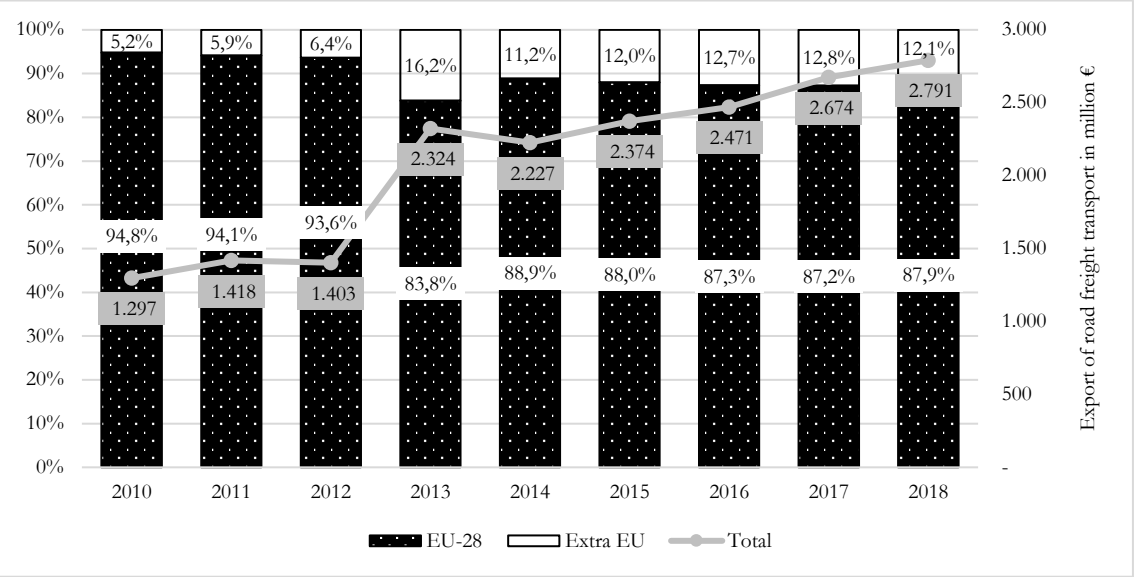
* The highlighted company is the one discussed, namely 'Fiege International Contract Logistics GmbH'.
**Source** Orbis database [Data extracted 17 June 2020]

#### 4.4.4.3 Export of services

The export of services is analysed by the BOPS data provided by Eurostat. These data show that in 2018, Germany exported € 2,791 million of road freight transport abroad (Figure 4.25). Over the years, a remarkably surge is visible; especially from 2012 to 2013 the export of services grew exceptionally. From € 1,297 million exported services in 2010 to € 2,791 million in 2018, Germany knew a sharp increase of 115.2%. Although exporting to countries outside the EU did not seem of great importance from 2010 to 2012, the share amounted to 16.2% in 2013. Therefore, it seems that the great increase noticed in this year is especially due to an increase in export of services to countries outside the EU-28. The last few years, the share of exported services to extra-EU has remained stable at around 12%.

The detailed breakdown of the Member States of destination can be found in appendix 5. The top Member State of destination for German export of services has always been France. Nevertheless, its importance has decreased over the years. In 2010, 34.4% of services in road freight transport were exported ton France, while in 2018 this share only amounts to 18.9%. Member States that have gained importance are Sweden (from 0.0% in 2010 to 6.1% in 2018), Slovakia (from 0.0% to 3.1%), Spain (from 0.1% to 2.8%), Italy (from 0.1% to 2.5%), and the United Kingdom (from 0.2% to 2.4%).

**Figure 4.25** **Export of services of road freight transport, breakdown by location where services are provided, in million €, 2010-2018, Germany**




**Source** Eurostat [bop_its6_det]

The export of services is subsequently compared to the total turnover created in the road transport sector. This indicates that in Germany in 2017, around 6% of turnover created stemmed from international road transport, which is a small increase from 4% in 2010 (Table 4.29). In terms of tonne-km performed, the shares of international transport are not that much higher. In 2010, 19% of all tonne-kms performed by Germany still concerned international transport, while in 2018, this share dropped to 13%. However, both when analysing the share of international transport based on tonne-km performed and turnover created, it is clear that international transportation is not the focus of German hauliers, as both shares are on the lower side.

**Table 4.29** **Comparison share international road freight transport in total road freight transport based on total turnover created and total tonne-km performed, 2010-2018, Germany**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|
| **Based on turnover (in million €)** | | | | | | | | | |
| Export of services | 1,297 | 1,418 | 1,403 | 2,324 | 2,227 | 2,374 | 2,471 | 2,674 | 2,791 |
| Total turnover | 32,738 | 36,027 | 37,068 | 38,302 | 39,201 | 40,307 | 40,613 | 43,737 | |
| % Share export of services | 4.0 | 3.9 | 3.8 | 6.1 | 5.7 | 5.9 | 6.1 | 6.1 | |
| **Based on tonne-km (in million tonne-km)** | | | | | | | | | |
| International transport | 60,642 | 58,807 | 52,510 | 49,022 | 47,110 | 45,166 | 44,095 | 41,483 | 40,621 |
| Total transport | 313,104 | 323,833 | 307,009 | 305,744 | 310,142 | 314,816 | 315,774 | 313,149 | 316,772 |
| % Share international transport | 19.4 | 18.2 | 17.1 | 16.0 | 15.2 | 14.3 | 14.0 | 13.2 | 12.8 |

**Source** Eurostat [bop_its6_det], [sbs_na_1a_se_r2], and [road_go_ta_tott]

### 4.4.5 Infringements/fraud and error

Germany checked an astounding number of 27,838,789 working days, which is 11.4% of all working days, thus clearly above the set requirement of 3% as set out by the EU regulations discussed in Section 3.6. Around 86% of checks were carried out at the roadside and 14% at premises.

The majority of vehicles checked were registered in Germany (60%), or other EU Member States (35%), as only 5% of vehicles were from outside the EU. Furthermore, 97% of vehicles were carriers of goods, and 3% were carriers of passengers.

In absolute numbers, Germany is the Member States that reported most offences in the EU, namely 32% of total offences. Together with Poland (16% of all offences), Austria (11%), Latvia (8%), and Italy (7%), Germany reported over two thirds of offences detected. Table 4.30 shows the types of offences found by Germany in 2015-2016.

It can be seen that offences regarding the misuse and manipulation of the tachograph are especially common at roadside checks (30.4% of all offences found), while offences regarding breaks are most common at premises checks (45.4% of all offences found). Requirements regarding the tachograph are set out in Regulation (EU) No 165/2014,[171] which is also known as the Tachograph Regulation. The report by the commission[172] also highlighted that tachograph fraud and manipulation are becoming increasingly sophisticated and harder to detect, suggesting that the real number of offences is likely to be much higher.

Additionally, it was stated that the offence rate per undertaking, for checks at premises, was particularly high in Germany, with an average of 65 offences per undertaking.

**Table 4.30 Type of offences found at roadside and premises, Germany, 2015-2016**

| | | Driving time | Breaks | Rest periods | 28 days record sheet | Lack/ availability of records | Incorrect functioning | Misuse and manipulation | Total offences |
|---|---|---|---|---|---|---|---|---|---|
| Roadside | Number | 107,027 | 92,051 | 122,780 | 58,170 | 75,845 | - | 198,963 | 654,836 |
| | % Share in total | 16.3 | 14.1 | 18.7 | 8.9 | 11.6 | 0.0 | 30.4 | 100 |
| Premises | Number | 71,087 | 197,839 | 124,338 | - | - | 22,086 | 20,213 | 435,563* |
| | % Share in total | 16.3 | 45.4 | 28.5 | 0.0 | 0.0 | 5.1 | 4.6 | 100 |

* The total reported number of offences at premises is 441,759, but this does not match the sum of all types of offences (435,563). In order to correctly calculate the shares, the sum was reported in the table.

**Source** Report from the Commission to the European Parliament and the Council on the 2015-2016 implementation of Regulation (EC) No 561/2006 on the harmonisation of certain social legislation relating to road transport and of Directive 2002/15/EC on the organisation of the working time of persons performing mobile road transport activities

Germany met the requirement of a minimum of 6 concerted checks with at least one other Member State. They performed 14 joint checks with other ECR members, of which 12 involved TISPOL (now ROADPOL, see Section 4.1.5). Furthermore, experience of 'manipulation of digital recording equipment', which is found to be increasingly frequent, was exchanged at national level between the police, the federal-state inspection authorities and the Federal Goods Transport Office.

171 Regulation (EU) No 165/2014 of the European Parliament and of the Council of 4 February 2014 on tachographs in road transport, repealing Council Regulation (EEC) No 3821/85 on recording equipment in road transport and amending Regulation (EC) No 561/2006 of the European Parliament and of the Council on the harmonisation of certain social legislation relating to road transport Text with EEA relevance.

172 Report from the Commission to the European Parliament and the Council on the 2015-2016 implementation of Regulation (EC) No 561/2006 on the harmonisation of certain social legislation relating to road transport and of Directive 2002/15/EC on the organisation of the working time of persons performing mobile road transport activities.

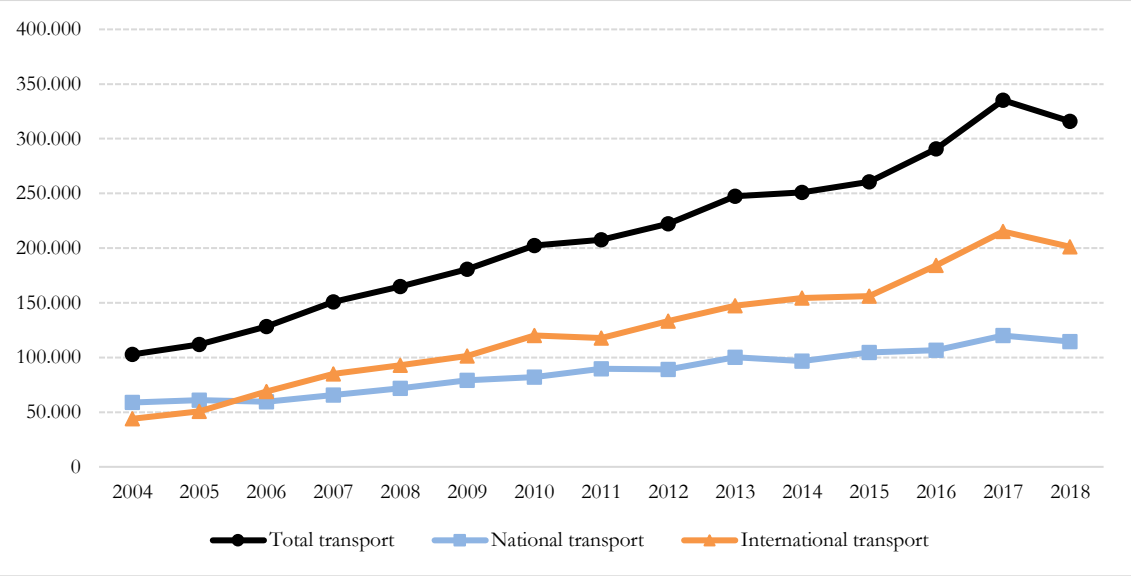
## 4.5 Poland

### 4.5.1 Type of transportation

In Poland, the annual road freight transport has been on the rise almost continually from 2004 to 2018 (Figure 4.26). It increased from 102,800 million tonne-km in 2004 to 315,800 million tonne-km in 2018, or an increase of more than 207%. The figure shows that particularly international transport has risen strongly. From 2006 onwards, international transport is more important than national transportation, in million tonne-km. An interesting evolution seems to be occurring from 2017 onwards, as there is a serious drop in total transportation from 2017 to 2018, namely -5.8%. Certain literature might be able to explain this decline. Rolbiecki and Książkiewicz (2018) state that although Poland is the leading country in terms of international transport, the financial situation of Polish hauliers is rather weak. Furthermore, due to recent developments in the area of road freight transport, this situation might get worse. For instance, the new regulations set out in the Mobility Package with regard to minimum wage and rest periods for drivers will increase the operating costs of Polish hauliers by as much as 30% (Rolbiecki & Książkiewicz 2018; Kędzior-Laskowska, 2019). In addition, it is stated that the attractiveness of the profession needs to be improved, by for instance increasing wages, as Poland is starting to face a driver shortage (Rolbiecki & Książkiewicz 2018). Kędzior-Laskowska (2019) also suggests there might be an economic slowdown in Poland and other Member States, not only because of the increased costs due to new regulations, but also because of losing some of the United Kingdom's market due to Brexit. Additionally, Nadolska and Barczewski (2019) argue that because Polish road transport is the biggest of its kind in Europe, the market is even oversaturated.

The evolution of the type of international transport is provided in Table 4.31. Goods loaded and unloaded in Poland knew a strong decline, whereas the share of cross-trade and cabotage increased substantially. The share of cross-trade more than doubled, and the share of cabotage grew more than sevenfold.

**Figure 4.26 Annual road freight transport, in million tonne-km, 2004-2018, Poland**




**Source** Eurostat [road_go_ta_tott]

**Table 4.31 Road freight transport by type of transport, share in total tonne-km, 2004, 2008 and 2018, Poland, in %**

| | 2004 | 2008 | 2018 |
|---|---|---|---|
| International transport total | 100.0 | 100.0 | 100.0 |
| Goods loaded in reporting country | 46.6 | 36.3 | 32.9 |
| Goods unloaded in reporting country | 40.9 | 36.2 | 29.5 |
| Cross-trade | 11.3 | 26.4 | 29.3 |
| Cabotage | 1.2 | 1.0 | 8.3 |

**Source** Eurostat [road_go_ta_tott]

As is the case in all discussed Member States, cabotage is on the rise in Poland as well. It increased by 312% over the period 1999-2018, reaching 129,000 thousand tonne-km in 2018.[173] Nonetheless, the cabotage penetration rate in this Member State remains minimal, going from 0.10% in 1999 to 0.15% in 2018.[174] This means that almost all national transportation is undertaken by domestic road freight companies.

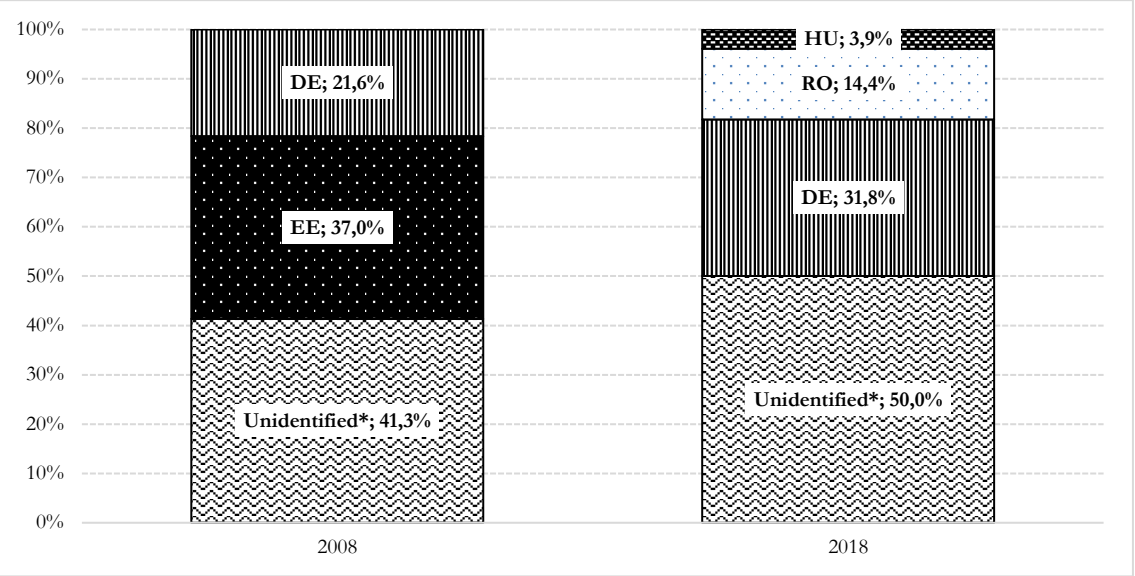
The nationality of hauliers performing cabotage in Poland is represented in Figure 4.27. However, an important limitation is the missing data. In 2008, for 41% of cabotage performed in Poland it was not known what the nationality of the hauliers was.[175] In 2018, the same holds true for 50% of cabotage. Nevertheless, it can be seen that Germany is an important provider of cabotage in Poland, with 22% in 2008 and 32% in 2018. Furthermore, Estonian hauliers provided 37% of all Polish cabotage in 2008. In 2018, no data for Estonia were provided, but when the number for 2016 is used, Estonian hauliers provided around 26% of all Polish cabotage, and then 'only' 24% of cabotage remains unidentified. In addition, in 2018, Romanian (14%) and Hungarian (4%) hauliers provided a significant share of cabotage in Poland.

173 Eurostat [road_go_ca_c].

174 Eurostat [road_go_ca_c] and [road_go_ta_tott].

175 This was calculated by looking at the difference between the total provided by Eurostat [road_go_ca_c] 'Road cabotage transport by country in which cabotage takes place' and Eurostat [road_go_ca_hac] 'Road cabotage by reporting country and country in which cabotage takes place'. The total amount of cabotage reported in the former dataset was larger than in the latter.

**Figure 4.27 Share in cabotage transport in total tonne-km in Poland, 2008 and 2018**




* The share of 'unidentified' is included, as the total amount of cabotage reported in [road_go_ca_hac] did not match the amount reported in [road_go_ca_c]. This means that for a certain amount of cabotage, it is not known by which Member States it was performed. For Poland, this is the case for 41.3% of cabotage in 2008 and 50.0% in 2018.

**Source** Eurostat [road_go_ca_hac] and [road_go_ca_c]

### 4.5.2 Profile of companies active in the road transport sector

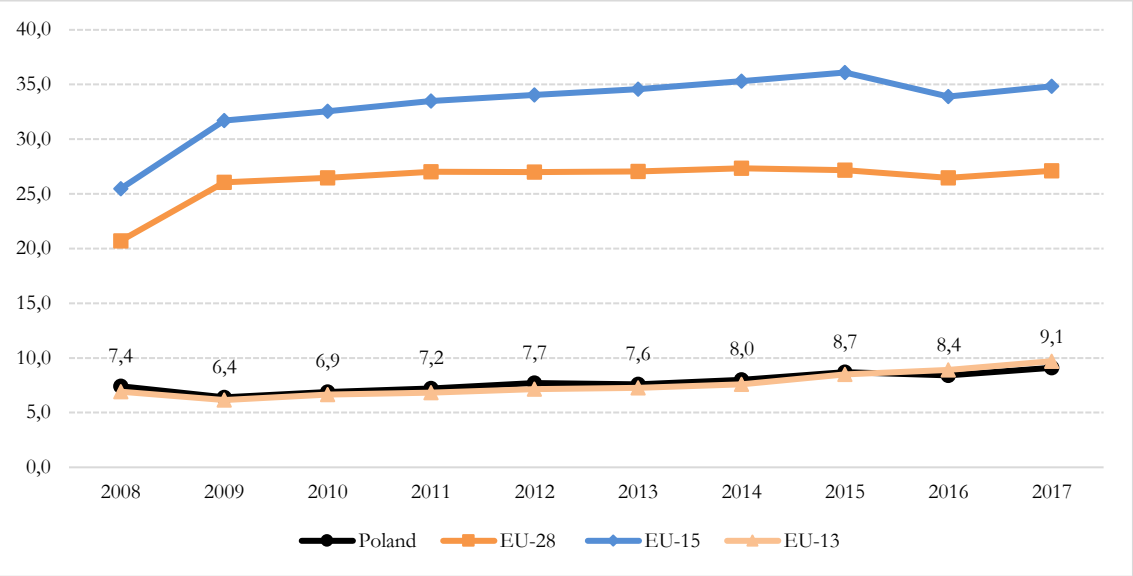
Although the number of companies in Poland active in the road transport sector remained stable from 2008 to 2017 at around 87,000, the total turnover increased greatly.[176] Coming from € 17,703 million turnover in 2008, the total turnover in 2017 amounted to € 27,620 million, a growth of 56.0%. This growth shows that the companies in this sector are becoming more profitable. This could also be expected when looking at Figure 4.26, as the amount of transport carried out by Polish hauliers has been steeply increasing, especially international transport. As a result, the average turnover per enterprise also knew a considerable surge of 56.6%. In 2008, a Polish road freight transport company earned around € 203,000 turnover, whereas in 2017, a company earned € 318,000 turnover.

The average personnel cost in Poland is one of the lowest in the EU-28, only higher than the ones in Bulgaria, Romania, and Latvia (in 2017, see Section 3.3 and Figure 3.11). This is also made clear by Figure 4.28, showing the EU-average and Poland's average personnel cost from 2008 to 2017. The average personnel cost is almost equal to the EU-13 average over this entire period. Although slightly above this average between 2008 and 2015, the Polish average lies under the EU-13 average in 2016 and 2017.

From 2008 to 2017, the average personnel cost in Poland grew from € 7,400 to € 9,100, an increase of 23.0%, and the highest growth of all six discussed Member States. However, the growth of the EU-13 average is even more impressive, as it grew by 40.3%, from € 6,900 in 2008 to € 9,700 in 2017.

176 Eurostat [sbs_na_1a_se_r2].

**Figure 4.28** **Average personnel cost of companies active in NACE 4941 'Freight transport by road', Poland, EU-28, EU-15, EU-13, 2008-2017, in € 1,000**




**Source** Eurostat [sbs_na_1a_se_r2]

The average personnel cost of companies active under NACE 4941 is lower than the average personnel cost in general (Table 4.32). However, the evolution of both is the most remarkable of all six Member States, with a growth of 42% in the transport sector and 40% in general. This indicates that the wages in general and in the transport sector in Poland are growing. Nevertheless, as could be seen in Figure 4.28 the average personnel cost in the transport sector is still on a low level compared to the EU-28 and EU-15 average.

**Table 4.32** **Average personnel cost of companies in the total economy and active in NACE 4941 'Freight transport by road', Poland, 2008-2017, in € 1,000**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Evolution 2009-2017 | Annual growth rate* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total economy | | 9.8 | 11.1 | 11.5 | 11.9 | | 12.4 | 12.7 | 12.5 | 13.7 | 39.8% | 4.3% |
| NACE 4941 | 7.4 | 6.4 | 6.9 | 7.2 | 7.7 | 7.6 | 8.0 | 8.7 | 8.4 | 9.1 | 42.2% | 4.5% |

* The annual growth rate was calculated based on data from 2009 to 2017.
**Source** Eurostat [sbs_na_sca_r2] and Eurostat [sbs_na_1a_se_r2]

Another indicator to study the profile of transport companies is their address. According to Regulation No 1071/2009, road transport companies have to satisfy the requirement of an effective and stable establishment, where its administrative and commercial activities are carried out, with one or more vehicles at its disposal as well as the appropriate technical equipment (see Section 3.6.1). Consequently, when multiple road transport companies are located at the same address, it is unlikely they meet this requirement, which could indicate the existence of a letterbox company, as no real activity takes place at this address. Therefore, Table 4.33 lists the five addresses where most of the Polish road freight transport companies were located.

At the most common address, more than 100 road transport companies were located, which is remarkable. Furthermore, at the other four addresses, more than 25 companies were situated. Even more noteworthy is that at the address in Warszawa (Warsaw), more than 1,200 companies are located, and in Poznan more than 500. However, this is no surprise, seeing for instance that the first

address is leased by a company as a virtual office.[177] In addition, certain addresses seem to be tailored specifically to road freight transport companies. At the address in Czestochowa (95%) and Wroclaw (87%) a high share of companies located there are road transport companies. However, it should be kept in mind that the address of a company is only one possible indicator to identify letterbox companies. In order to truly label these companies as such, individual investigations are necessary. Nevertheless, it can certainly be considered a red flag when numerous (transport) companies are located at one address.

**Table 4.33 Addresses of companies active under NACE 4941 'Freight transport by road' where multiple companies are located, Poland**

| Address | Number of companies active under NACE 4941 (A)* | Total number of companies (B)** | % Share in total (A/B) |
|---|---|---|---|
| Kopernika 17/19, Czestochowa | 101 | 106 | 95.3 |
| Jana Henryka Dabrowskiego 75, Poznan | 49 | 532 | 9.2 |
| Aleje Jerozolimskie 85, Warszawa | 40 | 1,293 | 3.1 |
| Boleslawa Krzywoustego 74, Wroclaw | 34 | 39 | 87.2 |
| Plac Na Bramie 8, Przemysl | 28 | 80 | 35.0 |

* This includes active companies active under NACE 4941 'Freight transport by road' with the standard legal form of private limited company or public limited company.

** This includes active companies with all standard legal forms. Therefore, it is possible that a company active under NACE 4941 with a standard legal form other than private/public limited company is included in this number.

**Source** Orbis database [Data extracted 15 May 2020]

### 4.5.3 Employment in the road transport sector

Freight transport by road is clearly a sector of growing importance in Poland. After a small dip in employment in 2009, the number of persons employed increased steadily (Table 4.34). From 2009 to 2017, the number of persons employed grew from 254,400 to 382,700, or a growth of 50%. Moreover, the number of employees even grew by 68%, from 171,900 in 2009 to 288,300 in 2017. The number of unpaid persons employed, on the other hand, grew by 'only' 14% from 2009 to 2017, while it even remained stable from 2008 to 2017, at around 94,000 persons.

The sector has not only gained importance in absolute numbers but has also become more important in total Polish employment. In 2009, the sector represented 1.6% of all employment, while this share equalled 2.4% in 2017.

**Table 4.34 Employment in NACE 4941 'Freight transport by road', Poland, 2008-2017**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Persons employed** | **280,904** | **254,411** | **271,392** | **288,636** | **288,959** | **292,544** | **301,884** | **326,652** | **355,330** | **382,740** |
| Unpaid persons employed | 93,923 | 82,477 | 87,734 | 93,098 | 89,362 | 84,373 | 84,444 | 89,279 | 92,494 | 94,370 |
| Employees | 186,981 | 171,934 | 183,658 | 195,538 | 199,597 | 208,171 | 217,440 | 237,373 | 262,836 | 288,370 |
| **% Share in total employment** | **1.8** | **1.6** | **1.8** | **1.9** | **1.9** | **1.9** | **1.9** | **2.1** | **2.2** | **2.4** |

**Source** Eurostat [sbs_na_1a_se_r2] and [lfsi_emp_a]

177 See https://www.biurowirtualnewarszawa.pl/english/

A remarkable evolution in Poland concerns the average number of persons employed per company. In 2008, this was only 3.2 persons, while in 2017 it increased to 4.4 persons.[178] Although this shows a growth of 37.5%, indicating that the average road freight transport company is growing in size, it is still below the EU-28 average of 5.7 persons in 2017. This number seems to confirm the statement made by Gis and Waśkiewicz (2017:182) that 'small, often family-owned businesses dominate the structure of Polish international road freight transport'.

Although the ageing workforce is an important issue in most Member States, it seems to be of less importance in Poland. In 2008, 23.8% of all persons employed were 50 years or older,[179] while this share amounted to 29.3% in NACE-code H49 'Land transport and transport via pipelines'.[180] In 2019, these shares amounted to 27.7% and 29.6% respectively. This shows that the share of older persons employed grew stronger in general (+3.9 percentage points) than in the transport sector (+0.2 percentage points). Furthermore, the growth in general is not as strong as in other Member States, indicating that the workforce in Poland is not yet ageing as much. This is slightly contradictory to what Vitols and Voss (2019) claimed, namely a lack of drivers and a difficulty to attract young people in the Polish road transport sector. Nevertheless, it is possible that this driver shortage is not yet reflected in the figures, as Rolbiecki and Książkiewicz (2018) for instance also indicate that the shortage of drivers in Poland has already reached 100 thousands and a fifth of all transport companies have already suffered from the consequences of this situation. Furthermore, they state that '40% of drivers currently employed by Polish carriers are 65 or older' (Rolbiecki & Książkiewicz, 2018:121) which is quite a difference from the 29.6% we found for persons employed in NACE H49 older than 50 years.

An important issue in Poland is the growth of third country nationals active in the road transport sector. In 2012, Poland already issued 5,353 driver attestations, or 19% of all driver attestations issued in the EU-28 (Table 4.35). However, in 2018 Poland issued more than 72,300 driver attestations, a growth of over 1,250%. These driver attestations amount to 54.2% of all driver attestations issued in the EU.

It is also clear that third country nationals are becoming more important in the Polish road freight transport by looking at the share of attestations in circulation compared to the total number of persons employed in this sector. In 2012, only 1.5% of persons employed were third country nationals, while this share grew to 12.1% in 2017. Of course, this high share can be expected as Poland borders certain non-EU countries (Ukraine, Russia and Belarus).

**Table 4.35 Driver attestations issued and in circulation, Poland, 2012-2018**

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| Number of driver attestations issued | 5,353 | 5,641 | 9,255 | 20,765 | 41,391 | 65,192 | 72,390 |
| % Share in total driver attestations issued by EU-28 | 19.1 | 20.8 | 27.5 | 44.7 | 55.3 | 60.2 | 54.2 |
| Number of driver attestations in circulation | 4,221 | 4,771 | 6,809 | 13,238 | 26,624 | 46,138 | 67,891 |
| % Share in total number of persons employed in NACE 4941 | 1.5 | 1.6 | 2.3 | 4.1 | 7.5 | 12.1 | n.a. |

**Source** Own elaborations based on European Commission (n.d.-h) and Eurostat [sbs_na_1a_se_r2]

178 Eurostat [sbs_na_1a_se_r2].
179 Eurostat [lfsq_egdn2].
180 Eurostat [lfsq_egan22d].

### 4.5.4 Cross-border elements

#### 4.5.4.1 Companies with a foreign majority shareholder

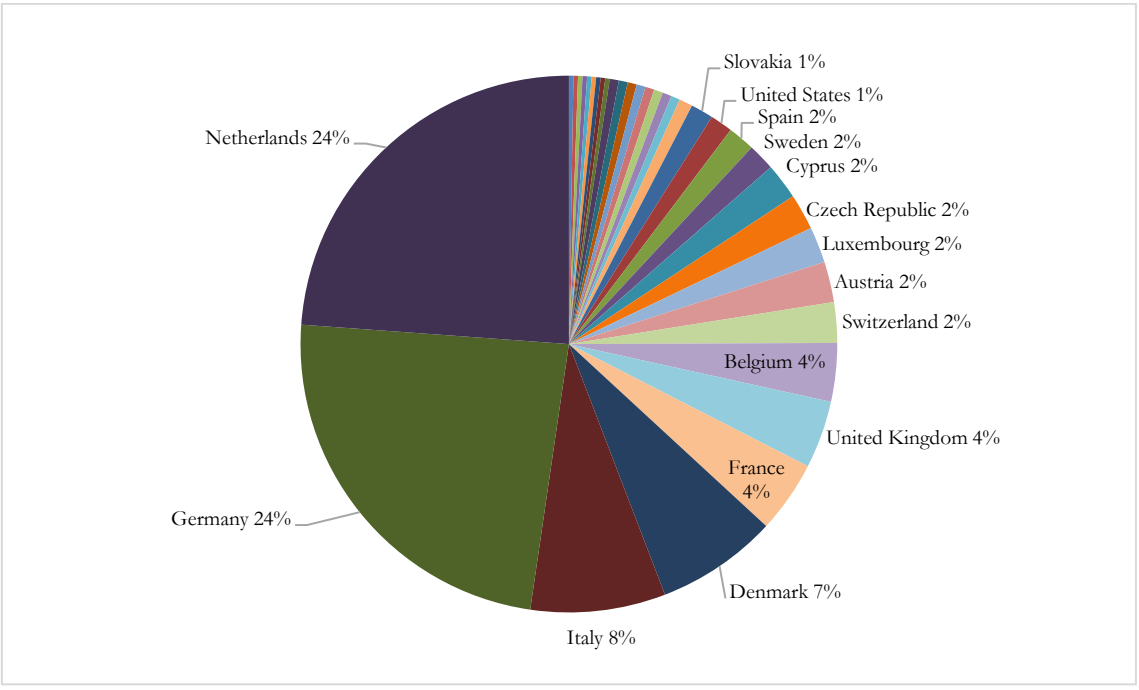
Out of the 10,198 road transport companies in Poland, 331 have a foreign majority shareholder, or 3.2%.[181] Although this share might be limited, these companies represent more than a fifth of the turnover created and employees active in this sector, indicating that particularly large companies have foreign majority shareholders.

More than a fifth of the companies with a foreign majority shareholder are located in Warsaw. Additionally, 4.5% are located in Poznan, 3.9% in Szczecin, 3.6% in Wroclaw, and 3.3% in Gdynia.

The foreign shareholders themselves are highly concentrated in the EU, as only 7.9% is located outside the EU. Even more specifically, 83.7% of all foreign majority shareholders are located in EU-15 Member States and 8.4% in other EU-13 Member States.

It can be seen in Figure 4.29 that almost half of all foreign majority shareholders are located in two Member States, namely the Netherlands (24%) and Germany (24%). Furthermore, 8% originates from Italy and 7% from Denmark.

**Figure 4.29 Location of foreign majority shareholder of Polish companies active under NACE 4941 'Freight transport by road'**




* The labels of countries where less than 1% of shareholders is located were removed for clarity. Together they account for 8% of all foreign majority shareholders. The countries consist of Ukraine, Turkey, South Korea, New Zealand, Malta, Lithuania, Hungary, Greece, Estonia, United Arab Emirates, Slovenia, Russia, Israel, India, Hong Kong, Finland, Bulgaria, and Belarus.

**Source** Orbis database [Data extracted 12 May 2020]

#### 4.5.4.2 Companies with a foreign subsidiary

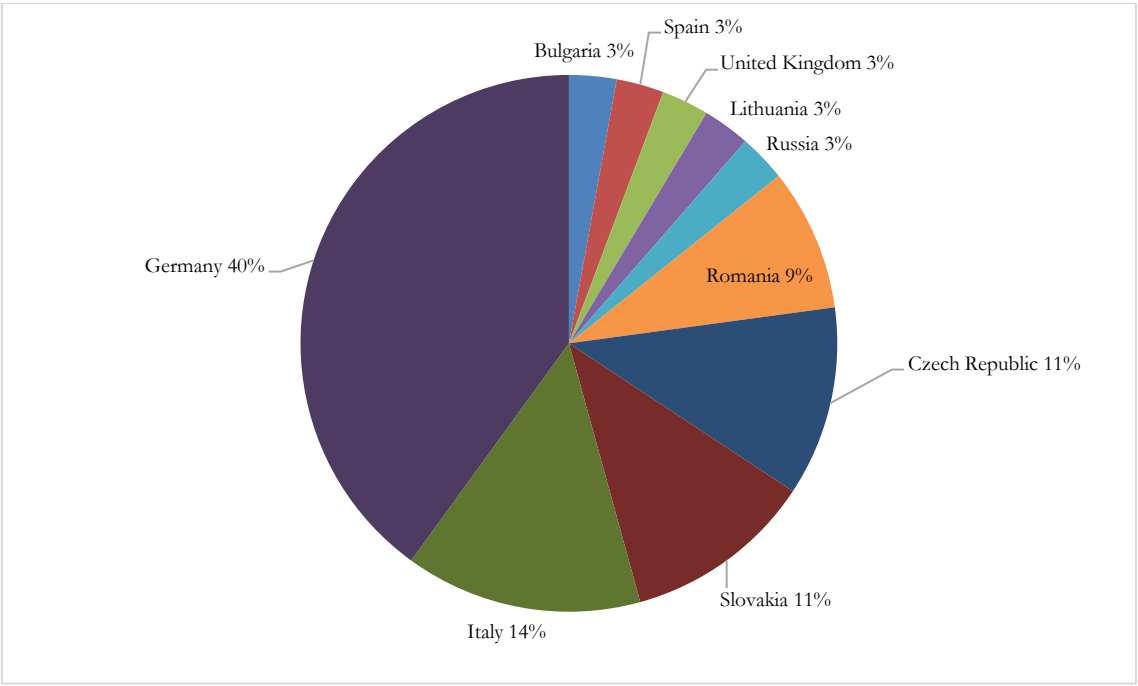
In total, only 25 companies out of the 10,198 road transport companies in Poland have a foreign subsidiary, or 0.2% of all companies.[182] These companies represent 3% of turnover and 1.1% of employees active in this sector.

181 Orbis database [Data extracted 15 May 2020].
182 Orbis database [Data extracted 15 May 2020].

These 25 companies have an average of 2.3 subsidiaries. The median company only has one subsidiary, which is the lowest of all six Member States. This might indicate that Polish transport companies are still rather small as opposed to large multinationals. In total, these companies have 57 subsidiaries, of which 35 are located outside of Poland. Almost all subsidiaries are located in the EU (97%), as only one of the 35 subsidiaries is located outside the EU (3%). Out of the 34 subsidiaries located in the EU, 21 are located in the EU-15 (60% of total subsidiaries), and 13 in the EU-13 (37%).

The majority of the subsidiaries are located in some of Poland's neighbouring countries (Figure 4.30). Most notably Germany, as 40% of subsidiaries are located here, followed by Slovakia (11%), and the Czech Republic (11%). Furthermore, a notable 14% of subsidiaries are located in Italy.

**Figure 4.30 Location of foreign subsidiaries of Polish companies active under NACE 4941 'Freight transport by road'**




**Source** Orbis database [Data extracted 13 May 2020]

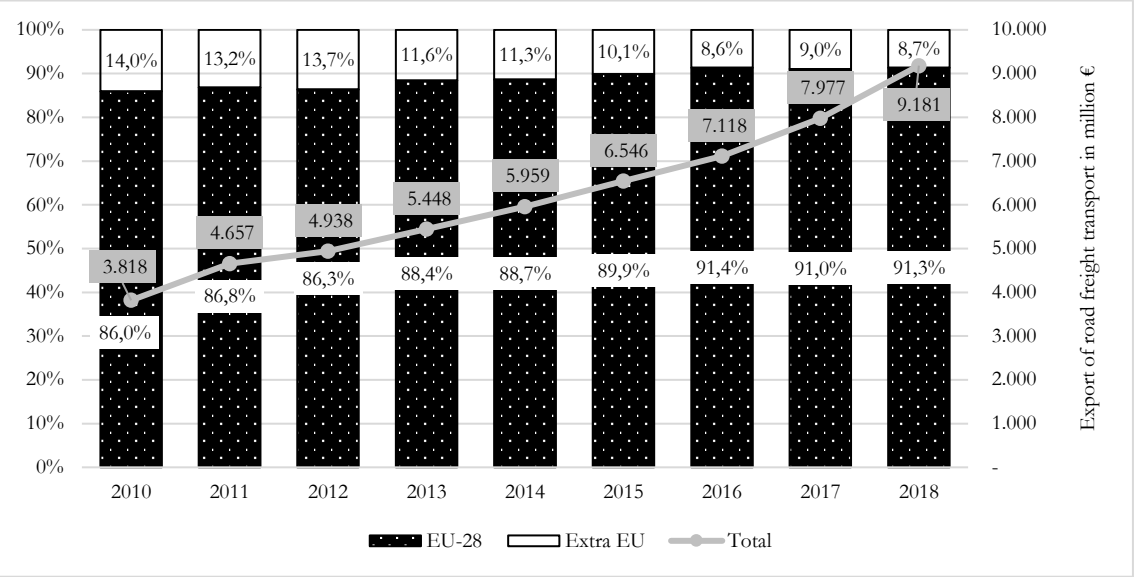
#### 4.5.4.3 Export of services

This chapter has already displayed the importance of Poland as a transport country, which is once again reaffirmed when analysing the export of services. Figure 4.31 indicates that in 2018, Poland exported € 9,181 million road freight transport services, the highest amount in the EU-28, and good for 14% of all exported services in the EU. Additionally, the export of services in Poland has been flourishing over the years. From 2010 to 2018, it knew an increase of no less than 140.5%.

It is remarkable to see that the share of extra-EU as destination has been on the decrease. In 2010, Poland still exported 14.0% of services to countries outside the EU, whereas in 2018, this share only accounted for 8.7%.

The breakdown of country of destination for EU Member States can be found in appendix 5. The most favoured country of destination for Polish international transport is certainly Germany, with 31.7% of total services in 2018. Furthermore, this has always been the most prominent country of destination with around 31% of services being exported to Germany from 2010 to 2018. The Netherlands with 12.7% and France with 7.7% complete the top three of countries of destination for the export of services in 2018.

**Figure 4.31** **Export of services of road freight transport, breakdown by location where services are provided, in million €, 2010-2018, Poland**




**Source** Eurostat [bop_its6_det]

It was already made clear in this chapter that international transport is of great importance for Polish hauliers. Not only can we look at the share of international transport in total transport based on tonne-km performed, but also by analysing the export of services on total turnover created in the sector. This analysis is pictured in Table 4.36.

Both the share of international transport based on turnover and tonne-km have grown over the years. In 2010, around 59% of transport performed in tonne-km by Poland concerned international transport, and the export of services accounted for 23% of total turnover created. In 2017, 64% of transport performed in tonne-km was international transport and the export of services generated 29% of turnover. The rather large difference between these shares indicates that Poland is a low-cost country in terms of international transport, as it performs a majority of international transport in terms of tonne-km while the export of services only generates a minority of the turnover in financial terms.

**Table 4.36** **Comparison share international road freight transport in total road freight transport based on total turnover created and total tonne-km performed, 2010-2018, Poland**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|
| **Based on turnover (in million €)** | | | | | | | | | |
| Export of services | 3,818 | 4,657 | 4,938 | 5,448 | 5,959 | 6,546 | 7,118 | 7,977 | 9,181 |
| Total turnover | 16,567 | 19,113 | 19,836 | 20,225 | 21,655 | 24,782 | 25,301 | 27,610 | |
| % Share export of services | 23.0 | 24.4 | 24.9 | 26.9 | 27.5 | 26.4 | 28.1 | 28.9 | |
| **Based on tonne-km (in million tonne-km)** | | | | | | | | | |
| International transport | 120,090 | 117,917 | 133,319 | 147,274 | 154,303 | 156,034 | 184,115 | 215,184 | 201,182 |
| Total transport | 202,308 | 207,651 | 222,332 | 247,594 | 250,931 | 260,713 | 290,749 | 335,220 | 315,874 |
| % Share international transport | 59.4 | 56.8 | 60.0 | 59.5 | 61.5 | 59.8 | 63.3 | 64.2 | 63.7 |

**Source** Eurostat [bop_its6_det], [sbs_na_1a_se_r2], and [road_go_ta_tott]

### 4.5.5 Infringements/fraud and error

In 2015-2016, Poland checked no less than 9,323,443 working days, which amounts to 6.5% of all working days, thus certainly reaching the requirement of 3% set by the EU Regulations on social rules in road transport (see Section 3.6). About one third of the working days was checked at premises (32%), and two thirds at the roadside (68%).

Of all the vehicles checked at the roadside, the majority were registered in Poland itself (66%). However, almost one fifth of vehicles was also registered in a third country (19%). The remaining 16% of checked vehicles were registered in another EU Member State. Furthermore, a relatively high share of vehicles checked by Poland were carriers of passengers (21.4%), although the large majority were still carriers of goods (78.6%).

The total number of infringements found amounts to 560,721 of which 37% at the roadside (204,396 infringements) and 64% at premises (356,325) (Table 4.37). This total number of offences is the second largest found in the EU, after Germany (1,090,399 offences found). Furthermore, together with Germany (32% of total offences), Austria (11%), Latvia (8%), and Italy (7%), Poland (16%) makes up more than two thirds of all offences found in the EU.

Table 4.37 indicates that the majority of offences found at roadside checks involve the misuse and manipulation of the tachograph (33.5%). Regulation (EU) No 165/2014[183] sets out requirements for the tachograph. A tachograph records the driving time, breaks, rest periods, and other work undertaken by a driver. Its goal is to enforce the rules on driving times and rest periods and monitor the driving times of professional drivers in order to prevent fatigue and guarantee fair competition and road safety (DG Mobility and Transport, 2020a). A questionnaire filled out by 46 professional drivers working in transport companies in Poland found that the most common infringements regarding the tachograph was the incorrect use of the recording device (Sudowski & Mrugalska, 2017). Furthermore, 32% of the respondents indicated that they had interfered with their work time. It is sometimes the case that drivers are instructed by employers to put the tachograph on rest while waiting at border checks or (un)loading goods, whereas this should actually be paid working time (ETF, 2020b). Consequently, there is a lot of hidden work.

In addition to offences found at the roadside, around 356,000 offences were found at premises (Table 4.37). The offence rate at premises in Poland is even one of the highest in the EU, seeing that approximately 81 offences were found per undertaking in 2015-2016. Additionally, it is remarkable to see that more than 80% of all offences found at premises have to do with the 28 days record sheet, which indicates that many undertakings do not have this information available.

183 Regulation (EU) No 165/2014 of the European Parliament and of the Council of 4 February 2014 on tachographs in road transport, repealing Council Regulation (EEC) No 3821/85 on recording equipment in road transport and amending Regulation (EC) No 561/2006 of the European Parliament and of the Council on the harmonisation of certain social legislation relating to road transport Text with EEA relevance.

**Table 4.37 Type of offences found at roadside and premises, Poland, 2015-2016**

| | | Driving time | Breaks | Rest periods | 28 days record sheet | Lack/ availa-bility of records | Incorrect func-tioning | Misuse and mani-pulation | Total offences |
|---|---|---|---|---|---|---|---|---|---|
| Roadside | Number | 23,014 | 17,919 | 56,230 | 17,862 | 14,318 | 6,643 | 68,410 | 204,396 |
| | % Share in total | 11.3 | 8.8 | 27.5 | 8.7 | 7.0 | 3.3 | 33.5 | 100 |
| Premises | Number | 6,529 | 9,285 | 21,538 | 285,654 | 193 | 11,719 | 21,407 | 356,325 |
| | % Share in total | 1.8 | 2.6 | 6.0 | 80.2 | 0.1 | 3.3 | 6.0 | 100 |

* The total reported number of offences at premises is 362,373, but this does not match the sum of all types of offences (356,325). In order to correctly calculate the shares, the sum was reported in the table.

**Source** Report from the Commission to the European Parliament and the Council on the 2015-2016 implementation of Regulation (EC) No 561/2006 on the harmonisation of certain social legislation relating to road transport and of Directive 2002/15/EC on the organisation of the working time of persons performing mobile road transport activities

Although the Commission report on the enforcement of social rules[184] does not mention Poland as one of the 15 Member States[185] that met the required number of concerted checks per year, Table 6 in that report shows that Poland participated in 7 concerted inspections, both in 2015 and 2016, organised by the ECR. Furthermore, Poland participated at international exchanges on tachograph fraud, passenger transport, secure loading, overloading, social dumping, technical checks of vehicles, and the Master Classes on tachograph as well as training workshops on transport of dangerous goods.

With regards to fraud and error in the field of applicable legislation, not much data are available for Poland. In general (not transport sector specific) as a receiving Member State in 2018, Poland got 287 requests to withdraw PDs A1 they received (Jorens *et al.*, 2019). Additionally, as a sending Member State, Poland withdrew 621 PDs A1 in 2017. Although this number seems high, it is only 0.1% of the total PDs A1 issued, seeing that Poland is the main issuing Member State in the EU.

## 4.6 Slovenia

### 4.6.1 Type of transportation

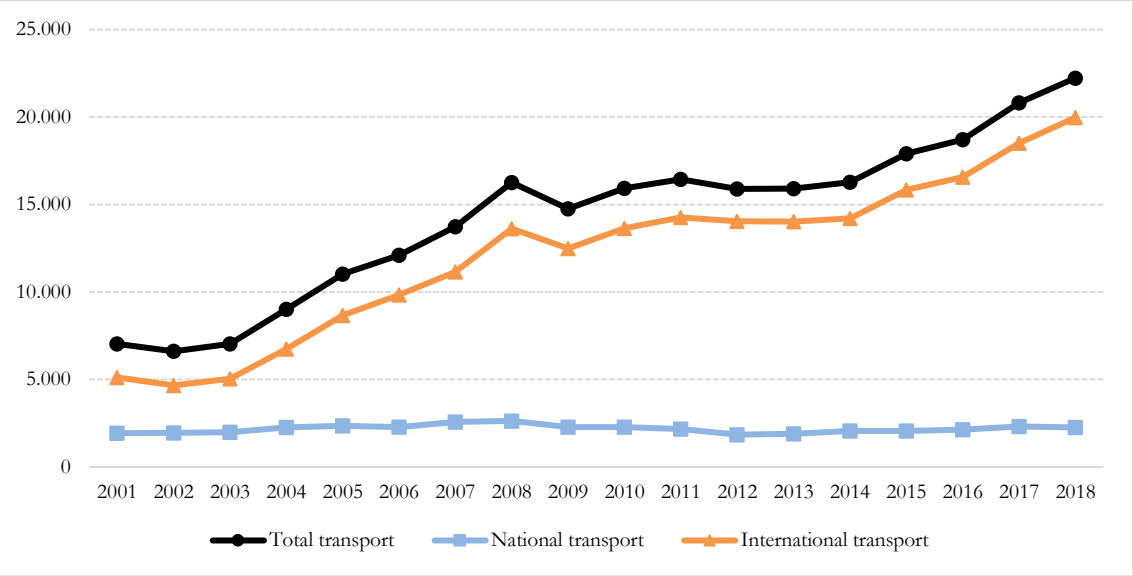
In Slovenia, the total annual transport has been on the rise ever since 2002, with only a small drop in 2009 and 2012 (Figure 4.32). It increased from 7,000 million tonne-km in 2001 to 22,200 million tonne-km in 2018, or an increase of 216%. This growth is almost completely due to the growth in international transportation, as can be seen in Figure 4.32. From 2001 to 2018, international transport grew by 291% whereas national transport only grew by 17%.

The type of international transport has changed considerably over the years (Table 4.38). Whereas goods loaded and unloaded in Slovenia still amounted to almost 80% of all international transport in 2004, they are only worth 49% of all international transport in 2018. While cabotage has increased from 1.6% to 5.0% of international transport, cross-trade stands out in particular, growing from 9.6% in 2004 to 46.5% of international transport in 2018.

184 Report from the Commission to the European Parliament and the Council on the 2015-2016 implementation of Regulation (EC) No 561/2006 on the harmonisation of certain social legislation relating to road transport and of Directive 2002/15/EC on the organisation of the working time of persons performing mobile road transport activities.

185 Austria, Czech Republic, Germany, France, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Netherlands, Romania, Slovakia, Spain, Sweden and the United Kingdom.

**Figure 4.32 Annual road freight transport, in million tonne-km, 2001-2018, Slovenia**




**Source** Eurostat [road_go_ta_tott]

**Table 4.38 Road freight transport by type of transport, share in total tonne-km, 2004, 2008 and 2018, Slovenia**

| | 2004 | 2008 | 2018 |
|---|---|---|---|
| International transport total | 100.0 | 100.0 | 100.0 |
| Goods loaded in reporting country | 39.8 | 33.0 | 28.3 |
| Goods unloaded in reporting country | 39.6 | 30.2 | 20.2 |
| Cross-trade | 9.6 | 33.9 | 46.5 |
| Cabotage | 1.6 | 2.9 | 5.0 |

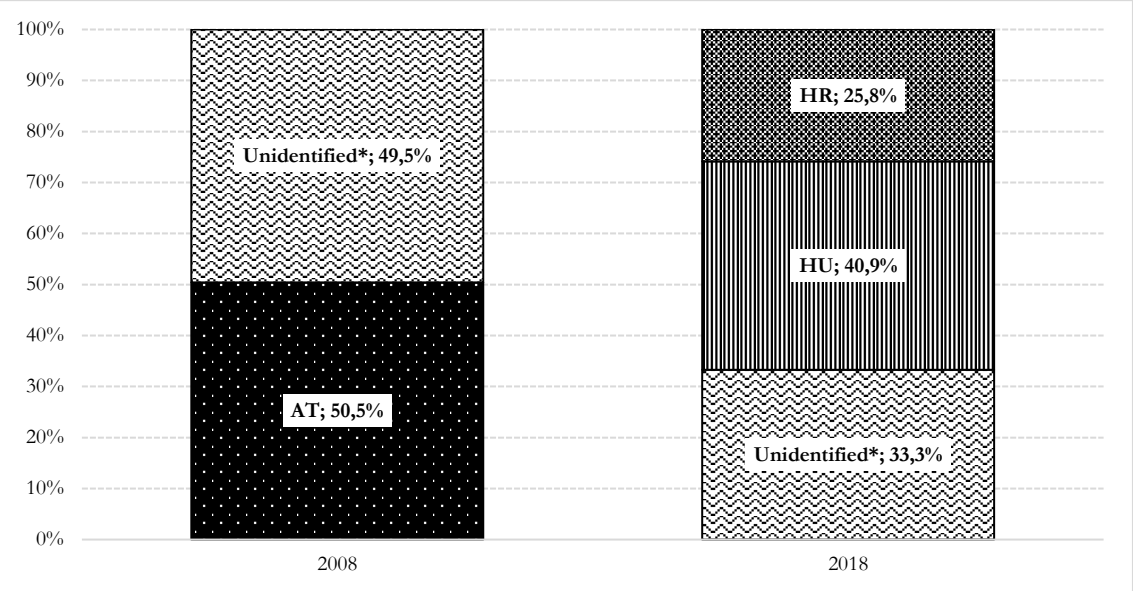
**Source** Eurostat [road_go_ta_tott]

The growth of cabotage taking place in Slovenia is remarkable. It went up from 831 thousand tonne-km in 1999 to 32,900 thousand tonne-km in 2018, or an increase of over 3,800%.[186] Although the cabotage penetration rate has also increased over the years (from 0.4% in 2001 to 2.0% in 2008),[187] the large majority of national transportation in Slovenia is still carried out by domestic hauliers.

For cabotage performed in Slovenia, it is often not known what the nationality of the hauliers is. Figure 4.33 shows this was the case for 50% of cabotage performed in 2008 and 33% of cabotage performed in 2018. However, for the cabotage for which the haulier's nationality is known, it is clear there are only a handful of nationalities present. In 2008, half of all cabotage in Slovenia was carried out by Austrian hauliers. In 2018, no data for Austria were reported, but it is hard to believe that they do not perform any cabotage in Slovenia anymore. When the number for 2014 is imputed, 24% of all cabotage in Slovenia is still performed by Austrian hauliers; then only 9% of cabotage hauliers' nationality remains unaccounted for. Furthermore, in 2018, Hungarian hauliers performed 41% of Slovenian cabotage and Croatian hauliers 26%. Most likely, they also performed a share of Slovenian cabotage in 2008 (out of the 50% unidentified), but the earliest data available for Hungarian and Croatian hauliers concern 2014 and 2018 respectively, so it is not beneficial imputing these values for 2008, as this would give a distorted view of reality.

186 Eurostat [road_go_ca_c].
187 Eurostat [road_go_ca_c] and [road_go_ta_tott].

**Figure 4.33 Share in cabotage transport in total tonne-km in Slovenia, 2008 and 2018**




* The share of 'unidentified' is included, as the total amount of cabotage reported in [road_go_ca_hac] did not match the amount reported in [road_go_ca_c]. This means that for a certain amount of cabotage, it is not known by which Member States it was performed. For Slovenia, this is the case for 49.5% of cabotage in 2008 and 33.3% in 2018.

**Source** Eurostat [road_go_ca_hac] and [road_go_ca_c]

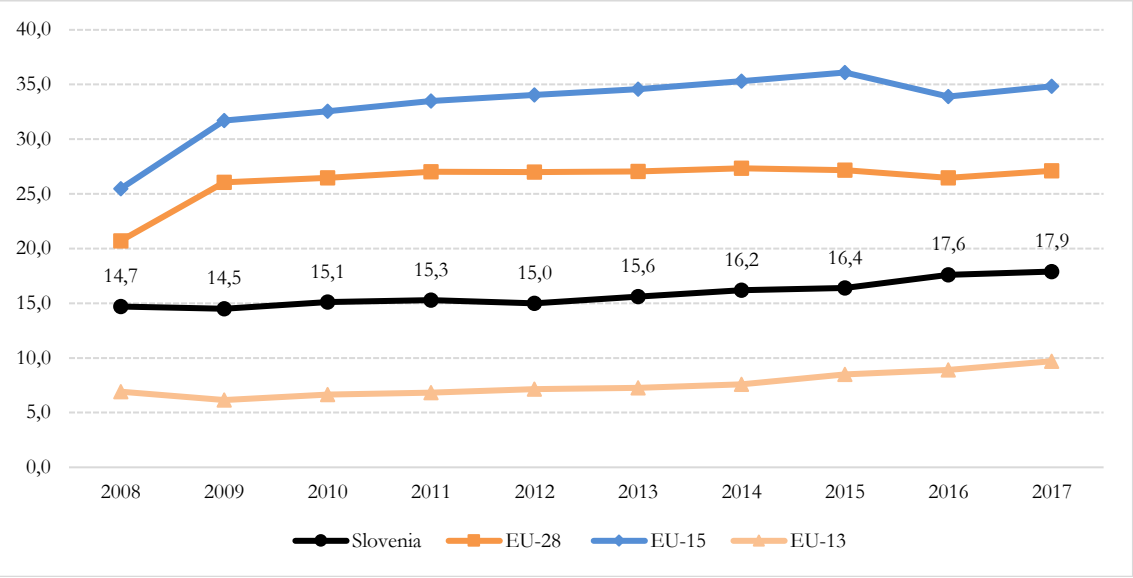
### 4.6.2 Profile of companies active in the road transport sector

Surprisingly, the number of road freight transport companies in Slovenia has decreased over time from 6,440 in 2008 to 5,549 in 2017.[188] This is surprising, as Figure 4.32 in Section 4.6.1 showed that in general, more and more transport is carried out by Slovenian hauliers, specifically concerning international transport. However, the total turnover generated by these companies increased by around 28%, from € 2,157 million in 2008 to € 2,758 million in 2017. Thus, the average turnover per enterprise grew by 48.4%. In 2008, a company earned around € 335,000 turnover, and in 2017, this rose to € 497,000. Seeing that more transport is carried out by Slovenian hauliers, but less companies are active in the sector, it can be derived that the average Slovenian road transport company is becoming bigger and/or more efficient.

The average personnel cost of road freight companies in Slovenia increased by 21.8% over a period of nine years, going from € 14,700 in 2008 to € 17,900 in 2017 (Figure 4.34). This average has been situated between the EU-13 average and the EU-28 average in this period.

188 Eurostat [sbs_na_1a_se_r2].

**Figure 4.34** **Average personnel cost of companies active in NACE 4941 'Freight transport by road', Slovenia, EU-28, EU-15, EU-13, 2008-2017, in € 1,000**




**Source** Eurostat [sbs_na_1a_se_r2]

When putting the average personnel cost in NACE 4941 in perspective, it can be seen that it is lower than the average annual personnel cost in the total economy (Table 4.39). However, from 2008 to 2017 the average personnel cost in the road transport sector has grown more than in general. In addition, it is growing (slightly) faster (2.2% annual growth) than in the total economy (2.1%).

**Table 4.39** **Average personnel cost of companies in the total economy and active in NACE 4941 'Freight transport by road', Slovenia, 2008-2017, in € 1,000**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Evolution 2008-2017 | Annual growth rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total economy | 19.8 | 19.8 | 20.8 | 21.4 | 21.4 | 21.6 | 22.1 | 22.5 | 23.4 | 23.9 | 20.7% | 2.1% |
| NACE 4941 | 14.7 | 14.5 | 15.1 | 15.3 | 15.0 | 15.6 | 16.2 | 16.4 | 17.6 | 17.9 | 21.8% | 2.2% |

**Source** Eurostat [sbs_na_sca_r2] and Eurostat [sbs_na_1a_se_r2]

In order to identify letterbox companies in the road transport sector, a possible indicator is the address of the company. Regulation No 1071/2009 sets out that road freight transport companies are required to have an effective and stable establishment (see Section 3.6.1). Thus, when multiple companies are located at one address, it is questionable that they fulfil this requirement. Therefore, Table 4.40 shows the top 5 addresses where most Slovenian road freight transport companies were located. At every address, more than 25 transport companies were located. However, the total number of companies at each address is even higher, with more than 450 companies at Kotnikova Ulica 5, and more than 300 at Dunajska Cesta 136. Furthermore, both addresses in Celje seem especially 'popular' for road transport companies, as more than three quarters of companies located there are active in NACE 4941 'Freight transport by road'. Although not every company located at these addresses is a letterbox company, for road transport companies it is rather unlikely that the requirement of an effective and stable establishment is fulfilled, when numerous other companies are located at the same address.

**Table 4.40 Addresses of companies active under NACE 4941 'Freight transport by road' where multiple companies are located, Slovenia**

| Address | Number of companies active under NACE 4941 (A)* | Total number of companies (B)** | % Share in total (A/B) |
|---|---|---|---|
| Ljubljanska cesta 60, Celje | 52 | 59 | 88.1 |
| Celovska Cesta 69, Ljubljana | 38 | 101 | 37.6 |
| Dunajska Cesta 136, Ljubljana | 33 | 306 | 10.8 |
| Jenkova ulica 24, Celje | 29 | 37 | 78.4 |
| Kotnikova Ulica 5, Ljubljana | 26 | 455 | 5.7 |

* This includes active companies active under NACE 4941 'Freight transport by road' with the standard legal form of private limited company or public limited company.
** This includes active companies with all standard legal forms. Therefore, it is possible that a company active under NACE 4941 with a standard legal form other than private/public limited company is included in this number.
**Source** Orbis database [Data extracted 15 May 2020]

### 4.6.3 Employment in the road transport sector

In Slovenia, despite the strong growth in the sector in terms of tonne-km performed (Figure 4.32), the number of persons employed decreased from 2008 until 2013, but has been back on a steep rise since 2014 (Table 4.41). In 2017, 25,650 persons were employed in the freight transport by road sector, an increase of 10% from 2008, when 23,413 were employed in the sector. It is remarkable to see that especially the number of employees has increased in this time period, namely by 20%, whereas the number of unpaid persons employed has decreased by over 30%. While unpaid persons accounted for approximately 20% of the Slovenian road freight transport workforce in 2008, their share dropped to 13% in 2017.

The share in total employment was already high in 2008, with 2.4%, and has even increased to 2.7% in 2017. This is especially high when comparing it to the EU-28 average of 1.5% in 2017.

**Table 4.41 Employment in NACE 4941 'Freight transport by road', Slovenia, 2008-2017**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Persons employed** | **23,413** | **22,319** | **21,534** | **21,313** | **20,699** | **20,388** | **21,137** | **22,370** | **23,751** | **25,650** |
| Unpaid persons employed | 4,704 | 4,478 | 4,249 | 3,970 | 3,813 | 3,677 | 3,515 | 3,433 | 3,340 | 3,277 |
| Employees | 18,709 | 17,840 | 17,285 | 17,344 | 16,886 | 16,711 | 17,622 | 18,937 | 20,411 | 22,373 |
| **% Share in total employment** | **2.4** | **2.3** | **2.3** | **2.3** | **2.3** | **2.3** | **2.4** | **2.5** | **2.6** | **2.7** |

**Source** Eurostat [sbs_na_1a_se_r2] and [lfsi_emp_a]

The general trend seems to be that the size of road freight transport companies is growing, at least concerning the average number of persons employed per company. This is also the case in Slovenia. In 2008, an average of 3.6 persons were employed per company, whereas this average amounted to 4.6 persons in 2017,[189] or an increase of 27.8%.

In Slovenia, in 2008, the share of 50+ persons employed in NACE H49 'Land transport and transport via pipelines' was lower (21.0%)[190] than in all NACE-codes (23.0%).[191] However, in 2019, this has clearly changed. The share of 50+ persons employed in NACE H49 grew by 14.9 percentage

189 Eurostat [sbs_na_1a_se_r2].
190 Eurostat [lfsq_egan22d].
191 Eurostat [lfsq_egdn2].

points to 35.8%, while the share of older persons employed in total 'only' grew by 6.5 percentage points to 29.5%.

The number of driver attestations gives an indication of the number of third country nationals active in the road freight transport. Table 4.42 shows that the number of attestations issued by Slovenia increased from 5,876 in 2012 to 13,345 in 2018, or an increase of 127%. Although in 2012, Slovenia issued 21% of all EU-28 attestations issued and the share decreased to 10% in 2018, it is still remarkable that a tenth of all EU-28 driver attestations were issued by Slovenia.

Even more remarkable is the comparison of the number of driver attestations in circulation with the total number of persons employed in NACE 4941 'Freight transport by road'. This share went up from 28% in 2012 to 44% in 2017, meaning that 44% of all persons employed in this sector are third country nationals. This is a strong increase, and especially noteworthy, as Slovenia does not border any non-EU countries. However, Slovenia has a number of bilateral agreements with countries in the region in terms of employees. For instance, a worker can come to work in Slovenia from Bosnia and Herzegovina if they have received an employment permit for a particular Slovenian employer (ETF, 2020b).

**Table 4.42 Driver attestations issued and in circulation, Slovenia, 2012-2018**

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| Number of driver attestations issued | 5,876 | 5,755 | 5,461 | 6,418 | 8,973 | 12,332 | 13,345 |
| % Share in total driver attestations issued by EU-28 | 20.9 | 21.2 | 16.2 | 13.8 | 12.0 | 11.4 | 10.0 |
| Number of driver attestations in circulation | 5,776 | 5,254 | 6,056 | 7,169 | 9,212 | 11,234 | 8,638 |
| % Share in total number of persons employed in NACE 4941 | 27.9 | 25.8 | 28.7 | 32.0 | 38.8 | 43.8 | n.a. |

**Source** Own elaborations based on European Commission (n.d.-h) and Eurostat [sbs_na_1a_se_r2]

## 4.6.4 Cross-border elements

### 4.6.4.1 Companies with a foreign majority shareholder

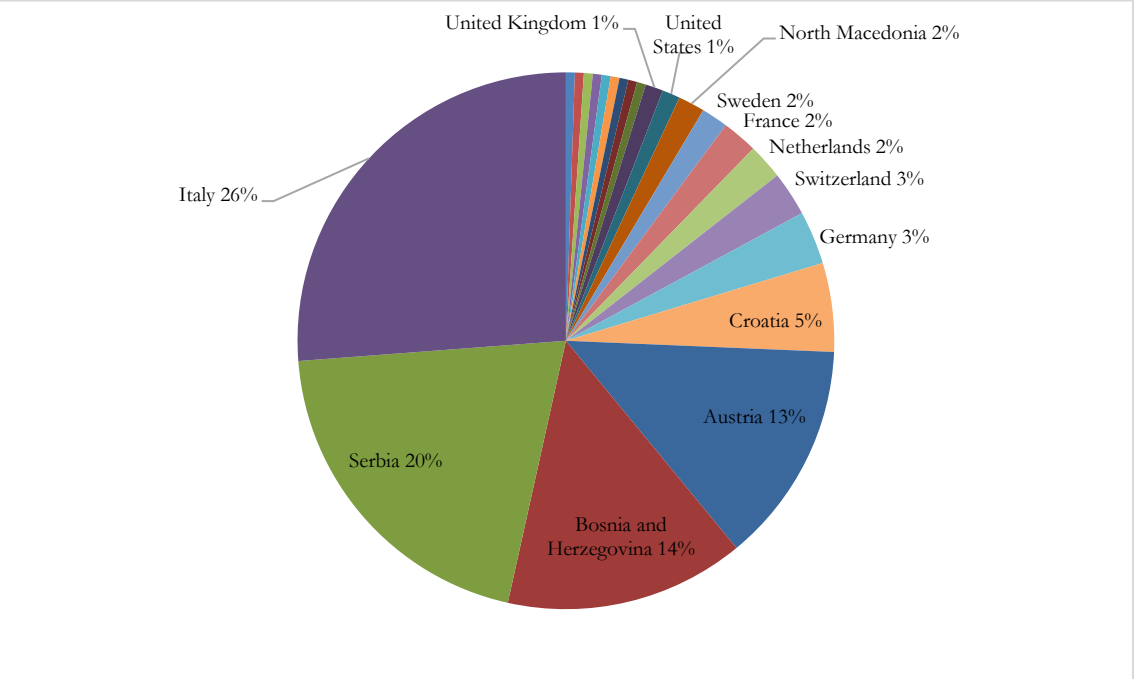
In Slovenia, 5.1% of all transport companies have a foreign majority shareholder.[192] These companies represent 9.2% of all turnover created in this sector, and 9.0% of employment.

The companies with a foreign majority shareholder are mainly concentrated in three cities. Around 31% is located in Ljubljana, 12.7% in Koper, and 11.4% in Celje.

The foreign shareholders are divided between the EU (58.3%) and outside the EU (41.7%). Over half of the foreign shareholders are located in the EU-15 (50.3%), and only 8.0% in the EU-13. Figure 4.35 shows a detailed overview of the location of the foreign majority shareholders. A top four can certainly be noticed with 26% of foreign shareholders being located in Italy, 20% in Serbia, 14% in Bosnia and Herzegovina, and 13% in Austria.

192 Orbis database [Data extracted 15 May 2020].

**Figure 4.35 Location of foreign majority shareholder of Slovenian companies active under NACE 4941 'Freight transport by road'**




* The labels of countries where less than 1% of shareholders is located were removed for clarity. Together they account for 5% of all foreign majority shareholders. The countries consist of Turkey, Slovakia, Russia, Lithuania, Hungary, Estonia, Denmark, China, and Bulgaria.

**Source** Orbis database [Data extracted 12 May 2020]

### 4.6.4.2 Companies with a foreign subsidiary

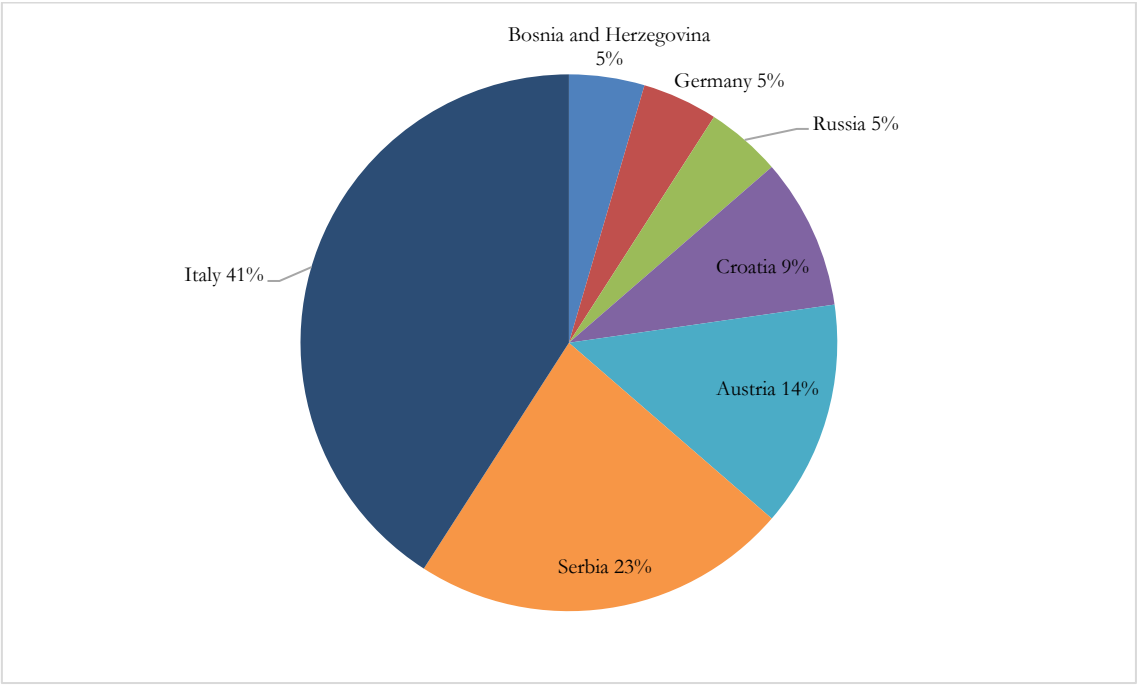
Out of the 3,088 Slovenian road transport companies, only 13 have a foreign subsidiary, or 0.4%.[193] They represent 2.6% of all turnover created in the road transport sector, and 1.7% of employment taking place in this sector.

Both the average number and median number of subsidiaries for these Slovenian companies with a subsidiary amounts to 2. This average number is the lowest of all six Member States. These 13 companies have a total of 27 subsidiaries, of which 22 are located outside of Slovenia. Around two thirds of these 22 subsidiaries are located in the EU (68.2%), and the remaining third is located outside of the EU (31.8%). Out of the subsidiaries located in the EU, the majority is located in the EU-15 (59.1% of all subsidiaries), and a minority in the EU-13 (9.1%).

As Figure 4.36 indicates, the majority of foreign subsidiaries is located in Italy (41%). Furthermore, 23% are located in Serbia, which does not border Slovenia. Another 14% is located in Austria, and 9% in Croatia, two other neighbouring countries of Slovenia.

193 Orbis database [Data extracted 15 May 2020].

**Figure 4.36 Location of foreign subsidiaries of Slovenian companies active under NACE 4941 'Freight transport by road'**



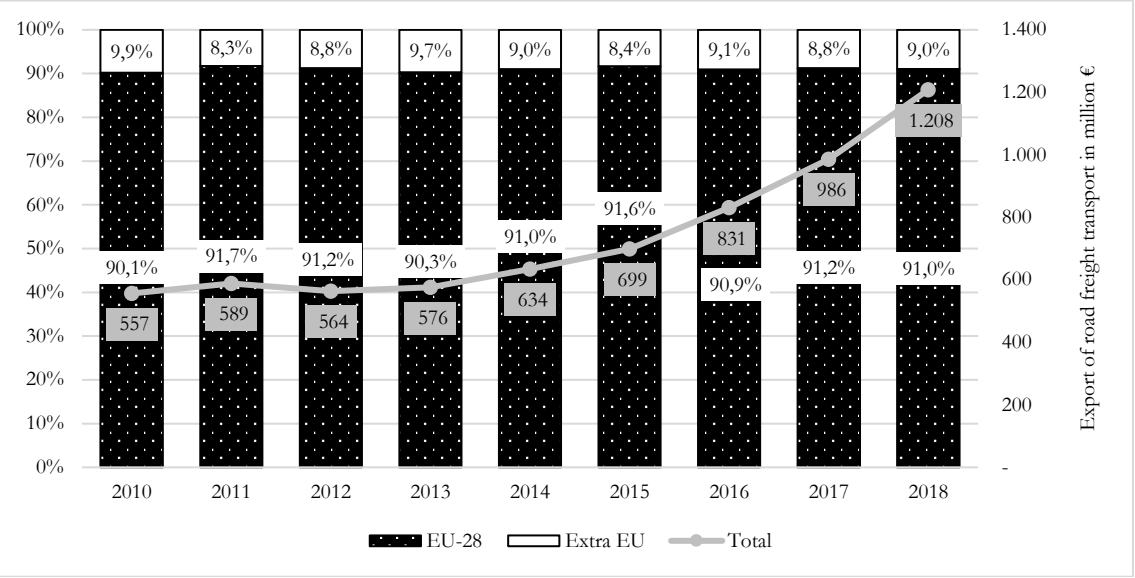

**Source** Orbis database [Data extracted 13 May 2020]

#### 4.6.4.3 Export of services

Slovenia knew a rather stable evolution of the export of road freight transport services, but from 2014 onwards, it knew a steep surge (Figure 4.37). Whereas in 2010, Slovenia exported € 557 million road freight transport services, in 2018 this amounted to € 1,208 million, or a growth of 117.1%. The share of services exported to countries outside the EU has remained stable at around 9%.

The detailed analysis of the countries of destination in appendix 5 shows that in 2018, Austria was the top one Member State of destination with 22.4% of total services exported to this Member State. However, the top one place has been fluctuating between three Member States over the years. From 2010 to 2012, Italy was the most prominent country of destination with 23.7%, 22.9% and 21.5% respectively. The following three years, Germany came in first place (21.4% in 2013, 20.7% in 2014, and 20.3% in 2015). Finally, from 2016 to 2018, Austria was the preferred destination with 19.9% in 2016 and 21.1% in 2017. In 2018, Germany and Italy join Austria in the top three, and France follows with 7.1%.

**Figure 4.37 Export of services of road freight transport, breakdown by location where services are provided, in million €, 2010-2018, Slovenia**




**Source** Eurostat [bop_its6_det]

For Slovenia, performing international transport is of great importance, as could be seen in Section 4.6.1. However, one might wonder if this is also the case when looking at the share of export of services on total turnover created. Table 4.43 indicates that this is much less the case. In 2017, 89% of tonne-km performed by Slovenia concerned international transport, while the export of services of road freight transport only accounted for 36% of turnover. Nonetheless, there might be a small change taking place when looking at the evolution of the shares. While from 2010 to 2017, the share of international transport based on tonne-km increased by 3.3 percentage points, in grew by 7.6 percentage points in terms of turnover created.

**Table 4.43 Comparison share international road freight transport in total road freight transport based on total turnover created and total tonne-km performed, 2010-2018, Slovenia**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|
| **Based on turnover (in million €)** | | | | | | | | | |
| Export of services | 557 | 589 | 564 | 576 | 634 | 699 | 831 | 986 | 1,208 |
| Total turnover | 1,979 | 2,107 | 2,056 | 2,116 | 2,232 | 2,320 | 2,483 | 2,758 | |
| % Share export of services | 28.1 | 27.9 | 27.4 | 27.2 | 28.4 | 30.1 | 33.5 | 35.7 | |
| **Based on tonne-km (in million tonne-km)** | | | | | | | | | |
| International transport | 13,643 | 14,262 | 14,039 | 14,016 | 14,211 | 15,840 | 16,573 | 18,504 | 19,969 |
| Total transport | 15,931 | 16,439 | 15,888 | 15,905 | 16,273 | 17,909 | 18,707 | 20,814 | 22,225 |
| % Share international transport | 85.6 | 86.8 | 88.4 | 88.1 | 87.3 | 88.4 | 88.6 | 88.9 | 89.8 |

**Source** Eurostat [bop_its6_det], [sbs_na_1a_se_r2], and [road_go_ta_tott]

### 4.6.5 Infringements/fraud and error

The enforcement of social rules in road transport in EU regulations state that at least 3% of working days need to be checked. Slovenia met this requirement by checking 660,676 working days which equals 4.2% of total working days checked. Around one third of working days was checked at premises (35%), and two thirds were checked at the roadside (65%).

Concerning the roadside checks, a majority of checked vehicles were registered outside the EU (43%), followed by Slovenian vehicles (30%), and vehicles registered in another EU Member State (28%). Although the EU report mentioned that the geographic location and volume of transit operations in Member States may play a role in this division of checked vehicles, this seems rather strange for Slovenia, seeing that it does not border any non-EU Member States.

However, Section 4.6.3 did indicate that in 2017, Slovenia had 11,234 driver attestations in circulation, which equals 44% of the total number of persons employed. Therefore, 44% of persons employed in the road transport sector in Slovenia are third country nationals. Furthermore, cross-border element of non-EU countries were also clearly present. Section 4.6.4.1 showed that 2 out of the top 3 countries where foreign majority shareholder of Slovenian transport companies are located, were non-EU countries. It concerns Serbia, where 20% of foreign majority shareholders are located, and Bosnia and Herzegovina with 14%. Italy came in first place with 26% of foreign majority shareholders. Additionally, the location of foreign subsidiaries also showed a comparable picture. Section 4.6.4.2 revealed that 23% of foreign subsidiaries of Slovenian transport companies are located in Serbia, only following Italy with 41%. Moreover, 5% are located in Russia and 5% in Bosnia and Herzegovina. Therefore, it does not only seem that Slovenia performs targeted checks on non-EU vehicles, but it also seems possible that many non-EU vehicles are indeed performing transport operations in Slovenia.

The type of vehicles checked is mostly a carrier of goods (89.7%) as opposed to a carrier of passengers (10.3%).

The type of offences found in Slovenia is pictured in Table 4.44. Out of 15,104 offences, the majority was found at the roadside (11,025 or 73% of total offences), and the remaining 27% at company premises. Offences at the roadside mainly concerns rest periods (36%), followed by breaks (28%). Offences at premises on the other hand primarily concern driving time (34.6%). Rules regarding the driving time are laid out in Regulation (EC) No 561/2006,[194] the Driving Time Regulation. In this regulation, Article 6 states that the daily driving time cannot exceed 9 hours, or 10 hours for maximum twice a week. Moreover, the weekly driving time may not exceed 56 hours and the total accumulated driving time during any two consecutive weeks shall not exceed 90 hours. Seeing that 1,410 offences were found against driving time at premises in Slovenia, it can be expected that drivers are working too many hours, which can impede the working conditions and road safety.

194 Regulation (EC) No 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport and amending Council Regulations (EEC) No 3821/85 and (EC) No 2135/98 and repealing Council Regulation (EEC) No 3820/85.

**Table 4.44 Type of offences found at roadside and premises, Slovenia, 2015-2016**

| | | Driving time | Breaks | Rest periods | 28 days record sheet | Lack/ availa-bility of records | Incorrect func-tioning | Misuse and mani-pulation | Total offences |
|---|---|---|---|---|---|---|---|---|---|
| Roadside | Number | 1,371 | 3,094 | 3,936 | 738 | 365 | 641 | 880 | 11,025 |
| | % Share in total | 12.4 | 28.1 | 35.7 | 6.7 | 3.3 | 5.8 | 8.0 | 100 |
| Premises | Number | 1,410 | 718 | 1,352 | 342 | 42 | 133 | 82 | 4,079 |
| | % Share in total | 34.6 | 17.6 | 33.1 | 8.4 | 1.0 | 3.3 | 2.0 | 100 |

**Source** Report from the Commission to the European Parliament and the Council on the 2015-2016 implementation of Regulation (EC) No 561/2006 on the harmonisation of certain social legislation relating to road transport and of Directive 2002/15/EC on the organisation of the working time of persons performing mobile road transport activities

The minimum requirement of performing at least six concerted roadside checks per year with at least one other Member State was not reached by Slovenia in 2015-2016. Nevertheless, they carried out 3 concerted checks with Hungary and Croatia. In addition, experiences were exchanged through the ECR where Slovenia is an active observer. In 2015 and 2016, inspectors participated in multilateral concerted checks in other ECR member countries.

It is interesting to notice that in general (not specifically for the transport sector), Slovenia issued a remarkably lower number of PDs A1 in 2018 (127,059) compared to previous years (2015: 126,902; 2016: 124,226; 2017: 190,976), namely a decrease of 33.5% from 2017 to 2018 (De Wispelaere *et al.*, 2020). According to the Slovenian authorities, the main reason is the adoption of a new national act that sets stricter conditions, besides conditions from the Regulation (Jorens *et al.*, 2019). Moreover, the way these conditions are verified is also more accurate. This could also possibly influence the occurrence of inappropriate use in this field.

# 5 | Focus on three tandems

This chapter focusses specifically on the three defined tandems. First, the type of road transport is analysed. Attention is paid to international road transport between the members of the tandem, meaning goods (un)loaded in either Member State, cross-trade with one of the Member States as a start or end point, and cabotage performed in one of the Member States. This gives a clear indication of the importance of the flow of transport operations between the Member States. Next, employment is looked at; specifically labour mobility, which consists of long-term labour mobility, cross-border mobility, and the posting of workers. Finally, companies with foreign majority shareholders and foreign subsidiaries are analysed. In appendix 6, fiches including the most important findings for the different tandems are presented.

## 5.1 Austria – Slovenia

### 5.1.1 Types of road transport

It is important to keep in mind that Austria and Slovenia share a border of 330 km, namely part of the southern border of Austria, and the northern border of Slovenia (Bobek & Maček, 2017). In order to analyse the transport taking place between the two countries in the tandem, international road transport is looked at. This transport consists of 'goods loaded in the reporting country', 'goods unloaded in the reporting country', 'cross-trade', and 'cabotage'.

As could be seen in Chapter 4, overall, in 2018 Austria performed more road freight transport than Slovenia, namely 25,700 million tonne-km versus 22,200 million tonne-km respectively. However, the type of transport differs greatly between both countries. Whereas 66% of transport performed by Austrian hauliers concerns national transport, only 10% of Slovenian transport is national transport. For Slovenian hauliers, cross-trade is the most important type of transport, with approximately 42% of all transport.

The further analysis focusses on the international transport between both countries, thus analysing all four types of international transport. Table 5.1 shows the first type of international transport, namely goods (un)loaded in the reporting country, in this case Austria and Slovenia. The first column shows the absolute amount of road freight transport loaded or unloaded in the respective country. It can be seen that this type of international transport is of greater importance in Slovenia (18,978 million tonne-km) than in Austria (8,300 million tonne-km). The second column indicates the share of goods loaded in Austria/Slovenia and unloaded in Slovenia/Austria in the total amount of goods loaded in these Member States. For example, it can be seen that for all the goods loaded in Austria by Austrian hauliers, 2.5% is unloaded in Slovenia. On the other hand, of all goods loaded in Slovenia by Slovenian hauliers, 11.4% is unloaded in Austria. Therefore, it can be concluded that the transport between Austria and Slovenia is more important for Slovenian hauliers than for Austrian hauliers. This can also be seen when looking at the third column for both Member States. Whereas Austrian hauliers only load 0.7% of transport in Slovenia, Slovenian hauliers load 12.2% of transport in Austria.

**Table 5.1 International road freight transport, goods loaded and unloaded, Austria and Slovenia, in million tonne-km, 2018**

| | Austria | | | Slovenia | | |
|---|---|---|---|---|---|---|
| | Annual road freight transport in million tonne-km | % Share in goods loaded in ... | % Share in total | Annual road freight transport in million tonne-km | % Share in goods loaded in … | % Share in total |
| Goods loaded in AT | 3,747 | | 45.1 | 2,313 | | 12.2 |
| of which unloaded in SI | 95 | 2.5 | 1.1 | 521 | 22.5 | 2.7 |
| Goods loaded in SI | 56 | | 0.7 | 5,661 | | 29.8 |
| of which unloaded in AT | 43 | 76.8 | 0.5 | 647 | 11.4 | 3.4 |
| Total | 8,300 | | 100.0 | 18,978 | | 100.0 |

**Source** Eurostat [road_go_ia_rc]

Although the table above already includes cross-trade, seeing for instance that of all goods loaded in Slovenia by Austrian hauliers, only 77% is unloaded in Austria, it is still useful to analyse cross-trade in more detail. Table 5.2 provides the cross-trade performed by both countries in 2018 in thousand tonnes. Cross-trade is clearly more important for Slovenian hauliers (11,119 thousand tonnes) than for Austrian hauliers (1,884 thousand tonnes). Furthermore, more than 50% of cross-trade performed by Slovenian hauliers involves Austria as the country of loading or unloading. For Austrian hauliers, only 2.5% of cross-trade involves Slovenia as the starting or ending point. Therefore, Austria is more important for Slovenia in terms of cross-trade than the other way around.

**Table 5.2 International road freight transport, cross-trade, Austria and Slovenia, in thousand tonnes, 2018**

| | Austria | | Slovenia | |
|---|---|---|---|---|
| | Thousand tonnes | % Share in total | Thousand tonnes | % Share in total |
| Goods loaded in SI, unloaded anywhere but AT | 36 | 1.9 | | |
| Goods unloaded in SI, loaded anywhere but AT | 11 | 0.6 | | |
| Total cross-trade in SI | 47 | 2.5 | | |
| Goods loaded in AT, unloaded anywhere but SI | | | 2,585 | 23.2 |
| Goods unloaded in AT, loaded anywhere but SI | | | 3,044 | 27.4 |
| Total cross-trade in AT | | | 5,629 | 50.6 |
| Total | 1,884 | 100.0 | 11,119 | 100.0 |

**Source** Eurostat [road_go_cta_gtt]

The final form of international transport which we discuss is cabotage. Table 5.3 shows the amount of cabotage performed by both countries and taking place in both countries. The figures concern 2014 as data were not available for more recent years. In absolute numbers, Slovenia performs more cabotage (653,242 thousand tonne-km versus 587,253), while the cabotage taking place in Austria is almost 73 times as high as in Slovenia (773,695 thousand tonne-km versus 10,622). Of all the cabotage performed by Austria, only 1.3% takes place in Slovenia. However, for Slovenia, of all the cabotage taking place in this Member State, 74% is performed by Austrian hauliers. This indicates that almost three quarters of the Slovenian national transport performed by non-Slovenian hauliers is

performed by Austrian hauliers, thus highly dominating this market. Again, the use of cabotage is a marginal phenomenon in Slovenia.

Of all the cabotage performed by Slovenia, approximately 19% takes place in Austria.[195] In addition, of all the cabotage taking place in Austria, 16% is carried out by Slovenian hauliers.[196]

**Table 5.3 International road freight transport, cabotage, Austria and Slovenia, in thousand tonne-km, 2014**

| | Cabotage performed by | |
|---|---|---|
| | **Austria** | **Slovenia** |
| | 587,253 | 653,242 |
| In Austria | | 120,781 |
| In Slovenia | 7,866 | |
| % Share in total | 1.3 | 18.5 |
| | **Cabotage taking place in** | |
| | **Austria** | **Slovenia** |
| | 773,695 | 10,622 |
| By Austria | | 7,866 |
| By Slovenia | 120,781 | |
| % Share in total | 15.6 | 74.1 |

**Source** Eurostat [road_go_ca_c] and [road_go_ca_hac]

### 5.1.2 Employment

No detailed figures exist at European level on the employment in the road freight sector by citizenship. This observation also applies to the cross-border mobility of truck drivers. Therefore, we only report general figures in this section. Table 5.4 shows the population aged between 15 and 64 for both Austria and Slovenia, with a distribution by citizenship, particularly Slovenian and Austrian. In total, Austria's population between 15 and 64 years old amounts to 5.9 million persons, of which 1.1 million do not have Austrian citizenship, or 18.7%. Out of these 1.1 million persons, 15,000 have the Slovenian nationality, which equals 1.4% of all non-Austrian population in Austria. In Slovenia, on the other hand, only 8.4% of the population does not have Slovenian citizenship. Furthermore, only 0.2% of the non-Slovenian population has Austrian citizenship. Thus, it can be concluded that the flow of citizens between Austria and Slovenia changing residence permanently is not that extensive.

195 In 2018, this share amounts to 22.4%, as Slovenian hauliers performed 991,193 thousand tonne-km, of which 221,772 in Austria.

196 In 2018, this share amounts to 21.1%, as 1,049,323 thousand tonne-km of cabotage takes place in Austria, of which 221,772 is performed by Slovenian hauliers.

**Table 5.4 Population by citizenship, from 15 to 64 years, Austria and Slovenia, 1 January 2019**

| | | | | |
|---|---|---|---|---|
| **Country of residence: Austria** | | | | |
| **Citizenship** | | **Number** | **% Share in total** | **% Share in non-Austrian** |
| | Austrian | 4,807,564 | 81.3 | |
| | Non-Austrian | 1,103,960 | 18.7 | 100 |
| | of which Slovenian | 15,216 | 0.3 | 1.4 |
| | **Total** | 5,911,524 | 100 | |
| **Country of residence: Slovenia** | | | | |
| **Citizenship** | | **Number** | **% Share in total** | **% Share in non-Slovenian** |
| | Slovenian | 1,240,169 | 91.6 | |
| | Non-Slovenian | 113,979 | 8.4 | 100 |
| | of which Austrian | 264 | 0.02 | 0.2 |
| | **Total** | 1,354,148 | 100 | |

**Source** Eurostat [migr_pop1ctz]

However, moving residence to a country other than the country of citizenship is only one type of labour mobility, namely long-term labour mobility (Fries-Tersch, Jones, Böök, de Keyser, & Tugran, 2020). Another option is cross-border workers,[197] meaning workers who work in a country other than their country of residence. Table 5.5 shows this type of worker in Austria and Slovenia, in 2018. Around 166,000 cross-border workers work in Austria, of which 16,000 live in Slovenia, or 9.6%. Looked at from the other side, these 16,000 cross-border workers living in Slovenia and working in Austria make up 76% of all cross-border workers living in Slovenia. This shows that Austria and Slovenia are rather important neighbours in terms of labour mobility of cross-border workers.

**Table 5.5 Cross-border workers (20-64 years), by country of residence and country of work, Austria and Slovenia, 2018, in thousands**

| | **Number (in thousands)** | **% Share in total** |
|---|---|---|
| **Cross-border workers working in …** | | |
| Austria | 166 | |
| of which with country of residence Slovenia | 16 | 9.6 |
| Slovenia | 7* | |
| **Cross-border workers living in …** | | |
| Austria | 47 | |
| Slovenia | 21 | |
| of which working in Austria | 16 | 76.2 |

* Number refers to 2017 and has a low reliability.
**Source** Fries-Tersch *et al.* (2020)

### 5.1.3 Companies with a foreign majority shareholder and foreign subsidiary

Table 5.6 shows that in Austria, around 3.3% of the transport companies has a foreign majority shareholder, whereas in Slovenia more than 5% of companies have a foreign majority shareholder.

197 Definition applied in the study by Fries-Tersch *et al.* (2020:10): '[C]ross-border workers are defined as EU citizens who live in one EU or EFTA country and work in another, regardless of their precise citizenship (provided they are EU-28/EFTA citizens). Cross-border workers therefore move across borders regularly. They can be EU-28/EFTA movers - meaning they live in a different Member State than their country of citizenship - and cross-border workers at the same time (for example, where a British person lives in Belgium and works in Luxembourg). Cross-border workers are employed or self-employed in a country other than their country of residence.'

Of particular interest for the tandem is the number of companies that have a foreign majority shareholder located in the other tandem country. In Austria, only 4 road transport companies had a foreign majority shareholder located in Slovenia, which equals 6% of all companies with a foreign majority shareholder. In Slovenia, on the other hand, 24 companies had a foreign majority shareholder located in Austria, which corresponds to 15% of all companies with a foreign majority shareholder. This indicates that Slovenian road transport companies with an Austrian majority shareholder are more common than the other way around.

**Table 5.6 Number of companies with a foreign majority shareholder active under NACE 4941 'Freight transport by road', Austria and Slovenia**

| | Austria | Slovenia |
|---|---|---|
| Number of companies active under NACE 4941 | 2,068 | 3,084 |
| Number of companies active under NACE 4941 with a foreign majority shareholder | 68 | 158 |
| *% Share in total number of companies* | *3.3* | *5.1* |
| Of which with a shareholder in Austria | | 24 |
| *% Share in number of companies with a foreign majority shareholder* | | *15.2* |
| Of which with a shareholder in Slovenia | 4 | |
| *% Share in number of companies with a foreign majority shareholder* | *5.9* | |

**Source** Orbis database [Data extracted 12 May 2020]

For companies with a foreign subsidiary a similar analysis is carried out. Table 5.7 shows that the share of transport companies with a foreign subsidiary is higher in Austria (1.9%) compared to Slovenia (0.4%). This can be an indication of Austrian companies trying to benefit from lower costs in EU-13 Member States, such as Slovenia. Out of the 13 Slovenian companies with a foreign subsidiary, 3 have a subsidiary located in Austria, or 23.1%. For Austrian companies with a foreign subsidiary, 15.4% has a subsidiary located in Slovenia.

**Table 5.7 Number of companies with a foreign subsidiary active under NACE 4941 'Freight transport by road', Austria and Slovenia**

| | Austria | Slovenia |
|---|---|---|
| Number of companies active under NACE 4941 | 2,068 | 3,084 |
| Number of companies active under NACE 4941 with a foreign subsidiary | 39 | 13 |
| *% Share in total number of companies* | *1.9* | *0.4* |
| Of which with a subsidiary in Austria | | 3 |
| *% Share in number of companies with a foreign subsidiary* | | *23.1* |
| Of which with a subsidiary in Slovenia | 6 | |
| *% Share in number of companies with a foreign subsidiary* | *15.4* | |

**Source** Orbis database [Data extracted 12 May 2020]

## 5.2 Germany – Poland

### 5.2.1 Types of road transport

The border between both countries lies in the east of Germany and the west of Poland, and its length amounts to 469 km (Statistisches Bundesamt, 2019). In Chapter 4 it was found that the amount of road freight transport performed by both countries lies very close, with 316,700 million tonne-km in Germany, and 315,800 million tonne-km in Poland in 2018. Nevertheless, the type of road transport does differ remarkably. In Germany, 87% of the transport concerns national transport, whereas in Poland this share only amounts to 36%. As a result, international transport is of great importance for Polish hauliers, with a rather equal division between goods loaded in Poland, goods unloaded in Poland, and cross-trade, all accounting for approximately 20%. Furthermore, 5% of all transport carried out by Polish hauliers involves cabotage.

The further analysis focusses on the international transport between Germany and Poland. The first type discussed is goods (un)loaded in one of these Member States, as presented in Table 5.8. As was already discussed above, this type of transport is of greater importance for Polish hauliers than for German hauliers, namely 184,544 million tonne-km versus 39,089 million tonne-km, or nearly five times as important. When German hauliers load goods in Poland, 83% of these goods are then unloaded in Germany. On the other hand, when Polish hauliers load goods in Germany, 'only' 50% are then unloaded in Poland, indicating the higher importance of cross-trade. International transport between both countries seems to be stronger from the Polish side, as Polish hauliers load 20% of their goods in Germany, whereas German hauliers only load 1.4% of goods in Poland.

**Table 5.8 International road freight transport, goods loaded and unloaded, Germany and Poland, in million tonne-km, 2018**

| | Germany | | | Poland | | |
|---|---|---|---|---|---|---|
| | Annual road freight transport in million tonne-km | % Share in goods loaded in ... | % Share in total | Annual road freight transport in million tonne-km | % Share in goods loaded in … | % Share in total |
| Goods loaded in DE | 20,589 | | 52.7 | 36,185 | | 19.6 |
| of which unloaded in PL | 522 | 2.5 | 1.3 | 17,899 | 49.5 | 9.7 |
| Goods loaded in PL | 560 | | 1.4 | 66,272 | | 35.9 |
| of which unloaded in DE | 464 | 82.9 | 1.2 | 19,011 | 28.7 | 10.3 |
| Total | 39,089 | | 100.0 | 184,544 | | 100.0 |

**Source** Eurostat [road_go_ia_rc]

As already mentioned above, cross-trade might be of greater importance for Poland than for Germany when analysing international transport between both countries. Therefore, Table 5.9 gives a detailed overview of cross-trade performed by both countries in thousand tonnes. In total, Polish hauliers perform almost 12 times as much cross-trade as Germany. Furthermore, for Poland, Germany is of great importance as a country of loading or unloading, seeing that 65% of all cross-trade performed by Polish hauliers includes Germany. On the contrary, only 1.3% of all cross-trade performed by German hauliers involves Poland as the country of loading or unloading.

**Table 5.9 International road freight transport, cross-trade, Germany and Poland, in thousand tonnes, 2018**

| | Germany | | Poland | |
|---|---|---|---|---|
| | Thousand tonnes | % Share in total | Thousand tonnes | % Share in total |
| Goods loaded in PL, unloaded anywhere but DE | 40 | 0.6 | | |
| Goods unloaded in PL, loaded anywhere but DE | 40 | 0.6 | | |
| Total cross-trade in PL | 80 | 1.3 | | |
| Goods loaded in DE, unloaded anywhere but PL | | | 24,454 | 33.1 |
| Goods unloaded in DE, loaded anywhere but PL | | | 23,320 | 31.6 |
| Total cross-trade in DE | | | 47,774 | 64.7 |
| Total | 6,244 | 100.0 | 73,868 | 100.0 |

**Source** Eurostat [road_go_cta_gtt]

Finally, the focus is on cabotage, the fourth type of international transport. The amount of cabotage performed and taking place in both Member States is provided in Table 5.10. Both countries are in first position in the EU-28 regarding cabotage: Poland is the Member State that performs the highest amount of cabotage, whereas in Germany, the highest amount of cabotage takes place. This can also be seen in Table 5.10: while Poland performed more than 16.6 billion tonne-km of cabotage, Germany 'only' performed 1.5 billion tonne-km. On the other hand, more than 19.1 billion tonne-km of cabotage took place in Germany, and only 0.12 billion tonne-km in Poland.

Of all the cabotage performed by Poland, 72% took place in Germany, while only 2.7% of cabotage performed by German hauliers occurred in Poland. This indicates that Polish hauliers are especially active on the German national transport market, whereas the opposite cannot be said to be true. Nevertheless, 32% of all cabotage in Poland is performed by German hauliers, which is already a remarkable share. In addition, 63% of cabotage taking place in Germany is performed by Polish hauliers. Therefore, it is not only the case that the majority of Polish hauliers active in cabotage are active in Germany, but also that the majority of the cabotage market in Germany is indeed taken up by Polish hauliers.

**Table 5.10 International road freight transport, cabotage, Germany and Poland, in thousand tonne-km, 2018**

| | Cabotage performed by | |
|---|---|---|
| | Germany | Poland |
| | 1,531,706 | 16,637,422 |
| in Germany | | 12,031,565 |
| in Poland | 41,147 | |
| % Share in total | 2.7 | 72.3 |
| | Cabotage taking place in | |
| | Germany | Poland |
| | 19,176,609 | 129,574 |
| by Germany | | 41,147 |
| by Poland | 12,031,565 | |
| % Share in total | 62.7 | 31.8 |

**Source** Eurostat [road_go_ca_c] and [road_go_ca_hac]

Although it is clear from this Section that the link between both tandem countries is very strong, there also exists some tension between them. In 2015, Germany put into effect the Minimum Wage Law (Mindestlohngesetz or MiLoG), stating that every employer had to pay at least € 8.50 gross per hour to an employee hired in Germany (Raczkowski *et al.*, 2017). This means that also employees hired in Germany by a company registered in another EU Member State have to apply to this law. Although this law will not be discussed in detail, it is mentioned to indicate some reactions that followed it, especially outed by Poland. For instance, it is stated that although the aim of MiLoG is an anti-social dumping law, it corresponds more to a protectionist law (Lewandowski, 2016; Gis & Waśkiewicz, 2017; Raczkowski *et al.*, 2017). Furthermore, Lewandowski (2016) states this law particularly harms Polish hauliers, as Germany can be seen as Poland's passageway into Western Europe, and the increased costs caused by this law affect their competitiveness.

### 5.2.2 Employment

In Germany, approximately 53.8 million persons are of working age (15-64), while in Poland this figure equals 25.4 million (Table 5.11). However, in Germany almost 15% of these persons are not German citizens, while in Poland for only 1% of persons the same holds true. Out of the entire working age population in Germany, 1.2% is a Polish citizen. Moreover, of all non-German citizens in Germany, 8.3% is a Polish citizen. Unfortunately, for German citizens in Poland, these figures were not available. Nevertheless, these rather high percentages of Polish citizens living in Germany already indicate that the flow of workers between both countries could be substantial.

**Table 5.11 Population by citizenship, from 15 to 64 years, Germany and Poland, 1 January 2019**

| Country of residence: Germany | | | | |
|---|---|---|---|---|
| Citizenship | | Number | % Share in total | % Share in non-German |
| | German | 45,970,730 | 85.4 | |
| | Non-German | 7,874,136 | 14.6 | 100.0 |
| | of which Polish | 654,600 | 1.2 | 8.3 |
| | **Total** | 53,844,866 | 100.0 | |
| **Country of residence: Poland** | | | | |
| Citizenship | | Number | % Share in total | % Share in non-Polish |
| | Polish | 25,182,231 | 99.0 | |
| | Non-Polish | 250,746 | 1.0 | 100.0 |
| | of which German | n.a. | n.a. | n.a. |
| | **Total** | 25,432,977 | 100.0 | |

**Source** Eurostat [migr_pop1ctz]

In addition to changing residency permanently, workers can also live in one Member State and work in another. The number of cross-border workers in Germany and Poland are presented in Table 5.12. It is clear that a high number of cross-border workers are working in Germany (406,000) and living in Germany (249,000). Out of the 406,000 cross-border workers working in Germany, 124,000 or 31% reside in Poland. However, out of the 249,000 cross-border workers living in Germany, only 5,000 or 2% is working in Poland. Although for Poland the absolute number of cross-border workers working (10,000) in Poland is less impressive, there are approximately 206,000 cross-border workers living in Poland. Furthermore, more than 60% of these cross-border workers living in Poland work in Germany, and 50% of the cross-border workers working in Poland reside in Germany. These high numbers and shares indicate that a large flow of cross-border workers exists between both countries.

**Table 5.12 Cross-border workers (20-64 years), by country of residence and country of work, Germany and Poland, 2018, in thousands**

| | Number (in thousands) | % Share in total |
|---|---|---|
| **Cross-border workers working in …** | | |
| Germany | 406 | |
| of which with country of residence Poland | 124 | 30.5 |
| Poland | 10* | |
| of which with country of residence Germany | 5* | 50.0 |
| **Cross-border workers living in …** | | |
| Germany | 249* | |
| of which working in Poland | 5* | 2.0 |
| Poland | 206 | |
| of which working in Germany | 124 | 60.2 |

* Numbers refer to 2017.
**Source** Fries-Tersch *et al.* (2020)

In the annual report on intra-EU labour mobility with reference year 2017 special attention was paid to job qualifications, including the shortage in certain occupations and countries (Fries-Tersch *et al.*, 2019). Seeing that both Germany and Poland were analysed in detail, it is interesting to look more into the labour shortage occurring in the transport sector.

In Germany, there seems to be a clear labour shortage in the transport sector. Regarding the ISCO[198]-occupation 'labourers in mining, construction, manufacturing and transport', the share of EU-movers amounts to 18%, while regarding NACE-code H 'transportation and storage' this share equals 10%. Seeing that these shares are higher than the average share of movers across all industries (8%), and based on other indicators,[199] it is stated that a shortage could indeed be seen in the transport sector. This shortage is a qualitative shortage, as it is not the required skill level that causes the shortage, but rather the working conditions, which are less attractive causing less people to be hired (Fries-Tersch *et al.*, 2019). This is in contrast to a quantitative shortage indicating that there are insufficient workers to fill the demand. However, it is stated that this qualitative shortage can be filled by movers (Fries-Tersch *et al.*, 2019).

However, when movers fill labour shortages in certain host countries, this can cause labour shortages in the country of origin at the same time. This is likely the case in Poland, one of the largest countries of origin of movers (Fries-Tersch *et al.*, 2019). In particular for NACE-code H 'Transportation and storage', the ratio of Polish workers working in another EU country compared to nationals working in this sector in Poland amounted to 11%, which is rather high. Furthermore, in 2016, one of the highest job vacancy rates[200] was noticed in the transportation and storage sector (0.9%), which indicates that there are many vacancies in this sector in Poland (Central Statistical Office, 2017:163). Therefore, this shortage can be considered as a quantitative shortage, as there are not enough workers available to fill the demand, which is possibly linked to mobility (Fries-Tersch *et al.*, 2019).

### 5.2.3 Companies with a foreign majority shareholder and foreign subsidiary

The share of German companies with a foreign majority shareholder is higher (4.1%) than the share of Polish companies with a foreign majority shareholder (3.2%) (Table 5.13). It is clear that these

198 International Standard Classification of Occupations.
199 Ratio of new hires to employed, Ratio of unemployed to new hires among nationals, and PES indicators (see Fries-Tersch *et al.*, 2019), for a detailed description of the methodology).
200 This rate is calculated by dividing the number of job vacancies by the sum of the number of occupied posts and the number of job vacancies multiplied by 100 (Eurostat, 2019).

tandem countries have a strong link with each other. Almost 13% of all German transport companies with a foreign majority shareholder have a majority shareholder located in Poland. The other way around the share is even more impressive, as more than a fifth of Polish road transport companies with a foreign majority shareholder have a majority shareholder located in Germany.

**Table 5.13 Number of companies with a foreign majority shareholder active under NACE 4941 'Freight transport by road', Germany and Poland**

| | Germany | Poland |
|---|---|---|
| Number of companies active under NACE 4941 | 8,726 | 10,198 |
| Number of companies active under NACE 4941 with a foreign majority shareholder | 360 | 331 |
| *% Share in total number of companies* | *4.1* | *3.2* |
| Of which with a shareholder in Germany | | 72 |
| *% Share in number of companies with a foreign majority shareholder* | | *21.8* |
| Of which with a shareholder in Poland | 46 | |
| *% Share in number of companies with a foreign majority shareholder* | *12.8* | |

**Source** Orbis database [Data extracted 12 May 2020]

It is clear from Table 5.14 that German and Polish transport companies do not have many foreign subsidiaries in general. With 36 out of 8,726 companies in Germany, and 25 out of 10,198 companies in Poland, its shares of 0.4% and 0.2% are even the lowest of all tandem countries. However, the shares of companies with a foreign subsidiary in the other tandem country in total number of companies with a foreign subsidiary are on the high side. Almost 17% of German companies with a foreign subsidiary has a subsidiary located in Poland. Furthermore, a remarkable 56% of Polish companies with a foreign subsidiary has a subsidiary located in Germany. These high shares indicate the strong link between both countries.

**Table 5.14 Number of companies with a foreign subsidiary active under NACE 4941 'Freight transport by road', Germany and Poland**

| | Germany | Poland |
|---|---|---|
| Number of companies active under NACE 4941 | 8,726 | 10,198 |
| Number of companies active under NACE 4941 with a foreign subsidiary | 36 | 25 |
| *% Share in total number of companies* | *0.4* | *0.2* |
| Of which with a subsidiary in Germany | | 14 |
| *% Share in number of companies with a foreign subsidiary* | | *56.0* |
| Of which with a subsidiary in Poland | 6 | |
| *% Share in number of companies with a foreign subsidiary* | *16.7* | |

**Source** Orbis database [Data extracted 12 May 2020]

## 5.3 Belgium – Czech Republic

### 5.3.1 Types of road transport

This final tandem is the only one where the countries involved are not neighbouring countries. Belgium and the Czech Republic do not border each other, as Germany lies in between, on Belgium's east side and Czech's west side.

In Belgium, 32,600 million tonne-km of road freight transport was performed in 2018, while in the Czech Republic this figure amounted to 41,000 million tonne-km. In both countries, the most important type of road transport is national transport, albeit slightly more important in Belgium (63%) than in the Czech Republic (57%). In the Czech Republic, the share of goods (un)loaded and cross-trade is of greater importance, while Belgian hauliers perform more cabotage than Czech ones.

The international transport between both countries is first analysed by looking at goods (un)loaded in either one of them (Table 5.15). It can already be seen that transport between both countries does not seem to be of the greatest importance. Belgian hauliers only load 0.1% of goods in the Czech Republic, and Czech hauliers only load 2.1% of goods in Belgium. Furthermore, Belgian hauliers do not unload any goods in the Czech Republic when they were loaded in Belgium, and also don't unload any goods in Belgium when loaded in the Czech Republic. Although Czech hauliers do unload goods in Belgium when they were loaded in the Czech Republic, they only account for 2% of all goods loaded in the Czech Republic. Overall, the flow of goods being (un)loaded between these tandem countries seems minimal.

**Table 5.15 International road freight transport, goods loaded and unloaded, Belgium and Czech Republic, in million tonne-km, 2018**

| | Belgium | | | Czech Republic | | |
|---|---|---|---|---|---|---|
| | Annual road freight transport in million tonne-km | % Share in goods loaded in ... | % Share in total | Annual road freight transport in million tonne-km | % Share in goods loaded in … | % Share in total |
| Goods loaded in BE | 6,168 | | 55.4 | 361 | | 2.1 |
| of which unloaded in CZ | 0 | 0.0 | 0.0 | 246 | 68 | 1.4 |
| Goods loaded in CZ | 11 | | 0.1 | 8,008 | | 46.9 |
| of which unloaded in BE | 0 | 0.0 | 0.0 | 199 | 2 | 1.2 |
| Total | 11,130 | | 100.0 | 17,066 | | 100.0 |

**Source** Eurostat [road_go_ia_rc]

Even though cross-trade was already included in the former table, it is important to highlight this type of transport further. Table 5.16 therefore looks at the amount of cross-trade performed by Belgium and the Czech Republic, in thousand tonnes. Both Member States perform almost the same amount of cross-trade, with 2,944 thousand tonnes by Belgium, and 2,626 by the Czech Republic. Nevertheless, for Czech hauliers, Belgium seems to be a more important country of (un)loading than the Czech Republic for Belgian hauliers. Approximately 11% of cross-trade performed by Czech hauliers includes Belgium as the country of (un)loading, whereas only 4% of cross-trade performed by Belgian hauliers includes the Czech Republic as the start or end point. In general, however, these rather low shares indicate that regarding international transport, these countries are not each other's main country of interest.

**Table 5.16 International road freight transport, cross-trade, Belgium and Czech Republic, in thousand tonnes, 2018**

| | Belgium | | Czech Republic | |
|---|---|---|---|---|
| | Thousand tonnes | % Share in total | Thousand tonnes | % Share in total |
| Goods loaded in CZ, unloaded anywhere but BE | 61 | 2.1 | | |
| Goods unloaded in CZ, loaded anywhere but BE | 59 | 2.0 | | |
| Total cross-trade in CZ | 120 | 4.1 | | |
| Goods loaded in BE, unloaded anywhere but CZ | | | 155 | 5.9 |
| Goods unloaded in BE, loaded anywhere but CZ | | | 120 | 4.6 |
| Total cross-trade in BE | | | 275 | 10.5 |
| Total | 2,944 | 100.0 | 2,626 | 100.0 |

**Source** Eurostat [road_go_cta_gtt]

The fourth type of international transport, cabotage, is displayed in Table 5.17 for 2016. It can be seen that while the amount of cabotage performed by Belgium and the Czech Republic is not too diverging, the amount of cabotage taking place in Belgium is nine times as big as the cabotage taking place in the Czech Republic.

Out of all the cabotage performed by the Czech Republic, only 1.2% took place in Belgium. Additionally, less than 1% of cabotage taking place in Belgium was carried out by Czech hauliers. Unfortunately, data on the amount of cabotage performed by Belgian hauliers in the Czech Republic were not available. Nevertheless, this will not be a high amount, as only 1.0% of all cabotage performed by Belgian hauliers could not be assigned to the country in which it took place.

**Table 5.17 International road freight transport, cabotage, Belgium and Czech Republic, in thousand tonne-km, 2016**

| | Cabotage performed by | |
|---|---|---|
| | Belgium | Czech Republic |
| | 1,629,260 | 986,483 |
| in Belgium | | 11,531 |
| in Czech Republic | n.a. | |
| % Share in total | | 1.2 |
| | Cabotage taking place in | |
| | Belgium | Czech Republic |
| | 1,740,396 | 192,910 |
| by Belgium | | n.a. |
| by Czech Republic | 11,531 | |
| % Share in total | 0.7 | |

**Source** Eurostat [road_go_ca_c] and [road_go_ca_hac]

### 5.3.2 Employment

The total population of working age, between 15 and 64 years old, in Belgium and the Czech Republic is comparable, with 7.3 million and 6.8 million respectively (Table 5.18). However, the share of non-

Belgian citizens in Belgium (14.2%) in the total population is larger than the share of non-Czech persons in the Czech Republic (6.8%). In Belgium, 0.04% of all working age population is a Czech citizen, which equals 0.3% of all non-Belgian population. Even smaller shares of Belgians in the Czech Republic can be found, namely 0.01% of the Czech working age population is a Belgian citizen, which amounts to 0.15% of all non-Czech persons. As a result, it is clear that the flows of persons between both countries is minimal, at least concerning the population residing in one of the countries.

**Table 5.18 Population by citizenship, from 15 to 64 years, Belgium and Czech Republic, 1 January 2019**

| | | | | |
|---|---|---|---|---|
| **Country of residence: Belgium** | | | | |
| **Citizenship** | | **Number** | **% Share in total** | **% Share in non-Belgian** |
| | Belgian | 6,304,878 | 85.8 | |
| | Non-Belgian | 1,045,616 | 14.2 | 100.0 |
| | of which Czech | 2,636 | 0.04 | 0.3 |
| | **Total** | 7,350,494 | 100.0 | |
| **Country of residence: Czech Republic** | | | | |
| **Citizenship** | | **Number** | **% Share in total** | **% Share in non-Czech** |
| | Czech | 6,401,280 | 93.2 | |
| | Non-Czech | 468,843 | 6.8 | 100.0 |
| | of which Belgian | 692 | 0.01 | 0.15 |
| | **Total** | 6,870,123 | 100.0 | |

**Source** Eurostat [migr_pop1ctz]

In addition to moving to another country, one can also work across borders, meaning living in one Member State while working in another. However, for the tandem Belgium-Czech Republic, this type of labour mobility does not seem to be of great importance (Table 5.19). There are 80,000 cross-border workers working in Belgium and 53,000 in the Czech Republic, while 115,000 are living in Belgium and 61,000 in the Czech Republic. The number of cross-border workers working in Belgium who reside in the Czech Republic only amounts to 1,000, which equals 1.3% of all cross-border workers working in Belgium, and 1.6% of all cross-border workers living in the Czech Republic. Seeing that Belgium and the Czech Republic do not share a common border, it is no surprise that the flow of cross-border workers between both countries is rather limited.

**Table 5.19 Cross-border workers (20-64 years), by country of residence and country of work, Belgium and Czech Republic, 2017, in thousands**

| | **Number (in thousands)** | **% Share in total** |
|---|---|---|
| **Cross-border workers working in …** | | |
| Belgium | 80 | |
| of which with country of residence Czech Republic | 1 | 1.3 |
| Czech Republic | 53 | |
| **Cross-border workers living in …** | | |
| Belgium | 115 | |
| Czech Republic | 61 | |
| of which working in Belgium | 1 | 1.6 |

**Source** Fries-Tersch *et al.* (2020)

### 5.3.3 Companies with a foreign majority shareholder and foreign subsidiary

Table 5.20 makes it clear that both in Belgium (6.0%) and the Czech Republic (6.9%) a rather high share of road transport companies has a foreign majority shareholder. However, the number of companies with a foreign majority shareholder located in one of the tandem countries is insignificant. Only one Belgian transport company has a foreign majority shareholder located in the Czech Republic, accounting for 0.2% of all companies with a foreign majority shareholder. Furthermore, out of the 582 Czech companies with a foreign majority shareholder, six have a foreign majority shareholder located in Belgium, or 1.0%.

**Table 5.20 Number of companies with a foreign majority shareholder active under NACE 4941 'Freight transport by road', Belgium and Czech Republic**

| | Belgium | Czech Republic |
|---|---|---|
| Number of companies active under NACE 4941 | 6,747 | 8,450 |
| Number of companies active under NACE 4941 with a foreign majority shareholder | 403 | 582 |
| *% Share in total number of companies* | *6.0* | *6.9* |
| Of which with a shareholder in Belgium | | 6 |
| *% Share in number of companies with a foreign majority shareholder* | | *1.0* |
| Of which with a shareholder in Czech Republic | 1 | |
| *% Share in number of companies with a foreign majority shareholder* | *0.2* | |

**Source** Orbis database [Data extracted 12 May 2020]

In addition to companies with a foreign majority shareholder, the link between tandem countries is also analysed by looking at companies with a foreign subsidiary. In general, only 0.9% of Belgian companies and 0.4% of Czech companies have a foreign subsidiary (Table 5.21). Although 5 out of 61 Belgian companies with a foreign subsidiary have a subsidiary in the Czech Republic, none of the Czech companies has a foreign subsidiary located in Belgium. This could indicate that the link between both countries is rather one-sided, with 8% of Belgian companies with a foreign subsidiary locating subsidiaries in the Czech Republic, while Czech companies have no interest in locating a subsidiary in Belgium.

**Table 5.21 Number of companies with a foreign majority shareholder active under NACE 4941 'Freight transport by road', Belgium and Czech Republic**

| | Belgium | Czech Republic |
|---|---|---|
| Number of companies active under NACE 4941 | 6,747 | 8,450 |
| Number of companies active under NACE 4941 with a foreign subsidiary | 61 | 38 |
| *% Share in total number of companies* | *0.9* | *0.4* |
| Of which with a subsidiary in Belgium | | 0 |
| *% Share in number of companies with a foreign subsidiary* | | *0.0* |
| Of which with a subsidiary in the Czech Republic | 5 | |
| *% Share in number of companies with a foreign subsidiary* | *8.2* | |

**Source** Orbis database [Data extracted 12 May 2020]

# 6 | Conclusion

### Disentangling the complexity of the EU road transport sector

The road transport sector can be considered as one of the key sectors of activity in the EU: it counts more than 570,000 companies and employs some 3.3 million persons.[201] Nonetheless, it cannot be denied that the sector is confronted with several problems and challenges, which became even more visible during the COVID-19 pandemic. The root of the existing problems can be traced back to a tension which has always been present in the EU, namely between the economic and social dimension of the internal market.[202] Competition in the road transport sector is strongly based on cost factors, and thus on price competition. Moreover, the price sensitivity of the sector and its labour-intensive nature brings with it certain undesired effects such as cross-border fraud. Some even argue that the sector is in a vicious circle: the continuous demand for cheap(er) goods might have led to lower prices, but also to a constant pressure on wages, the unattractiveness of the job, the 'flagging out' of companies, and the use of fraudulent and illegal practices. Above views have led to severe tensions between employers' and workers' organisations as well as between EU-13 and EU-15 Member States. Political and public discussions, which are sometimes rather based on perceptions than facts, demonstrate that efforts should be made to better understand the complexity of the road transport sector. In that regard, the aim of this report was to improve our understanding of business structures and employment practices in the European road haulage, mainly by analysing quantitative data from Eurostat and Orbis, on three different levels. First, for the EU as a whole, then for six Member States of interest (Austria, Belgium, Czech Republic, Germany, Poland, and Slovenia), and finally for three defined tandems (Austria – Slovenia, Germany – Poland, Belgium – Czech Republic).[203]

### The transnational dimension of the road transport sector

There are two main aspects of the transnational dimension of the road haulage sector. Firstly, by companies 'flagging out'. This implies that transport companies establish subsidiaries abroad and register (part of) their vehicle fleet abroad. Secondly, instead of companies moving themselves, they can also provide transnational road transport. Both can certainly be related to each other. For instance, when a company 'flags out', it can consequently provide transport services from its new location. [204] However, whether there is a link between 'flagging out' and the export of services between two Member States has not been considered in this report.

#### a) 'Flagging out'

In general, 13% of EU-28 road freight transport companies has a foreign majority shareholder. For EU-15 companies this share amounts to 17.3%, while it only reaches 5.3% for EU-13 companies. This while the perception is often the opposite. However, when the United Kingdom is taken out of the picture, the numbers are quite different. In that case, only 3.4% (instead of 17.3%) of EU-14[205]

201 Moreover, there is an increasing number of third country nationals working in the EU road transport sector. In the EU-28, the share of persons employed with a driver attestation amounts to some 3.3% (2017 figures). A high share of employed workers in the road transport sector of Lithuania (31.9%), Slovenia (43.8%) and Poland (12.1%) are third country nationals with a driver attestation.

202 This tension is also noticeable when reading Kubera & Morozowski, 2019; Ferri & Cortese, 2019.

203 An important tool that complements this conclusion is appendix 6, which includes country fiches, not only for the six discussed Member States, but also for the EU as a whole and the three defined tandems.

204 For instance, the flagging out of German transport companies to Poland could result in a large proportion of transnational transport to Germany carried out by such companies.

205 EU-15 Member States excluding the United Kingdom.

transport companies has a foreign majority shareholder anywhere in the world. In some Member States, a remarkably high share of hauliers have a foreign majority shareholder. This is the case in Luxembourg (50.1% of all hauliers), the United Kingdom (43.8%), Estonia (34.7%) and Slovakia (31.7%). Additionally, it is interesting to see that 73% of all EU-28 companies with a foreign majority shareholder are located in the United Kingdom, 7% in Slovakia, 5% in Romania and 4% in Estonia. Regarding foreign subsidiaries, only 0.2% of the road transport companies has a foreign subsidiary. This share amounts to 0.3% in EU-15 companies, and 0.1% in EU-13 companies. Of all the companies with a foreign subsidiary, 79% is located in the EU-15 and only 21% in the EU-13. Furthermore, the location of the foreign subsidiaries reveals that the large majority is still located in the EU-15 (61%), as opposed to the EU-13 (29%), or outside of the EU (10%). Moreover, a strong correlation exists between the average amount of wages per employee and the estimation of the share of companies with a foreign subsidiary in the total number of companies (+0.72). This means that when the average amount of wages per employee is higher, the share of companies with a foreign subsidiary is higher as well. This is an indication of the concept of 'flagging out', as companies will set up subsidiaries abroad when it is cheaper to operate there. Therefore, it mostly concerns EU-15 companies who will set up a foreign subsidiary in the 'cheaper' EU-13 Member States, proving the intertwining of EU-15 mother companies with EU-13 subsidiaries. Consequently, both eastern and western companies contribute to the existence of these practices. However, it should be kept in mind that labour costs are not the only factor influencing the decision of companies to flag out. Several other (financial) reasons (e.g. corporate taxes, subsidies, geographical location, administrative and legislative burden (e.g. incorporation requirements), infrastructure and technology, quantity/quality/productivity of the labour force etc.) might be important.

Although the numbers presented above might refute the perception that 'flagging out' has become a common practice, different points of view should be taken into account. For instance, although only approximately 13% of EU-28 companies has a foreign majority shareholder, these companies represent 21.6% of the turnover created and employ 16.5% of the workers in this sector. Moreover, while only 0.2% of EU-28 road transport companies has a foreign subsidiary, these companies account for 18.1% of turnover and 10.9% of employment in the transport sector. Therefore, certainly not many transport companies are 'flagging out', but the ones who do are clearly very large companies.

#### b) Letterbox companies

Our analysis revealed that transport companies with a foreign shareholder are often interwoven in a complex network of companies established in different countries and sectors. The setting up of complex transport chains or networks with many layers of sub-contractors, mainly for cost-saving reasons, refutes the perception that the transport sector is only faced with a reallocation of companies from the EU-15 to the EU-13. In practice, it often involves several subsidiaries established in different Member States, each with their own specific purpose.

This of course brings up the issue of the letterbox companies. While a lot of anecdotal evidence suggests they are common in the road transport sector, it is hard to quantify their occurrence. For instance, the lack of economic activity in a certain Member State, a corner stone of the definition of letterbox companies, is impossible to identify by the Orbis database as it is not known whether the turnover is created in the country of establishment or abroad. Nevertheless, Article 3 of Regulation No 1071/2009[206] provides specific rules for road transport companies in order to combat letterbox companies. One of these rules is that companies need to have an effective and stable establishment in a Member State. Consequently, whether companies adhere to this rule can be checked by the address of a company. When multiple transport companies are located at one address, it is highly

206 Regulation (EC) No 1071/2009 of the European Parliament and of the Council of 21 October 2009 establishing common rules concerning the conditions to be complied with to pursue the occupation of road transport operator and repealing Council Directive 96/26/EC.

unlikely that they have an effective and stable establishment, which can subsequently be seen as an indicator of a letterbox company. An analysis in the Orbis database pointed out that especially companies in the United Kingdom stand out in this regard. In the United Kingdom, there were 76 addresses where more than 50 transport companies are active at the same location, with the most popular address housing 500 road freight transport companies. Furthermore, the highest number of transport companies located at one address amounted to 130 in Slovakia, 113 in Bulgaria, 101 in Poland and 83 in France. Although these companies should not be promptly considered as letterbox companies, the requirement of a stable establishment is probably not fulfilled. Additionally, the recently established rules concerning the return of the driver and the return of the truck every four and eight weeks respectively are significant measures against letterbox companies, as it will be problematic for companies to organise the return when the established company only consists of a letterbox.

#### c) National vs transnational transport

The majority of the freight transport by road performed in the EU concerns national transport (65%) as opposed to international transport (35%). This is already a crucial finding, as political debate seems to focus mainly on international transport, while it can be seen that the large majority of transport performed in the EU is still national transport. A turning point, however, is 2011, as from that moment onwards EU-13 Member States performed more international transport than EU-15 Member States. Currently, some 30% of total international transport is provided by Poland. Especially cabotage[207](+494%) and cross-trade[208] (+97%) performed by EU-13 Member States have grown exponentially from 2009 to 2018. Nevertheless, the cabotage penetration rate[209] in the EU-28 is still low at 3.9%, which means that the majority of national transportation is carried out by national hauliers. However, this rate is higher for EU-15 Member States than for EU-13 Member States. Moreover, these figures from Eurostat are probably an underestimation of reality. Based on national evidence, the 2018 cabotage penetration rate in Germany amounts to 9.9%, instead of 7.4% specified by Eurostat, and in Austria to 21% instead of 8.9% (Kummer *et al.*, 2016a, 2017; Vitols & Voss, 2019; Sternberg *et al.*, 2020). Above figures show that even though EU-15 Member States have 'lost' the battle for international transport, they are still leaders in national transport, which explains why they are reluctant to 'liberalise' rules on cabotage, as this might lead to them also losing the national transport market.

Furthermore, it is estimated that a third of the international transport operations in the EU are subject to the Posting of Workers Directive. This mainly concerns cross-trade (26%) and to a lesser extent cabotage (6%) operations. Nonetheless, there are strong differences between Member States. For instance, more than 50% of international transport operations carried out by truck drivers from Lithuania, Luxembourg, Bulgaria, Romania and Slovenia will be covered by the Posting of Workers Directive. Furthermore, as EU-13 hauliers carry out considerably more cross-trade and cabotage operations, truck drivers from these Member State will more frequently be considered to be posted for the purpose of the Posting of Workers Directive.

#### d) International trade in services

Data on the export, import, and balance of road freight transport services also reflect the transnational dimension of the sector. In absolute numbers, the most important exporting Member States are the Netherlands, Poland and Austria, whereas France, Germany, the Netherlands, Austria and Belgium import the highest amount of transport services. Overall, about 90% and 87% of export and import are directed towards the EU-28 respectively, and only 10% and 13% is exported to and

207 National transport undertaken by hauliers from another Member State.

208 International road transport between two different countries performed by a road motor vehicle registered in a third country.

209 The share of cabotage transport in total national transport, where total national transport is the sum of national transport (for hire and reward) and cabotage transport (in that country).

imported from outside the EU-28 respectively. The balance of trade in transport services, namely export minus import, gives an idea about the most important 'net-exporting' and 'net-importing' Member States. Especially Poland, Romania and Lithuania are significant 'exporting' Member States, while Germany and France are the main 'importing' Member States. In addition, it is remarkable to see a certain division in the six Member States. In each tandem, one Member State is a pronounced 'exporting' Member State (Poland, Slovenia and the Czech Republic), whereas the other is a clear 'importing' Member State (Germany, Austria and Belgium).

In order to get an idea of the cost of international road transport, the export of road freight transport services is divided by the million tonne-km of international transportation, to get the average charged cost of international transport. It is found that in particular the EU-13 Member States are able to offer cheap services in international transport, with Bulgaria and Poland as frontrunners. Nevertheless, it is remarkable to see that also Germany and Luxembourg have a relatively low charged cost, indicating that they are competitive in providing international transport.

Finally, figures on the export of services can be compared to the total turnover created in the road transport sector to get an idea of the relative importance of the export of services. In the EU-28, on average 22% of all turnover created in the road transport sector originates from the export of services. However, the median lies higher at 25%. Especially in Austria (81.2%) and Luxembourg (74.8%) exporting road freight transport services abroad is of great importance. Furthermore, it can be seen that international transport has always been of more significance in the EU-13 compared to the EU-15. Whereas in 2018, 18% of the turnover created by the EU-15 in the road transport sector originated from the export of services, this share amounts to 31% for EU-13 Member States.

*Wage convergence: a turning point in the unbalance between the economic and social dimension?*

The average personnel cost is generally (much) higher in the EU-15 compared to the EU-13. A strong negative correlation was found between the average personnel cost and the share of international transport in total transport (-0.56), and a strong positive correlation between the average personnel cost and the cabotage penetration rate (+0.62). This means that when the average personnel cost in a Member State is higher, the share of international transport in total transport will be lower, as it is relatively expensive to perform international transport. Furthermore, when the average personnel cost is higher, the cabotage penetration rate will also be higher, meaning that a higher share of national transport will be performed by non-national hauliers. However, this does not imply causality. Finally, from 2008 to 2017 the average personnel cost in the EU-13 increased by 27.2%, and even by 40.3% in road freight transport. These numbers indicate a hopeful evolution, namely a certain 'catching up'-effect by the EU-13, even mostly pronounced in the road transport sector. The personnel costs consist of wages and social security costs. For the wages specifically, the convergence theory was tested and confirmed. It is found that in the road transport sector, the Member States with the lowest average wages per employee, namely EU-13 Member States, have a higher annual growth rate of wages. Thus, these Member States are 'catching up' to Member States with an already high average wage (EU-15 Member States). This is a welcome and positive evolution in this sector, characterised by a continuous pressure on wages. Although this is a general, non-transport specific trend, this upward convergence is more pronounced in the road transport sector. Concerning the social security costs on the other hand, such an upward convergence is not clearly pronounced.

*What brings the future? Towards a blueprint for guaranteeing transnational social rights in road freight transport*

Many observers still remain very critical of the Commission's efforts in the field of social policy (e.g., Pochet, 2019). The common feeling is that the social mandate and mission of the EU is underdeveloped, especially compared to its economic dimension. However, the EU does have a strong legal basis through Article 3 TEU and, *inter alia*, Articles 151 to 161 TFEU[210] to fully accomplish its social

210 Title X 'Social Policy' of the TFEU.

dimension and objective and thus to 'support and complement the activities of the Member States', *inter alia*, in the field of the working environment to protect workers' health and safety (Article 153(1)(a) TFEU); working conditions (Article 153(1)(b) TFEU); social security and social protection of workers (Article 153(1)(c) TFEU) and the modernisation of social protection systems (Article 153(1)(k) TFEU). Moreover, it cannot be denied that under the Juncker European Commission, renewed attention was directed to Europe's social dimension.[211] The von der Leyen Commission wants to continue this policy. Their ambitions even seem, partly due to the COVID-19 pandemic,[212] to exceed those of the previous Commission.[213] There is of course a huge difference between announcing measures and implementing them, preferably by hard law. The latter is a frequently heard criticism (Börner, 2020). Indeed, an initiative such as the recent European Pillar of Social Rights[214] is no guarantee that Member States actually take steps in the further development of their social protection system. Fortunately, the 20 principles[215] introduced by the 'Social Pillar' have been translated into a number of legislative initiatives by the Commission. Consequently, where at the beginning of the launch of this initiative people's voices on this issue were rather negative or condescending, today there seems to be hope that these can be useful guidelines for future social policy in Europe (Vanhercke *et al.*, 2019). Moreover, the Mobility Package seems to be in line with several principles of the European Pillar of Social Rights, particularly with Chapter 2 on fair working conditions.

It can be argued that EU social policy has two main functions. Firstly, it regulates the social rights of mobile persons, for instance by coordinating the social security systems of Member States (i.e. the 'European dimension'). Secondly, it supports and complements the activities of the Member States in the field of social policy (i.e. 'the national dimension'). For this report, especially the European dimension is of importance. In case of transnational mobility, people move from one 'social space' to another (see e.g., Ferrera, 2005). It could be argued that in the course of this action, people enter a (European) transnational social space that includes several actors from the country of origin as well as the host country (Heidenreich, 2019). These actors are the ones that provide 'transnational social protection'. The concept 'transnational social protection' has received much scholarly attention during the last few years by sociologists and political scientists (e.g., Levitt *et al.*, 2017; Paul, 2017; Lafleur & Vintila, 2020).[216]

Within the context of this report, it seems better to use the notion of 'transnational social rights'.[217] After all, the focus will not only be on the social protection of mobile persons, but also on their working conditions. In this regard, the concept of 'transnational social rights' can be defined as follows: 'initiatives of (a group of) states which provide for social rights across national borders'. In practice, this boils down to the question in which social space/solidarity circle mobile persons should be included. This is an important issue both for the mobile person, since it has an impact on which

211 For a comprehensive overview of initiatives, we refer to the brochure 'Putting social matters at the heart of Europe. How the European Commission supported employment, social affairs, skills and labour mobility (2014-2019)' (European Commission, 2019).

212 For instance, an instrument for temporary Support to mitigate Unemployment Risks in an Emergency (SURE) was designed.

213 President von der Leyen's mission letter to Nicolas Schmit (December 2019) defines several ambitions: develop an action plan to implement the European Pillar of Social Rights; put forward a legal instrument to ensure that every worker in the EU has a fair minimum wage; contribute to the design of a European Unemployment Benefit Reinsurance Scheme; establish and support the work of the new European Labour Authority; reinforce the Youth Guarantee and lead the work on developing a European Child Guarantee as a tool to fight poverty and ensure children have access to basic services; improve the labour conditions of platform workers; develop a European Social Fund+ to improve job creation, productivity and mobility; work with Member States to strengthen social protection systems in Europe; develop a European Action Plan for Social Economy to enhance social innovation; lead the Commission's work on implementing and updating skills agenda, focusing on filling skills shortages and reskilling. See also the Consultation Document of the EC 'First phase consultation of Social Partners under Article 154 TFEU on a possible action addressing the challenges related to fair minimum wages' (C(2020)83 final).

214 Although it is called European Pillar of Social Rights, it does not proclaim social rights. It merely present principles.

215 Divided over three chapters: (1) equal opportunities and access to the labour market; (2) fair working conditions; and (3) adequate and sustainable social protection. The chapter on 'adequate and sustainable protection' contains 10 principles.

216 The definition which is used by scholars to indicate what this umbrella concept comprises reads as follows: 'transnational social protection comprises the policies, programmes, people, organisations, and institutions which provide for and protect individuals across national borders in the categories of old age, survivors, incapacity, healthcare, family benefits, active labour market programs, unemployment, and housing assistance' (Levitt *et al.*, 2017:6; Paul, 2017:36).

217 The European Social Charter (ESC) could be used to define the concept of 'social rights'.

social protection and working conditions can be enjoyed, and for the employers and Member States concerned, since it determines which wages and social security contributions have to be paid. Consequently, the determination of the social space/solidarity circle is not at all trivial. Moreover, as stated by Vandenbroucke (2017:39) 'the challenge is to find a balance between the need for an integrated market in services and the foundational principle of the EU that mobile workers should be integrated into the solidarity circle of the Member State in which they work, both in terms of wages, working conditions, and social security contributions and social policy entitlements.' Indeed, the question remains how to balance transnational social rights against the economic rights in cases where they clash (Garben, 2020). For instance, the tension between the internal market freedoms on the one hand and social rights on the other has become a major issue in road freight transport. In that respect, the question arises as to whether European policymakers are faced with a dilemma, which prevents one of the two objectives *1)* facilitate and promote the internal market freedoms and *2)* provide well-developed transnational social rights from being achieved. The answer to this question is highly nuanced as it depends on several factors. Moreover, the solution for finding such a balance is even more difficult to determine, particularly for road freight transport.[218] In any case, it should be a solution in which workers' and employers' organisations, as well as Eastern and Western European Member States, can find themselves. Past discussions on the Mobility Package have shown that this is a very challenging task.

218 For instance, a 'harmonised social security status' could be aspired. This brings us to the 'thirteenth state', an idea that was launched by Pieters and Vansteenkiste (1993) in the early 1990s that seems to be reviving today. Yet the idea seems even more utopian than at the time it was launched. After all, differences in the social field have become greater between Member States. This does not mean that this idea cannot be elaborated further for certain highly mobile workers. International truck drivers are the first to be targeted in this respect. However, the differences in social security contributions undoubtedly result in competitive differences between Member States. Therefore, it will be very difficult to convince the road transport sector (or governments) of this idea.

# - APPENDICES -

# appendix 1 Industry classification

An issue that arose in the Orbis database is how to extract those companies that genuinely perform freight transport by road. It is possible to search by industry classifications based on 3 classifications: the NACE Rev. 2 (Statistical classification of economic activities in the European Community), US SIC (Standard Industrial Classification), and NAICS 2017 (North American Industry Classification System). Seeing that the Eurostat database also uses the NACE-classification, and we are most familiar with this classification in the EU, the researchers opted to use this classification.

Although a clear NACE-code exists compromising our intended sector (NACE 4941 'Freight transport by road'), it is possible that certain companies do not operate under this NACE-code. An example is Jost Group, a transport and logistics company in Europe, providing services in the areas of road transport, air and sea freight, logistics and customs and forwarding services (Jost Group, 2020). In the Orbis database, however, its primary NACE-code is 8290 'Business support service activities n.e.c.'.[219]

In order to see whether NACE-code 4941 would be sufficient, an exercise was conducted using all three classifications in Orbis. This is shown in Table a1.1. In a first step, we selected the active companies located in the EU-28. Then, for all three classifications, those codes were selected which the researchers thought would comprehend the road transport sector. For the NACE-classification this led to 559,515 companies (NACE 4941 'Freight transport by road'), 580,436 according to the US SIC classification ('4212 Local trucking without storage' - '4213 Trucking - except local' - '4214 Local trucking with storage'), and 559,235 according to the NAICS 2017-classification ('4841 General freight trucking' - '4842 Specialised freight trucking'). In a following step, for each of these selections, the other classifications were looked at. For instance, it can be seen that of the 559,515 EU-28 companies under NACE-code 4941, 99.95% had the NAICS 2017 code 4841, whereas for the remaining 0.05% the NAICS 2017 code was not available.

The most important columns are the final two, in order to see which NACE-code corresponds best with the chosen SIC-and NAICS-codes. For both, NACE 4941 'Freight transport by road' is clearly the most common one, with 96.4% and 99.99% of all companies respectively. This indicates that this NACE-code is indeed the one that best encompasses the road transport sector. In conclusion, this code will be used whenever companies are selected in the Orbis database.

Of course, this is a limitation as certain companies which are active in this sector, like Jost Group mentioned above, will not be included in the analysis. Nevertheless, it is worth mentioning that many of the subsidiaries of Jost Group are active under NACE-code 4941 and are thus included in the analysis.

219 Its NAICS 2017 code is 5614 'Business Support Services', and its US SIC-code is 7380 'Miscellaneous business services'.

**Table a1.1 Industry classifications for active companies located in the EU-28, in %**

| | | n = 559,515 | n = 580,436 | n = 559,235 |
|---|---|---|---|---|
| | **Chosen codes** | ***NACE 4941*** **'Freight transport by road'** | ***US SIC*** **'4212 Local trucking without storage' – '4213 Trucking - except local' – '4214 Local trucking with storage'** | ***NAICS 2017*** **'4841 General freight trucking' – '4842 Specialised freight trucking'** |
| | **Corresponding codes** | | | |
| **NACE** | 4618. Agents specialised in the sale of other particular products | | 0.0002 | 0.0002 |
| | 4673. Wholesale of wood, construction materials and sanitary equipment | | 0.0002 | 0.0002 |
| | 4941. Freight transport by road | | 96.4 | 99.99 |
| | 4942. Removal services | | 3.6 | |
| | Other | | 0.004 | 0.005 |
| **US SIC** | 421. Trucking and courier services, except air | 100.0 | | 100.0 |
| **NAICS 2017** | 4841. General Freight Trucking | 99.95 | 96.3 | |
| | 4889. Other Support Activities for Transportation | | 3.6 | |
| | n.a. | 0.05 | 0.1 | |

* It concerns the number of active companies located in the EU-28.
**Source** Own elaborations based on Orbis [Data extracted 21 April 2020]

# appendix 2 Decoupling of economic growth and road transport activity

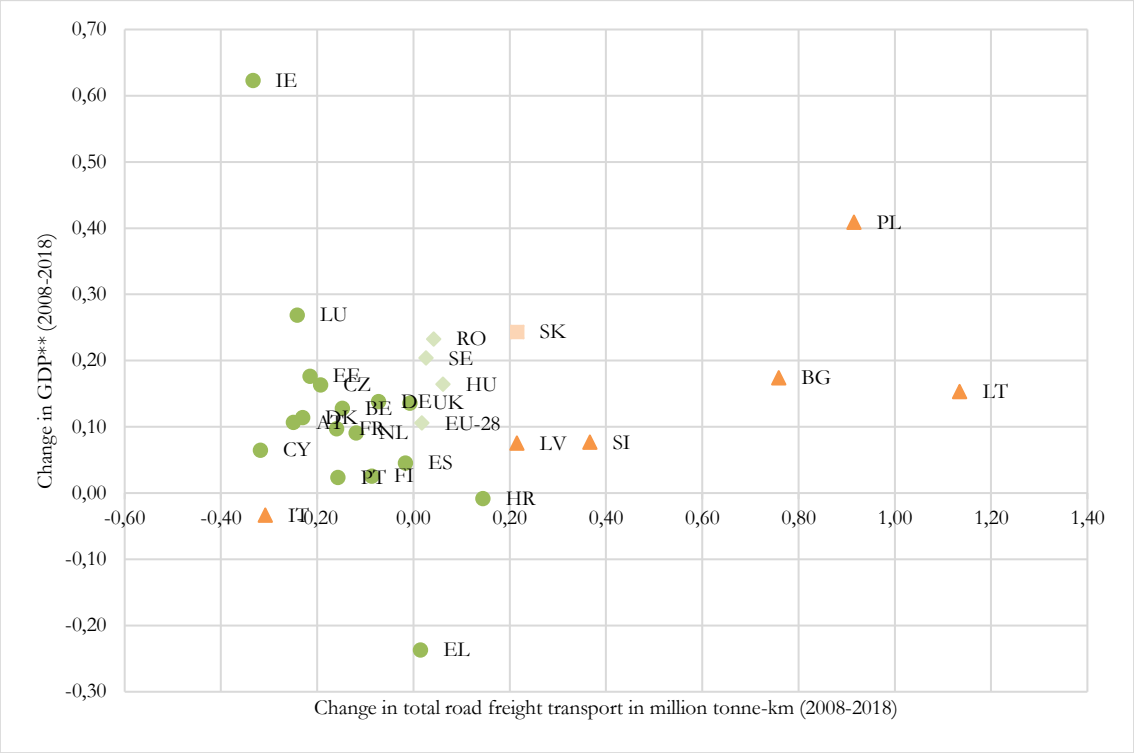
The idea of decoupling economic growth and road transport activity entails that continued economic growth should be possible without transport activity growing as well, because of its negative externalities (Aditjandra, 2018).

In the article by Alises and Vassallo (2015) the decoupling trend is analysed by comparing the growth of the GDP with the growth of freight transport volume. A similar exercise is performed in this report, with more recent data at hand. Figure a2.1 shows the scatterplot with this information, namely the evolution of both variables from 2008 to 2018. It should be noted that the correlation between both variables only amounts to +0.13, which indicates a very weak relationship. This already indicates that both variables do not influence each other considerably and are not well connected.

In the majority of Member States, one can speak of a strong decoupling, as GDP grew stronger than road transport (dark green circles). In some other Member States, the decoupling is less pronounced, as both variables grew more closely together (light green diamonds). For instance, in the EU-28 as a whole, from 2008 to 2018, GDP grew by 11%, while road transport increased with 2%. However, for some Member States, the opposite evolution seems to be taking place, namely a coupling, or negative decoupling. For instance, in Slovakia, one can find an expansive coupling, as GDP increased with 24% and road transport with 22% (light orange square). In Bulgaria, Italy, Latvia, Lithuania, Poland, and Slovenia, there is even an expansive negative decoupling (dark orange triangles). For instance, in Poland, GDP grew by 41% while road transport grew by 92%. One special case in this group is Italy, as both the GDP (-3%) and road transport (-31%) have decreased from 2008 to 2018.

Overall, it can be seen that in general in most EU Member States, the link between GDP growth and road transport has been broken or at least weakened, with a few exceptions. The weak correlation between both variables indicates that there are more important influencing variables for these evolutions, and their relationship is rather weak.

**Figure a2.1 Level of decoupling of road freight transport volume from GDP, EU-28, 2008-2018**




* The correlation coefficient amounts to +0.1286.

** The GDP is in Chain linked volumes, index 2010=100.

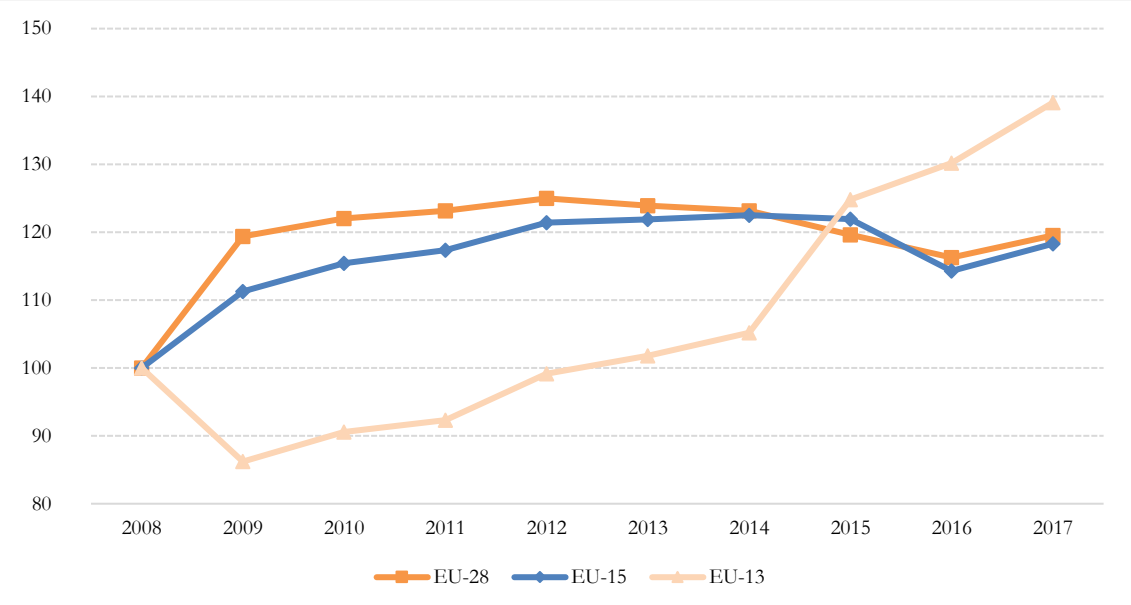
*** Alises and Vassallo (2015) analyse the level of decoupling by dividing the change in road freight transport by the change in GDP. If this number is lower than 0, there is strong decoupling (dark green spheres); if it is between 0 and 0.8, there is a weak decoupling (light green diamonds); if it is between 0.8 and 1.2, there is an expansive coupling (light orange square); and if it is above 1.2, there is an expansive negative decoupling (dark orange triangles).

**Source** Eurostat [road_go_ta_tott] and [nama_10_gdp]

# appendix 3 Convergence of social security costs

In addition to wages and salaries, social security costs make up the total personnel cost. The average social security costs per employee in the road transport sector is quite divergent. It ranges from € 895 in Bulgaria, to € 15,310 in Belgium in 2017. In 2017 in the EU-15, it amounts to € 7,269 and in the EU-13 to € 1,753. The evolution is pictured in Figure a3.1, with 2008 as a base year. This figure makes it clear that the average social security costs are growing more rapidly in EU-13 Member States than in EU-15 Member States. EU-13 Member States knew a decrease in social security costs in 2009 but have been on the rise ever since. EU-15 Member States on the other hand have been steadily increasing, with a small dip in 2016. From 2008 to 2017, the social security costs in EU-15 Member States grew by 18% and in EU-13 Member States by 39%. Furthermore, the average annual growth rate amounts to 1.9% in the EU-15 and 3.7% in the EU-13. However, an increase of social security costs in absolute terms does not automatically mean that the percentage of social security costs has increased, as this growth might be the result of an increase in wages and salaries.[220]

**Figure a3.1 Evolution average amount of social security costs per employee in NACE 4941 'Freight transport by road', 2008-2017, 2008=100, EU-28, EU-15, EU-13**




**Source** Eurostat [sbs_na_1a_se_r2]

Consequently, one can wonder whether there is an upward convergence of social security costs as well, just like the convergence of wages in the sector (see Section 3.3). To examine this, once again the beta convergence is looked at. This convergence posits that those Member States which are lagging behind are catching up with the leaders, thus growing faster. Therefore, the initial level of social security costs per employee in 2008 is considered together with the average annual growth rate of

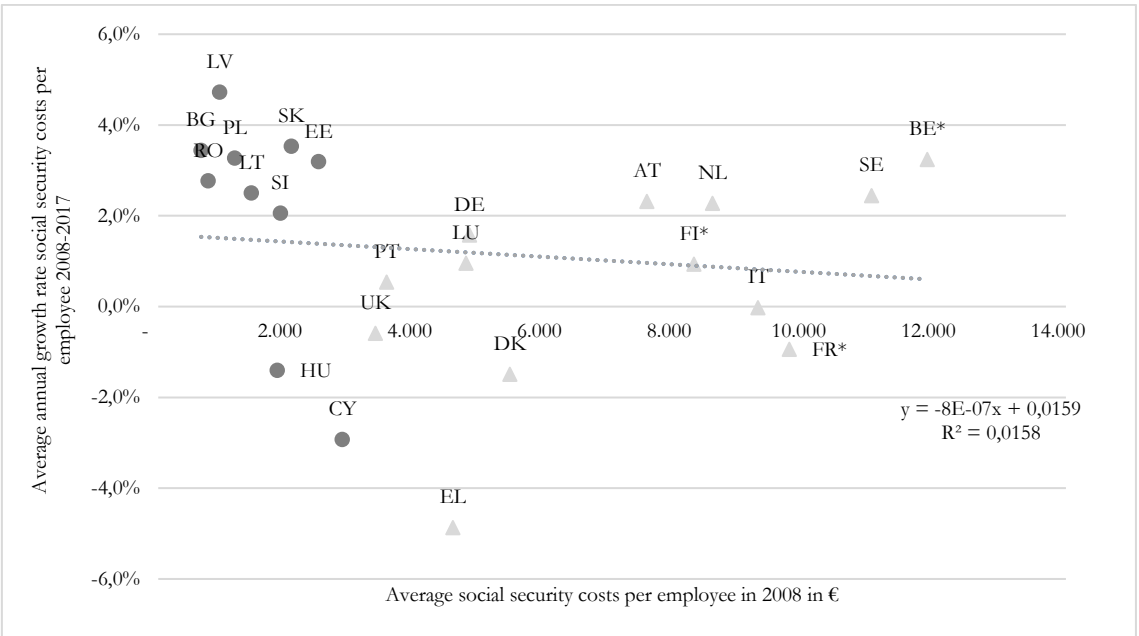
220 For example, 10% social security costs on an hourly wage of € 30 results in € 3. If the wage increases to € 35, and the social security costs decreases to 9%, the social security costs has risen anyway to € 3.15. Thus, when only comparing the € 3 with the € 3.15, this might give the wrong impression that the percentage of social security costs has increased.

social security costs from 2008 to 2017 in Figure a3.2. The beta convergence states that there will be a negative correlation between both variables, as those with a low starting value will grow considerably faster.

However, as the figure illustrates, the correlation between the variables is rather weak (-0.13). Yet, the social security costs in EU-13 Member States seem to conform to the beta convergence theory. They are all positioned in the left upper corner of the figure (dark spheres), which indicates that the initial social security costs are very low, but their annual growth rate is high. The only exceptions are Cyprus and Hungary, which both knew a negative growth rate of -2.9% and -1.4% respectively. Over the period 2008-2017, the social security costs in the transport sector in Cyprus even decreased by 23% and in Hungary by 12%. Nevertheless, it is the EU-15 Member States that do not correspond to the upward convergence theory. When a strong negative correlation occurs, the EU-15 Member States (light triangles) should be located at the right bottom of the figure, as the initial social security costs are high, and they are not growing much. However, the EU-15 Member States are scattered all over the figure. Some EU-15 Member States indeed have a high social security cost initially, but the costs also grew considerably over the years, for instance in Belgium, Sweden, the Netherlands and Austria. On the other hand, certain EU-15 Member States did not have a high initial value for social security costs, and the average annual growth rate was even negative. This is the case for Greece, Denmark, and the United Kingdom.

As a result, it is not possible to state that an upward convergence in social security costs in the transport sector is taking place, which was very clear regarding wages and salaries. Therefore, in this sector it might be interesting if these costs were to converge together, or even harmonised social security costs were to exist in the EU. This could also mean a downward convergence, as the social security costs in the EU-15 certainly have room to decrease in this highly competitive sector.

**Figure a3.2** **Beta convergence of average social security costs per employee in NACE 4941 'Freight transport by road', correlation between average social security costs per employee in 2008 in € and the average annual growth rate of social security costs per employee from 2008 to 2017 in %**




* The average annual growth rate of wages and salaries per employee concerns the evolution from 2009 to 2017 for BE, FR, and FI.

** The correlation coefficient amounts to -0.13.

**Source** Eurostat [sbs_na_1a_se_r2]

# appendix 4 International trade in services

**Table a4.1 Export of road freight transport services, 2018, in million €**

| | Partner Member State | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **BE** | **BG** | **CZ** | **DK** | **DE** | **EE** | **IE** | **EL** | **ES** | **FR** | **HR** | **IT** | **CY** | **LV** | **LT** | **LU** | **HU** | **MT** | **NL** | **AT** | **PL** | **PT** | **RO** | **SI** | **SK** | **FI** | **SE** | **UK** | **Extra EU-28** | **EU-28** | **Total** |
| **EU-28** | 4,663.2 | 324.2 | 1,093.0 | 1,717.5 | 16,030.3 | 159.5 | 881.7 | 281.7 | n.a. | 6,941.1 | 137.9 | 4,598.0 | 60.4 | 168.3 | 389.2 | 823.1 | 991.5 | 32.4 | 6,471.1 | 3,266.6 | 1,589.5 | 762.1 | 682.3 | 241.1 | 662.0 | 875.2 | 2,889.3 | 4,247.2 | 7,466.2 | 64,042.1 | **71,508.3** |
| **BE** | | 12.0 | 17.0 | 37.0 | 750.0 | n.a. | 63.0 | 6.0 | 80.0 | 982.0 | 1.0 | 137.0 | 5.0 | 2.0 | 7.0 | 173.0 | 8.0 | 4.0 | 1,255.0 | 56.0 | 37.0 | 21.0 | 26.0 | n.a. | 27.0 | 46.0 | 217.0 | 373.0 | 473.0 | 4,355.0 | **4,828.0** |
| **BG** | 16.0 | | 21.2 | 5.3 | 134.6 | 1.0 | 1.1 | 63.7 | 16.7 | 40.9 | 4.6 | 71.5 | 2.0 | 1.2 | 1.8 | 0.2 | 13.5 | 0.7 | 16.6 | 17.3 | 18.4 | 2.9 | 57.0 | 4.6 | 7.1 | 2.2 | 9.4 | 20.7 | 108.9 | 552.5 | **661.4** |
| **CZ** | 106.4 | 22.1 | | 40.4 | 505.2 | 11.4 | 38.8 | 14.8 | 200.7 | 228.1 | 14.0 | 185.9 | 2.3 | 6.6 | 15.9 | 6.7 | 122.0 | 1.6 | 175.2 | 124.0 | 68.6 | 22.7 | 60.4 | 19.9 | 75.6 | 28.9 | 102.7 | 257.0 | 539.2 | 2,457.9 | **2,997.1** |
| **DK** | 85.1 | 9.9 | 27.0 | | 514.7 | 5.9 | 39.8 | 8.6 | 36.4 | 98.2 | 1.7 | 49.0 | 0.9 | 12.6 | 14.1 | 15.6 | 11.7 | 0.9 | 166.8 | 21.3 | 92.4 | 9.0 | 17.3 | 1.6 | 12.2 | 75.7 | 417.4 | 115.1 | 525.8 | 1,871.7 | **2,397.5** |
| **DE** | 238.0 | 0.0 | 178.0 | 94.0 | | 0.0 | 5.0 | 1.0 | 77.0 | 527.0 | 1.0 | 71.0 | 0.0 | 0.0 | 2.0 | 11.0 | 45.0 | 0.0 | 364.0 | 252.0 | 241.0 | 6.0 | 6.0 | 1.0 | 86.0 | 7.0 | 171.0 | 68.0 | 339.0 | 2,453.0 | **2,791.0** |
| **EE** | 4.1 | 0.2 | 0.8 | 11.9 | 36.0 | | 0.3 | 0.0 | 2.7 | 5.8 | 0.1 | 6.3 | 1.4 | 16.3 | 14.0 | 1.8 | 0.4 | 0.0 | 26.6 | 2.6 | 7.1 | 0.0 | 0.2 | 0.1 | 0.4 | 112.5 | 63.7 | 21.8 | 128.4 | 337.1 | **465.5** |
| **IE** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| **EL** | 7.8 | 9.0 | 2.6 | 1.0 | 17.7 | 0.0 | 2.3 | | 5.5 | 7.5 | 0.6 | 12.5 | 9.5 | 0.1 | 0.9 | 0.0 | 2.6 | 0.8 | 29.3 | 11.5 | 1.1 | 0.5 | 0.2 | 3.2 | 2.1 | 3.7 | 4.4 | 9.7 | 15.4 | 145.9 | **161.3** |
| **ES** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **FR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 778.0 | 5,190.0 | **5,969.0** |
| **HR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **426.1** |
| **IT** | 50.5 | 8.3 | 28.0 | 10.2 | 302.4 | 1.4 | 3.4 | 15.7 | 80.0 | 259.9 | 14.7 | | 3.3 | 1.5 | 3.7 | 1.8 | 20.8 | 6.2 | 49.8 | 83.0 | 51.3 | 11.4 | 24.9 | 40.4 | 14.3 | 6.5 | 21.0 | 52.8 | 89.7 | 1,167.2 | **1,256.9** |
| **CY** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| **LV** | 26.0 | 8.0 | 2.0 | 17.0 | 94.0 | 18.0 | 0.0 | 2.0 | 16.0 | 129.0 | 0.0 | 48.0 | 0.0 | | 46.0 | 1.0 | 2.0 | 0.0 | 25.0 | 5.0 | 11.0 | 0.0 | 0.0 | 0.0 | 7.0 | 10.0 | 93.0 | 21.0 | 180.0 | 580.0 | **760.0** |
| **LT** | 134.0 | 2.0 | 11.1 | 192.7 | 609.1 | 49.2 | 2.6 | 1.9 | 89.3 | 425.4 | 0.7 | 148.2 | 0.7 | 71.2 | | 31.6 | 3.2 | 0.0 | 168.5 | 260.5 | 46.4 | 3.7 | 4.3 | 2.3 | 4.1 | 22.0 | 82.0 | 82.8 | 277.3 | 2,530.8 | **2,808.1** |
| **LU** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 88.0 | 966.0 | **1,054.0** |
| **HU** | 30.3 | 6.0 | 22.9 | 14.0 | 377.8 | 0.2 | 2.3 | 2.0 | 21.7 | 61.6 | 8.1 | 46.7 | 0.5 | 0.2 | 1.7 | 11.3 | | 0.0 | 80.6 | 354.1 | 15.3 | 1.0 | 21.0 | 5.7 | 64.4 | 1.0 | 4.9 | 27.5 | 38.6 | 1,182.8 | **1,221.4** |
| **MT** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| **NL** | 1,199.0 | 14.8 | 79.8 | 128.9 | 2,561.8 | 9.1 | 195.2 | 14.8 | 275.1 | 767.9 | 2.4 | 383.9 | 5.7 | 7.5 | 40.1 | 104.8 | 155.2 | 1.9 | | 161.4 | 427.6 | 52.7 | 115.0 | 7.4 | 20.7 | 171.7 | n.a. | 1,287.5 | n.a. | n.a. | **9,334.6** |
| **AT** | 163.0 | 33.0 | 210.0 | 45.0 | 3,131.0 | 3.0 | 15.0 | 44.0 | 165.0 | 321.0 | 20.0 | 859.0 | 2.0 | 2.0 | 12.0 | 41.0 | 193.0 | 2.0 | 402.0 | | 148.0 | 24.0 | 118.0 | 65.0 | 122.0 | 93.0 | 297.0 | 366.0 | 791.0 | 6,896.0 | **7,687.0** |
| **PL** | 311.2 | 20.4 | 204.2 | 357.4 | 2,914.7 | 18.3 | 56.8 | 12.0 | 253.9 | 708.9 | 9.9 | 401.5 | 7.0 | 31.4 | 133.8 | 129.1 | 78.8 | 1.9 | 1,169.1 | 458.5 | | 18.5 | 98.8 | 15.7 | 106.8 | 70.4 | 381.6 | 413.9 | 796.9 | 8,384.1 | **9,181.0** |
| **PT** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **RO** | 404.2 | 115.2 | 48.8 | 172.3 | 920.7 | 1.3 | 3.0 | 16.3 | 607.9 | 344.9 | 6.4 | 619.7 | 4.7 | 1.7 | 34.2 | 92.0 | 160.5 | 0.4 | 572.8 | 748.4 | 113.5 | 15.3 | | 15.9 | 45.3 | 3.4 | 41.5 | 168.2 | 163.3 | 5,278.5 | **5,441.8** |
| **SI** | 26.1 | 4.5 | 19.7 | 9.6 | 233.4 | 0.2 | 0.9 | 2.9 | 12.0 | 86.2 | 36.7 | 199.0 | 3.4 | 0.4 | 3.5 | 14.1 | 24.8 | 0.2 | 57.3 | 270.7 | 15.6 | 0.4 | 21.1 | | 18.5 | 1.0 | 18.6 | 19.2 | 108.4 | 1,099.9 | **1,208.4** |
| **SK** | 132.0 | 7.3 | 110.4 | 39.6 | 256.1 | 0.3 | 4.2 | 0.4 | 9.1 | 53.9 | 1.4 | 161.6 | 0.4 | 0.2 | 0.7 | 22.5 | 69.7 | 0.8 | 63.8 | 249.4 | 16.1 | 1.6 | 5.9 | 13.7 | | 3.0 | 17.3 | 34.0 | 116.2 | 1,275.2 | **1,391.4** |
| **FI** | 22.0 | 1.0 | 3.0 | 31.0 | 101.0 | 14.0 | 1.0 | 0.0 | 7.0 | 17.0 | 0.0 | 14.0 | 0.0 | 2.0 | 3.0 | 1.0 | 1.0 | 0.0 | 42.0 | 19.0 | 15.0 | 1.0 | 0.0 | 1.0 | 1.0 | | 180.0 | 12.0 | 123.0 | 489.0 | **612.0** |
| **SE** | 81.0 | 6.4 | 14.0 | 272.9 | 300.0 | 10.0 | 3.2 | 1.0 | 16.6 | 56.8 | 0.6 | 56.9 | 0.4 | 4.4 | 3.9 | 4.9 | 11.8 | 0.0 | 73.7 | 19.8 | 52.4 | 2.1 | 8.5 | 1.6 | 1.5 | 176.3 | | 60.8 | 486.7 | 1,241.5 | **1,728.3** |
| **UK** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* How to read this table: Belgium exported € 12.0 million in road freight transport services to Bulgaria.
** No data available for ES, PT, UK. No breakdown available for FR, HR, LU.
**Source** Eurostat [bop_its6_det]

**Table a4.2 Import of road freight transport services, 2018, in million €**

| | Partner Member State | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **BE** | **BG** | **CZ** | **DK** | **DE** | **EE** | **IE** | **EL** | **ES** | **FR** | **HR** | **IT** | **CY** | **LV** | **LT** | **LU** | **HU** | **MT** | **NL** | **AT** | **PL** | **PT** | **RO** | **SI** | **SK** | **FI** | **SE** | **UK** | **Extra EU-28** | **EU-28** | **Total** |
| **EU-28** | 3,168.7 | 1,660.8 | 3,402.9 | 1,658.9 | 9,877.5 | 628.2 | 375.2 | 455.1 | n.a. | 3,822.7 | 339.5 | 4,030.3 | 61.9 | 432.8 | 2,235.4 | 1,204.2 | 2,298.3 | 26.7 | 6,557.0 | 2,580.1 | 9,131.5 | 989.4 | 3,676.7 | 1,143.2 | 1,977.5 | 612.0 | 1,656.4 | 2,429.0 | 10,795.0 | 70,721.1 | **81,516.1** |
| **BE** | | 222.0 | 124.0 | 81.0 | 883.0 | 7.0 | 64.0 | 13.0 | 232.0 | 835.0 | 7.0 | 252.0 | 8.0 | 12.0 | 104.0 | 297.0 | 52.0 | 8.0 | 1,531.0 | 114.0 | 447.0 | 72.0 | 338.0 | 25.0 | 193.0 | 28.0 | 116.0 | 456.0 | 640.0 | 6,524.0 | **7,164.0** |
| **BG** | 12.7 | | 26.2 | 4.2 | 79.4 | 0.6 | 2.4 | 0.9 | 5.4 | 16.9 | 5.0 | 30.4 | 0.2 | 1.8 | 2.7 | 0.3 | 44.1 | 0.4 | 29.1 | 16.9 | 45.5 | 0.8 | 46.2 | 8.9 | 29.5 | 1.6 | 4.2 | 6.3 | 48.5 | 422.6 | **471.1** |
| **CZ** | 38.4 | 11.8 | | 32.1 | 110.7 | 3.2 | 21.0 | 8.1 | 96.0 | 145.0 | 4.7 | 174.1 | 1.4 | 2.8 | 10.8 | 2.5 | 59.6 | 0.6 | 61.6 | 27.7 | 43.1 | 13.5 | 35.2 | 11.2 | 33.2 | 19.8 | 45.0 | 105.5 | 1,500.8 | 1,118.6 | **2,619.4** |
| **DK** | 73.1 | 86.8 | 54.6 | | 398.1 | 28.8 | 20.1 | 6.2 | 61.3 | 78.4 | 4.3 | 63.9 | 1.2 | 42.1 | 179.4 | 11.5 | 43.5 | 6.3 | 152.3 | 32.6 | 350.1 | 19.6 | 103.2 | 7.0 | 21.1 | 67.9 | 180.1 | 113.2 | 360.9 | 2,215.8 | **2,576.7** |
| **DE** | 169.0 | 301.0 | 1,110.0 | 10.0 | | 292.0 | 5.0 | 292.0 | 438.0 | 556.0 | 5.0 | 514.0 | 0.0 | 20.0 | 436.0 | 306.0 | 471.0 | 0.0 | 1,552.0 | 836.0 | 2,523.0 | 17.0 | 313.0 | 13.0 | 425.0 | 1.0 | 8.0 | 24.0 | 730.0 | 10,637.0 | **11,367.0** |
| **EE** | 9.0 | 1.3 | 13.6 | 14.3 | 32.1 | | 0.5 | 1.3 | 1.8 | 9.0 | 0.2 | 19.4 | 11.7 | 31.3 | 53.4 | 0.7 | 3.9 | 0.9 | 23.3 | 6.5 | 48.4 | 0.2 | 3.9 | 1.5 | 6.9 | 24.3 | 21.9 | 17.6 | 53.0 | 359.0 | **411.9** |
| **IE** | 19.0 | 0.0 | 0.0 | 0.0 | 11.0 | 0.0 | | 0.0 | 4.0 | 8.0 | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 44.0 | 171.0 | 96.0 | **268.0** |
| **EL** | 2.1 | 43.3 | 0.5 | 0.9 | 16.5 | 0.1 | 1.6 | | 1.2 | 3.9 | 0.1 | 8.8 | 8.8 | 1.2 | 0.3 | 0.1 | 1.7 | 0.1 | 6.7 | 10.3 | 4.8 | 0.2 | 6.8 | 1.2 | 0.3 | 0.3 | 1.2 | 4.8 | 20.0 | 127.7 | **147.7** |
| **ES** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **FR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,537.0 | 12,248.0 | **13,785.0** |
| **HR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **224.2** |
| **IT** | 28.2 | 160.7 | 248.0 | 11.1 | 251.4 | 20.3 | 3.3 | 6.1 | 200.9 | 295.4 | 69.9 | | 0.6 | 34.2 | 247.1 | 14.8 | 222.0 | 0.8 | 68.4 | 247.5 | 643.0 | 57.1 | 411.0 | 363.6 | 243.9 | 2.4 | 3.4 | 25.4 | 284.2 | 3,880.4 | **4,164.7** |
| **CY** | n.a. | n.a. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | n.a. | n.a. | 0.0 | 0.0 | | n.a. | n.a. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | n.a. | 0.0 | n.a. | 0.0 | n.a. | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | **2.0** |
| **LV** | 5.0 | 1.0 | 4.0 | 5.0 | 29.0 | 21.0 | 1.0 | 0.0 | 4.0 | 5.0 | 0.0 | 8.0 | 0.0 | | 48.0 | 0.0 | 3.0 | 0.0 | 10.0 | 3.0 | 25.0 | 0.0 | 0.0 | 1.0 | 2.0 | 12.0 | 9.0 | 6.0 | 23.0 | 202.0 | **225.0** |
| **LT** | 3.2 | 14.6 | 6.8 | 4.1 | 24.9 | 11.5 | 0.1 | 0.0 | 2.0 | 10.3 | 0.1 | 5.5 | 0.2 | 34.0 | | 0.7 | 0.7 | 0.0 | 9.0 | 4.6 | 77.4 | 1.7 | 2.9 | 1.0 | 1.8 | 3.3 | 3.7 | 7.0 | 396.2 | 232.0 | **628.2** |
| **LU** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 56.0 | 1,043.0 | **1,098.0** |
| **HU** | 24.8 | 13.7 | 44.3 | 6.6 | 349.1 | 0.5 | 6.2 | 2.7 | 19.4 | 53.8 | 26.7 | 47.1 | 0.1 | 1.7 | 13.0 | 1.0 | | 0.0 | 139.2 | 106.2 | 74.6 | 2.6 | 110.9 | 18.7 | 155.3 | 1.2 | 3.6 | 33.4 | 120.7 | 1,256.4 | **1,377.2** |
| **MT** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| **NL** | 1,006.8 | 132.3 | 311.1 | 258.3 | 1,536.0 | 31.5 | 134.5 | 32.0 | 413.0 | 556.8 | 14.1 | 343.2 | 10.0 | 32.8 | 219.1 | 139.1 | 188.5 | 4.8 | | 206.9 | 1,282.1 | 97.3 | 530.4 | 36.5 | 113.3 | 59.3 | n.a. | 667.9 | n.a. | n.a. | **9,770.1** |
| **AT** | 140.0 | 397.0 | 505.0 | 31.0 | 1,441.0 | 20.0 | 22.0 | 21.0 | 127.0 | 110.0 | 129.0 | 309.0 | 10.0 | 36.0 | 369.0 | 43.0 | 570.0 | 1.0 | 209.0 | | 966.0 | 56.0 | 864.0 | 483.0 | 507.0 | 76.0 | 157.0 | 111.0 | 866.0 | 7,709.0 | **8,575.0** |
| **PL** | 88.0 | 31.4 | 137.3 | 83.5 | 944.0 | 13.4 | 17.6 | 5.6 | 83.5 | 157.9 | 5.6 | 146.4 | 5.2 | 17.1 | 109.1 | 11.3 | 86.4 | 0.9 | 295.2 | 192.4 | | 12.0 | 85.9 | 18.8 | 70.4 | 29.6 | 115.9 | 125.3 | 871.5 | 2,889.4 | **3,760.9** |
| **PT** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **RO** | 23.0 | 119.0 | 14.2 | 17.2 | 247.1 | 1.1 | 0.9 | 3.2 | 38.2 | 53.7 | 3.4 | 60.6 | 2.4 | 0.6 | 7.5 | 0.6 | 79.5 | 0.0 | 84.0 | 117.7 | 84.0 | 2.4 | | 8.8 | 18.0 | 0.2 | 105.9 | 27.1 | 86.2 | 1,120.3 | **1,206.5** |
| **SI** | 5.4 | 3.7 | 6.9 | 2.5 | 26.5 | 0.4 | 0.2 | 0.6 | 1.7 | 13.1 | 42.2 | 12.7 | 0.1 | 0.6 | 1.7 | 0.2 | 6.5 | 0.0 | 7.1 | 36.5 | 19.3 | 0.3 | 12.3 | | 6.4 | 0.4 | 1.9 | 4.7 | 60.7 | 213.8 | **274.5** |
| **SK** | 16.7 | 9.0 | 249.3 | 7.8 | 292.4 | 0.1 | 1.0 | 1.1 | 5.8 | 47.8 | 5.9 | 48.0 | 0.5 | 0.4 | 5.7 | 0.5 | 116.2 | 0.3 | 43.0 | 110.9 | 140.9 | 1.7 | 32.6 | 39.5 | | 0.5 | 4.8 | 7.5 | 201.7 | 1,190.1 | **1,391.8** |
| **FI** | 41.0 | 2.0 | 4.0 | 68.0 | 203.0 | 99.0 | 3.0 | 0.0 | 20.0 | 24.0 | 0.0 | 21.0 | 0.0 | 14.0 | 28.0 | 3.0 | 9.0 | 0.0 | 122.0 | 46.0 | 129.0 | 2.0 | 2.0 | 0.0 | 6.0 | | 360.0 | 33.0 | 135.0 | 1,241.0 | **1,376.0** |
| **SE** | 130.7 | 52.3 | 99.1 | 591.6 | 645.4 | 67.7 | 10.8 | 2.6 | 88.0 | 67.5 | 3.1 | 99.4 | 1.4 | 35.2 | 85.5 | 10.6 | 17.8 | 0.4 | 300.9 | 110.9 | 251.5 | 9.8 | 14.8 | 14.7 | 14.4 | 254.2 | | 121.5 | 442.1 | 3,102.1 | **3,544.2** |
| **UK** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* How to read this table: Belgium imported € 222.0 million in road freight transport services from Bulgaria.
** No data available for ES, PT, UK. No breakdown available for FR, HR, LU.
**Source** Eurostat [bop_its6_det]

**Table a4.3 Balance of road freight transport services (= export - import), 2018, in million €**

| | Partner Member State | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **BE** | **BG** | **CZ** | **DK** | **DE** | **EE** | **IE** | **EL** | **ES** | **FR** | **HR** | **IT** | **CY** | **LV** | **LT** | **LU** | **HU** | **MT** | **NL** | **AT** | **PL** | **PT** | **RO** | **SI** | **SK** | **FI** | **SE** | **UK** | **Extra EU-28** | **EU-28** | **Total** |
| **EU-28** | 1,494.6 | -1,336.5 | -2,310.0 | 58.6 | 6,152.8 | -468.7 | 506.5 | -173.4 | n.a. | 3,118.4 | -201.6 | 567.7 | -1.5 | -264.4 | -1,846.2 | -381.2 | -1,306.9 | 5.8 | -86.0 | 686.5 | -7,542.0 | -227.3 | -2,994.3 | -902.0 | -1,315.4 | 263.2 | 1,233.0 | 1,818.2 | -3,328.8 | -6,678.9 | **-10,007.8** |
| **BE** | | -210.0 | -107.0 | -44.0 | -133.0 | n.a. | -1.0 | -7.0 | -152.0 | 146.0 | -6.0 | -115.0 | -3.0 | -10.0 | -97.0 | -124.0 | -44.0 | -5.0 | -276.0 | -58.0 | -410.0 | -51.0 | -312.0 | n.a. | -167.0 | 18.0 | 100.0 | -84.0 | -167.0 | -2,169.0 | **-2,336.0** |
| **BG** | 3.3 | | -5.0 | 1.1 | 55.2 | 0.4 | -1.3 | 62.8 | 11.3 | 24.0 | -0.4 | 41.1 | 1.8 | -0.6 | -0.9 | -0.1 | -30.6 | 0.3 | -12.5 | 0.5 | -27.1 | 2.1 | 10.8 | -4.2 | -22.3 | 0.6 | 5.2 | 14.5 | 60.4 | 129.9 | **190.3** |
| **CZ** | 68.0 | 10.4 | | 8.2 | 394.6 | 8.2 | 17.8 | 6.7 | 104.7 | 83.1 | 9.3 | 11.9 | 0.9 | 3.7 | 5.0 | 4.2 | 62.4 | 1.0 | 113.5 | 96.3 | 25.5 | 9.2 | 25.2 | 8.8 | 42.4 | 9.0 | 57.7 | 151.6 | -961.6 | 1,339.3 | **377.7** |
| **DK** | 11.9 | -76.9 | -27.6 | | 116.6 | -22.9 | 19.7 | 2.4 | -24.8 | 20.0 | -2.5 | -14.8 | -0.4 | -29.5 | -165.2 | 4.0 | -31.8 | -5.4 | 14.6 | -11.3 | -257.6 | -10.6 | -85.7 | -5.4 | -8.9 | 7.8 | 237.3 | 1.9 | 165.0 | -344.1 | **-179.3** |
| **DE** | 69.0 | -301.0 | -932.0 | 84.0 | | -292.0 | 0.0 | -292.0 | -361.0 | -28.0 | -4.0 | -443.0 | 0.0 | -19.0 | -434.0 | -295.0 | -426.0 | 0.0 | -1,188.0 | -584.0 | -2,282.0 | -11.0 | -306.0 | -12.0 | -339.0 | 6.0 | 163.0 | 44.0 | -391.0 | -8,184.0 | **-8,575.0** |
| **EE** | -4.9 | -1.1 | -12.8 | -2.4 | 3.9 | | -0.1 | -1.3 | 0.9 | -3.3 | -0.1 | -13.1 | -10.3 | -15.0 | -39.4 | 1.1 | -3.5 | -0.9 | 3.3 | -3.9 | -41.3 | -0.2 | -3.7 | -1.4 | -6.6 | 88.2 | 41.8 | 4.2 | 75.4 | -21.8 | **53.6** |
| **IE** | -19.0 | 0.0 | 0.0 | 0.0 | -11.0 | 0.0 | | 0.0 | -4.0 | -8.0 | 0.0 | -4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -44.0 | -171.0 | -96.0 | **-268.0** |
| **EL** | 5.7 | -34.3 | 2.1 | 0.1 | 1.2 | -0.1 | 0.7 | | 4.3 | 3.6 | 0.5 | 3.7 | 0.7 | -1.1 | 0.6 | -0.1 | 0.9 | 0.7 | 22.6 | 1.2 | -3.7 | 0.3 | -6.7 | 2.0 | 1.8 | 3.4 | 3.3 | 4.9 | -4.6 | 18.3 | **13.6** |
| **ES** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **FR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -759.0 | -7,058.0 | **-7,817.0** |
| **HR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **201.9** |
| **IT** | 22.3 | -152.4 | -220.0 | -0.8 | 51.1 | -18.9 | 0.1 | 9.6 | -120.9 | -35.4 | -55.3 | | 2.7 | -32.7 | -243.4 | -13.0 | -201.2 | 5.3 | -18.7 | -164.5 | -591.7 | -45.6 | -386.2 | -323.2 | -229.6 | 4.1 | 17.6 | 27.5 | -194.5 | -2,713.2 | **-2,907.7** |
| **CY** | n.a. | n.a. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | n.a. | n.a. | 0.0 | 0.0 | | n.a. | n.a. | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | n.a. | 0.0 | n.a. | 0.0 | n.a. | 0.0 | 0.0 | 0.0 | -1.0 | -1.0 | **-2.0** |
| **LV** | 21.0 | 7.0 | -2.0 | 12.0 | 64.0 | -3.0 | -1.0 | 2.0 | 12.0 | 124.0 | 0.0 | 40.0 | 0.0 | | -2.0 | 1.0 | -1.0 | 0.0 | 15.0 | 2.0 | -14.0 | 0.0 | 0.0 | -1.0 | 4.0 | -2.0 | 84.0 | 15.0 | 158.0 | 378.0 | **535.0** |
| **LT** | 130.8 | -12.6 | 4.3 | 188.6 | 584.2 | 37.7 | 2.5 | 1.9 | 87.3 | 415.1 | 0.7 | 142.7 | 0.5 | 37.3 | | 30.9 | 2.5 | 0.0 | 159.5 | 255.9 | -31.0 | 2.0 | 1.4 | 1.4 | 2.4 | 18.8 | 78.3 | 75.8 | -118.9 | 2,298.8 | **2,179.9** |
| **LU** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 33.0 | -77.0 | **-44.0** |
| **HU** | 5.5 | -7.6 | -21.4 | 7.4 | 28.8 | -0.3 | -3.9 | -0.7 | 2.2 | 7.8 | -18.6 | -0.3 | 0.4 | -1.4 | -11.3 | 10.3 | | 0.0 | -58.6 | 247.9 | -59.3 | -1.6 | -89.9 | -13.0 | -91.0 | -0.3 | 1.2 | -5.9 | -82.1 | -73.6 | **-155.8** |
| **MT** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | **0.0** |
| **NL** | 192.2 | -117.4 | -231.3 | -129.4 | 1,025.8 | -22.3 | 60.6 | -17.1 | -137.9 | 211.1 | -11.7 | 40.7 | -4.3 | -25.3 | -179.1 | -34.3 | -33.3 | -3.0 | | -45.5 | -854.5 | -44.6 | -415.4 | -29.1 | -92.5 | 112.4 | 330.2 | 619.6 | -600.2 | 164.7 | **-435.5** |
| **AT** | 23.0 | -363.0 | -295.0 | 13.0 | 1,690.0 | -17.0 | -7.0 | 22.0 | 38.0 | 211.0 | -109.0 | 550.0 | -8.0 | -34.0 | -358.0 | -2.0 | -376.0 | 1.0 | 193.0 | | -817.0 | -32.0 | -746.0 | -418.0 | -385.0 | 17.0 | 140.0 | 256.0 | -75.0 | -813.0 | **-888.0** |
| **PL** | 223.2 | -10.8 | 66.9 | 273.8 | 1,970.7 | 4.9 | 39.2 | 6.3 | 170.4 | 551.2 | 4.2 | 255.1 | 1.9 | 14.3 | 24.4 | 117.6 | -7.3 | 0.9 | 873.9 | 265.9 | | 6.6 | 12.7 | -3.1 | 36.4 | 40.8 | 265.6 | 288.6 | -74.6 | 5,494.8 | **5,420.2** |
| **PT** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **RO** | 381.0 | -3.9 | 34.6 | 155.1 | 673.6 | 0.2 | 2.1 | 13.1 | 569.8 | 291.1 | 3.0 | 559.3 | 2.4 | 1.1 | 26.6 | 91.3 | 81.0 | 0.2 | 488.6 | 630.6 | 29.4 | 12.9 | | 7.1 | 27.3 | 3.2 | -64.5 | 141.2 | 77.1 | 4,157.9 | **4,235.1** |
| **SI** | 20.7 | 0.9 | 12.8 | 7.2 | 206.9 | -0.2 | 0.7 | 2.3 | 10.3 | 73.0 | -5.5 | 186.3 | 3.3 | -0.2 | 1.8 | 13.9 | 18.2 | 0.2 | 50.2 | 234.2 | -3.6 | 0.1 | 8.8 | | 12.2 | 0.6 | 16.7 | 14.4 | 47.7 | 886.1 | **933.8** |
| **SK** | 115.3 | -1.7 | -138.9 | 31.8 | -36.3 | 0.2 | 3.2 | -0.7 | 3.3 | 6.1 | -4.6 | 113.5 | -0.2 | -0.2 | -5.0 | 22.0 | -46.5 | 0.5 | 20.7 | 138.5 | -124.8 | -0.1 | -26.7 | -25.8 | | 2.5 | 12.5 | 26.5 | -85.5 | 85.1 | **-0.4** |
| **FI** | -19.0 | -2.0 | -1.0 | -37.0 | -102.0 | -85.0 | -2.0 | 0.0 | -13.0 | -7.0 | 0.0 | -7.0 | 0.0 | -12.0 | -25.0 | -2.0 | -8.0 | 0.0 | -80.0 | -27.0 | -114.0 | -1.0 | -1.0 | 1.0 | -5.0 | | -179.0 | -21.0 | -12.0 | -752.0 | **-764.0** |
| **SE** | -49.7 | -45.9 | -85.1 | -318.7 | -345.4 | -57.6 | -7.6 | -1.8 | -71.5 | -10.7 | -2.5 | -42.4 | -1.0 | -30.8 | -81.7 | -5.8 | -5.9 | -0.3 | -227.2 | -91.1 | -199.1 | -7.7 | -6.3 | -13.2 | -13.1 | -78.0 | | -60.6 | 44.6 | -1,860.5 | **-1,815.9** |
| **UK** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* How to read this table: the balance from Belgium to Bulgaria amounts to - € 210.0 million, which means that Belgium imported € 210.0 million more road transport services from Bulgaria than it exported to Bulgaria.

** No data available for ES, PT, UK. No breakdown available for FR, HR, LU.

**Source** Eurostat [bop_its6_det]

# appendix 5 Cross-table export of road freight transport services for six Member States

**Table a5.1 Row percentages export of road freight transport services, breakdown by Member State where service is provided, Austria, Belgium, Czech Republic, Germany, Poland, an Slovenia, 2010-2018, in %**

| | | BE | BG | CZ | DK | DE | EE | IE | EL | ES | FR | HR | IT | CY | LV | LT | LU | HU | MT | NL | AT | PL | PT | RO | SI | SL | FI | SE | UK | EU-28 | Extra-EU28 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Austria* | 2012 | 2 | 0 | 2 | 1 | 42 | 0 | 0 | 1 | 2 | 4 | 0 | 11 | 0 | 0 | 0 | 1 | 4 | 0 | 4 | 0 | 2 | 0 | 1 | 1 | 2 | 1 | 3 | 4 | 89 | 11 | 100 |
| | 2013 | 2 | 1 | 2 | 1 | 43 | 0 | 0 | 1 | 2 | 4 | 0 | 11 | 0 | 0 | 0 | 1 | 3 | 0 | 4 | 0 | 2 | 0 | 1 | 1 | 2 | 1 | 3 | 4 | 90 | 10 | 100 |
| | 2014 | 2 | 1 | 2 | 1 | 43 | 0 | 0 | 1 | 2 | 4 | 0 | 11 | 0 | 0 | 0 | 1 | 3 | 0 | 5 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 3 | 4 | 90 | 10 | 100 |
| | 2015 | 2 | 1 | 2 | 1 | 41 | 0 | 0 | 1 | 2 | 4 | 0 | 11 | 0 | 0 | 0 | 1 | 3 | 0 | 5 | 0 | 2 | 0 | 1 | 1 | 2 | 1 | 4 | 5 | 90 | 10 | 100 |
| | 2016 | 2 | 0 | 3 | 1 | 41 | 0 | 0 | 1 | 2 | 4 | 0 | 11 | 0 | 0 | 0 | 1 | 3 | 0 | 5 | 0 | 2 | 0 | 2 | 1 | 2 | 1 | 4 | 5 | 90 | 10 | 100 |
| | 2017 | 2 | 0 | 3 | 1 | 41 | 0 | 0 | 1 | 2 | 4 | 0 | 11 | 0 | 0 | 0 | 1 | 3 | 0 | 5 | 0 | 2 | 0 | 2 | 1 | 2 | 1 | 4 | 5 | 90 | 10 | 100 |
| | 2018 | 2 | 0 | 3 | 1 | 41 | 0 | 0 | 1 | 2 | 4 | 0 | 11 | 0 | 0 | 0 | 1 | 3 | 0 | 5 | 0 | 2 | 0 | 2 | 1 | 2 | 1 | 4 | 5 | 90 | 10 | 100 |
| Belgium | 2010 | 0 | 0 | 0 | 0 | 18 | 0 | 1 | 0 | 2 | 25 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 18 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 4 | 9 | 88 | 12 | 100 |
| | 2011 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 2 | 25 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | | 20 | 1 | 1 | 0 | 1 | 0 | 1 | 2 | 4 | 8 | 86 | 14 | 100 |
| | 2012 | 0 | 0 | 1 | 1 | 16 | 0 | 1 | 0 | 1 | 22 | | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 23 | 1 | 1 | 0 | 1 | | 0 | 2 | 5 | 8 | 88 | 12 | 100 |
| | 2013 | 0 | 0 | 1 | 1 | 16 | 0 | 1 | 0 | 2 | 21 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 21 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 5 | 9 | 87 | 13 | 100 |
| | 2014 | 0 | 1 | 0 | 1 | 16 | 0 | 1 | 0 | 2 | 22 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 20 | 1 | 1 | 0 | 1 | | 1 | 1 | 5 | 9 | 88 | 12 | 100 |
| | 2015 | 0 | 0 | 0 | 1 | 15 | 0 | 2 | 0 | 2 | 21 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 0 | 22 | 1 | 1 | 0 | 1 | | 1 | 1 | 4 | 8 | 90 | 10 | 100 |
| | 2016 | 0 | 1 | 0 | 1 | 16 | 0 | 1 | 0 | 2 | 22 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 0 | 24 | 1 | 1 | 0 | 1 | | 1 | 1 | 4 | 9 | 92 | 8 | 100 |
| | 2017 | 0 | 0 | 0 | 1 | 15 | 0 | 1 | 0 | 2 | 21 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 0 | 24 | 1 | 1 | 0 | 0 | | 1 | 1 | 4 | 9 | 91 | 9 | 100 |
| | 2018 | 0 | 0 | 0 | 1 | 16 | | 1 | 0 | 2 | 20 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 0 | 26 | 1 | 1 | 0 | 1 | | 1 | 1 | 4 | 8 | 90 | 10 | 100 |
| Czech Republic | 2010 | 4 | 0 | 0 | 1 | 19 | 0 | 0 | 0 | 5 | 7 | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 0 | 5 | 6 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 7 | 78 | 22 | 100 |
| | 2011 | 4 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 4 | 7 | 0 | 5 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 6 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 7 | 70 | 30 | 100 |
| | 2012 | 3 | 1 | 0 | 1 | 15 | 0 | 0 | 0 | 4 | 7 | 0 | 5 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 5 | 2 | 1 | 1 | 0 | 2 | 1 | 2 | 7 | 66 | 34 | 100 |
| | 2013 | 4 | 1 | 0 | 1 | 18 | 0 | 0 | 0 | 5 | 8 | 0 | 6 | 0 | 0 | 1 | 0 | 3 | 0 | 4 | 5 | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 9 | 78 | 22 | 100 |
| | 2014 | 4 | 1 | 0 | 2 | 17 | 0 | 1 | 0 | 6 | 8 | 0 | 6 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 9 | 79 | 21 | 100 |
| | 2015 | 4 | 1 | 0 | 1 | 17 | 0 | 1 | 0 | 6 | 8 | 0 | 6 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 10 | 81 | 19 | 100 |
| | 2016 | 4 | 1 | 0 | 1 | 17 | 0 | 1 | 0 | 7 | 8 | 0 | 7 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 9 | 82 | 18 | 100 |
| | 2017 | 4 | 1 | 0 | 1 | 18 | 0 | 1 | 0 | 7 | 8 | 0 | 7 | 0 | 0 | 1 | 0 | 4 | 0 | 5 | 4 | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 9 | 82 | 18 | 100 |
| | 2018 | 4 | 1 | 0 | 1 | 17 | 0 | 1 | 0 | 7 | 8 | 0 | 6 | 0 | 0 | 1 | 0 | 4 | 0 | 6 | 4 | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 9 | 82 | 18 | 100 |
| Germany | 2010 | 11 | 0 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 10 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 95 | 5 | 100 |
| | 2011 | 10 | 0 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 10 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 94 | 6 | 100 |
| | 2012 | 11 | 0 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 10 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 94 | 6 | 100 |
| | 2013 | 8 | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 1 | 22 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 11 | 10 | 8 | 0 | 0 | 0 | 2 | 1 | 5 | 3 | 84 | 16 | 100 |
| | 2014 | 8 | | 7 | 3 | 0 | 0 | 0 | 0 | 2 | 24 | 0 | 2 | | 0 | 0 | 0 | 0 | | 11 | 8 | 9 | 0 | 0 | 0 | 4 | 0 | 7 | 2 | 89 | 11 | 100 |
| | 2015 | 8 | | 7 | 4 | 0 | 0 | 0 | 0 | 2 | 22 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | 12 | 8 | 9 | 0 | 0 | 0 | 4 | 0 | 6 | 3 | 88 | 12 | 100 |
| | 2016 | 8 | 0 | 7 | 4 | 0 | 0 | 0 | 0 | 2 | 21 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | 12 | 8 | 9 | 0 | 0 | | 4 | 0 | 6 | 3 | 87 | 13 | 100 |
| | 2017 | 8 | 0 | 7 | 4 | 0 | 0 | 0 | 0 | 3 | 20 | 0 | 3 | | 0 | 0 | 1 | 2 | | 13 | 8 | 9 | 0 | 0 | 0 | 3 | 0 | 5 | 3 | 87 | 13 | 100 |
| | 2018 | 9 | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 3 | 19 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 13 | 9 | 9 | 0 | 0 | 0 | 3 | 0 | 6 | 2 | 88 | 12 | 100 |

**Table a5.1 Row percentages export of road freight transport services, breakdown by Member State where service is provided, Austria, Belgium, Czech Republic, Germany, Poland, an Slovenia, 2010-2018, in % (continued)**

| | | BE | BG | CZ | DK | DE | EE | IE | EL | ES | FR | HR | IT | CY | LV | LT | LU | HU | MT | NL | AT | PL | PT | RO | SI | SL | FI | SE | UK | EU-28 | Extra-EU28 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Poland | 2010 | 5 | 0 | 2 | 3 | 31 | 0 | 0 | 0 | 2 | 9 | 0 | 5 | 0 | 0 | 1 | 1 | 1 | 0 | 11 | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 5 | 86 | 14 | 100 |
| | 2011 | 5 | 0 | 2 | 3 | 31 | 0 | 0 | 0 | 2 | 9 | 0 | 4 | 0 | 0 | 1 | 1 | 1 | 0 | 13 | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 4 | 87 | 13 | 100 |
| | 2012 | 5 | 0 | 2 | 3 | 30 | 0 | 0 | 0 | 2 | 8 | 0 | 4 | 0 | 0 | 1 | 2 | 1 | 0 | 13 | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 4 | 86 | 14 | 100 |
| | 2013 | 4 | 0 | 2 | 3 | 30 | 0 | 1 | 0 | 2 | 9 | 0 | 4 | 0 | 0 | 2 | 2 | 1 | 0 | 14 | 5 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 4 | 88 | 12 | 100 |
| | 2014 | 4 | 0 | 2 | 3 | 30 | 0 | 1 | 0 | 2 | 9 | 0 | 5 | 0 | 0 | 2 | 2 | 1 | 0 | 12 | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 89 | 11 | 100 |
| | 2015 | 4 | 0 | 2 | 4 | 30 | 0 | 1 | 0 | 3 | 9 | 0 | 4 | 0 | 0 | 1 | 2 | 1 | 0 | 12 | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 5 | 90 | 10 | 100 |
| | 2016 | 4 | 0 | 2 | 4 | 31 | 0 | 1 | 0 | 3 | 9 | 0 | 4 | 0 | 0 | 1 | 2 | 1 | 0 | 12 | 5 | 0 | 0 | 1 | 0 | 1 | 1 | 4 | 4 | 91 | 9 | 100 |
| | 2017 | 3 | 0 | 2 | 4 | 31 | 0 | 1 | 0 | 3 | 8 | 0 | 4 | 0 | 0 | 1 | 1 | 1 | 0 | 12 | 5 | 0 | 0 | 1 | 0 | 1 | 1 | 4 | 5 | 91 | 9 | 100 |
| | 2018 | 3 | 0 | 2 | 4 | 32 | 0 | 1 | 0 | 3 | 8 | 0 | 4 | 0 | 0 | 1 | 1 | 1 | 0 | 13 | 5 | 0 | 0 | 1 | 0 | 1 | 1 | 4 | 5 | 91 | 9 | 100 |
| Slovenia | 2010 | 2 | 0 | 1 | 0 | 17 | 0 | 0 | 0 | 1 | 9 | 4 | 24 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 20 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 90 | 10 | 100 |
| | 2011 | 2 | 0 | 1 | 0 | 19 | 0 | 0 | 0 | 1 | 8 | 4 | 23 | 0 | 0 | 0 | 2 | 2 | 0 | 3 | 21 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 92 | 8 | 100 |
| | 2012 | 2 | 0 | 1 | 0 | 19 | 0 | 0 | 0 | 1 | 8 | 4 | 21 | 0 | 0 | 0 | 2 | 2 | 0 | 4 | 21 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 91 | 9 | 100 |
| | 2013 | 3 | 0 | 1 | 1 | 21 | 0 | 0 | 0 | 1 | 8 | 3 | 20 | 0 | 0 | 0 | 1 | 2 | 0 | 4 | 19 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 90 | 10 | 100 |
| | 2014 | 3 | 0 | 1 | 1 | 21 | 0 | 0 | 0 | 2 | 8 | 4 | 19 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 19 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 3 | 91 | 9 | 100 |
| | 2015 | 3 | 0 | 1 | 1 | 20 | 0 | 0 | 0 | 1 | 7 | 4 | 19 | 0 | 0 | 0 | 1 | 2 | 0 | 4 | 19 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 92 | 8 | 100 |
| | 2016 | 3 | 0 | 2 | 1 | 19 | 0 | 0 | 0 | 1 | 7 | 4 | 18 | 0 | 0 | 0 | 1 | 2 | 0 | 5 | 20 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 91 | 9 | 100 |
| | 2017 | 2 | 0 | 3 | 1 | 20 | 0 | 0 | 0 | 1 | 7 | 3 | 18 | 0 | 0 | 0 | 1 | 2 | 0 | 5 | 21 | 1 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 91 | 9 | 100 |
| | 2018 | 2 | 0 | 2 | 1 | 19 | 0 | 0 | 0 | 1 | 7 | 3 | 16 | 0 | 0 | 0 | 1 | 2 | 0 | 5 | 22 | 1 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 91 | 9 | 100 |

* For Austria, no data are available for 2010 and 2011.

** When a cell is blank, no information was provided in Eurostat.

**Source** Eurostat [bop_its6_det]

# appendix 6 Country fiches

# European Union

571,795

Companies active under NACE 4941 'Freight transporty by road', 2017

3.3 mio
1.5%

Number of persons employed in 2017 in NACE 4941 'Freight transport by road' and share in total employment

5.7

Persons employed per enterprise in 2017

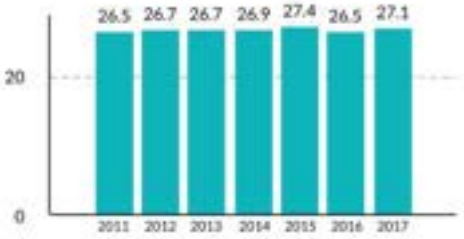
3.3%

Share of driver attestations in total number of persons employed in NACE 4941 'Freight transport by road' in 2017

| **Type of transport** (Share in total, 2017) | **EU-28** | **EU-15** | **EU-13** |
|---|---|---|---|
| Total transport | 100.0% | 68.0% | 32.0% |
| ↳ National transport | 64.6% | 54.4% | 10.2% |
| ↳ International transport | 35.4% | 13.6% | 21.8% |
| ↳ Goods loaded in reporting country | 13.1% | 6.6% | 6.5% |
| ↳ Goods unloaded in reporting country | 10.8 | 5.1% | 5.7% |
| ↳ Cross-trade | 9.3% | 1.3% | 8.0% |
| ↳ Cabotage | 2.2% | 0.6% | 1.6% |

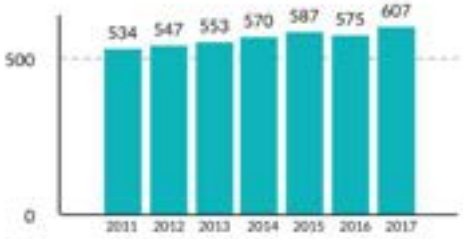
Source Eurostat (road_go_ta_tott)

**Average personnel cost** of companies active under NACE 4941 'Freight transport by road', 2011-2017, in € 1,000




Source Eurostat (sbs_na_1a_se_r2)

**Average turnover per company** active under NACE 4941 'Freight transport by road', 2011-2017, in € 1,000




Source Eurostat (sbs_na_1a_se_r2)

**12.8%** of transport companies have a **foreign majority shareholder**


Source Orbis database

**0.2%** of transport companies have a **foreign subsidiary**


Source Orbis database

# Austria

6,364

Companies active under NACE 4941 'Freight transport by road', 2017


Number of persons employed in 2017 in NACE 4941 'Freight transport by road' and share in total employment


Persons employed per enterprise in 2017

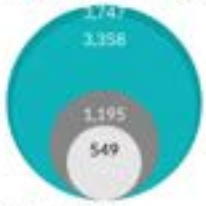

Share of driver attestations in total number of persons employed in NACE 4941 'Freight transport by road' in 2017

**Total road freight transport** in million tonne-km in 2018


National transport (65.65%)
International transport (34.35%)

Source: Eurostat [road_go_ta_tott]

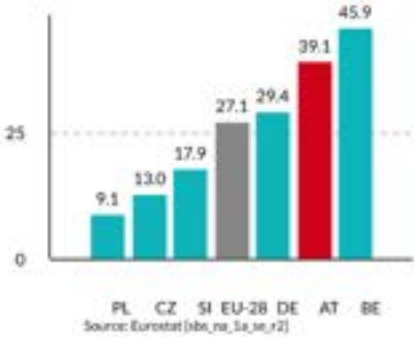
**International road freight transport** in million tonne-km in 2018




Goods loaded in AT (42.34%)
Goods unloaded in AT (37.95%)
Cross-trade (13.5%)
Cabotage (6.2%)

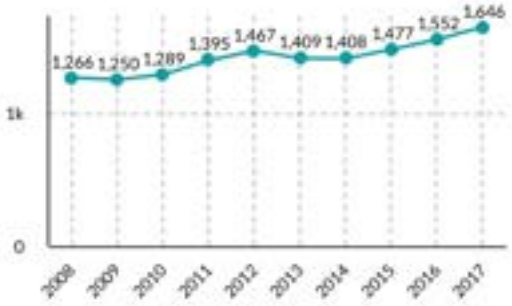
Source: Eurostat [road_go_ta_tott]

**Average personnel cost** of companies active under NACE 4941 'Freight transport by road', 2017, in € 1,000




Source: Eurostat [sbs_na_1a_se_r2]

**Average turnover per company** active under NACE 4941 'Freight transport by road', 2008-2017, in € 1,000




Source: Eurostat [sbs_na_1a_se_r2]

**3.3%** of transport companies have a **foreign majority shareholder**


EU (88.75%)
Non-EU (11.25%)

Source: Orbis database

**1.9%** of transport companies have a **foreign subsidiary**


EU (89.29%)
Non-EU (10.71%)

Source: Orbis database

# Belgium

7,494

Companies active under NACE 4941 'Freight transporty by road', 2017


Number of persons employed in 2017 in NACE 4941 'Freight transport by road' and share in total employment


Persons employed per enterprise in 2017


Share of driver attestations in total number of persons employed in NACE 4941 'Freight transport by road' in 2017

**Total road freight transport** in million tonne-km in 2018


National transport (63%)
International transport (37%)

Source: Eurostat (road_go_ta_tott)

**International road freight transport** in million tonne-km in 2018


Goods loaded in BE (51.01%)
Goods unloaded in BE (32.29%)
Cross-trade (8.74%)
Cabotage (7.96%)

Source: Eurostat (road_go_ta_tott)

**Average personnel cost** of companies active under NACE 4941 'Freight transport by road', 2017, in € 1,000

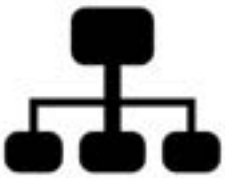

Source: Eurostat (sbs_na_1a_se_r2)

**Average turnover per company** active under NACE 4941 'Freight transport by road', 2008-2017, in € 1,000


Source: Eurostat (sbs_na_1a_se_r2)

**6.0%** of transport companies have a **foreign majority shareholder**

**0.9%** of transport companies have a **foreign subsidiary**




EU (55.5%) Non-EU (44.5%)

Source: Orbis database


EU (78.82%) Non-EU (21.18%)

Source: Orbis database

# Czech Republic

30,979

Companies active under NACE 4941 'Freight transport by road', 2017

Source: Eurostat [sbs_na_1a_se_r2]

128,964
2.5%

Number of persons employed in 2017 in NACE 4941 'Freight transport by road' and share in total employment

Source: Eurostat [sbs_na_1a_se_r2] and [lfsi_emp_a]

4.2

Persons employed per enterprise in 2017

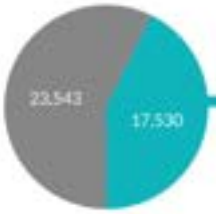
Source: Eurostat [sbs_na_1a_se_r2]

0.6%

Share of driver attestations in total number of persons employed in NACE 4941 'Freight transport by road' in 2017

Source: Eurostat [sbs_na_1a_se_r2] and European Commission

**Total road freight transport** in million tonne-km in 2018




National transport (57.32%)
International transport (42.68%)

Source: Eurostat [road_go_ta_tott]

**International road freight transport** in million tonne-km in 2018

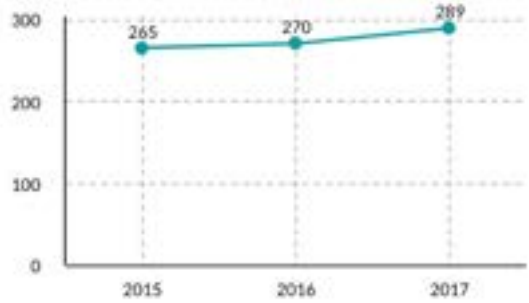

Goods loaded in CZ (45.68%)
Goods unloaded in CZ (39.73%)
Cross-trade (11.95%)
Cabotage (2.65%)

Source: Eurostat [road_go_ta_tott]

**Average personnel cost** of companies active under NACE 4941 'Freight transport by road', 2017, in € 1,000


Source: Eurostat [sbs_na_1a_se_r2]

**Average turnover per company** active under NACE 4941 'Freight transport by road', 2015-2017, in € 1,000




Source: Eurostat [sbs_na_1a_se_r2]

6.9% of transport companies have a **foreign majority shareholder**


EU (71.06%)
Non-EU (28.94%)

Source: Orbis database

0.4% of transport companies have a **foreign subsidiary**


EU (94.83%)
Non-EU (5.17%)

Source: Orbis database

# Germany

35,873

Companies active under NACE 4941 'Freight transport by road', 2017


Number of persons employed in 2017 in NACE 4941 'Freight transport by road' and share in total employment


Persons employed per enterprise in 2017


Share of driver attestations in total number of persons employed in NACE 4941 'Freight transport by road' in 2017

**Total road freight transport** in million tonne-km in 2018


National transport (87.18%)
International transport (12.82%)

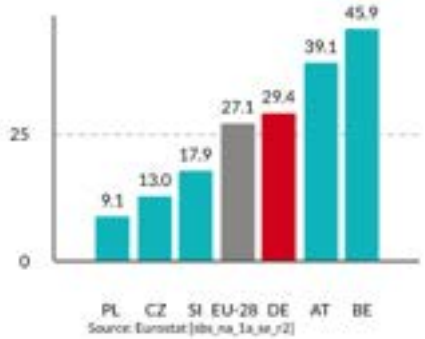
Source: Eurostat (road_go_ta_tott)

**International road freight transport** in million tonne-km in 2018


Goods loaded in DE (50.69%)
Goods unloaded in DE (37.45%)
Cross-trade (8.09%)
Cabotage (3.77%)

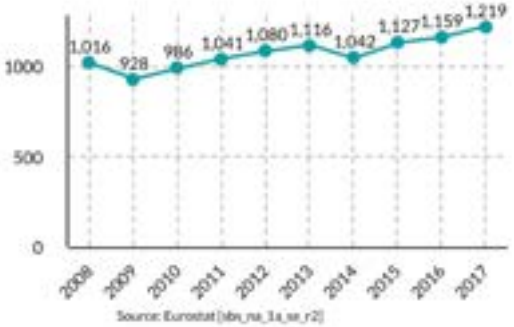
Source: Eurostat (road_go_ta_tott)

**Average personnel cost** of companies active under NACE 4941 'Freight transport by road', 2017, in € 1,000

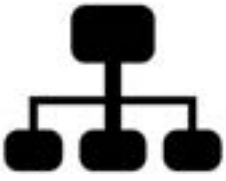



Source: Eurostat (sbs_na_1a_se_r2)

**Average turnover per company** active under NACE 4941 'Freight transport by road', 2008-2017, in € 1,000




Source: Eurostat (sbs_na_1a_se_r2)



**4.1%** of transport companies have a **foreign majority shareholder**


EU (78.37%)
Non-EU (21.63%)

Source: Orbis database

**0.4%** of transport companies have a **foreign subsidiary**


EU (84.72%)
Non-EU (15.28%)

Source: Orbis database

# Poland

86,834

Companies active under NACE 4941 'Freight transport by road', 2017


Number of persons employed in 2017 in NACE 4941 'Freight transport by road' and share in total employment


Persons employed per enterprise in 2017


Share of driver attestations in total number of persons employed in NACE 4941 'Freight transport by road' in 2017

**Total road freight transport** in million tonne-km in 2018


National transport (36.31%)
International transport (63.69%)

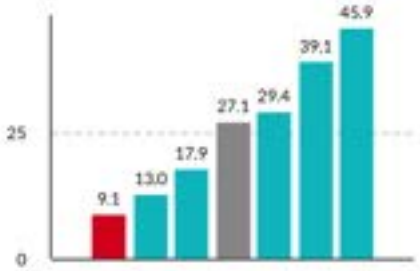
Source: Eurostat (road_go_ta_tott)

**International road freight transport** in million tonne-km in 2018


Goods loaded in PL (32.94%)
Goods unloaded in PL (29.51%)
Cross-trade (29.28%)
Cabotage (8.27%)

Source: Eurostat (road_go_ta_tott)

**Average personnel cost** of companies active under NACE 4941 'Freight transport by road', 2017, in € 1,000

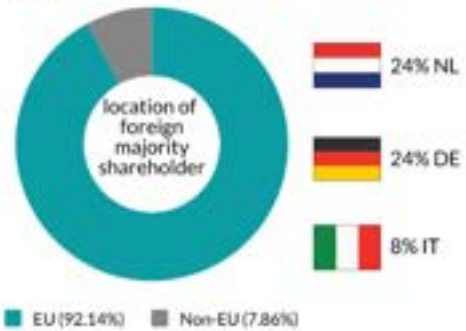



Source: Eurostat (sbs_na_1a_se_r2)

**Average turnover per company** active under NACE 4941 'Freight transport by road', 2008-2017, in € 1,000

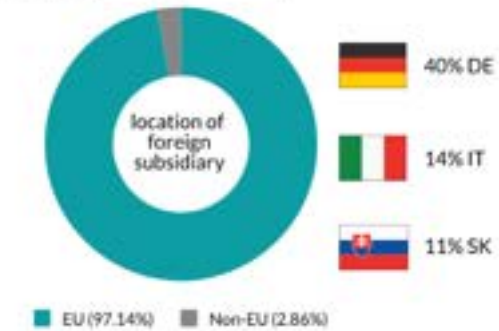

Source: Eurostat (sbs_na_1a_se_r2)

**3.2%** of transport companies have a **foreign majority shareholder**




Source: Orbis database

**0.2%** of transport companies have a **foreign subsidiary**




Source: Orbis database

# Slovenia

5,549

Companies active under NACE 4941 'Freight transport by road', 2017


Number of persons employed in 2017 in NACE 4941 'Freight transport by road' and share in total employment


Persons employed per enterprise in 2017


Share of driver attestations in total number of persons employed in NACE 4941 'Freight transport by road' in 2017

**Total road freight transport** in million tonne-km in 2018


National transport (10.15%)
International transport (89.85%)

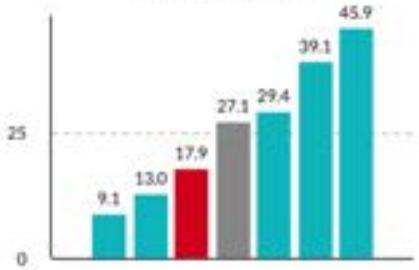
Source: Eurostat (road_go_ta_tott)

**International road freight transport** in million tonne-km in 2018


Goods loaded in SI (28.35%)
Goods unloaded in SI (20.15%)
Cross-trade (46.54%)
Cabotage (4.96%)

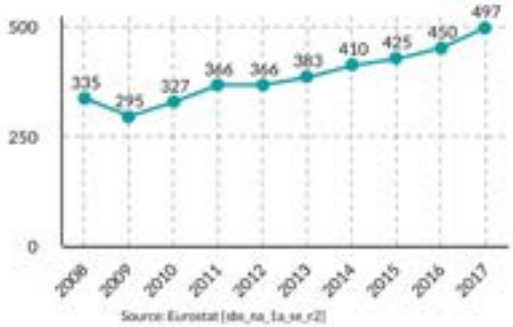
Source: Eurostat (road_go_ta_tott)

**Average personnel cost** of companies active under NACE 4941 'Freight transport by road', 2017, in € 1,000



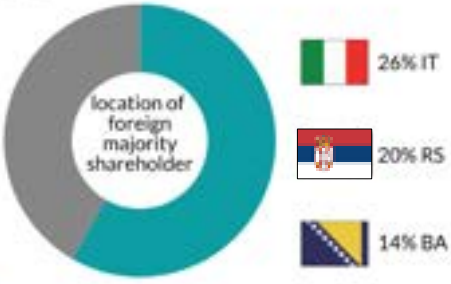

Source: Eurostat (sbs_na_1a_se_r2)

**Average turnover per company** active under NACE 4941 'Freight transport by road', 2008-2017, in € 1,000




Source: Eurostat (sbs_na_1a_se_r2)

**5.1%** of transport companies have a **foreign majority shareholder**

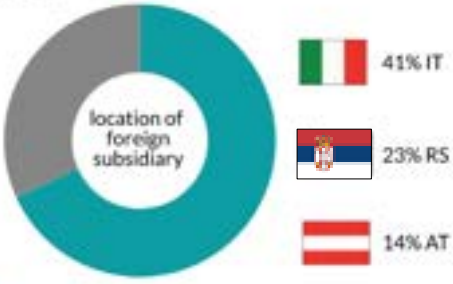



26% IT
20% RS
14% BA

EU (58.29%)
Non-EU (41.71%)

Source: Orbis database

**0.4%** of transport companies have a **foreign subsidiary**




41% IT
23% RS
14% AT

EU (68.18%)
Non-EU (31.82%)

Source: Orbis database

# Austria - Slovenia

Share in total **cross-trade** performed **by Austria** with Slovenia as a start or end point 2018


Source Eurostat [road_go_cta_gtt]

Share in total **cross-trade** performed **by Slovenia** with Austria as a start or end point 2018

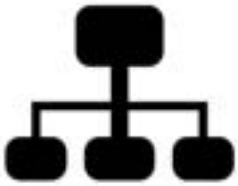

Source Eurostat [road_go_cta_gtt]

Share of **cabotage** taking place in Slovenia performed **by Austrian hauliers** 2014


Source Eurostat [road_go_ca_c] and [road_go_ca_hac]

Share of **cabotage** taking place in Austria performed **by Slovenian hauliers** 2014


Source Eurostat [road_go_ca_c] and [road_go_ca_hac]



Share in transport companies with a **foreign majority shareholder**

Austrian companies

with a foreign majority shareholder in Slovenia


Slovenian companies

with a foreign majority shareholder in Austria


Source Orbis database

Share in transport companies with a **foreign subsidiary**

Austrian companies

with a foreign subsidiary in Slovenia


Slovenian companies

with a foreign subsidiary in Austria


Source Orbis database

# Germany - Poland

Share in total **cross-trade** performed **by Germany** with Poland as a start or end point 2018


Source Eurostat [road_go_cta_gtt]

Share in total **cross-trade** performed **by Poland** with Germany as a start or end point 2018


Source Eurostat [road_go_cta_gtt]

Share of **cabotage** taking place in Poland performed **by German hauliers** 2018


Source Eurostat [road_go_ca_c] and [road_go_ca_hac]

Share of **cabotage** taking place in Germany performed **by Polish hauliers** 2018


Source Eurostat [road_go_ca_c] and [road_go_ca_hac]

Number of **PDs A1 issued** according to art. 12 of the Basic Regulation **by Poland**, 2018

*Total*


Source De Wispelaere et al. (2020)

*For NACE H 'Transportation and storage'*


Source De Wispelaere et al. (2020)

Share in transport companies with a **foreign majority shareholder**


Source Orbis database

Share in transport companies with a **foreign subsidiary**


Source Orbis database

# Belgium - Czech Republic

Share in total **cross-trade** performed **by Belgium** with Czech Republic as a start or end point
2018


Source Eurostat [road_go_cta_gtt]

Share in total **cross-trade** performed **by Czech Republic** with Belgium as a start or end point
2018


Source Eurostat [road_go_cta_gtt]

Share of **cabotage** taking place in Czech Republic performed **by Belgian hauliers**
2018


Source Eurostat [road_go_ca_c] and [road_go_ca_hac]

Share of **cabotage** taking place in Belgium performed **by Czech hauliers**
2018


Source Eurostat [road_go_ca_c] and [road_go_ca_hac]

Number of **PDs A1 issued** according to art. 12 of the Basic Regulation **by Czech Republic** , 2018

*Total*


Source De Wispelaere et al. (2020)

*For NACE 4941 'Freight transport by road'*


Source De Wispelaere et al. (2020)

Share in transport companies with a **foreign majority shareholder**

Belgian companies

with a foreign majority shareholder in Czech Republic: 0.2%

Czech companies

with a foreign majority shareholder in Belgium: 1%

Source Orbis database

Share in transport companies with a **foreign subsidiary**

Belgian companies

with a foreign subsidiary in Czech Republic: 8.2%

Czech companies

with a foreign subsidiary in Belgium: 0%

Source Orbis database

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