The Bulgarian haulage sector

Market study. An impact assessment of Mobility Package I

8 October 2019
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive summary</td>
<td>5</td>
</tr>
<tr>
<td>Market overview</td>
<td>13</td>
</tr>
<tr>
<td>Mobility Package</td>
<td>25</td>
</tr>
<tr>
<td>Impact assessment of full changes implementation</td>
<td>33</td>
</tr>
<tr>
<td>Appendices</td>
<td>44</td>
</tr>
<tr>
<td>Glossary</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>‘000</td>
<td>Thousands</td>
</tr>
<tr>
<td>ACEA</td>
<td>European Automobile Manufacturers’ Association</td>
</tr>
<tr>
<td>BE</td>
<td>Belgium</td>
</tr>
<tr>
<td>BG</td>
<td>Bulgaria, Bulgarian</td>
</tr>
<tr>
<td>BGN</td>
<td>Bulgarian lev</td>
</tr>
<tr>
<td>Cabotage</td>
<td>Transport carried out within the national territory of one country, by an enterprise registered on the territory of another country</td>
</tr>
<tr>
<td>CAGR</td>
<td>Compound annual growth rate</td>
</tr>
<tr>
<td>CAPEX</td>
<td>Capital expenditures</td>
</tr>
<tr>
<td>Cross-trade</td>
<td>Transport carried out between two countries, by an entity registered in a third country</td>
</tr>
<tr>
<td>EC</td>
<td>European Commission</td>
</tr>
<tr>
<td>EP</td>
<td>European Parliament</td>
</tr>
<tr>
<td>EU/EU-28</td>
<td>European Union (considered as a given set of countries)</td>
</tr>
<tr>
<td>EUR, €</td>
<td>Euro</td>
</tr>
<tr>
<td>F</td>
<td>Forecast</td>
</tr>
<tr>
<td>FTE</td>
<td>Full-time equivalent</td>
</tr>
<tr>
<td>FY</td>
<td>Financial year</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>HGV</td>
<td>Heavy goods vehicle</td>
</tr>
<tr>
<td>HICP</td>
<td>Harmonized Index of Consumer Prices</td>
</tr>
<tr>
<td>IRU</td>
<td>International Road Transport Union</td>
</tr>
<tr>
<td>IT</td>
<td>Information technology</td>
</tr>
<tr>
<td>KPI</td>
<td>Key performance Indicators</td>
</tr>
<tr>
<td>mln</td>
<td>Million</td>
</tr>
<tr>
<td>MS</td>
<td>EU member states</td>
</tr>
<tr>
<td>N.Q.</td>
<td>Not quantifiable</td>
</tr>
<tr>
<td>n/a</td>
<td>not available</td>
</tr>
<tr>
<td>NSI</td>
<td>National Statistical Institute</td>
</tr>
<tr>
<td>TKM</td>
<td>Million tonne-kilometre</td>
</tr>
<tr>
<td>UIH</td>
<td>Union of International Haulers in Bulgaria</td>
</tr>
<tr>
<td>VAT</td>
<td>Value added tax</td>
</tr>
</tbody>
</table>
Our work commenced on 24 August 2019. The contents of this report cover our analysis of information gathered until 26 September 2019.

We have not sought to establish the reliability of the information provided to us. Therefore we have not verified that it is truthful, complete, correct or accurate; nor have we conducted any independent review (even by contacting public offices and authorities or third parties) of the information collected. Therefore, we cannot accept any responsibility for the accuracy or completeness of the information provided to us.

Our principal information sources are presented in Appendix 2.

This engagement is not an assurance engagement conducted in accordance with any generally accepted assurance standards and consequently no assurance opinion is expressed. Our work is not designed to and not likely to reveal fraud or misrepresentation by the management of the Union of International Haulers. Accordingly we cannot accept responsibility for detecting fraud (whether by management or external parties) or misrepresentation.

On occasions our report makes reference to 'KPMG Analysis'; this indicates only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented; we do not accept responsibility for the underlying data.

We have not undertaken financial, tax, legal, operational, IT or technical due diligence. If such due diligence had been undertaken it may have impacted our findings. We have performed procedures as outlined in our scope of work.

KPMG accepts no duty of care to any person, except the Union of International Haulers which has signed the Engagement Letter. Our Report may not be suitable for a third party or for a purpose other than the one set out in our Engagement Letter. Any party relying on our Report does so entirely at its own risk.

Because of its nature, our report may not be suited for any purpose other than to meet the specific information needs of Union of International Haulers, the Report might be shared with other interested parties such as members and advisors of Union of International Haulers, Government authorities on Bulgaria and EU level only for information purposes.

Nothing in our deliverable should be construed as advice to proceed or not to proceed with a certain course of action.

KPMG expressly disclaims any and all liability for, or based on or relating to any such information contained in, or errors in or omissions from, this Study or based on or relating to the Recipients' use of the Study.

Important notice
Executive summary
Background

The Board of Directors of the Union of International Haulers in Bulgaria ("UIH") is willing to explore the business environment applicable to Bulgarian companies providing international road freight transport services as well as to analyse the potential impacts of the regulatory changes included in the Mobility Package I.

The Union of International Haulers is a professional transport organization in Bulgaria and unites more than 560 legitimate companies in the road freight transport sector.

UIH approached KPMG Bulgaria EOOD ("KPMG") with a request to conduct an independent market study examining the particularities of the international road freight sector in Bulgaria as well as to analyse the impacts of the proposed regulatory changes included in the Mobility Package ("Market study", "the Report").

UIH’s requested KPMG to focus on estimating the impact of the effects of the proposed changes in regulations with respect to 1) Driving times, rest periods and tachographs; 2) Posting of workers and 3) Cross-trade and cabotage operations.

It is our understanding that the analysis is required in relation to the envisaged discussions with different stakeholders and government authorities. We have conducted an independent fact-based study which does not include statements pro or against the UIH position.

KPMG Role

Supported by the UIH’s management, KPMG designed the independent Market study to incorporate the following key components:

- Market overview of the international road freight transport in Bulgaria in the context of EU
- Mobility Package I with respect to:
  - Driving times, rest periods and tachographs
  - Posting of workers
  - Cross-trade and cabotage operations
- Impact assessment of full changes implementation

For further details please refer to Appendix 1: Scope of work.

Approach and methodology

Impact assessment of proposed changes is based on statistical data for the international road freight transport market in Bulgaria for 2018, which is subsequently extrapolated to estimate 2020 market levels. Further, the market size is analysed in the context of proposed changes in regulation, applying a set of operational, regulatory, financial and market assumptions (presented in detail on p. 35-37).

It is assumed that the proposed regulatory changes will be adopted in 2020 and the applicable effects for the companies operating in the sector will crystallize in 2023. In light of the latter, the impact assessment on the market size is estimated for the year of 2023.

The market size as at 2023 under a balanced implementation of changes is also presented for illustrative purposes.

Impacts from the full changes implementation in the following areas have been analysed and assessed:

- Proposal for weekly off-cabin rest period;
- Mandatory “home-comings” of trucks / drivers
- Changes in cross-trade and cabotage rules
- Posting of workers posting of workers in the transport sector and the minimum wage requirements

We have applied specific approaches for assessing the socio-economic and environmental impacts.

Further, it should be noted that no market dynamics, such as autonomous vehicles penetration, economic levels, etc. are taken into consideration in estimating the impact assessment in 2023.

We have based our analyses on reputable publicly available information as presented in Appendix 2 and on the feedback received from a specially designed survey conducted by KPMG amongst the members of UIH (the „KPMG Survey”, the “Survey”).
Introduction (2/2)

The KPMG Survey: design

KPMG has compiled a Questionnaire consisting of 16 questions aiming to explore the views of key market participants on the current status, recent major industry trends and anticipated developments in relation to the international road freight transport sector in Bulgaria.

It includes primarily close-ended questions which aim to explore the respondents’ operating and financial position as well as the expected impacts on the sector resulting from regulatory changes.

Questions with a list of possible answers have been included also to provide the Survey participants with the opportunity to add information or options beyond the listed ones.

An outline of the questionnaire is presented in Appendix 3 of this Report.

The KPMG Survey: organization

Based on a sample provided by UIH, the questionnaire was distributed by KPMG to 32 of the most active UIH members, including both sizeable and smaller companies. UIH have further distributed the questionnaire to 48 member, providing for KPMG to receive the answers from the respondents directly.

In total, KPMG received feedback from 57 companies which corresponds to approximately 71% response rate.

The participation in the study is based on strict confidentiality. The privacy of the respondents is guaranteed and the research process has ensured anonymous use of individual data, information and comments, presented in an aggregated form.
The summary below contains key facts about the international road transport freight sector in Bulgaria, as well as key impact assessment results of the proposed Mobility Package I changes in EU regulations:

### Key facts as at 2018

- **Number of BG trucks in operation in 2019**: 25,800
- **Average age of BG fleet park providing international road transport**: 3 years
- **Number of registered transport companies**: 12,700
- **Number of companies operating max. 5 trucks**: 9,600
- **Total headcount employed by the Bulgarian companies providing international transport**: 42,500
- **Average driver’s monthly income**: €1,751
- **Market size of international road transport sector in Bulgaria**: €2.86 bn
- **As percentage of GDP**: 6%

### Impact assessment

#### Economic

**International road freight sector development**

- **Market size 2018**: €2,863 mln
- **Lost revenue**: (1,026) mln
- **Discontinued business**: 1,104 mln
- **Market size 2023 (illustrative)**: 3,966 mln
- **Growth 2019 - 2023**: 2,000 mln
- **Discontinued business 2023**: 1,327 mln

#### Social

Based on the Survey performed, 36% of current trucks in operation (circa 9,200 trucks mostly owned by smaller companies) will discontinue operations in the country if full scope of changes in regulations are implemented: either closing business, or relocating operations to another country. This might threaten approximately 14,000 drivers and administrative personnel, currently employed in the sector, to lose their jobs. The negative social impact would be reaching even further considering the effect on employees’ families and on the supporting businesses in the industry.

#### Environmental

Under the scenario of full proposed changes implementation, it is expected a notable decrease in the market size, driven by two major market forces:
- Lost revenue due to empty runs during mandatory homecomings
- Discontinued and / or businesses relocating out of the country.

The proposed changes in the regulations will negatively impact the cost structure of the companies in the sector mainly through the following elements: hotel, safe parking, fuel, administrative costs.

The market size in 2023 under the balanced changes is presented for illustrative purposes.

- **Market size 2018**: €2,863 mln
- **Lost revenue**: (1,026) mln
- **Discontinued business**: 1,104 mln
- **Market size 2023 (illustrative)**: 3,966 mln
- **Growth 2019 - 2023**: 2,000 mln
- **Discontinued business 2023**: 1,327 mln

The empty runs of mandatory homecomings will cause a significant increase in the CO2 emissions. The additional CO2 emissions are estimated to the amount of ca. 88,500 t, which represents 3% increase in total CO2 emissions coming from vehicles owned by Bulgarian companies providing international road transport.

This will lead to in 1% increase in total greenhouse emissions generated by the transport sector in Bulgaria.
Fact sheet (1/2)

17%-35% risk of lost revenue of Bulgarian international road freight transport sector if full changes proposed in Mobility Package I are implemented. Resulting in 1-2% drop in Bulgarian GDP.

Average monthly driver’s Income:

€ 1,751 per month in BG international road Transport sector vs. € 586 country average income.

EU Target for reduction of CO2 emissions.

3 years average age of international road fleet in BG vs. 11.7 years EU average.

47% of BG Road transport is cabotage and cross-trade.

INVESTMENTS in trucks and infrastructure:

- € 500 mln./year
- € 2 bln. planned 2019-23
- € 1.8 bln. cut if Mobility Package changes accepted

Bulgarian Transport, logistics & posting services:

€ 9,131 mln.

3 years average age of international road fleet in BG vs. 11.7 years EU average.

Increase in total greenhouse emissions generated by the transport sector in Bulgaria due to mandatory homecoming.

53% of vehicles will be travelling empty during mandatory homecoming.

Source: Publicly available market information, KPMG survey and analysis.

© 2019 KPMG Bulgaria EOOD, a Bulgarian limited liability company and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.
Based on the analyses performed there are approximately 25,800 heavy goods vehicles in operation engaged in international road transportation. Approximately 63% of the heavy goods vehicles on operation are below 3 years old. Moreover, 90% of the Bulgarian vehicles servicing international road freight transport are below 6 years old.

It is estimated that the total headcount employed by the Bulgarian companies providing international transport is 42,500, including both drivers and administration. Furthermore, the average monthly truck driver income is 3 times above the average salary in Bulgaria (EUR 586 vs. EUR 1,751).

Based on Eurostat data, Bulgaria is among the leading Member State countries in international road freight transport, including cross-trade and cabotage with 26,822 million tons kilometers.
Mobility Package: Major challenges and effects on international road transport sector in Bulgaria

**Driving times, rest periods and tachographs**
Regular weekly rest periods shall not be taken in the vehicle.
Drivers are allowed to be on the road, away from home, and resting in their cabins, for a maximum of three weeks (if they take two short weekend rests in sequence). A driver has to be back at his home country at latest every four weeks. If two reduced weekly rest periods have been taken, drivers may have to return home after three weeks on the road.

**Cabotage and cross-trade**
Cabotage operations will be allowed only within three days from last unloading.
Follow-up cabotage activities are allowed only after a return of the vehicle to the haulier’s home base and a minimum “cooling-off” period of 60 hours.

**Posting of workers**
Amendments proposed demand that all cabotage operations shall be subject to the “Posting of Workers Directive”.
Companies performing international transport may have to meet the labor law requirements of each of the countries:
- Income taxes and social security dues
- Compliance with national recruiting and reporting regulations related to hiring foreign workers
- Honoring worker trade union agreements.

---

Road transport is the backbone of the EU economy and any disruptions in the sector will not only affect transport operators but the entire supply chain mobility and, ultimately, society as a whole.
Any limitations on the market imposed by the proposed regulations could lead to a disrupted economy and higher prices for consumers, while goods deliveries could be hampered and people may face interrupted and inefficient mobility patterns.
## SWOT analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>— Modern fleet providing international road freight transport: the average age of the trucks of Bulgarian companies is 3 years, which is significantly below EU average (approximately 12 years)</td>
<td></td>
</tr>
<tr>
<td>— Proven expertise and quality of services provided of Bulgarian transport companies performing international road freight</td>
<td></td>
</tr>
<tr>
<td>— Availability of qualified drivers as to partially offset the shortage in the EU sector</td>
<td></td>
</tr>
<tr>
<td>— Bulgarian road transport is among the top performers in EU in terms of cross-border and cabotage operations</td>
<td></td>
</tr>
<tr>
<td>— The largest share of Bulgarian companies are family-owned businesses and they possess up to five trucks. It will be close to impossible for them to respond to increased requirements of new regulations.</td>
<td></td>
</tr>
<tr>
<td>— Limited opportunities for cost reductions to offset anticipated increase in operating costs as a result of changes in regulations</td>
<td></td>
</tr>
<tr>
<td>— Limited volume of the import-export activity between Bulgaria and other EU countries</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>— Expected growth of EU production outputs and economy as a whole fostering growth in the demand for logistic services</td>
<td></td>
</tr>
<tr>
<td>— Digitalization boosting revenue and also driving to cost savings through process automation</td>
<td></td>
</tr>
<tr>
<td>— Introduction of autonomous vehicles leading to costs savings</td>
<td></td>
</tr>
<tr>
<td>— Limited capacity and underdevelopment of other modes of transport in the country (rail, water, air)</td>
<td></td>
</tr>
<tr>
<td>— Shortage of skilled drivers in EU is likely to grow providing solid ground for further development of Bulgarian transport companies</td>
<td></td>
</tr>
<tr>
<td>— Investment in transport infrastructure in the company and its positive impact on the road transport industry</td>
<td></td>
</tr>
<tr>
<td>— Increase in cross-trade and cabotage operations in EU at risk for Bulgarian transport companies, if “Mobility Package” is implemented in full scope, as currently proposed</td>
<td></td>
</tr>
<tr>
<td>— Need for consolidation and internalization of transport companies as a result of changes in regulations, limiting the ability for smaller companies to compete on the market</td>
<td></td>
</tr>
<tr>
<td>— Increase in operating costs as a result of inefficient empty runs, mandatory out-of-cabin rests and adherence to the minimum wage requirements in the countries where transport services are being performed</td>
<td></td>
</tr>
<tr>
<td>— Freeze of investments by the companies in the sector if “Mobility Package” is implemented in full scope</td>
<td></td>
</tr>
<tr>
<td>— Potential for increase in competition from non-EU companies which are not subject to the EU regulations</td>
<td></td>
</tr>
</tbody>
</table>
Market overview
International road freight, including bi-lateral operations, cross-trade and cabotage services account for about 35% of total EU transport.

Road freight industry in EU has been consistently growing over the last 10 years, with all sub-sectors contributing to the positive trend.

— Over the last decade, the EU road transport industry has been experiencing dynamic growth due to the opening up of access to freight transport markets in the EU-28 and the recovery after the 2008 economic crisis.

— Eurostat data indicates that following the crisis of 2008 the total ton-kilometers performed fell from 1.89 trillion tkm in 2008 to the range between 1.69 and 1.77 trillion tkm in 2009-13.

— The ton-kilometer levels from 2008 were not reached until 2017, when transport performance carried out in the EU reached the level of 1.92 trillion tkm, outperforming the pre-crisis result.

— The recovery of the road freight transport industry has been most evident in the period 2014-2018 when it grew at CAGR of 2.9%.

— As evident from the data, the freight sector has been strongly impacted by the overall economic dynamics in EU.
As of 2017, there were approximately 4.3 million registered vehicles performing freight transport in the EU. Although Bulgaria is ranked 11th in terms of number of registered vehicles, it is ranked among the top 3 countries in terms of number of truck per capita, with 1 truck per 62 people, indicating the economic significance of the transportation sector for the country.

Overview

According to Eurostat data, there were approximately 4.3 million vehicles performing freight transport registered in the EU in 2017. This value had increased by 2.1% compared to 2016, and by 2.8% compared to 2013.

The CAGR for the last 5 recorded years is 0.7% with more significant increase after 2015.

Among the Member States, Poland (16.4% of the total EU stock of vehicles) registered the largest stock of vehicles, followed by France (12.9%) and Germany (12.4%).

Between 2016 and 2017, the highest rises were observed in Romania (10.4%), Ireland (10.1%) and Lithuania (9.3%), while the largest decreases were recorded in Hungary (-7.7%), Belgium (-6.3%) and Italy (-3.4%).

It should be noted, that Bulgaria is ranked among the top 3 countries in terms of number of truck per capita, with 1 truck per 62 people.
Cross-trade and cabotage are an important part of transport companies’ range of services and are an important factor in eliminating empty runs, which boosts transport efficiency.

It should be noted that Bulgarian road transportation sector is third most dependent on the cross-trade and cabotage services. In 2017, approximately 47% of the Bulgarian road total transportation is delivered under cross-trade and cabotage activities.

Performing cross-trade and cabotage is important for eliminating empty runs, which boosts transport efficiency. The Bulgarian road transportation sector is third most dependent on cross-trade and cabotage services. In 2017, approximately 47% of the Bulgarian road total transportation is delivered under cross-trade and cabotage activities, amounting to 14.4 millions of ton-kilometers and 2.2 millions of ton-kilometers, respectively.

Moreover, the Bulgarian road transport sector is ranked among the top performing countries in terms of cross-border and cabotage services, respectively 4th in 2017 and 5th in 2018.

Road freight transport services may be provided in three separate ways, which should be treated as separate fields of activity:
- within the territory of the carrier’s country of origin (national)
- handling goods imported/exported to and from the host country (international), and
- exporting transport services themselves (in the form of cross-trade and cabotage)

The Bulgarian road transportation sector is ranked among the top performing countries in terms of cross-border and cabotage services, respectively 4th in 2017 and 5th in 2018.
Overview:
— In 2018, 22.6% of goods travelled over distances less than 150 km and 4.2% travelled over distances more than 2 000 km.
— However, the bulk of road transport activity was carried out over distances between 150 km and 1,999 km, accounting for 73.2% of the total. Approximately 60% of freight volumes take goods carried out over distances between 300 km and 999 km.
— Until 2017 there was a steady increase and a higher growth rate each year in total tonne-kilometres, however in 2018 the growth rate slowed down from 4.7% to 0.8%. The slowing is due to decrease in large distance transportation.
Road transport is the backbone of the EU economy and any disruptions in the sector will not only affect transport operators but the entire supply chain mobility and, ultimately, society as a whole.

Any limitations on the market imposed by the proposed regulations could lead to a disrupted economy and higher prices for consumers, while goods deliveries could be hampered and people may face interrupted and inefficient mobility patterns.

- **Hauliers** as companies organizing and performing the road freight transport are the main stakeholder as their whole business is dependent on the health of the industry. Registered hauliers in the EU in 2015 are over 500 thousand enterprises.
- **Logistic companies** are tied to road freight as they often operate as mediator between the haulier and the customer.
- **Customers** are key stakeholders as they are the consumers of the service provided by the hauliers.
- **Goods producers** depend on road freight to reach their customers both national and international. Changes in the transport sector could affect consumption and therefore production and prices of goods.
- Road freight transport alone has generated approximately 335 billion EUR in the European union for 2015. This represents 2.3% of nominal GDP in the EU for the same year.
- According to EU Energy & Transport in Figures Statistical Pocketbook, published by the European Commission in 2018, road freight transport is expected to grow with 60% until 2050.
- According to statistics over 3 million people in the EU are professionally engaged in road freight transport, most of which are drivers. Therefore uncertainty in the industry directly affect millions of employees.
- **OEMs** manufacture and provide maintenance and service of the new vehicles over the warranty period. Further other players such as road service, insurance companies, etc. gross from stable and transport sector.
- **National authorities** benefit from a profitable and well-organized transport industry as they gather taxes, toll fees, eco-fees and others from hauliers and logistic companies.
- Main responsibility of the trade associations is to protect industry interests and to connect members operating in the sectors with the respectful authorities and with each other.
Case study: Trucks running costs comparison between Bulgaria and Belgium

There are no material differences in major HGVs operating costs between Belgium and Bulgaria, which is in line with the characteristics of the single EU market.

The minor differences in maintenance costs are driven mostly by the labour component, e.g. servicing the vehicles, which is approximately 30% higher in Belgium. However, it is not significant as a share of the total cost (e.g. spare parts vs. labour cost).

On the other hand, in Belgium there are state subsidies for transport companies in relation to emissions standards.

It should be noted, that for the purposes of the case study analysis the staff costs are excluded. For details on staff costs please refer to next two slides.

<table>
<thead>
<tr>
<th>Supplies</th>
<th>Price of HGV</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE</td>
<td>BG</td>
</tr>
<tr>
<td>No material difference</td>
<td>No material difference</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE</td>
</tr>
<tr>
<td>Price of trucks distributed in Europe does not depend on the home country of the client. Thus the initial purchase prices are equal in all European countries and moreover depend on the size of the transport company.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tyres</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE</td>
</tr>
<tr>
<td>Price of HGV</td>
</tr>
<tr>
<td>850-1100 EUR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Batteries</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE</td>
</tr>
<tr>
<td>Supply costs in general are considerably equal in all EU countries which is in line with the specifics of the EU single market, i.e. free movement of goods, services, capitals and labour.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brake pads</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE</td>
</tr>
<tr>
<td>Supply costs in general are considerably equal in all EU countries which is in line with the specifics of the EU single market, i.e. free movement of goods, services, capitals and labour.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third party liability</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE</td>
</tr>
<tr>
<td>Third party liability insurance is ca. 10-15% (EUR 200-300 equivalent) more expensive in Belgium as compared to Bulgaria.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State subsidy</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE</td>
</tr>
<tr>
<td>Since 2017, the Flemish Government subsidize companies for expenses promoting ecological and safe freight transport. Bulgaria has no such practice yet.</td>
</tr>
</tbody>
</table>

Note: Fuel cost, CMR and toll taxes have not been analyzed since they are equal to all providers of international transport services regardless of company origin and country of registration.
Bulgaria still remains with the lowest average net earning in EU with €459 per month, which is almost 5 times below the average net EU earnings.

**Background**

- Labour plays a major role in the functioning of an economy. From the point of view of businesses, it represents a cost (labour costs) that includes not only the wages and salaries paid to employees but also non-wage costs, mainly social contributions payable by the employer. Thus, it is a key determinant of business competitiveness, although this is also influenced by the cost of capital and non-price elements such as entrepreneurship, skills and labour productivity, innovation and brand/product positioning within markets.

- In 2018, the net earnings of a single person earning 100% of the average earnings of a worker in the business economy, without children, ranged from EUR 459 per month in Bulgaria to EUR 3,495 in Luxembourg. The same two EU Member States recorded the lowest (EUR 6,100) and the highest (EUR 56,300) average net earnings respectively for a married couple with a single earner and two children.

- It should be noted that in the recent years Bulgaria have increased its minimum wage a number of times reaching the current level of EUR 286 per month. However, it still remains with the lowest average net earning in EU with €459 per month, which is almost 5 times below the average net EU earnings.

**Average monthly net earnings. 2018**

![Graph showing average monthly net earnings for EU countries in 2018](image)

EU Average: €2,058

Source: Eurostat and KPMG analysis
The average gross income of an international HGV driver is approximately three times more than the average gross salary in Bulgaria.

Taking into consideration the relatively lower level of the social contributions and personal income tax in Bulgaria vis-à-vis western EU states and the average gross monthly income presented, it appears that the international HGV drivers employed by Bulgarian transport companies receive similar to the average EU levels net earnings.

As shown on the graph to the left, the average gross income of an international HGV driver is approximately three times more than the average gross salary in Bulgaria. The average gross income of international drivers employed by Bulgarian companies in the sector is estimated at EUR 1,751 per month over a 12-month period, e.g. reflecting drivers annual holidays. This is attractive remuneration, taking into account the fact that the education of the drivers might not exceed the vocational level.

It should be noted that the high earnings in many of the EU states are resulting not only from the basic salary but also of the numerous allowances that apply to the international drivers, e.g. per diems, bonuses etc.

Taking into consideration the relatively lower level of the social contributions in Bulgaria and the average gross monthly income presented in the graph below, it appears that the international HGVs drivers employed by Bulgarian companies receive similar to the average EU levels net earnings.

Over the last few years the EU road freight transport sector is facing the most severe shortage of professional drivers for decades. As per IRU analysis the shortage of drivers in the road freight transport sector in EU is 21%. Moreover, as per the association the scale of the problem will grow and the expected shortage will reach 40 per cent because the demand for truckers will increase further in 2019. The latter and the remunerations presented to the left indicates that the HGVs drivers market in Europe is competitive and the benefit package is just one of the factors that attracts employees in the sector.
As a result of the significant investments, the average age of the Bulgarian fleet providing international road freight transport is 3 years which is significantly below the EU average levels (approximately 12 years as per Eurostat data).

Furthermore, the number of trucks in operation providing international road freight transport grew at a CAGR of 10% during the period 2014-2018, reaching almost 26 thousand in 2018.

**Overview**

- Between 2015 and 2018 the number of operating vehicles providing international road freight transport grew significantly at a CAGR of 10.1%.
- However, only ca. 23% of the total registered trucks in the country are for international freight transport.
- According to market available information, total number of trucks circulating throughout the EU is 604 thousand, from which the Bulgarian fleet represents approximately 4.2% of total vehicles.
- The average age of road fleet in freight transport owned by the Bulgarian companies operating in the sector is approximately 3 years. For comparison average age of vehicles in the European Union is 11.7 years which is 400% higher.
- Bulgarian HGVs with first registration in the last 5 years are 90% of the operating vehicles servicing international road freight transport and ca. 63% of them are less than 3 years old.
- According to the Bulgarian Union of International Haulers, 95% of their members’ fleet meets EURO V and VI emission standards, and furthermore 51% of the fleet meets EURO VI emission standard.
Transportation, logistics and courier sector in Bulgaria is a major contributor to country’s economy.

The sector and the international road freight transport, in particular, has been consistently rising in the last five years, outpacing the growth of the economy as a whole.

The estimated market size of the international road freight transport amounts to EUR 2.9 billion and contributes approximately 6.0% of the country GDP.

The market size of international road freight transport in Bulgaria is estimated mostly based on KPMG Survey feedback.

Transport, logistics and posting services sector: Market size vs. GDP

![Market size and development in Bulgaria](image)

International road freight transport

- Based on the analysis performed, International road freight transport represents approximately 31% of Bulgarian transportation, logistics and courier sector. Its market size in 2018 is estimated at EUR 2.86 billion.

- The sub-sector has slightly outpaced the growth of the whole industry in the last five years. The compound annual growth rate over the analysed period is 8.0% compared to 7.2% for the whole industry.

- Furthermore, it is expected that the industry size in 2019 will increase by 1.7% to BGN 2.91 billion.

Bulgarian transportation, logistics, and courier sector

- The road freight transport sector plays a key role in the economy. In terms of gross value added, both the Bulgarian and the entire EU-28 economy are characterized by a high share of services.

- The transportation, logistics and courier industry is one of the leading sectors in Bulgaria in terms of GDP contribution. It represents a substantial portion of Bulgarian economy contributing to about 19% of country GDP.

- In line with the overall positive economy environment the sector has been on steady growth over the last few years at a CAGR of 7.2%

- Over the last 5 years the market size of the transportation, logistics and courier sector has increased by EUR 2.2 billion.

Market size of international road freight transport

![Market size and development in Bulgaria](image)

Source: NSI and KPMG analysis

CAGR: 7.2%

CAGR: 8.0%
Based on the Survey performed it is estimated that the amount of the planned CAPEX investments might be negatively impacted by approximately EUR 1.78 billion over the period 2020 – 2023.

Planned investments in truck and infrastructure

<table>
<thead>
<tr>
<th>Year</th>
<th>CAPEX Investments (€ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY16</td>
<td>488</td>
</tr>
<tr>
<td>FY17</td>
<td>387</td>
</tr>
<tr>
<td>FY18</td>
<td>599</td>
</tr>
</tbody>
</table>

Source: KPMG Survey and KPMG analysis

Historical investments
— Bulgarian companies in the sector have consistently invested significant amounts (ca. EUR 492 mln. average annual spend for the last three years) to respond to market demands and foster growth.

Planned investments
— Full implementation of proposed changes of Mobility Package will lead to freezing of practically all planned CAPEX investments by Bulgarian international hauliers
— The majority of the respondents state that the impact of changes on their business will be impossible to deal with and overcome.
— Companies state that “cost cutting” and divestures are among the most commonly stated strategy changes that companies in the sector contemplate in case of full-scope implementation of the regulatory changes
— The scope of contemplated divestitures ranges from removing international road freight transportation from the portfolio of services provided, through optimization of truck fleet and employees, to moving the operations outside of Bulgaria or closing the business.

Planned investments of Bulgarian companies engaged in international road freight transport

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Planned Investment (€ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Balanced&quot; scenario of Mobility Package</td>
<td>2.04 bn.</td>
</tr>
<tr>
<td>&quot;Full changes&quot; scenario of Mobility Package</td>
<td>1.78 bn.</td>
</tr>
<tr>
<td>Planned investment in case of &quot;balanced&quot; scenario of Mobility Package</td>
<td>2.04 bn.</td>
</tr>
<tr>
<td>Planned investment in case of &quot;full changes&quot; scenario of Mobility Package</td>
<td>1.78 bn.</td>
</tr>
</tbody>
</table>

Source: KPMG Survey and KPMG analysis
Mobility Package
Currently, the legislative process has reached the stage of trilogue between the EC, the European Parliament and the Council after the EP TRAN Committee during its regular meeting on 24 September 2019 decided to initiate the trilogue.

The following timeline outlines the major steps undertaken by the three institutions until now and expected continuation of the legislative process.

### Mobility package

**Mobility packages state of play**

- **17 May 2018:** Proposal for Mobility Package III
- **3-4 Dec 2018:** Council’s General Approach on Mobility package I
- **4 April 2019:** EP’s first reading position
- **31 May 2017:** Proposal for Mobility Package I
- **8 Nov 2017:** Proposal for Mobility Package II
- **17 May 2018:** Proposal for Mobility Package III
- **3-4 Dec 2018:** Council’s General Approach on Mobility package I
- **4 April 2019:** EP’s first reading position
- **23-24 Sept 2019:** EP TRAN Committee decides on trilogue mandate
- **3 Oct 2019:** First trilogue on Mobility package I
- **2 Dec 2019:** Transport Council meeting
- **1 July-31 Dec 2019:** Finish Presidency
- **1 Jan 2020:** Croatian Presidency of the Council of the European Union
- **1 July 2020:** German Presidency of the Council of the European Union
- **4 April 2019:** Adoption of Mobility Package by EP at first reading

© 2019 KPMG Bulgaria EOOD, a Bulgarian limited liability company and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.
Regulation No. 561/2006 sets a common framework for harmonization of the number of driving hours, breaks and rest periods for hauliers within the EU. Currently, the set of rules allows for “daily rest periods and reduced weekly periods away from base … be taken in a vehicle” as stipulated in art. 8(8).

In the period 2016-2017, several Western European countries such as Germany, Belgium, France, the United Kingdom, Italy and Spain started applying the so-called ‘off-cabin rest regulation’ for regular weekly rests, resulting in a possibility to fine drivers who decide to rest in their cabin during regularly weekly rest period.

Currently, Regulation No. 561/2006 allows for:

- Daily breaks and rest
  - Daily driving period should not exceed 9 hours, except for twice a week when it can be extended to 10 hours
  - Regular breaks of at least 45 min. after 4.5 hours at the latest

- The total amount of driving time per week may not exceed 56 hours.
- The total amount of driving time per fortnight may not go beyond 90 hours.
- Weekly rest is determined as 45 continuous hours, with potential reduction to 24 hours every second week.
- Drivers have to compensate any reduced weekly rests every 3 weeks.
Driving times, rest periods and tachographs

Major amendments proposed

To a large extend, the Commission’s and the Council’s proposal share the same views on provisions regarding spending reduced weekly rests on board of the vehicle as long as appropriate sleeping and sanitary facilities are at each driver’s disposal, and prohibiting regular weekly rests aboard.

On the other hand, the EP goes a step further by also prohibiting drivers to remain in their vehicle during reduced weekly rest periods. This seems to disregard the Impact Assessment and Study on the Parking Places for Trucks, carried out by the Commission, which evidence insufficient number of places providing appropriate facilities for drivers.

The table below contains a summary of the major amendments proposed by the members of the trilogue:

<table>
<thead>
<tr>
<th>Proposed amendments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commission’s Proposal</strong></td>
</tr>
<tr>
<td>— The Commission proposes that drivers are able to spend at least one regular weekly rest period, or a weekly rest of more than 45 hours taken as compensation for reduced weekly rest, at home every 3 consecutive weeks.</td>
</tr>
<tr>
<td>— Additionally, regular weekly rest periods and any weekly rests of more than 45 hours taken as compensation for previous reduced weekly rests may not be taken inside the vehicle. Instead, they shall be taken in a suitable accommodation providing adequate and sanitary facilities. It is, nevertheless, possible to spend reduced weekly rest periods in the vehicle as currently allowed by the legislative regime.</td>
</tr>
</tbody>
</table>
The European Commission prioritized the prohibition to spend regular weekly rest periods on board of the vehicle despite acknowledging certain compliance and enforcement hurdles hauliers would face.

EC: “in the context of lacking resting facilities, time pressure and stringent application of the current rules on driving and resting times, the prohibition of spending weekly rests in the vehicle may even further increase drivers’ stress levels.”

**Key outcomes:**

— In its Impact Assessment, the EC acknowledges that the proposal will have a positive effect by reducing the currently existing legal uncertainty in respect of the allowed location to spend weekly rest periods. In particular, this would clarify whether drivers are allowed to spend the regular weekly rest periods aboard which is not clearly regulated under the current legislative framework.

— Additionally, the EC recognizes that prohibiting drivers to spend regular weekly rest period on the board of their vehicle will encounter implementation and enforcement difficulties which will lead to compliance issues. Nevertheless, the EC decided to give priority to such a prohibition, justifying it by the occupational health, working conditions, and road safety considerations.

**Pros of prohibiting hauliers to spend regular weekly rest periods inside the vehicle**

— Occupational health
— Working conditions
— Road safety

**Cons of prohibiting hauliers to spend regular weekly rest periods inside the vehicle**

— Difficulties in implementation
— Shortage of appropriate resting facilities and safe parking areas
— Difficult enforcement

The current proposal, published in the context of the “Europe on the move” initiative, aims at addressing shortcomings of current posting legislation when applied to road transport sector.

The Posting Directive aims at protecting the social rights of posted workers by providing for basic employment conditions that must be available to posted workers in their host country.


The following list contains few of the most notable changes:

- Posting of workers by temporary unemployment agencies of placement agency
- Reinforcement of posted workers legal protection
- Clarifications on the concept of remuneration and minimum wages
- Enforcement of control and monitoring of postings
- Entry into force and date of transposition by Member States

In its legislative impact assessment, the Commission underlines that the posting provisions and administrative requirements of current regulations were inadequate for the mobile nature of the road transport sector drivers’ work, and created disproportionate regulatory burdens for operators and barriers to cross-boarder services.

The current proposal, published in the context of the “Europe on the move” initiative, aims at addressing such shortcomings.

Additionally, it puts specific focus on the posting of workers in the road sector to respond to concerns raised regarding the adequacy of the Posting of Workers Directive, when applied to road transport sector.

The proposal specifies that any period of posting above three days in a calendar month requires the application of Member State’s social framework (minimum pay rates, minimum paid annual holidays) for the entire period of posting.

It also clarifies that these rules should always apply to cabotage operations which by definition take place entirely in the host Member State, irrespective of their duration and frequency.

In addition, the proposal sets specific requirements and control methods to apply to road operators and drivers to check compliance with the Posting of workers directive provisions in the road freight sector.

Source: KPMG analysis, European Parliamentary Research Service
According to EC Impact Assessment, in the period 2010-2014, cabotage increased by 80%, with main MS where operations take place being Germany, France, Italy, the UK and Sweden. The level of illegal cabotage is reported to be relatively low (below 1% of all cabotage activity).

The EC has estimated the number of road freight transport enterprises in Europe to be 563,598, which employ circa 2.9 million people.

According to statistics provided by the EC, in 2015 23% of all heavy good vehicles in the EU ran empty.

By amending the rules on cabotage operations, the EC aims to overcome this challenge by offering a more balanced approach.

**Key trends and developments**

- Regulation No. 1071/2009 on access to the occupation of road transport operator and Regulation No. 1072/2009 on access to the international road transport market are part of package of measures aiming at harmonization of the rules administering the admission to the occupation of road transport operator and access to the road transport market. They were adopted as tools to necessitate the completion of the internal market in road transport, its efficiency and competitiveness.


- The EC proposes removing the limit as to the number of cabotage operations but reducing the time spent in the host country to five days from the date of incoming international carriage.

- The Council’s general approach retains the rules on cabotage operations but introduces the so-called ‘cooling off period’ of five days i.e. hauliers are not allowed to undertake cabotage operations with the same vehicle within the same MS.

- The European Parliament goes a step further by even additionally restricting cabotage operations being allowed only “within 3 days from last unloading” in the country where cabotage operations occur. The cooling off period of 60 hours is linked with the return to the haulier’s Member State of establishment before performing a new incoming international carriage.

**Currently, Art. 8 of Regulation No. 1072/2009 allows for three cabotage operations in the host MS within seven days starting the day after the unloading in the course of the incoming international carriage**

**Commission Proposal:**
- 5 days + unlimited cabotage operations

**Council General approach:**
- 7 days + 3 cabotage operations + ‘cooling off’ period of 5 days

**European Parliament Proposal:**
- 3 days + unlimited cabotage operations + cooling off’ period of 60 hours after the return to the haulier’s Member State of establishment
According to the Impact Assessment conducted by the European Commission, an increase of circa. 30% of the overall amount of cabotage (expressed in t-km) is expected in the regarded timeframe for the baseline scenario. The reason for this increase is owed to the projected increase in overall transport activity within the EU until 2035.

— The Impact Assessment by the European Commission estimated that a potential decrease in the time limit for the cabotage operations to 4 days is expected to have a sizable negative impact on the transport market. The main repercussions are outlined below. Alternatively, reducing the time period to 5 days is forecasted as bringing less adverse impacts for the cabotage industry.

— The implications suggest that there will be an increase in overhead costs due to hauliers facing difficulties in locating appropriate loads within such a short time frame (4 days).

— The effects of reduced time for cabotage operations will affect hauliers adversely not only by decreasing their ability to perform cabotage operations, but also hamper their competitiveness at the cabotage market. Unable to compete with other companies offering cabotage, some hauliers will face economic distress which potentially might cause ceasing activity.

— Generally, although proposed amendments would have positive impact in terms of simplification of the existing regulatory framework, they pose different set of hurdles to hauliers: how to comply with the new requirements given the time limitation.
Impact assessment of full changes implementation
We have applied specific approaches for assessing the socio-economic and environmental impacts.

**Socio-economic impacts**

*Regulatory assumptions*
- A simulation of the monthly driving and rest schedules for one truck has been prepared based on the following:
  - current regulation in accordance with European Agreement concerning the work of crews of vehicles engaged in international road transport.
  - full implementation of the proposed changes in Mobility Package I.

*Operating and financial assumptions*
- Operating and financial assumptions are based on the market data as at 2018, where available. The feedback from the KPMG Survey was utilized where such information did not exist.
- The quantification of the effects on the Bulgarian companies providing international road transport services is estimated, as follows:
  - Revenues from mandatory homecomings: 1) length of trips to the EU from Bulgaria (and the other way around); 2) average revenue per km and the percentage of empty runs; and 3) total number of trucks in operation.
  - Cost for hotels: 1) number of days of stays required by the proposed regulations; 2) price of daily stay at a hotel; and 3) number of drivers in operation.
  - Cost for safe parking spaces: 1) number of days a truck spends at a safe parking; 2) price of daily stay at a safe parking; 3) total number of trucks in operation.
  - Administrative expenses: 1) additional number of administrative personnel required by a company; 2) average employee cost per employee; and 3) number of companies that will hire additional administrative staff.
  - Fuel cost associated with the empty mandatory homecomings: 1) length of trips to the EU from Bulgaria (and the other way around); 2) average fuel consumption per truck; 3) average fuel cost per liter; and 4) total number of trucks in operation.

*Impact assessment*
- It is assumed that the proposed regulatory changes will be adopted in 2020 and the applicable effects for the companies operating in the sector will crystallize in 2023.
- Further, it should be noted that no market dynamics, such as autonomous vehicles penetration, economic levels, etc. are taken into consideration in the 2023 impact assessment.

**Environmental impact**
- The additional CO2 emissions associated with the empty runs have been estimated applying the activity-based approach under the following assumptions:
  - average weight of goods transported;
  - average additional distance travelled due to mandatory homecomings;
  - CO2 emissions factor (g CO2 per tkm);
  - number of trucks in operation;
  - percent of empty runs of mandatory homecomings.
Socio-economic impact assessment

Monthly driving and rest schedules simulations

Simulations of monthly driving and rest schedules for one truck are presented below. These schedules as well as the assumptions presented below have been used as the basis for the calculation of the impact of the proposed changes on the Bulgarian companies providing international road freight transport.

### Monthly simulation based on current rules:

<table>
<thead>
<tr>
<th>Day</th>
<th>Total Driving Time</th>
<th>Total Rest Time</th>
<th>Total Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>T</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>W</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>T</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>F</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>S</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>S</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
</tbody>
</table>

**Weekly Total**
- **Total Driving Time**: 51.5h
- **Total Rest Time**: 54.0h

### Monthly simulation based on full implementation of proposed changes:

<table>
<thead>
<tr>
<th>Day</th>
<th>Total Driving Time</th>
<th>Total Rest Time</th>
<th>Total Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>T</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>W</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>T</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>F</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>S</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
<tr>
<td>S</td>
<td>8.5h</td>
<td>9.0h</td>
<td>468 km</td>
</tr>
</tbody>
</table>

**Weekly Total**
- **Total Driving Time**: 51.5h
- **Total Rest Time**: 54.0h

### Operating assumptions:
- Total monthly distance covered = 11,300 km
- Distance covered per year = 130,000 km
- Average trip BG-EU = 2,000 km
- Average cabotage length = 275 km
- Average cross-trade length = 717 km
- Share of empty mandatory homecomings = 53%

### Regulatory assumptions:
- In the simulation based on current rules we have assumed that as goods are unloaded in a Member State, the truck performs in three consecutive cabotage operation within 7 days, after which it performs cross-trade to another EU country.
- In the simulation based on the proposed changes we have assumed one cabotage operation in the first three day after unloading and a subsequent cross-trade operation.

**Source:** "The EC’s Mobility Package I: Impact on the European Road Transport System", KPMG Survey and analysis
Socio-economic impact assessment

Summary of assumptions

The estimations of the impact of the implementation of the proposed changes on assumptions sourced from market data in 2018 and information provided by market participants as a result of the Survey.

It should be noted that the following assumptions are based on Survey feedback:

- Average revenue per km
- Percentage of empty runs as a result of the homecomings
- Number of additional administrative staff to be hired

The impact of the implementation of the proposed changes on assumptions is based on market data in 2018 and information provided by market participants as a result of the Survey.

ASSUMPTIONS

<table>
<thead>
<tr>
<th>IMPACTED BUSINESS AREAS</th>
<th>ASSUMPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>2,000 km average BG-EU trip 0.8 EUR per km revenue</td>
</tr>
<tr>
<td>Fuel cost</td>
<td>2,200 km per month empty run 1.14 EUR/l fuel cost (VAT incl.) 25 l/100 km fuel consumption</td>
</tr>
<tr>
<td>Hotel cost</td>
<td>8 days hotel stay per month 50 EUR cost per night</td>
</tr>
<tr>
<td>Safe parking places</td>
<td>8 days parking stay per month 10 EUR cost per day</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>1.5 FTEs additional staff 720 EUR cost per employee</td>
</tr>
</tbody>
</table>

Source: NSI, Mobility studies, Other publicly available information, KPMG Survey and analysis
Socio-economic impact assessment

Annual effects quantification

The full changes implementation of proposed regulation is likely to negatively impact the Bulgarian companies in the sector mainly through the following elements:
- Lost revenue performing empty runs on mandatory homecomings
- Additional hotel cost related to drivers’ rest periods outside the cabin
- Higher cost for safe parking places
- Additional administrative expenses

Significant part of the fuel cost that companies normally incur will not generate revenues while performing empty runs on mandatory homecomings. Other costs that are likely to also increase but difficult to estimate are:
- Insurance costs as drivers are not present in the cabin
- Additional public transportation costs from the hotel to the parking places

Below are summarized the estimated effects that companies in the sector will incur following the full changes implementation of the proposed regulations and the proposed additional requirements: The effects presented below shall not be taken on cumulative basis.

**Administrative expenses**
44% percent of respondents plan to hire additional administrative employees to respond to the enhanced requirements for the posting of workers, leading to 66% increase in administrative expenses in the sector

**Safe parking places**
Annual parking cost following the requirement for drivers’ rests outside of the cabin

(24 mil. EUR)

**Lost revenue**
Based on the concept of missed revenue as a result of empty runs due to mandatory homecomings.

(509 mil. EUR)

(155 mil. EUR)

**Additional hotel cost**
Additional accommodation cost for the regular weekly rests outside of the cabin.

(119 mil. EUR)

**Fuel cost***
This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks.

Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country

(40 mil. EUR)

**Additional administrative expenses**
44% percent of respondents plan to hire additional administrative employees to respond to the enhanced requirements for the posting of workers, leading to 66% increase in administrative expenses in the sector

**Safe parking places**
Annual parking cost following the requirement for drivers’ rests outside of the cabin

(24 mil. EUR)

**Fuel cost***
This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks.

Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country

(40 mil. EUR)

**Lost revenue**
Based on the concept of missed revenue as a result of empty runs due to mandatory homecomings.

(509 mil. EUR)

(155 mil. EUR)

**Additional hotel cost**
Additional accommodation cost for the regular weekly rests outside of the cabin.

(119 mil. EUR)

**Fuel cost***: This is not incremental cost for the companies. Its impact is captured through the calculation of the opportunity cost of empty runs.

It is worth noting that it will be at the expense of the companies and it will not generate revenue in the context of mandatory homecomings.

**Annual effects quantification**

Fuel cost.*: This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks.

Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country

(155 mil. EUR)

(509 mil. EUR)

(119 mil. EUR)

(40 mil. EUR)

Fuel cost.*: This is not incremental cost for the companies. Its impact is captured through the calculation of the opportunity cost of empty runs.

It is worth noting that it will be at the expense of the companies and it will not generate revenue in the context of mandatory homecomings.

**Annual effects quantification**

Fuel cost.*: This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks.

Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country

(155 mil. EUR)

(509 mil. EUR)

(119 mil. EUR)

(40 mil. EUR)

Fuel cost.*: This is not incremental cost for the companies. Its impact is captured through the calculation of the opportunity cost of empty runs.

It is worth noting that it will be at the expense of the companies and it will not generate revenue in the context of mandatory homecomings.

**Annual effects quantification**

Fuel cost.*: This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks.

Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country

(155 mil. EUR)

(509 mil. EUR)

(119 mil. EUR)

(40 mil. EUR)

Fuel cost.*: This is not incremental cost for the companies. Its impact is captured through the calculation of the opportunity cost of empty runs.

It is worth noting that it will be at the expense of the companies and it will not generate revenue in the context of mandatory homecomings.

**Annual effects quantification**

Fuel cost.*: This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks.

Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country

(155 mil. EUR)

(509 mil. EUR)

(119 mil. EUR)

(40 mil. EUR)

Fuel cost.*: This is not incremental cost for the companies. Its impact is captured through the calculation of the opportunity cost of empty runs.

It is worth noting that it will be at the expense of the companies and it will not generate revenue in the context of mandatory homecomings.

**Annual effects quantification**

Fuel cost.*: This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks.

Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country

(155 mil. EUR)

(509 mil. EUR)

(119 mil. EUR)

(40 mil. EUR)

Fuel cost.*: This is not incremental cost for the companies. Its impact is captured through the calculation of the opportunity cost of empty runs.

It is worth noting that it will be at the expense of the companies and it will not generate revenue in the context of mandatory homecomings.

**Annual effects quantification**

Fuel cost.*: This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks.

Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country

(155 mil. EUR)

(509 mil. EUR)

(119 mil. EUR)

(40 mil. EUR)

Fuel cost.*: This is not incremental cost for the companies. Its impact is captured through the calculation of the opportunity cost of empty runs.

It is worth noting that it will be at the expense of the companies and it will not generate revenue in the context of mandatory homecomings.

**Annual effects quantification**

Fuel cost.*: This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks.

Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country

(155 mil. EUR)

(509 mil. EUR)

(119 mil. EUR)

(40 mil. EUR)

Fuel cost.*: This is not incremental cost for the companies. Its impact is captured through the calculation of the opportunity cost of empty runs.

It is worth noting that it will be at the expense of the companies and it will not generate revenue in the context of mandatory homecomings.

**Annual effects quantification**

Fuel cost.*: This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks.

Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country

(155 mil. EUR)

(509 mil. EUR)

(119 mil. EUR)

(40 mil. EUR)
The impact assessment is performed to estimate the potential impact of the proposed regulatory changes on the international road transport sector in 2023.

**Full changes implementation**
- It is estimated that under this scenario the negative impact on the market size in 2023 will amount to EUR 1,026 mln., resulting from discontinued businesses in Bulgaria. This is based on the assumption that companies owning 36% of the trucks currently in operation will either discontinue or relocate their operations to another country. The latter assumption is grounded on the Survey feedback received.
- In addition, the market size in 2023 is likely to decline by EUR 509 mln. due to the missed revenues as a mandatory homecomings and empty runs.
- The detailed assumptions and calculations are presented on pages 36-38

**Balanced changes implementation**
- An estimation of the market size in 2023 under the balanced changes implementation is prepared and presented for illustrative purposes.
- It has been assumed, that the development of the sector will continue in line with the historically achieved compound annual growth rate over the period 2015-2018.
- We have not analysed the potential impacts of the balanced implementation of changes on the Bulgarian companies providing international road freight transport.
- Further, any other investments and costs related to the gradual adaptation of the Bulgarian transport companies and the harmonization of the EU sector are not evaluated and therefore, not taken into consideration for the purposes of this impact assessment.

**International road freight transport sector in Bulgaria in 2023**

<table>
<thead>
<tr>
<th>Category</th>
<th>Market Size 2023</th>
<th>Discontinued Business</th>
<th>Lost Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full changes implemented</strong></td>
<td>1,327</td>
<td>(1,026)</td>
<td>(509)</td>
</tr>
<tr>
<td><strong>Market size 2018</strong></td>
<td>2,863</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Growth 2019 - 2023</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Market size 2023</strong></td>
<td>3,966</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: NSI, Mobility studies, KPMG Survey and analysis
Similar effects as presented for Bulgaria would be expected in other countries as well.

Lost revenue will depend on the average length of hauls for the respective countries.

Assumptions for additional costs for hotels and safe parking places would apply to other countries’ transport companies as well.

The amount of additional administrative expenses will depend on the average salaries in the respective countries. Still, the estimated impact for Bulgarian companies in the sector of 66% administrative cost increase will likely be relevant to other countries as well.

The table below contains estimated impact of the proposed changes in regulations on the sectors in Bulgaria, Romania and Poland.

### Impact of changes on CEE countries

<table>
<thead>
<tr>
<th>Country</th>
<th>No. of trucks</th>
<th>Lost revenue</th>
<th>Hotel expenses (EUR’000)</th>
<th>Safe parking cost (EUR’000)</th>
<th>Fuel* (EUR’000)</th>
<th>Administrative expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>25,800</td>
<td>Up to 17% drop in road freight transport sector</td>
<td>118,000</td>
<td>24,000</td>
<td>115,000</td>
<td>+66% increase in administrative cost in the sector</td>
</tr>
<tr>
<td>Romania</td>
<td>35,200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>184,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: “The EC’s Mobility Package I: Impact on the European Road Transport System”, KPMG Survey and analysis

Fuel cost.*: This is not incremental cost for the companies. Its impact is captured through the calculation of the opportunity cost of empty runs.

It is worth noting that it will be at the expense of the companies and it will not generate revenue in the context of mandatory homecomings.
The limited number of parking spots, able to accommodate the truck drivers within Europe, requiring overnight parking, has an unintended economic effect of increasing prices of the existing parking locations. To compensate for the higher parking prices, lorry drivers will have to increase the prices of their services.

Moreover, it appears that a significant investment and timeframe will be required in order to construct new parking infrastructure as to meet the demand in case that the changes proposed in the Mobility package are approved.

Key trends and developments

— In regard to the geographical distribution of the HGV, the 7,000 HGV are located in a limited number of countries as could be seen from the map. The HHV are predominantly positioned in Germany, Spain, the Netherlands, and Belgium. This creates hurdles for drivers to rely on availability of certified secure parking spots in certain countries and on several corridors.

— At present, the non-secure parking areas are more evenly spread over the entire network of corridors and MS as the map represents. However, such not certified parking spots provide no guarantee and the necessary services for drivers.

— Further, having a shortfall of circa. 320,000 certified places to accommodate the needs of the 400,000 drivers involved in long-distance transport across Europe, creates a potential effect of monopoly of the existing certified parking spots. As such, drivers may be required to pay higher prices for the services provided which in turn will lead to price increase of the freight transportation services.
European heavy-duty vehicle manufacturers are expected to reduce CO2 emissions by:
- -20% for the period 2014-2020
- Additional -15% by 2025
- Additional -16% by 2030

EU heavy-duty vehicle manufacturers believe that the ambition is achievable at a high, but acceptable, cost. Their recommendation is that EU shifts from “new-vehicle-only” approach to a fully integrated approach to CO2 reduction, covering all areas of truck usage and operation.

More than half of the potential improvement in CO2 emissions is attributed to the more efficient use of vehicles.

The increased number of empty runs to vehicle’s home country will surely conflict with EU’s ambition for reduction of greenhouse gas emissions.

### CO2 Emission target reductions

<table>
<thead>
<tr>
<th>Period</th>
<th>CO2 Emission Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>-20%</td>
</tr>
<tr>
<td>2014-2020</td>
<td>-15%</td>
</tr>
<tr>
<td>2021-25</td>
<td>-16%</td>
</tr>
<tr>
<td>2026-2030</td>
<td>-30%</td>
</tr>
</tbody>
</table>

Source: ACEA Position Paper: Reducing CO2 Emissions from Heavy-Duty Vehicles 2016, KPMG analysis

- Heavy-duty vehicles (including trucks and buses) account for roughly 5% of Europe’s greenhouse gas emissions
- Driven by market forces, truck manufacturers have delivered a 60% reduction in fuel consumption since 1965
- European manufacturer are expected to reduce fuel consumption as depicted in the graph below:

### 2014-2020 CO2 emission reduction impactors

<table>
<thead>
<tr>
<th>Impact</th>
<th>2014</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trailer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tires</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio fuels 2nd generation</td>
<td>-6%</td>
<td>-3%</td>
</tr>
<tr>
<td>Synthetic fuel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fleet renewal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: ACEA Position Paper: Reducing CO2 Emissions from Heavy-Duty Vehicles 2016, KPMG analysis

- More than a half of the potential improvement is attributed to the more efficient use of vehicles
- High-capacity vehicles and other highly-efficient solutions increasing the loading length of trailers and semitrailers, have proven their added value in several EU countries over the past years
- High-capacity vehicles can deliver the same transport capacity with less vehicles, resulting in total fuel consumption and emissions as well as less congestion
- While enhancement of cabotage services is estimated to contribute to the reduction of CO2 emissions by 0.5%, the increased number of empty runs to vehicle’s home country will surely conflict with EU’s ambition for reduction of greenhouse gas emissions
- Heavy-duty vehicle manufacturers believe that the ambition levels for future CO2 standards for heavy-duty vehicles are achievable at a high, but acceptable cost.
There are two approaches to the estimation of CO2 emissions from freight transport:

- **Energy-based approach**
- **Activity based approach**

Average carbon factors used in calculations for CO2 emissions are very sensitive to assumptions about vehicle loading and empty running.

Based on data provided by a sample of Bulgarian international haulers, around 53% of the additional mandatory homecomings of the vehicles will run empty coming back to Bulgaria, and again around 53% will travel empty to the EU after the cool-off period.

### Methods of calculation

**There are two approaches to the estimation of CO2 emissions from freight transport:**

- Since almost all CO2 emissions from freight transport are energy-related, the simplest way of calculating these emissions is to **record energy use** and to **employ standard emission factors** to convert energy values into CO2.

<table>
<thead>
<tr>
<th>Load</th>
<th>% of truck-kms run empty</th>
<th>0.0%</th>
<th>5.0%</th>
<th>10.0%</th>
<th>15.0%</th>
<th>20.0%</th>
<th>25.0%</th>
<th>30.0%</th>
<th>35.0%</th>
<th>40.0%</th>
<th>45.0%</th>
<th>50.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>81.0</td>
<td>84.7</td>
<td>88.8</td>
<td>93.4</td>
<td>98.5</td>
<td>104.4</td>
<td>111.1</td>
<td>118.8</td>
<td>127.8</td>
<td>138.4</td>
<td>151.0</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>74.8</td>
<td>78.2</td>
<td>81.9</td>
<td>86.1</td>
<td>90.8</td>
<td>95.1</td>
<td>102.1</td>
<td>109.1</td>
<td>117.3</td>
<td>127.0</td>
<td>138.6</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>69.7</td>
<td>72.6</td>
<td>76.2</td>
<td>80.0</td>
<td>84.3</td>
<td>89.2</td>
<td>94.7</td>
<td>101.1</td>
<td>108.6</td>
<td>117.5</td>
<td>128.1</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>65.4</td>
<td>68.2</td>
<td>71.4</td>
<td>74.9</td>
<td>79.9</td>
<td>83.4</td>
<td>88.5</td>
<td>94.4</td>
<td>101.3</td>
<td>109.5</td>
<td>119.3</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>61.7</td>
<td>64.4</td>
<td>67.3</td>
<td>70.6</td>
<td>74.2</td>
<td>78.4</td>
<td>83.2</td>
<td>88.7</td>
<td>95.1</td>
<td>102.7</td>
<td>111.8</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>58.6</td>
<td>61.0</td>
<td>63.8</td>
<td>66.8</td>
<td>70.3</td>
<td>74.2</td>
<td>78.6</td>
<td>83.7</td>
<td>89.7</td>
<td>96.8</td>
<td>105.3</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>55.9</td>
<td>58.2</td>
<td>60.7</td>
<td>63.6</td>
<td>66.8</td>
<td>70.5</td>
<td>74.6</td>
<td>79.5</td>
<td>85.1</td>
<td>91.7</td>
<td>99.7</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>53.5</td>
<td>55.7</td>
<td>58.1</td>
<td>60.8</td>
<td>63.8</td>
<td>67.2</td>
<td>71.2</td>
<td>75.7</td>
<td>81.0</td>
<td>87.2</td>
<td>94.7</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>51.4</td>
<td>53.5</td>
<td>55.8</td>
<td>58.3</td>
<td>61.2</td>
<td>64.4</td>
<td>68.1</td>
<td>72.4</td>
<td>77.4</td>
<td>83.3</td>
<td>90.4</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>49.6</td>
<td>51.5</td>
<td>53.7</td>
<td>56.1</td>
<td>58.8</td>
<td>61.9</td>
<td>65.4</td>
<td>69.5</td>
<td>74.2</td>
<td>79.8</td>
<td>86.5</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>48.0</td>
<td>49.8</td>
<td>51.9</td>
<td>54.2</td>
<td>56.8</td>
<td>59.7</td>
<td>63.0</td>
<td>66.9</td>
<td>71.4</td>
<td>76.7</td>
<td>83.0</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>46.6</td>
<td>48.3</td>
<td>50.3</td>
<td>52.5</td>
<td>54.9</td>
<td>57.7</td>
<td>60.9</td>
<td>64.5</td>
<td>68.8</td>
<td>73.9</td>
<td>80.0</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>45.3</td>
<td>47.0</td>
<td>48.8</td>
<td>50.9</td>
<td>53.3</td>
<td>55.9</td>
<td>59.0</td>
<td>62.5</td>
<td>66.5</td>
<td>71.4</td>
<td>77.2</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>44.2</td>
<td>45.8</td>
<td>47.6</td>
<td>49.6</td>
<td>51.8</td>
<td>54.3</td>
<td>57.2</td>
<td>60.6</td>
<td>64.5</td>
<td>69.1</td>
<td>74.7</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>43.2</td>
<td>44.7</td>
<td>46.4</td>
<td>48.3</td>
<td>50.5</td>
<td>52.9</td>
<td>55.7</td>
<td>58.9</td>
<td>62.7</td>
<td>67.1</td>
<td>72.4</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>42.3</td>
<td>43.8</td>
<td>45.4</td>
<td>47.3</td>
<td>49.3</td>
<td>51.7</td>
<td>54.3</td>
<td>57.4</td>
<td>61.0</td>
<td>65.2</td>
<td>70.3</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>41.5</td>
<td>42.9</td>
<td>44.5</td>
<td>46.3</td>
<td>48.3</td>
<td>50.5</td>
<td>53.1</td>
<td>56.0</td>
<td>59.5</td>
<td>63.6</td>
<td>68.5</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>40.8</td>
<td>42.2</td>
<td>43.7</td>
<td>45.4</td>
<td>47.3</td>
<td>49.5</td>
<td>52.0</td>
<td>54.8</td>
<td>58.1</td>
<td>62.1</td>
<td>66.8</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>40.2</td>
<td>41.5</td>
<td>43.0</td>
<td>44.6</td>
<td>46.5</td>
<td>48.6</td>
<td>51.0</td>
<td>53.7</td>
<td>56.9</td>
<td>60.7</td>
<td>65.3</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>39.7</td>
<td>41.0</td>
<td>42.4</td>
<td>44.0</td>
<td>45.7</td>
<td>47.8</td>
<td>50.1</td>
<td>52.7</td>
<td>55.8</td>
<td>59.3</td>
<td>63.9</td>
<td></td>
</tr>
</tbody>
</table>

Based on data provided by a sample of Bulgarian international haulers (37 transport companies), around 53% of the additional mandatory homecomings will run empty coming back to Bulgaria, and again around 53% will travel empty to the EU after the cool-off period.

Depending on the average payload on the laden section the emission can vary from 63.9 gCO2 per ton-km for 29 tons to 151 gCO2 per ton-km for 10 tons.

**CO2 emissions calculation (1/2)**

**Impact assessment: Environmental**

**Energy-based approach**

- In the absence of energy data it is possible to make a rough estimate of the carbon footprint of a transport operation by applying the following formula:
  
  \[ \text{CO2} = \text{tons transported} \times \text{average distance travelled} \times \text{CO2 emissions factor per ton/km} \]

- Company records, ERP systems and delivery manifests can provide the necessary data on tonnages moved.

**Activity-based approach**

- For road movements estimates of average length of haul can also be based on data from these sources.
- One of the most difficult issues in applying the approach is the choice of carbon emission factors.
- These are generally expressed as grams of CO2 per ton/kg.

CO2 emissions are estimated to account for around 93-95% of total greenhouse gases emissions from freight transport. Furthermore, most of the published emission factors for freight are expressed solely in terms of CO2.
The transport sector is a major source of gases with growing share in national emissions, regardless of its decline in volume since 2009. The estimated additional CO2 as a result of the empty runs amount to around 0.09 mln t, which represents circa 3% increase in total CO2 emissions coming from international road transport.

Bulgaria’s total greenhouse gas emissions for the period 2007-2013 are on a decreasing trend.

The transport sector is a major source of gases with growing share in national emissions, regardless of its decline in volume since 2009.

About 94% of greenhouse gas emissions from transport are from road transport.

For the purposes of the additional CO2 emissions from the empty runs we have used the Activity-based approach using a set of assumptions as presented below:

- **Average tons transported**: 15.9 t
- **Average additional distance travelled (due to mandatory homecomings)**: 2,000 km
- **CO2 emissions factor (gCO2 per t-km)**: 99.7 g CO2/kg
- **Number of trucks in operation**: 25,800
- **Percent of empty runs of mandatory homecomings**: 53%

The estimated additional CO2 as a result of the empty runs amount to around 88,500 t, which represents 3% increase in total CO2 emissions coming from international road transport.

This will increase total greenhouse emissions generated by transport sector in Bulgaria by 1%.

Source: NSI, Mobility studies, Measuring and Managing CO2 Emissions of European Chemical Transport, Other publicly available information and KPMG Survey and analysis.
Appendices
As part of our engagement KPMG has prepared an independent market study of the road freight transport sector in Bulgaria with focus on the transport services performed in the EU and evaluation of some of the effects of the Mobility package. The scope of work is set out below:

**Market overview**
- Trends in the development of the road freight transport market in Europe; Leading countries by market shares;
- Overview of the Mobility package;
- Size, trends and specifics of the sector in Bulgaria;
- Overview of the key stakeholders in Bulgaria;
- Average age of Bulgarian trucks that operate on the international market relative to other countries;
- Historical investments in Bulgarian transport sector for new road freight fleet;
- Analysis of the Bulgarian labor market of international drivers and leading European countries in the sector with focus on the countries facing highest shortage of drivers;
- Analysis of the remunerations in the sector in Bulgaria compared to neighbor countries;
- Analysis of the costs related to operating a road freight vehicle in Bulgaria compared to other countries:
  - Price of Green card;
  - Conditions for leases when purchasing new vehicles;
  - Tax on road freight vehicles;
  - Subsidies for investments in machinery, that meets European eco standards.

**Change in rules regarding cabotage**
- Overview of the proposed changes;
- Analysis of the costs and the effects on the environment caused by the requirement of mandatory homecomings of the vehicles;
- Analysis of the additional costs related to the requirement of mandatory homecomings of the vehicles;
- Analysis of potential losses for the business if the trucks perform empty runs during homecomings.

**Change in rules regarding posting of workers**
- Overview of the proposed changes;
- Overview of the key requirements for publishing workers’ records;
- Evaluation of the additional costs for Bulgarian haulers related to enforcing the new requirements regarding posting of workers;
- Comparative analysis of the costs for cross-trade and international trade in Bulgaria compared to neighbor countries;
- Analysis of the additional costs for the business related to the unification of drivers’ remuneration among EU member countries.

**Proposal regarding driving times, rest periods and tachographs**
- Number of drivers and potential additional costs related to drivers’ accommodation;
- Number of necessary spaces for safe parking and the respective costs for their construction;
- Potential rise in insurance premiums because the freight will be unattended while the driver is accommodated;
- Potential rise in the need of additional investments due to installment of tachographs that meet the EU requirements.

**Summary**
- SWOT analysis. Review of the advantages and disadvantages, as well as potential risks and opportunities for development of Bulgarian haulers;
- Review and analysis of the administrative and regulatory frame regarding the performance of road freight transport services in the EU;
- Quantitative and qualitative analysis of the effects.
Appendix 2
Sources of information (1/2)

ACEA
- ACEA (2018), Vehicles in use Europe 2018
- ACEA (2019), High Capacity Transport - Smarter policies for smart transport solutions
- ACEA (2019), Tax guide
CNR (2016), Comparative study of employment and pay conditions of international lorry drivers in Europe
DLA Piper UK (2019), Legal analysis of the Mobility package 1

European Commission
- European Commission (2018), EU Transport in figures - Statistical pocketbook 2018
- European Commission (2019), Study on Safe and Secure Parking Places for Trucks
- European Commission (2019), The future of road transport
- European Commission (2019), Transport taxes and charges in Europe
- European Union Road Federation (2017), Road statistics Yearbook 2017
- Better access to the EU road haulage market - Revision of the Regulations on Access to Road Haulage Market and to the occupation of road transport undertaking (1071 and 1072/2009)
- Commission Staff Working Document: Impact Assessment
- Commission Staff Working Document: Impact Assessment
- Commission Staff Working Document: Ex-post evaluation
- Commission Staff Working Document: Executive summary of the Ex-post evaluation*

Eurostat
- Eurostat (2018), Road freight transport statistics (Statistics explained)

Insurance Europe (2019), European Motor Insurance Markets

International Council on Clean Transportation Europe, European vehicle market statistics - Pocketbook 2018/19

IRU
- IRU (2017), Position on the EU Mobility Package – technical analysis and recommendations on the revision of the EU rules on Access to the Profession of Road Transport Undertaking and Access to the Road Haulage Market
- IRU, Tackling the European Driver Shortage

KPMG in Romania (2018), Minimum wage requirements within Europe in the context of posting of workers

KPMG in UK (2019), Mobility Resource Pack
Appendix 2

Sources of information (2/2)

"McKinnon and Piecyk / Heriot-Watt University for CEFIC, Measuring and Managing CO2 Emissions of European Chemical Transport"

Ministry of Transport (2017), Integrated transport strategy for the period until 2030

Motor Transport Institute (2017), The Impact of regulation of the road transport sector of entrepreneurship and economic growth in the European Union

National Statistical Institute

NSI Infostat

Prof. Peter Klaus, D.B.A. / Boston University (2019), The EC's Mobility Package 1: Impact of the European Road Transport System

PWC, Transport of the future - Report on prospects for development of road transport in Poland in 2020-2030


Representations provided by Union of International Haulers

Other publicly available information
Appendix 3

Outline of the Survey questionnaire

1. What is the number of trucks in your fleet, performing international road freight transport in the European Union, during the last 3 years?
2. What is the age of the trucks in your fleet at the current moment which you use to perform international road freight transport in the European Union?
3. Which European eco standard for harmful emissions does the trucks in your fleet which you use to perform international road freight transport in the European Union have?
4. Please point out the number of trucks in your fleet which operate under the conditions of cabotage in the EU.
5. What share of your company’s revenue is related to performing services under the conditions of cabotage in the EU?
6. Please point out how much revenue your company generates from performing international road freight transport in the European Union (for the last 5 years and a forecast for 2019).
7. Please point out how much your company’s expenses are related to performing international road freight transport in the European Union (for the last 2 years).
8. Please point out how much your company’s investments are related to performing international road freight transport in the European Union (for the last 5 years and a forecast for 2019).
9. How much does your company forecast the additional annual costs related to the requirements for high-tech tachographs (“smart” tachographs) to be?
10. What part of the HGV runs related to the requirement for compulsory truck homecomings does your company forecast to be empty / unloaded? (e.g. Company XYZ has 10 trucks which operate under the conditions of cabotage and because of the Mobility package, the trucks are require to come to their home country every 4 weeks, i.e. 130 runs on average one way and accordingly 130 the other way)
11. What part of your company’s investments in road freight fleet are financed through a finance lease?
12. What is the average number of your company’s personnel engaged in performing and administrating international road freight transport in the European Union, in the last 3 years?
13. How much are your company’s annual costs related to personnel which is engaged in performing and administrating international road freight transport in the European Union, by type of employment?
14. Does your company forecast hiring additional personnel related to administrating the additional requirements of the Mobility Package (records and postings)?
15. What are your company’s plans for investments in road freight fleet operating in the EU, as well as in necessary/required infrastructure in the next 5 years:
   - In the conditions of balanced Mobility package;
   - In the conditions of full Mobility package.
16. Does your company consider changing its business strategy in case the Mobility package is enforced in its full version of requirements?
Overview of international road freight in EU: Market shares by countries

International road freight transport (incl. cross-trade and cabotage) in the EU, as % of total tkm in 2017 and 2018

Source: Eurostat and KPMG analysis

Source: Eurostat
Overview of international road freight in EU: Road freight transport by type

The graph on the left represents EU member states’ road freight by type of operation as share of their total.

National transport dominates in Western European countries while international transport which includes cross-trade, cabotage, and transporting internationally goods which are loaded/unloaded in the reporting country, prevails in most Central and Eastern European countries.

Source: Eurostat
Note: The selection excludes Denmark, Finland, Estonia and Greece due to lack of information.
## Appendix 6

**Overview of international road freight in EU: Top 5 countries performing cabotage**

### Top 5 cabotage performing countries and their main countries in which cabotage takes place in 2017

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country which performs cabotage</th>
<th>Million tonne-kilometres</th>
<th>Top 3 countries in which cabotage takes place</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poland</td>
<td>17,897</td>
<td>Germany</td>
<td>73.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>France</td>
<td>12.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>United Kingdom</td>
<td>2.8%</td>
</tr>
<tr>
<td>2</td>
<td>Romania</td>
<td>3,921</td>
<td>Germany</td>
<td>32.2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>France</td>
<td>30.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Italy</td>
<td>10.5%</td>
</tr>
<tr>
<td>3</td>
<td>Spain</td>
<td>2,781</td>
<td>France</td>
<td>89.7%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Germany</td>
<td>2.9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Italy</td>
<td>2.6%</td>
</tr>
<tr>
<td>4</td>
<td>Lithuania</td>
<td>2,567</td>
<td>France</td>
<td>46.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Germany</td>
<td>35.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sweden</td>
<td>4.4%</td>
</tr>
<tr>
<td>5</td>
<td>Bulgaria</td>
<td>2,163</td>
<td>Germany</td>
<td>26.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>France</td>
<td>15.1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Spain</td>
<td>13.1%</td>
</tr>
</tbody>
</table>

Source: Eurostat
As per the Enforcement Directive, EU Member States should have introduced its provisions in national law.

This overview compares these national provisions and focuses on key differences in the documents that should be disclosed to allow the receiving country to verify if the assignment is a genuine posting (e.g. contract, payslips, time-sheets, proof of payment):

<table>
<thead>
<tr>
<th>Country</th>
<th>Retention Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only to be kept during the assignment</td>
<td></td>
</tr>
<tr>
<td>To be kept 1 year after termination of the assignment</td>
<td></td>
</tr>
<tr>
<td>The home company must be able to provide the documents upon a request of the authorities within one year after the termination of the posting</td>
<td></td>
</tr>
<tr>
<td>To be kept 5 years after termination of the assignment</td>
<td></td>
</tr>
<tr>
<td>To be kept 6 years after termination of the assignment</td>
<td></td>
</tr>
<tr>
<td>To be kept 3 years after termination of the assignment</td>
<td></td>
</tr>
<tr>
<td>Since the documents are submitted via an online system there is no need to keep them separately</td>
<td></td>
</tr>
<tr>
<td>To be kept 7 years after termination of the assignment</td>
<td></td>
</tr>
<tr>
<td>To be kept 2 years after termination of the assignment</td>
<td></td>
</tr>
<tr>
<td>To be kept 5 years after termination of the assignment, no statutory rule</td>
<td></td>
</tr>
<tr>
<td>To be kept 2 years after termination of the assignment</td>
<td></td>
</tr>
</tbody>
</table>

As per the Enforcement Directive, EU Member States should have introduced its provisions in national law. Longer retention periods might apply for other reasons (e.g. lawsuits, etc.)

No time prescription for retention of the documents. One year after termination of the assignment is advised

To be kept 2 years after termination of the assignment

To be kept 2 years after termination of the assignment

To be kept 10 years after termination of the assignment

No retention obligation

No statutory rule. Up to one year retention recommended

Documents need to be kept during the assignment.

To be kept 2 years after termination of the assignment

To be kept 1 year after termination of the assignment

To be kept 3 years after termination of the assignment

Up to 1 year recommended

To be kept 2 years after termination of the assignment

To be kept 5 years after termination of the assignment
In the 20 countries that have a minimum wage established at national level, it varies between EUR 261 per month in Bulgaria and EUR 1,999 per month in Luxemburg.

We have presented above a high-level comparison between the Member States from the following perspectives:

- Minimum net monthly wage of the employee
- The cost borne by the employee (generally income tax and employee’s mandatory social security contributions, less any tax credits/reliefs available)
- The cost borne by the employer (employer’s social security contributions)

The comparison has been presented for statistical purposes only, in order to present comparative figures applicable within the EU.

There are two main groups in terms of minimum wage policy. The larger group consists of countries that have national statutory minimum wage (20 out of 31 countries in scope of analysis).

The second group consists of countries that do not have a national minimum wage requirement. This means that the minimum wage is not set at national level and is instead based on Collective Bargaining Agreements. Consequently, in these Member States, the minimum wage can differ based on industry, position, occupation, age, etc.

Sweden is the only Member State that has no legal minimum wage requirement for EU nationals.
Social security employer contribution is the additional cost that employers incur in addition to the salary they pay to their employees.

Employer contribution in Bulgaria is close to EU average (19% of gross minimum monthly wage) but still the value gap compared to the countries receiving cabotage and cross-trade transport services is significant, having in mind that the minimum wage in Bulgaria (EUR 261 per month) is significantly the wage levels in these countries.

Analysis shows that the average social security employer contribution in EU appears to be 21% of gross minimum wage.

Social security employer contributions in France are the highest among Member States, 55% of gross minimum monthly wage and also the biggest in value terms (EUR 824 per month).

The country hosting the largest share of cabotage in the EU, Germany, requires 19% of gross minimum wage (or EUR 273 per month) as employer contributions to social security.

Employer contribution in Bulgaria is close to EU average (19% of gross minimum monthly wage) but still the value gap compared to the countries receiving cabotage and cross-trade transport services is significant, having in mind that the minimum wage in Bulgaria (EUR 261 per month) is significantly the wage levels in these countries.
Monthly driving schedule simulation: EC’s proposal recognized by European Parliament

The proposal (dated 03 December 2018) for specific rules with respect to Directives 96/71/EC and 2014/67/EU for posting drivers, sets out guidance for exemption of posting of workers with respect to goods transport. This proposal has been presented by the EC with the adoption of the General Approach and has been recognized by the European Parliament.

The driver performing a bilateral transport operation is allowed to execute one activity of loading and/or unloading in the MS or a third country that the driver crosses, provided that the driver does not load goods and unloads them in the same MS.

In practice this may shift the operating model of transport companies to exclusively performing bilateral operations in order to be exempted from the provisions of Directive 96/71/EC for posting of workers.

EC’s proposal recognized by European Parliament:


The simulation illustrates the effect of applying the exemption of posting of workers under Directive 96/71/EC when performing bilateral transport operations:

**Simulation based on current rules:**

<table>
<thead>
<tr>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>S</th>
<th>S</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>S</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>165 km</td>
<td>440 km</td>
<td>440 km</td>
<td>440 km</td>
<td>440 km</td>
<td>165 km</td>
<td>440 km</td>
<td>440 km</td>
<td>440 km</td>
</tr>
<tr>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>3.0h</td>
<td>8.0h</td>
<td>8.1h</td>
<td>8.6h</td>
<td>3.0h</td>
<td>3.0h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
</tr>
<tr>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
<td>468 km</td>
</tr>
<tr>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
<td>8.5h</td>
</tr>
</tbody>
</table>

**Total driving time = 90h**
**Total rest time = 90h**

**Operating assumptions:**
- Total monthly distance covered = 11,300 km
- Distance covered per year = 130,000 km
- Average trip BG-EU = 2,000 km
- Average cabotage length = 275 km
- Average cross-trade length = 717 km
- Share of empty mandatory homecomings = 53%

**Regulatory assumptions:**
- In the simulation based on current rules we have assumed that as goods are unloaded in a Member State, the truck performs in three consecutive cabotage operation within 7 days, after which it performs cross-trade to another EU country.
- In the simulation based on the proposal presented by the EC and recognized by the European Parliament we have assumed that in order to avoid posting of drivers, companies are limited to performing bilateral operations.

Source: “The EC’s Mobility Package I: Impact on the European Road Transport System”, KPMG Survey and analysis
The implementation of European Parliament’s proposal will essentially impact the same business areas of transport companies operations however the magnitude of the various effects will differ. Performing bilateral operations will increase the number of homecomings, essentially doubling the lost revenue and the fuel cost impact assuming 53% of the trips will be empty. Administrative expenses will not differ from the simulation of full implementation of changes since this model will not require different number of administrative personnel. Additional cost for hotels and safe parking places will likely be slightly lower since part of the rest periods are assumed to be carried out at home with no associated cost for the employer.

We have summarized below the estimated negative impacts that companies in the sector will incur following the changes in the regulation and the proposed additional requirements:

**Administrative expenses.**
44% percent of respondents plan to hire additional administrative employees to respond to the enhanced requirements for the posting of workers, leading to 66% increase in administrative expenses in the sector.

**Lost revenue.**
Based on the concept of missed revenue as a result of empty runs due to mandatory homecomings.

**Fuel cost.***
This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks. Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country.

**Additional hotel cost.**
Additional accommodation cost for the regular weekly rests outside of the cabin.

**Safe parking places.**
Annual parking cost following the requirement for drivers’ rests outside of the cabin.

**Representing 2% drop in Bulgarian GDP**

---

Impact of EC’s proposal on Bulgarian companies providing international road transport

We have summarized below the estimated negative impacts that companies in the sector will incur following the changes in the regulation and the proposed additional requirements:

**Administrative expenses.**
44% percent of respondents plan to hire additional administrative employees to respond to the enhanced requirements for the posting of workers, leading to 66% increase in administrative expenses in the sector.

**Lost revenue.**
Based on the concept of missed revenue as a result of empty runs due to mandatory homecomings.

**Fuel cost.***
This is the annual fuel cost for the empty runs due to the mandatory homecomings of the trucks. Part of this cost should be considered a benefit for the local petrol stations, as a result of additional charging in the country.

**Additional hotel cost.**
Additional accommodation cost for the regular weekly rests outside of the cabin.

**Safe parking places.**
Annual parking cost following the requirement for drivers’ rests outside of the cabin.

---

*Fuel cost.*: This is not incremental cost for the companies. Its impact is captured through the calculation of the opportunity cost of empty runs. It is worth noting that it will be at the expense of the companies and it will not generate revenue in the context of mandatory homecomings.