Impact assessment of the Mobility Package 1 changes over the Romanian road freight transport sector

FINAL REPORT

22 October 2020

Contents

Glossary

ACEA	European Automobile Manufacturers' Association
Cabotage	Transport carried out within the national territory of one country, by an enterprise registered on the territory of another country
CAGR	Compound annual growth rate
CAPEX	Capital expenditures
Cross-trade	Transport carried out between two countries, by an entity registered in a third country
bn.	billion
EC	European Commission
EP	European Parliament
EUR	Euro
FTE	Full-time equivalent
FY	Financial year
GDP	Gross Domestic Product
HGV	Heavy goods vehicle
HICP	Harmonized Index of Consumer Prices
International road freight transport	Transport carried out outside national border including: Cross-trade, Cabotage and bilateral transport operations
IRU	International Road Transport Union
IT	Information technology
KPI	Key performance Indicators
mil.	Million
MP 1	Mobility Package 1
MS	(EU) Member State
N/A	Not applicable
PA	Per annum
SSTPA	Safe and Secure Truck Parking Area
TKM	Million ton-kilometer
UNTRR	National Union of Road Hauliers from Romania

Introduction (1/2)

Background

Under the current legislative measures adopted by the European Parliament regarding the road freight transport, the Board of Directors of the National Union of Road Hauliers from Romania ('UNTRR') wanted to explore the business environment applicable to Romanian 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 National Union of Road Hauliers from Romania (UNTRR) is an organisation - professional and employers, non-governmental, independent, apolitical - founded in 1990 on democratic principles, promoting and defending the interests of road transport domestically and internationally, recording since its foundation to the present over 16,000 members - operators carrying out domestic and international freight transport and passengers.

KPMG's objective was to conduct an independent market study highlighting the importance of the Romanian road haulage market and to perform the impact assessment of full changes implementation of the Mobility Package 1 considering 3 pillars: economic, social and environmental. The impact assessment considered the impact of MP1 agreement on the road freight transport companies and their employees, but also the direct and indirect impact on the Romanian economy.

UNTRR requested KPMG to focus on estimating the impact of the effects of the adopted changes in regulations with respect to:

1. Mandatory returns home of the truck every 8 weeks
2. Mandatory returns home of the drivers every 3/4 weeks
3. Limitation of cross-trade operations which are excepted from the application of the posting rules
4. Posting of workers enforcement in correlation with Rome I application to road freight transport and to the revision of the regulations regarding the coordination of social security systems
5. Cabotage restrictions

We have conducted an independent fact-based study which does not include statements pro or against the UNTRR position.

Introduction (2/2)

Approach and methodology

The Market Study is based on statistical data for the international road freight transport market in Romania for 2019. Further, the market size is analysed in the context of the adopted changes in regulation, applying a set of operational, regulatory, financial and market assumptions.

The adopted regulatory changes are partially applicable for the companies operating in the sector since 20 August 2020. The remaining measures will produce effects starting 2 February 2022.

Our analysis considers specific approaches for assessing the socio-economic and environmental impacts of the main elements of the MP1: Access to the market and to the profession, Driving and resting rules and Posting of workers to the road freight transport.

We have based our analyses on publicly available information as presented in Appendix 1 and on the feedback received from a specifically designed survey conducted by KPMG amongst the members of UNTRR (the „KPMG Survey", the "Survey").

The KPMG Survey: design

KPMG has compiled a Questionnaire consisting of 76 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 Romania.

It includes questions which aim to explore the respondents' operating and financial position as well as their expected impact on the sector resulting from regulatory changes.

The KPMG Survey: organization

The questionnaire has been distributed to the transport firms members of UNTRR upon which we received feedback from 127 companies, including both large and small companies, from different geographical areas of Romania.

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.

KPMG

Executive summary

Key facts (1/4)

The summary below contains key facts about the international road freight transport sector in Romania, as well as key results of our impact assessment of the regulatory changes imposed by the newly adopted Mobility Package I ("MP1").

Key facts as at 2019

Number of RO licensed HGV	154,545
Average age of RO fleet park providing international road transport	6 years
Number of licensed road hauliers	33,655
Number of companies operating max. 5 trucks	28,913
Total licensed and employed drivers	186k
Average driver's monthly gross income	€2,600
Turnover of the road freight transport sector in Romania	€10.6 bn
As percentage of RO total turnover of non-financial companies	3.2%
Export of road freight transport services in Romania	€6.10 bn

Economic

Full implementation of MP1 changes is expected to significantly erode the profitability of Romanian international road freight transport companies, by inducing both missed revenue due to empty runs during mandatory returns home of trucks, as well as a higher cost base driven by additional expenses with hotel accommodation and mandatory return home of drivers, safe parking of trucks, additional administrative staff and drivers that would be required to comply with the new requirements.

As evidenced by the KPMG Survey, this will lead to major changes in the business models of such companies, including the decision to discontinue or relocate the operations. As a result, revenues from international road freight transport are estimated to decrease by EUR 4.5 bn, corresponding to an estimated net impact of EUR 3 bn on the Romanian economy, that is a 0.9% decrease in the total turnover of non-financial companies in Romania, which represents 1.4% of the Romanian GDP.

Social

Based on the Survey performed, 55% of the companies providing cross-trade and cabotage transport services (which account for 39% of the total road freight transport services), will discontinue operations in Romania as a result of full implementation of MP1 regulatory changes, either by closing their business or relocating operations to another country in the EU. This would lead to an increase of the unemployment among drivers and support personnel and an increase by 0.3% in unemployment rate at national level.

Environment

The empty runs due to mandatory return home of trucks will cause a significant increase in the CO2 emissions. The additional CO2 emissions are estimated to the amount of ca. 456 thousand t, which represents 7.7% increase in total CO2 emissions coming from vehicles owned by Romanian companies providing international road transport.

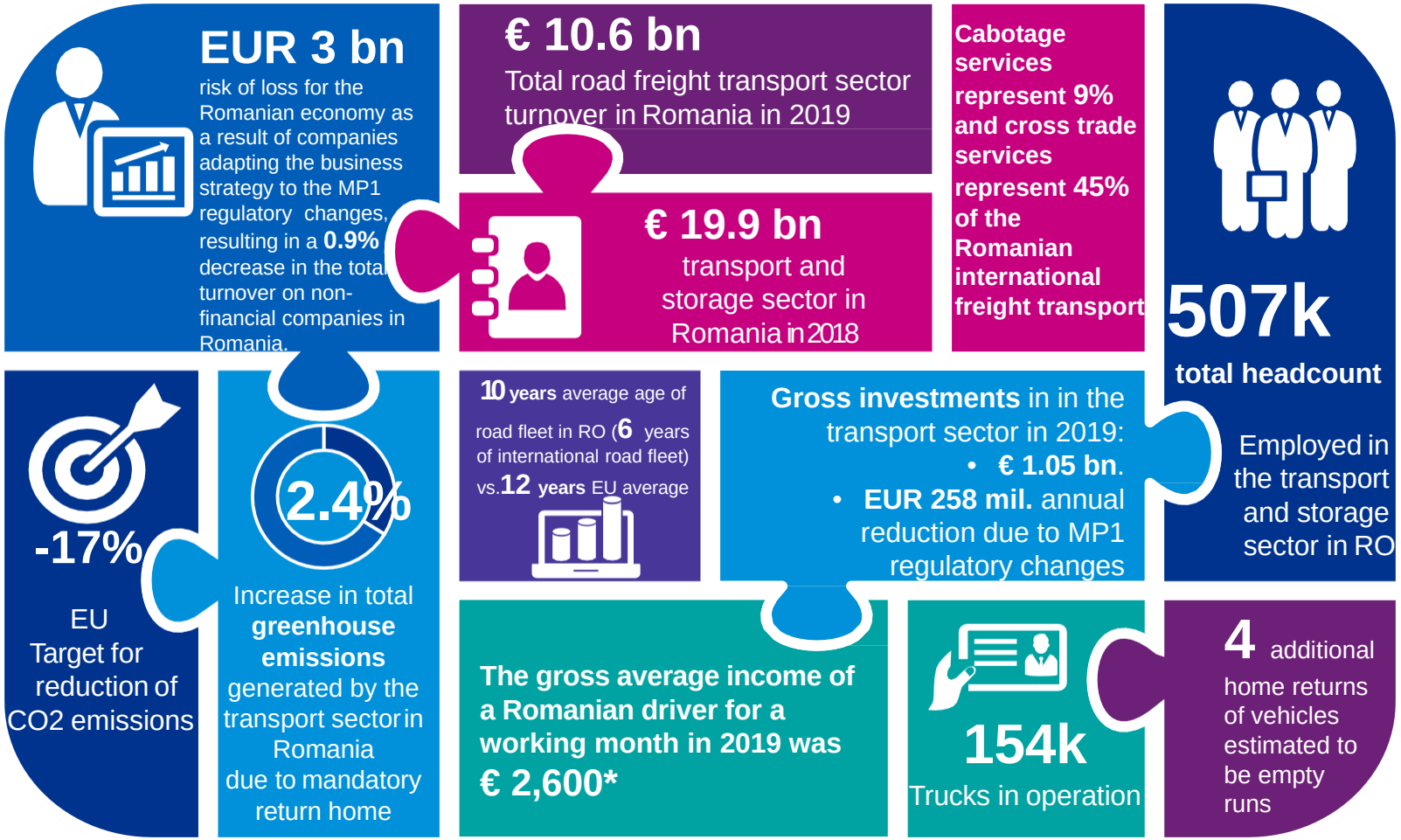
This will lead to in 2.4% increase in total greenhouse emissions generated by the transport sector in Romania.

Key facts as at Sept 2020

Number of RO licensed HGV	158,152
Average age of RO fleet park providing international road transport	6 years
Number of licensed road hauliers	34,893
Number of companies operating max. 5 trucks	29,005
Total licensed and employed drivers	171k

Source: ARR, KPMG survey, INSS, BNR, KPMG analysis

Key facts (2/4)



* The Romanian drivers are paid in average with this amount for 9.5 months/ year (i.e. gross salary + non –taxable per diems). For the rest of the 2.5 months, the drivers are paid with the gross salary only)

Source: Publicly available market information, KPMG survey and analysis

Major challenges and effects on international road freight transport sector in Romania

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 and, ultimately, society as a whole.

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

The Mobility Package 1 contains the following regulations and directives, divided into 3 categories:

I. Access to the market and to the profession

Regulation (EU) 2020/1055 of the European Parliament and of the Council amending Regulations (EC) 1071/2009, (EC) 1072/2009 and (EU) no 1024/2012 with a view to adapting them to developments in the road transport sector and Regulation (EU) 593/2008 of the European Parliament and of the Council (Rome 1)

Major challenges:

- Mandatory return home of the trucks every 8 weeks
- Hauliers are not allowed to carry out cabotage operations in the same Member State within 4 days following the end of their cabotage operation in that Member State

II. Driving and rest time rules

Regulation (EU) 2020/1054 of the European Parliament and of the Council amending Regulation (EC) No 561/2006 regarding minimum requirements on maximum daily and weekly driving times, minimum breaks and daily and weekly rest periods and Regulation (EU) No 165/2014 regarding tachographs

Major challenges:

- The mandatory return home of the drivers every 4 weeks
- Ban to spend regular weekly rest (45 h) in the cabin, but in an adequate accommodation space

III. Posting of workers to road freight transport

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

Major challenge:

- Significant administrative burden considering that drivers are considered posted when performing cabotage and cross-trade operations

Missed revenues resulting from the "mandatory return home" and expected empty runs

→ **Higher costs to be incurred by the Romanian companies due to restrictions on having weekly rests accommodated outside the cabin and applicable parking fees**

→ **Slow-down in the revenues generated by the Romanian companies due restricted access to the EU market in cross-trade and cabotage services.**

→ **Top performing Romanian companies in the sector currently operating on EU market are likely to establish new entities in Western EU countries**

→ **Bankruptcy of smaller companies operating in the sector due to negative financial impacts (missed revenues and increase in costs).**

SWOT analysis of the Romanian road freight transport sector

Strengths

- Newer fleet providing road freight transport: based on the publicly available information, the average age of the road freight vehicles of Romanian companies is 10 years (6 years for international road freight transport fleet), which is below EU average (approximately 12 years). However, if we are to extrapolate the survey responses, the average age of the Romanian fleet performing international road freight transport is 6 years.
- Proven expertise and quality of services provided of Romanian transport companies performing international road freight
- Availability of qualified drivers - the road transport industry is a major employer.
- Romanian road transport is among the top performers in EU in terms of cross-trade operations

Weaknesses

- Romanian carriers operate with extremely low margins in order to be competitive in Europe. As a consequence to the MP1 adoption:
  - The cost for the Romanian firms are expected to grow. To compensate for this increase in the operating costs, according to the survey, the companies are considering reducing drivers' revenues. This would equate to a very high probability that the companies will lose professional drivers – economic implications: decrease of contributions to the state budget and increase in the unemployment rate. Even if the unemployment rate will be mitigated by the migration of drivers to other EU countries, it would still have a negative impact on Romania, as the emigration rates will increase.
  - Many Romanian transporters will disappear, and multinationals will migrate in other EU countries, closer to the main markets – economic implications: decrease of contributions to the state budget.
- Romania is not competing in the same conditions with other European countries: higher costs with truck financing, shortage of labor market, increase of empty runs and of CO2 emissions (i.e. due to the mandatory return of trucks every 8 weeks imposed by MP1).
- The percentage of empty runs will increase for the Romanian transporters, due to the mandatory return home of the trucks at every 8 weeks.

Opportunities

- Expected growth of EU production outputs and economy as a whole fostering growth in the demand for logistic services
- Digitalization boosting revenue and also driving to cost savings through process automation
- Investment in transport infrastructure and its positive impact on the road transport industry

Threats

- Cross-trade and cabotage operations in EU are at risk for Romanian firms along with the implementation of the MP1 – 34% of the survey respondents stated that they will move to another EU state, 21% will close their activity 17% will change their activity or will limit the transport services only to bi-lateral operations and national road freight and 10% of the respondents said that they will reduce the truck fleet.
- Decrease of investments by the companies in the sector if “Mobility Package” is implemented in full scope
- Potential for increase in competition from non-EU companies which are not subject to the EU regulations (the MP1 does not apply to non-EU countries)
- Shortage of skilled drivers is likely to grow, as a consequence of the migration process (specific for peripheral EU Member States)

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Market overview

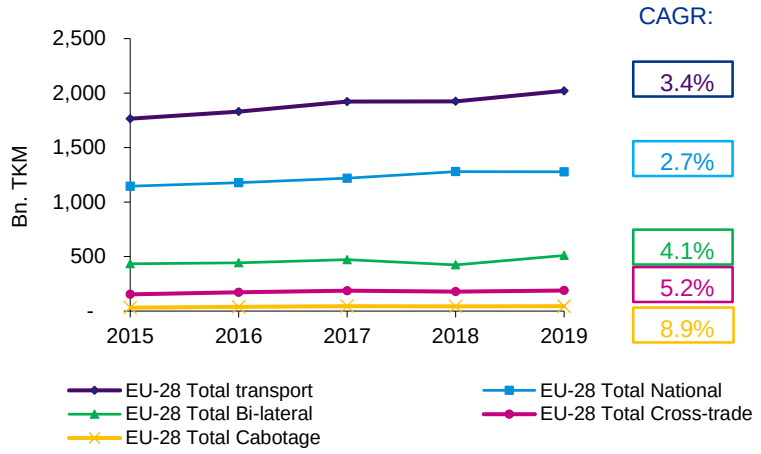
Road freight transport by type in Romania compared with EU level

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

International road freight, including bi-lateral operations, cross-trade and cabotage services represent approximately 37% out of total transport at EU-28 level and 73% in Romania out of total transport .

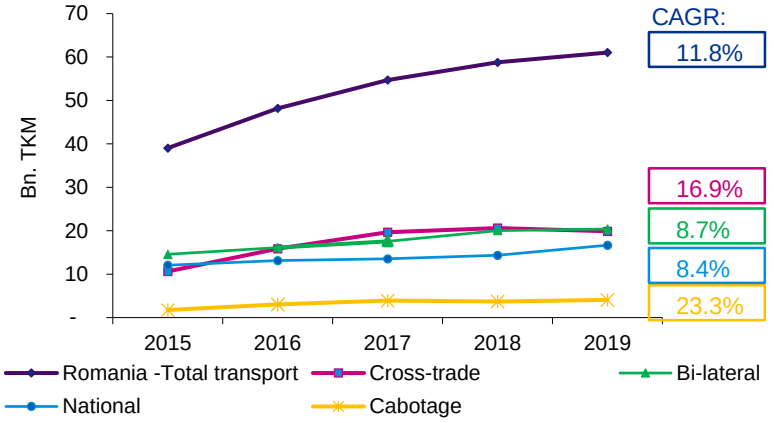
In 2019, bi-lateral transport had the highest share in the Romanian road transportation of 33%, followed by cross-trade operations with a share of 32%, while for the cabotage operations the share in the Romanian road transportation was 7%.

Evolution of road freight transport (by type) in EU Member States, 2015-2019



Source: Eurostat and KPMG analysis

Evolution of road freight transport (by type) in Romania, 2015-2019



Source: Eurostat and KPMG analysis

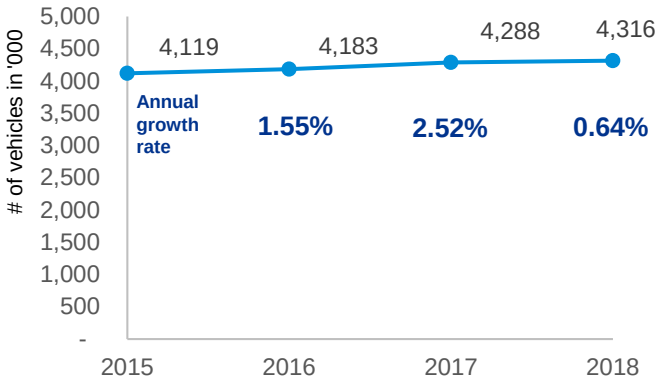
- Over the last decade, the EU road transport industry has been experiencing dynamic growth due to the opening up of access to freight transport markets in the EU-28 and the recovery after the 2008 economic crisis.
- This underlines the importance of the international road freight transport sector in Romania. This is also outlined by its share in the total transport – the international road freight transport represents 73% out of the total transport in Romania.
- The increase of the road freight transport sector has been evident in the period 2015-2019 when it grew at CAGR of 3.4% in EU-28 and 11.8% in Romania, where the highest rate of growth is represented by the cabotage operations (during the analysed period the CAGR is 23.3% in Romania and 8.9% at EU level), followed by cross-trade operations (during the analysed period the CAGR is 16.9% in Romania and 5.2% at EU level).
- From the analysed data, the Romanian road transportation sector is one of EU's most dependent on international transport operations. In 2019, approximately 32% of the Romanian road freight transportation services were cross-trade, with approximately 20 billions of ton-kilometers, while 33% of the Romanian road transport was delivered under bi-lateral transport. Cabotage operations represented 7% of the transport operations performed by Romanian hauliers in 2019.

Fleet park

As of 2018, there were approximately 4.3 million registered vehicles performing road freight transport in the EU.

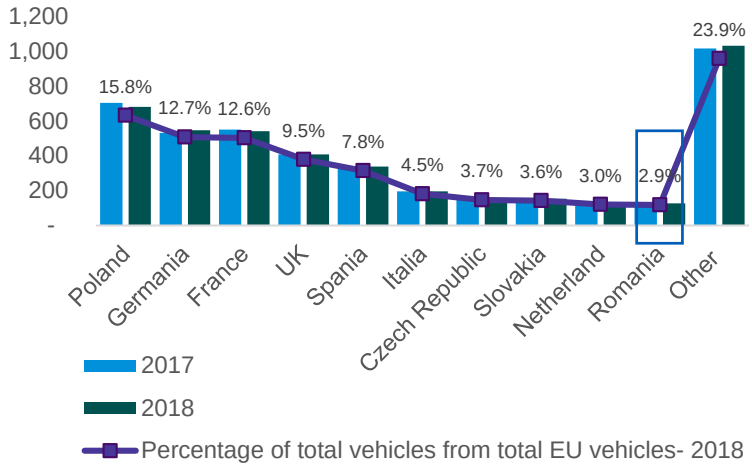
In 2018, Romania was on the 10th place in terms of road freight vehicles fleet size, with 127,000 trucks, representing 3% of the EU fleet, registering an increase with 5% compared to 2017.

Evolution of total number of registered vehicles performing road freight transport in the EU between 2015 and 2018



Source: Eurostat and KPMG analysis

Top 10 countries by number of registered vehicles performing road freight transport in the EU (evolution 2017 – 2018)



Source: Eurostat and KPMG analysis

Overview

- According to Eurostat data, there were approximately 4.3 million vehicles performing freight transport registered in the EU in 2018. This value has increased in 2018 with 0.64% % compared to 2017, and in 2017 with 2.52 % compared to 2016.
- Among the EU Member States, Poland registered the largest road freight transport fleet (680,000 - 15.8 %), followed by Germany (546,000 - 12.7 %) and France (541,000 - 12.6 %), with Romania on the 10th place (127,000 – 3%). The Member States which are outside of the Top 10 are summed in the “Other” column.
- In 2018, the road freight transport vehicles registered in Romania represented approximately 3% of the total number of road freight transport vehicles registered in the EU, having an increase of 5% compared to 2017. In terms of number of trucks per capita, Romania ranks 10th with 1 truck per 151 per capita, at a level comparable with Germany (1 truck per 154 capita) and Spain (1 truck per 136 per capita).

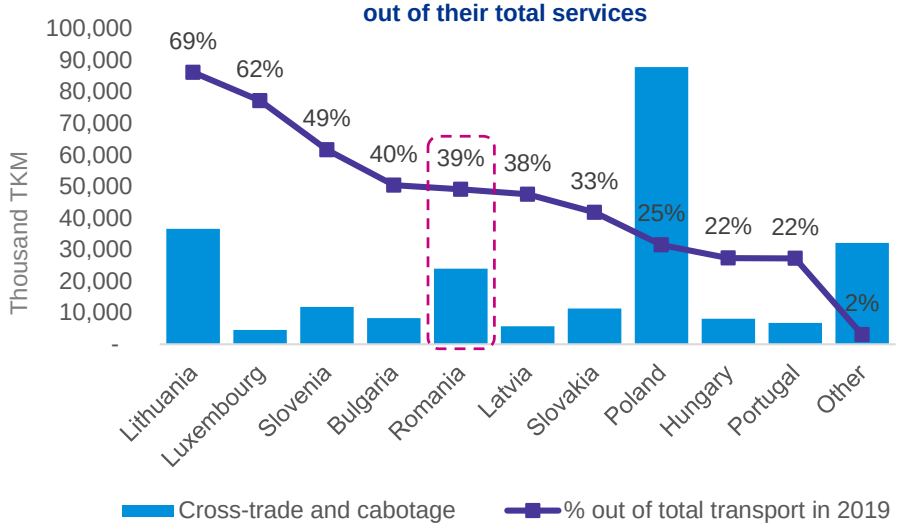
Cross-trade and cabotage services

Cross-trade and cabotage are an important part of the range of services offered by the road freight transport companies, as well as an important factor in reducing empty runs, which boosts transport efficiency.

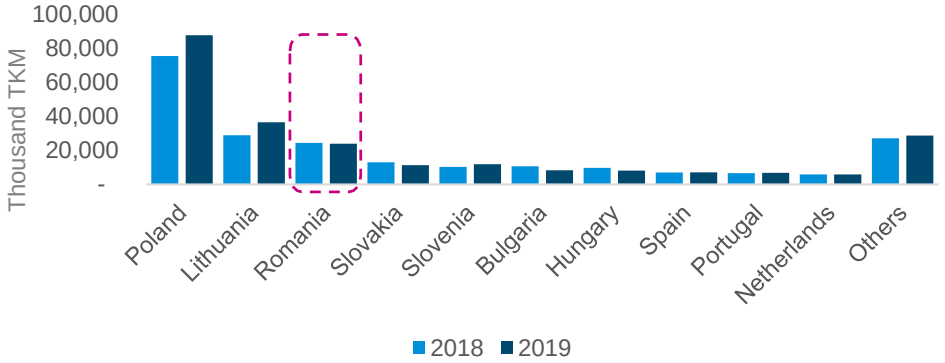
In 2019, approximately 32% of the total Romanian road freight transport services were cross-trade operations and 7% were cabotage operations.

It should be noted that, on cumulative basis, Romanian road freight transport sector has a high dependency on the cross-trade and cabotage services, which represented approximately 39% of total freight transport services in 2019.

Top 10 EU-28 countries* in terms of the weight of cross-trade and cabotage services out of their total services



Top 10 EU-28 countries* in terms of TKM of cross-trade and cabotage services performed in 2018 and 2019



- Road freight transport services may be provided in three separate ways, which should be treated as separate fields of activity:
  - Transport within the territory of the carrier's country of origin (national)
  - Transport outside of the territory of the carrier's country (international), which may be:
    - transport from the carrier's country to/ another destination/ country (bi-lateral)
    - transport between two other countries (cross-trade)
    - Transport within the territory of another country (cabotage)
- Romanian road transportation sector is the 5th most dependent on the cross-trade and cabotage services, on cumulative basis. In 2019, approximately 33% of the Romanian road transportation has been delivered under cross-trade, with 19.9 millions of ton-kilometers and approximately 7% of the Romanian road transportation has been delivered under cabotage activities, with 4 millions of ton-kilometers.
- Moreover, the Romanian road transport sector is ranked among the top performing in the EU in terms of cross-border and cabotage services (cumulated), respectively 3rd place both in 2018 and 2019.

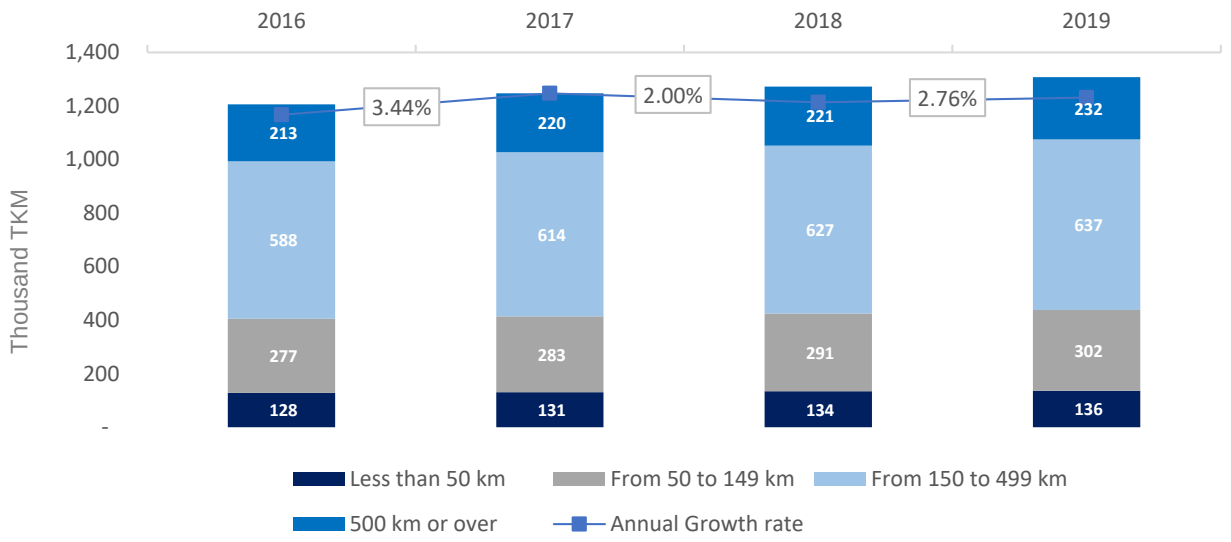
*The countries outside top 10 have been added to the "Other " column. However, data for Greece, Finland, Estonia and Denmark is missing.

Source: Eurostat and KPMG analysis

Road freight transport by distance

The majority of road freight transport activity in the EU is carried out over distances between 150 km and 499 km.

Split and evolution of road freight transport by distance class (EU, 2016-2019)



Source: Eurostat and KPMG analysis

Overview:

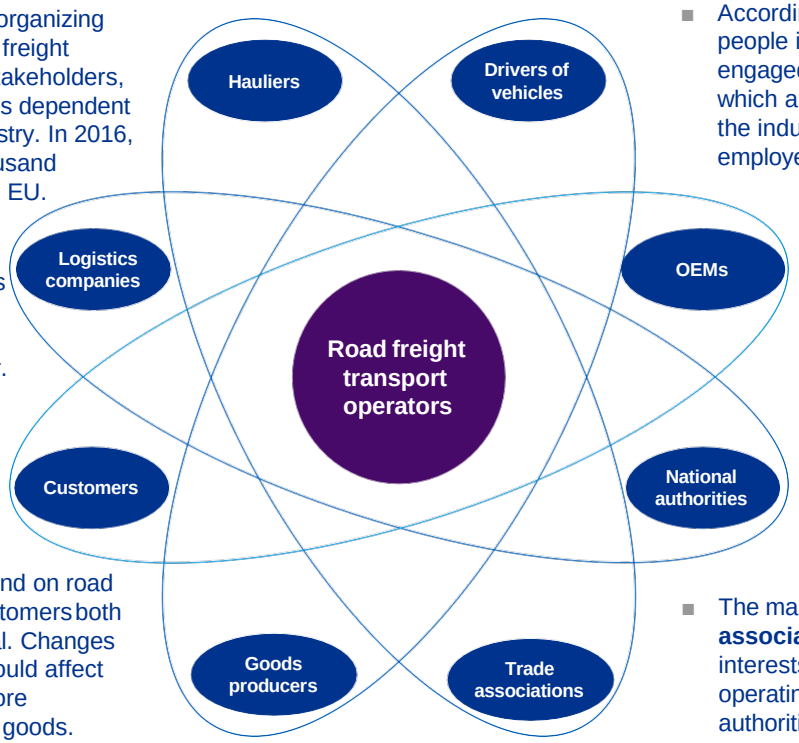
- In average, during 2016-2019, 11% of the total TKM has been transported over distances less than 50 km and 18% of the total TKM has been transported over distances more than 500 km.
- The majority of road freight transport activity was carried out over distances between 150 km and 499 km, accounting for 49% of the total. Approximately 23% of the total TKM have been transported over distances between 50 km and 150 km.
- During 2016 – 2019, there has been a positive YoY growth rate of the total distances (in TKM), between 2% and 3.5% (2016-2017: 3.44%; 2017-2018:2.00%; 2018-2019: 2.76%)

Key sector stakeholders

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.

The limitations on the market imposed by the regulations could lead to a disrupted sector and higher transportation prices, leading to 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 stakeholders, as their whole business is dependent on the health of the industry. In 2016, there were over 580 thousand hauliers registered in the EU.
- **Logistics companies** are tied to road freight as they often operate as mediators between the haulier and the customer.
- **Customers** are a key stakeholder 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.



- 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 and their families..
- **OEMs** manufacture and provide maintenance and service of the new vehicles over the warranty period. Furthermore, other players such as road service, insurance companies, etc. benefit from a stable transport sector.
- **National authorities** benefit from a profitable and well-organized transport industry as they gather taxes, toll fees, eco-fees etc. from hauliers and logistics companies.
- The main responsibility of the **trade associations** is to protect industry interests and to connect members operating in the sectors with the respective authorities and with each other.

- Road freight transport alone has generated approximately 355 billion EUR in the European Union in 2019. This represents 1.94% 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.

Case study: costs of operating a road freight vehicle in Romania compared with Belgium

There are no significant differences between Belgium and Romania in terms of total costs of operating a road freight vehicle over an year.

The differences in maintenance costs are driven mostly by the labor component, e.g. servicing the vehicles, the maintenance costs being approximately 1.6 times higher in Belgium compared to the costs from Romania.

On the other hand, Belgium grants 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 slide.

Initial cost / grants

Price of HGV

BE RO

No material difference

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.

State subsidy

BE RO

Up to EUR 5,000 **0**

Since 2017, the Flemish Government subsidizes companies for certain expenses, promoting ecological and safe freight transport.

The Romanian Government has no such practice yet.

Annual cost

Maintenance

Maintenance costs are 1.6 higher in Belgium than Romanian costs.

BE RO

EUR 8,001 **EUR 4,830**

Third party liability (MTPL)

Third party liability insurance is similarin Romania as compared to Belgium.

BE RO

EUR 1,900 **EUR 1,940**

Toll taxes

Average annual toll taxes costs are 43% higher for Romanian companies as compared to Belgium companies.

BE RO

EUR 8,000 **EUR 14,000**

Fuel cost

BE RO

EUR 30,134 **EUR 37,309**

Annual fuel cost is slightly higher for Romanian companies as compared to Belgium companies

Financing costs: interest rate

(loans up to Eur 1 mil, between 1 and 5 years)

BE RO

1.25% **3.13% for EUR loans**
6.7% for RON loans

Supplies

Tires

BE RO

EUR 3,114 **EUR 4,480**

The tires cost per year in Romania is higher with 44% than the average costs in Belgium.

Source: Comité national routier France 2017, NBR, Euro Area Statistics Financial Supervisory Authority from Romania (ASF) for RO MTPL price

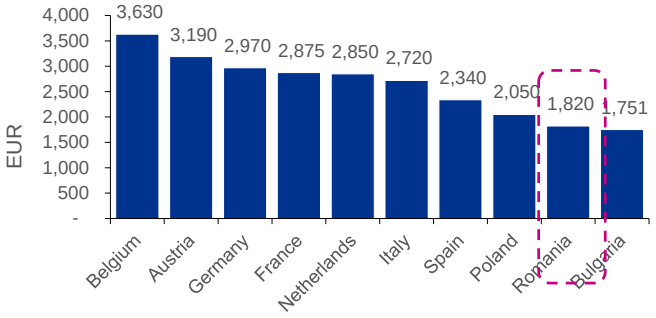
Average international HGVs drivers income

6% of the total employed population in Romania works in the transport and storage sector.

The average gross income of an international road freight vehicle driver is approximately 5 times higher than the minimum gross salary in Romania and 2 times more than the average gross salary in Romania, in 2019.

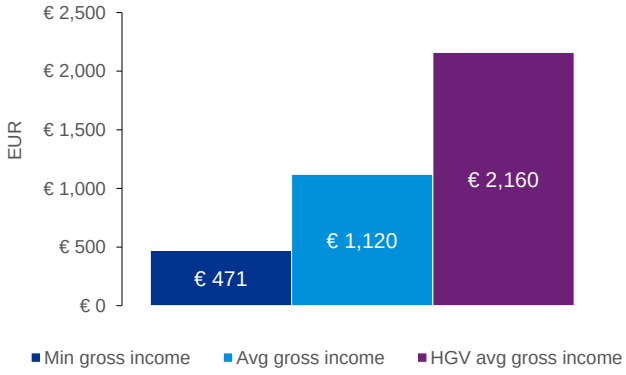
Average monthly gross income of international HGV drivers in selected member states (2018)

EU Average: € 2,058



Source: Publicly available information, KPMG survey and analysis

Minimum and average salary vs. HGV driver income in Romania in 2019



Source: Publicly available information, KPMG survey and analysis

- 505 thousand people were employed in the transport and storage sector in Romania in 2019, while the sector's share in total employment population is of 6%. 12,365 thousand people were employed in the transport and storage sector in the EU, representing 5% from the total labor market.
- The average gross income earned by a Romanian road freight vehicle driver in a working month in 2019 was an average of EUR 2,600. The Romanian drivers are paid with this amount for 9.5 months/ year (i.e. gross salary + non –taxable per diems). For the rest of the 2.5 months, the drivers is paid with the gross salary). For comparison purposes we determined the average monthly income considering that the annualized average value [(gross average income + per diems) x 9.5 + gross average income x 2.5]/12 , resulting a monthly gross income of EUR 2.160 in 2019.
- Based on the data available across EU-28, in the graph from the left we have exemplified the average monthly gross income earned by an International HGV driver in 2018. There is no public data available for 2019. In 2018, in Belgium, for example, the average monthly income was EUR 3,630. Nevertheless, the remuneration in the transport sector in Romania is attractive to drivers - by conversion to purchasing power parity, calculated by Eurostat, living with EUR 2,160 in Romania is equivalent to living with EUR 4,537 in Belgium as per the data from 2019.
- As shown on the graph to the left, the average income of a Romanian road freight vehicle driver from 2019 is approximately 5 times higher than the minimum income in Romania (EUR 471) and approximately 2 times higher than the average income in Romania (EUR 1,120).
- It should be noted that the monthly income of a road freight transport driver is the base salary plus per diems and other bonuses.

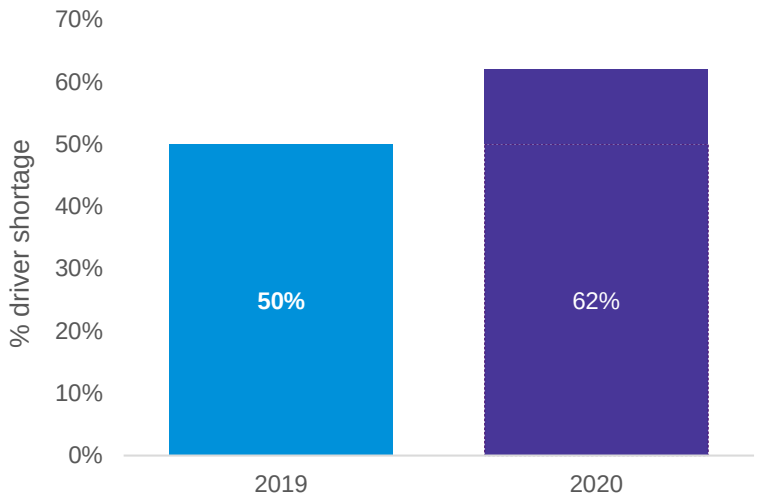
Driver shortage: a problem for the European road transport companies

The European road transport sector is facing a 36% driver shortage in 2020.

According to the IRU report, Romania and Poland are among the most impacted countries in terms of driver shortage.

In Romania, a key cause of the driver shortage is the rise in emigration.

Evolution of driver shortage in Romania



In 2019, truck companies in Romania faced a driver shortage of 50%. For 2020 they estimated a 62% driver shortage.

Source: IRU Report driver shortage 2020

*Driver shortage calculation used in IRU research from 2019: Unsatisfied driver demand (Driver shortage) = 100% - % of satisfied driver (demand of drivers currently employed from the total needed).
**Driver shortage 2020 = (Driver shortage 2019 + expected driver demand growth) / (100 + expected driver demand growth)

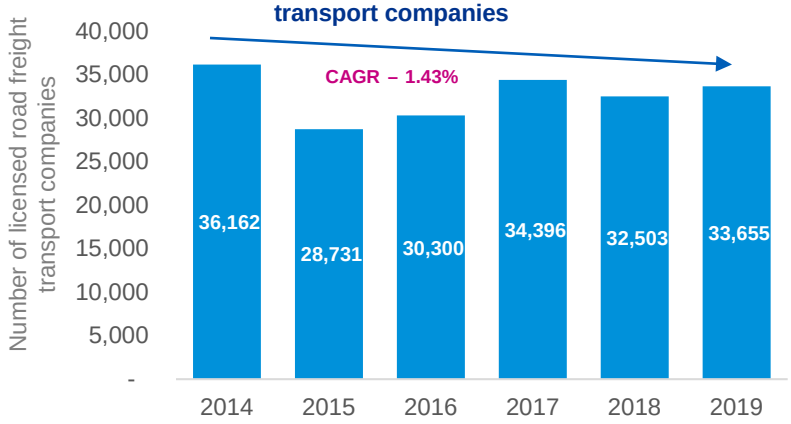
- Over the last few years the EU road freight transport sector has been facing the most severe shortage of professional drivers for decades. As per IRU analysis, the shortage of drivers in the road freight transport sector in EU is 23%* and they estimated for 2020 a 13 point increase in driver shortage, to 36%**.
- Among the main reasons impacting this indicator we count the ageing workforce, sector attractiveness, increase of demand of freight transportation.
- The average age in the Romanian transport sector was 42 years in 2019, while the average age of a professional driver in Europe was 50 years. In Germany, the average age of the drivers is over 47, where more than half of the drivers workforce is expected to retire by 2027, creating only in Germany a shortfall of 185,000 of drivers, according to IRU report 2019 (nevertheless, Germany is still one of the top five largest hauliers in the international transport in Europe). Thus, the ageing of the workforce generates a significant shortage and this demographic imbalance is set to increase in the coming years.
- According to IRU's report, Poland and Romania are two of the most heavily impacted European countries. In Poland, driver shortage stands at 22% and is expected to jump by 15 points this year.
- Driver shortage is expected to amplify with the introduction of MP1 changes. Thus, according to the data collected through KPMG Survey, respondents currently need 15% more drivers, while in order to comply with the MP1 regulatory changes, assuming that the international transport operations remain at constant levels, the respondents estimate that they would need in average 37% more drivers.

Road freight transport fleet in Romania

The average age of the Romanian fleet providing road freight transport is of 9-10 years (6 years for international road freight transport fleet), while the EU average is 12 years (as per Eurostat).

Furthermore, the number of trucks in operation providing road freight transport grew at a CAGR of 5.72% during the period 2014 - 2019, reaching almost 155 thousand in 2019.

Evolution of the number of licensed road freight transport companies

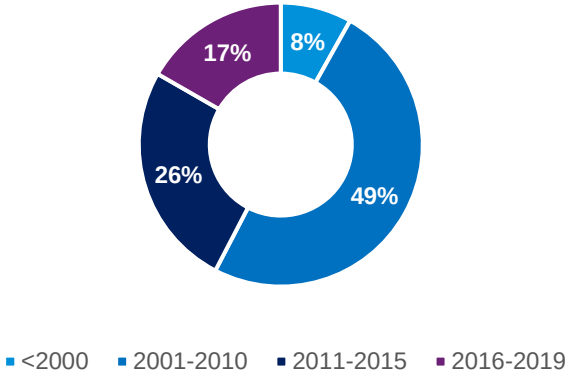


Source: ARR report 2019 and KPMG analysis

Overview

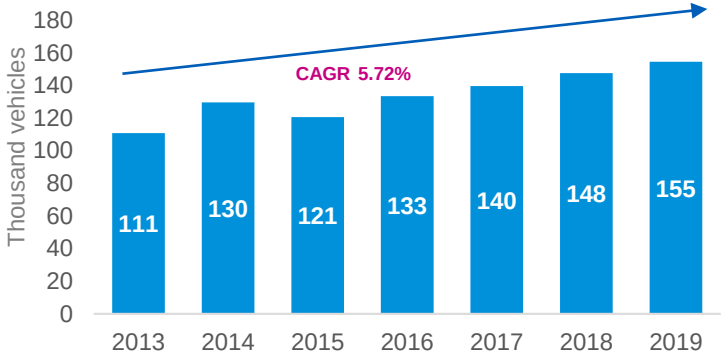
- Between 2014 and 2019 the number of licensed road hauliers decreased at a CAGR of 1.43%, while between 2013 and 2019 the number of licensed road freight vehicles increased at a CAGR of 5.72%
- The average age of the road freight transport fleet owned by the Romanian companies operating in the sector is approximately 9-10 years (and 6 years for international road freight transport fleet). For comparison, the average age of the EU fleet is 11.7 years.

Average age of the road freight transport fleet in Romania



Source: Source: ARR report- May 2019 and KPMG analysis

Evolution of the licensed number of road freight vehicles

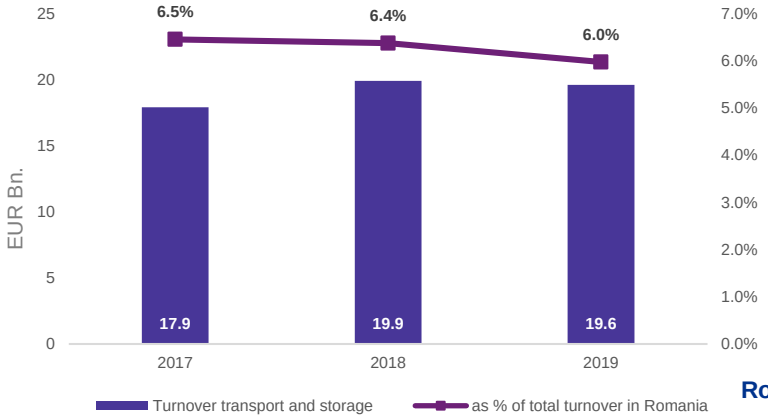


Road freight transport sector size and development in Romania

Transportation and storage sector in Romania is a major contributor to the country's economy.

The market size of the road freight transport in 2019 amounts to EUR 10.6 billion which represents 3.2% of the total turnover of non-financial companies in Romania.

Transportation and storage sector in Romania: evolution of market size and contribution to the total turnover in Romania



Source: Eurostat and KPMG analysis

Romanian transportation and storage sector

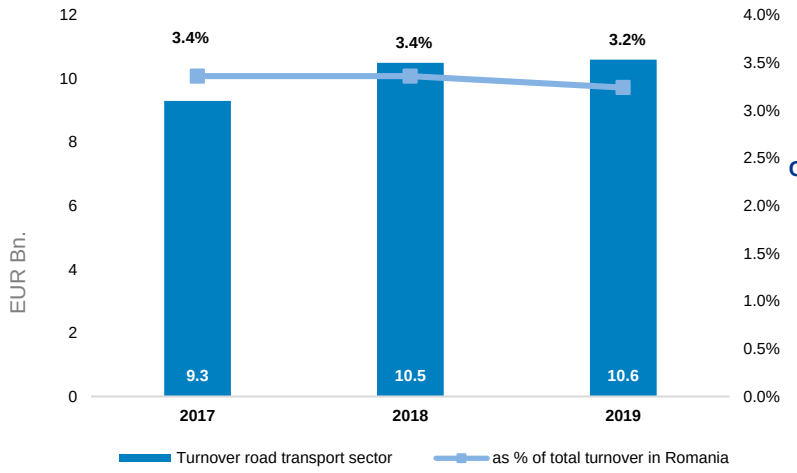
- The transportation and storage represents 6% of the total turnover of non-financial companies in Romania.
- The sector has a CAGR of 6.5% over the analysed period (2017-2019).

Romanian road freight transport sector

CAGR 6.5%

- Based on the analysis performed, road freight transport represented approximately 53% of Romanian transportation and storage sector, with a market size of EUR 10.6 billion in 2019.
- The sub-sector has outpaced the growth of the whole industry in the analyzed period. The compound annual growth rate over the analysed period is 8.5% compared to 6.5% for the whole industry.
- Both in the EU and in Romania, the road freight transport sector plays a key role in the economy.

Road freight transport sector in Romania: evolution of market size and contribution to the total turnover in Romania



CAGR: 8.5%

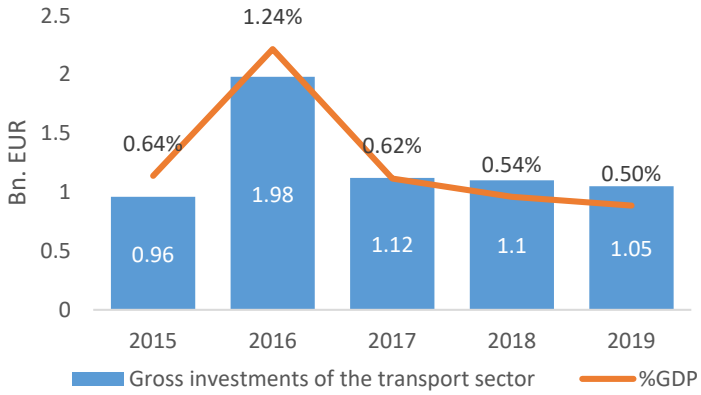
Source: Eurostat and KPMG analysis

Planned investments in the sector in Romania

Gross investments in the transport sector for 2019 were of EUR 1.05 bn, representing a 0.5% share of Romania's GDP.

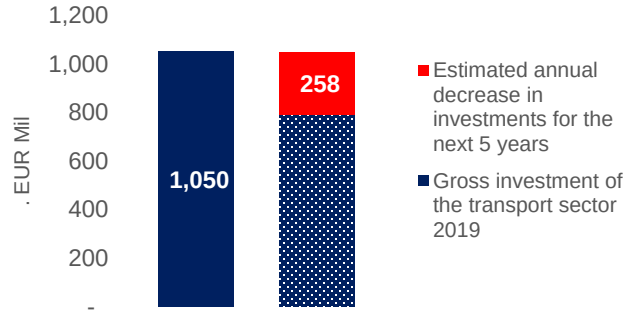
Based on the KPMG Survey, it is expected that investments in the transport sector will be negatively impacted by the MP1 changes, with an estimated decrease of 25% of the annual investment volumes over the next 5 years (i.e.an equivalent of EUR 1.3 bn on a cumulative basis over this period).

Evolution of gross investments in the transport sector in Romania (2015 – 2019)



Source: INSSE

Investments of Romanian road freight transport companies and the impact of MP1 regulatory changes



Source: KPMG Survey and analysis

Historical investments

— The Romanian transport companies have been consistently involved to respond to market demands and as such, they have continuously invested in trucks and transport infrastructure in the last 5 years.

Planned investments

— Full implementation of MP1 changes leads to a decrease or even the cessation of the planned investments by Romanian road freight transport companies based on the survey responses. Thus, the majority of the Survey respondents stated that the impact of changes on their business will decrease their planned investments in trucks and transport infrastructure, with a 64% average decrease of planned investments (weighted according to respondents' turnover size) for the next 5 years.

— MP1 changes are impacting mainly the companies active in international road freight transport, thus we have assumed that the decrease in planned investments will be concentrated in this segment of the transport sector.

— Based on the above, we have estimated a EUR 258 million (25%) decrease in annual investments over the next 5 years, by reference to the gross investments of the overall sector in 2019.

— However, the impact may be even higher considering that many road hauliers have mixed national and international operations. The most common strategy changes mentioned by the respondents to our Survey in case of full scope implementation of the MP1 regulatory changes are: moving the operations outside Romania or closing the business (55% of the respondents), reducing the number of trucks and the number of employees or changing the main activity (27% of the respondents), focusing on transport outside the EU (17% of the respondents plan to limit their operations in the EU).

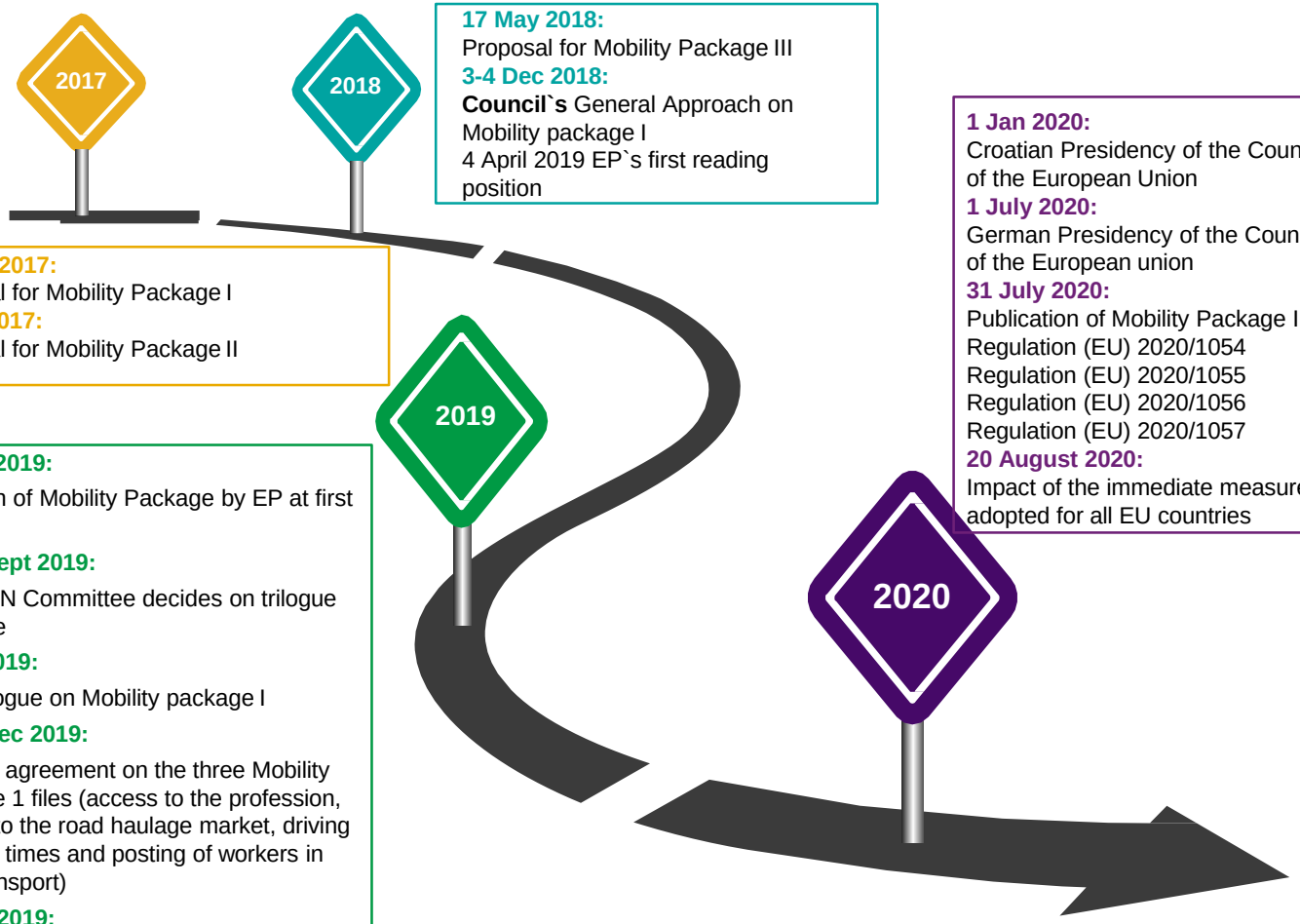
KPMG

Overview of the Mobility Package 1 changes

Mobility packages over the years

The following milestones are set in the Mobility Package I adopted at 9 July 2020:

- **20 August 2020 - Driving and resting rules (though some of the changes will be implemented starting 2022)**
- **2 February 2022 - Posting of workers to road freight transport**
- **21 February 2022 - Access to the market and to the profession and**
- **21 August 2024 - electronic information relating to the carriage of goods**



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

4 April 2019:
Adoption of Mobility Package by EP at first reading
23-24 Sept 2019:
EP TRAN Committee decides on trilogue mandate
3 Oct 2019:
First trilogue on Mobility package I
11-12 Dec 2019:
Trilogue agreement on the three Mobility Package 1 files (access to the profession, access to the road haulage market, driving and rest times and posting of workers in road transport)
20 Dec 2019:
Coreper confirms provisional agreement on Mobility Package 1

1 Jan 2020:
Croatian Presidency of the Council of the European Union
1 July 2020:
German Presidency of the Council of the European union
31 July 2020:
Publication of Mobility Package I:
Regulation (EU) 2020/1054
Regulation (EU) 2020/1055
Regulation (EU) 2020/1056
Regulation (EU) 2020/1057
20 August 2020:
Impact of the immediate measures adopted for all EU countries

Access to the market and to the profession (2020/1055)

Main adopted changes are related to:

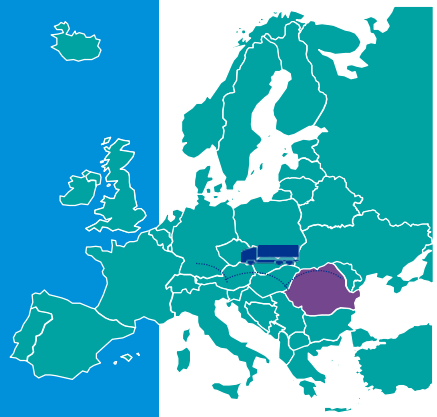
- **mandatory return home of the trucks every 8 weeks**
- **restriction of cabotage to only one operation within 4 days of the international delivery in the same EU Member State**

Key trends and developments

— EU Regulation No. 1071/2009 on access to the occupation of road transport operator, EU Regulation No. 1072/2009 and EU Regulation No 1024/2012 on access to the international road transport market are part of a package of measures aiming to harmonize the rules regarding the admission to the occupation of road freight transport companies and access to the road freight transport market. They were adopted as tools to fulfill the efficiency and competitiveness of the international road freight transport sector.

— As of July 2020, the Regulation 2020/1055 of the European Parliament and of the Council has been adopted, amending the above mentioned Regulations.

— To be registered as road freight transport company, the following conditions have to be fulfilled: • a stable and operational establishment in a Member State; • good reputation and no record of infringing industry rules; • adequate financial means to operate; • necessary professional competence.



Adopted changes	Former rules
Mandatory return home of the trucks every 8 weeks: "An undertaking shall organise its fleet activity in such a way as to ensure that vehicles that are at the disposal of the undertaking and are used in international carriage return to one of the operational centres in that Member State at least within eight weeks after leaving it."	N/A
Restriction of cabotage operations: "Hauliers are not allowed to carry out cabotage operations, with the same vehicle, or, in the case of a coupled combination, the motor vehicle of that same vehicle, in the same Member State within four days following the end of its cabotage operation in that Member State"	3 cabotage operations within 7 days of presence on a host national territory

Source: Official Journal of the European Union

Driving times, rest periods and tachographs (2020/1054) (1/2)

Since 2006, the European Regulation no. 561/2006 aimed to harmonize the social legislation concerning road transport. There was a general understanding among all EU Member States, reflected in the practice of the entire EU road transport industry, that regular and reduced weekly rest may be taken by the professional drivers in the vehicle, as long as it has suitable sleeping facilities for each driver and the vehicle is stationary.

In 2020, the European Commission adopted a new package regulating driving times and rest periods, which is impacting differently the various EU countries, depending on their geographical position.

Regulation (EU) 2020/1054 of the European Parliament and of the Council has amended the Regulation (EC) No 561/2006 and Regulation (EU) No 165/2014 regarding positioning by means of tachographs. The new regulation has been adopted in July 2020 and prescribes the requirements regarding the maximum daily and weekly driving times and the minimum breaks for the daily and weekly rest periods.

Former rules:

Daily breaks and rest	1 week	2 weeks	3 weeks	4 weeks
Regular breaks of at least 45 minutes and daily and weekly rests	**Reduced weekly rest period:** Long distance truck drivers can spend reduced weekly rest in the cabin	**Every 2-week period,** the maximum driving time is 90 hours	**Before the end of each 3-week period,** drivers must compensate any reduced weekly rest	**N/A**

Adopted changes:

Daily breaks and rest	1 week	2 weeks	3 weeks	4 weeks
Regular breaks of at least 45 minutes and daily and weekly rests. A driver engaged in multi-manning may take a break of 45 minutes in a vehicle driven by another driver provided that the driver taking the break is not involved in assisting the driver driving the vehicle	Reduced weekly rest period: Long distance truck drivers shall spend the reduced weekly rest in adequate accommodation spaces	In any two consecutive weeks a driver shall take at least: two regular weekly rest periods; or one regular weekly rest period and one reduced weekly rest period of at least 24 hours. A weekly rest period shall start no later than at the end of six 24-hour periods from the end of the previous weekly rest period	Any reduction in weekly rest period shall be compensated by an equivalent period of rest taken an bloc before the end of the third week following the week in question. Where two reduced weekly rest periods have been taken consecutively, the next weekly rest period shall be preceded by a rest period taken as compensation for those two reduced weekly rest periods	The drivers must return home* at every 4 weeks. * to the employer's operational centre where the driver is normally based and where the driver's weekly rest period begins, in the Member State of the employer's establishment, or to return to the drivers' place of residence

Driving times, rest periods and tachographs (2020/1054) (2/2)

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."*

Overview of the impact assessment study performed by the EC

- In its Impact Assessment, the EC acknowledges that the measure has a positive effect by reducing the currently existing legal uncertainty in respect of the allowed location to spend weekly rest periods. In particular, this clarifies whether drivers are allowed to spend the regular weekly rest periods aboard which was not clearly regulated under the previous 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.

Pro's of prohibiting hauliers to spend regular weekly rest periods inside the vehicle

— Occupational health
— Working conditions
— Road safety

Con's of prohibiting hauliers to spend regular weekly rest periods inside the vehicle

— Difficulties in implementation
— Shortage of appropriate accommodation facilities and safe parking areas
— Difficult enforcement
— Health risk in pandemic situation

Source: Impact Assessment of the European Commission modifying Regulation (EC) No 561/20061 , Directive 2006/22/EC2 , Directive 2002/15/EC3 and Regulation (EU) 165/2014

Posting of workers (2020/1057)

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 legal framework in EU regulating posting of workers consisted of two main Directives: Directive 2018/957 of 28 June 2018 amending Directive 96/71/EC and Directive 67/2014/EU Enforcement Directive on Posted Workers until July 2020. These directives have been amended by Directive 2020/1057.

The newly adopted Directive aims to ensure adequate working conditions and social protection for drivers, on the one hand, and suitable conditions for business and for fair competition for road transport operators, on the other hand.

The EC and EP underline the importance of a balance between social and working conditions for drivers facilitating the exercise of the freedom to provide road transport services based on fair competition between national and foreign operators.

The measures adopted focus on aspects related to the enforcement of compliance, improving legal certainty across Member States and strengthening administrative cooperation with respect to posting of workers:

- Legal clarity
- Identifying genuine posting
- Information availability
- Cooperation between national authorities
- Control measures and inspections
- Strengthen complaint possibilities
- Subcontracting liability

The following list contains few of the most notable changes:

— A driver shall not be posted when performing bilateral transport operations in respect of goods or when the driver transits through the territory of a Member State without loading or unloading freight

— A driver is considered posted when performing cabotage and cross-trade operations

— A Member State may impose to the posting drivers:
  1. an obligation for the operator established in another Member State to submit a posting declaration to the national competent authorities of a Member State to which the driver is posted at the latest at the commencement of the posting, using a multilingual standard form of the public interface
  2. an obligation for the operator to ensure that the driver has at his or her disposal in paper or electronic form and an obligation for the driver to keep and make available when requested at the roadside
  3. an obligation for the operator to send via the public interface, after the period of posting, at the direct request of the competent authorities of the Member States where the posting took place, copies of documents from point 1
  4. posting of workers enforcement in correlation with Rome I application to road freight transport and to the revision of the regulations regarding the coordination of social security systems

— Each Member State will organize road checks for at least 3 % of days worked by drivers of vehicles falling within the scope of Regulations

— Member States shall, at least six times per year, carry out concerted roadside checks on drivers and vehicles falling within the scope of Regulation

— The Members States shall exchange information between them

— Member States shall introduce a risk rating system for undertakings based on the relative number and gravity of any infringement of Regulation.

KPMG

Assessment of impact on the Romanian transport sector and economy

Our approach

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

MP1 measures considered in the impact assessment:

- **the mandatory return home of the drivers every 4 weeks**
- **ban to spend regular weekly rest in the cabin, but in an adequate accommodation space**
- **mandatory return home of the trucks every 8 weeks**
- **restriction of cabotage to only one operation within 4 days of the international delivery in the same EU Member State**

Socio-economic impact

Regulatory assumptions

— A simulation of the monthly driving and rest schedules for one truck has been prepared based on the following:

- The adopted regulations and directives concerning the road freight transport rules at EU level (1054/2020, 1055/2020 si 1056/2020)
- Full implementation of the Mobility Package 1 changes

Operational and financial assumptions

— The operational and financial assumptions are based on the market data as at 2019, where available. Where such information was not publicly available, we extrapolated the Survey responses received with the limitation that, given the high fragmentation of the sector (high number of players with diverse business models and operations), the sample of respondents is not the equivalent of a statistically representative sample.

— The following factors have been used to quantify the MP1 changes impact on the Romanian companies providing international road freight transport services:

- **Missed revenue as a result of mandatory return home of the trucks every 8 weeks**: (1) Average revenue/ km, (2) Average additional distance traveled per year (due to mandatory return home) per truck, (3) no of trucks in operation
- **Cost of hotel accommodation:** (1) average number of necessary hotel accommodations per month; (2) average price for one accommodation at a hotel; (3) number of drivers in operation.
- **Cost for safe parking spaces:** (1) number of necessary safe parking days per truck; (2) price of safe parking/ day; (3) total number of trucks in operation.
- **Operational expenses:** (1) additional number of drivers required by a company; (2) average employee cost per driver; (3) number of companies that will hire additional drivers.
- **Fuel cost** associated with the empty mandatory return home (1) average length of annual empty runs ; (2) average fuel consumption per truck; (3) average fuel cost per liter; (4) total number of trucks in operation.

Environmental impact

The additional CO2 emissions associated with the empty runs have been estimated considering the following assumptions:

- average weight of goods transported;
- average additional distance travelled due to mandatory returns home;
- CO2 emissions factor (g CO2 per tkm);
- number of trucks in operation;
- percent of empty runs of mandatory returns home

Assumptions for the MP1 impact assessment on the Romanian transport sector

The impact assessment of the MP1 changes on the transport sector in Romania has been based on the data publicly available as at 2019 and on the results from the Survey performed by KPMG.

Given that the impact of the changes is concentrated on cross-trade and cabotage operations, we have based our analysis on data relevant for this segment, and where such data was not available (e.g. number of trucks, number of drivers) we have pro-rated the overall transport sector data with the weight of cross-trade and cabotage in total sector operations (i.e. 39%).

HOTEL COSTS	4 hotel accommodations per month	EUR 65 cost per night	72,945 drivers involved in cross-trade and cabotage
SAFE AND SECURE PARKING PLACES	4 days parking stays per month	10 EUR cost per day	60,650 trucks involved in cross-trade and cabotage
ADDITIONAL DRIVERS COSTS*	37% increase from additional drivers	EUR 2,160 monthly cost/ employed driver	72,945 drivers involved in cross-trade and cabotage
ADDITIONAL STAFF COSTS	~28% increase in administrative cost	EUR 1,120 monthly cost/ employee	16,012 number of administrative staff in 2019
REVENUES	9800 km/year – the additional avg. distance travelled	EUR 0.9 per km revenue**	60,650 trucks involved in cross-trade and cabotage
FUEL	9800 km/year – the additional avg. distance travelled	EUR 1.1 /l fuel cost (VAT incl.)***	30 l/100 km fuel consumption
ADDITIONAL TOLL TAXES	9800 km/year – the additional avg. distance travelled	EUR 0.253 km/ truck	60,650 trucks involved in cross-trade and cabotage
DRIVER TRANSFER COSTS	Avg. of 6 additional return home / driver / year	EUR 370 transport cost/ trip/ driver	72,945 drivers involved in cross-trade and cabotage
TACHOGRAPHS COSTS (one-off)	60,650 tachographs	EUR 1,000 cost/ truck	60,650 trucks involved in cross-trade and cabotage

* Potential impact considering companies will keep their business at the current level of operating. Given the current shortage of drivers, this scenario is unlikely to be implemented in the future.
** Considering the cross trade and cabotage revenues generated in 2019 and corresponding kms travelled in 2019
*** European Commission, Energy Policy 12.10.2020

Source: KPMG survey and analysis

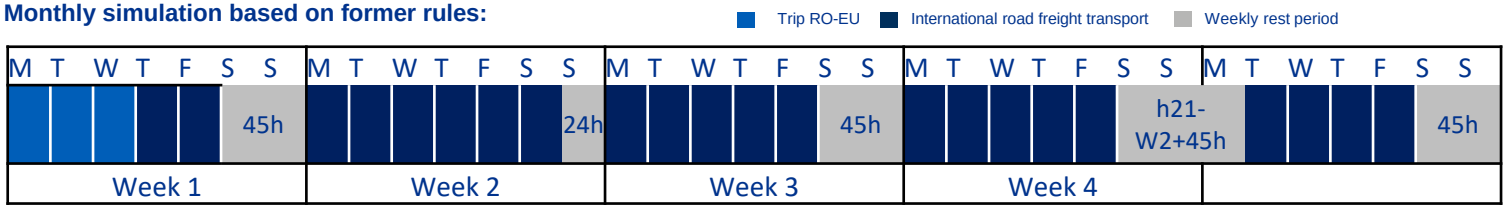
Monthly driving and rest schedules simulations

Simulations of monthly driving and rest schedules for one truck have been created and used for the purposes of impact assessment of full implementation of adopted changes.

The driving and rest scenario considers a normal weekly rest period and a reduced weekly rest period (in week 4 the driver returns home, where he will recover 21 hours from week 2).

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 MP1 regulatory changes on the Romanian international road freight transport companies.

Monthly simulation based on former rules:



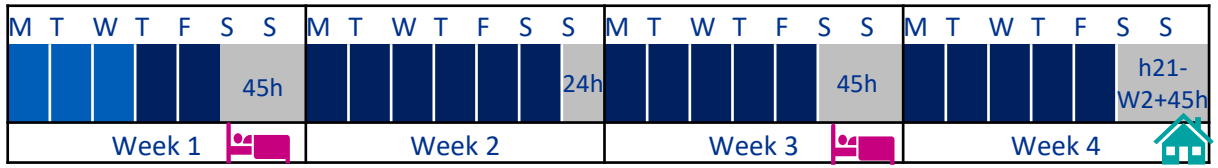
Total distance: 3,417 km
Average/day: 570 km

Total distance: 2,520 km
Average/day:420 km

Total distance: 3,417 km
Average/day:570 km

Total distance: 2,553 km
Average/day:511 km

Monthly simulation based on current rules:



Total distance: 3,390 km
Average/day: 565 km

Total distance: 2,557 km
Average/day:426 km

Total distance: 3,417 km
Average/day:570 km

Total distance: 2,613 km
Average/day:523 km

The mandatory return home of the drivers every 4 weeks

…while the truck is taken over by another driver (please refer to next slide)

Operating assumptions:

Total monthly distance covered per month/truck performing international road freight transport= 12,000 km/month

Distance covered per year/truck performing international road freight transport = 144,000 km/year

Average additional distance travelled per year (due to mandatory return home)/ truck = 9,800 km/year

Cross-trade and cabotage share in the Romanian international road freight transport = 54%

Total monthly distance covered per month performing cross-trade and cabotage operations/truck = 6,480 km/month

Distance covered per year performing cross-trade and cabotage operations/truck = 77,760 km/year

Total driving time = 90h / Total rest time = 90h

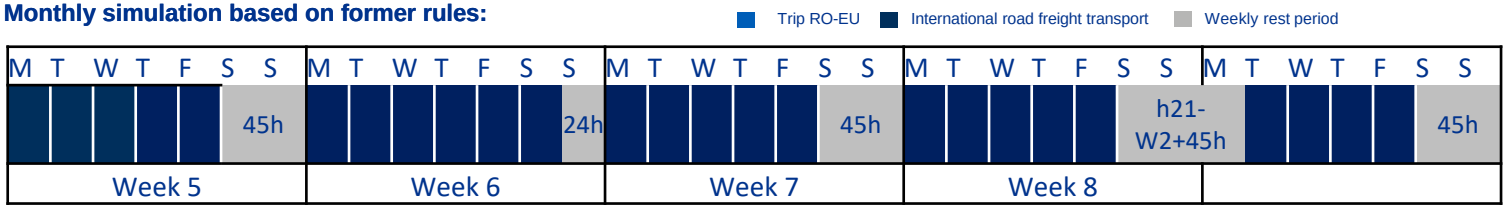
Source: KPMG survey and analysis

Simulations of the mandatory returns home of the truck at every 8 weeks

Simulations of the mandatory return home of the trucks at every 8 weeks for one truck have been created and used for the purposes of impact assessment of full implementation of adopted changes.

Simulations of mandatory return home of the trucks at every 8 weeks for one truck are presented below continuing the schedules after the first driver is returning home in order to perform its rest period. The truck schedule as well as the assumptions presented below have been used as the basis for the calculation of the impact of the MP1 regulatory changes on the Romanian international road freight transport companies

Monthly simulation based on former rules:



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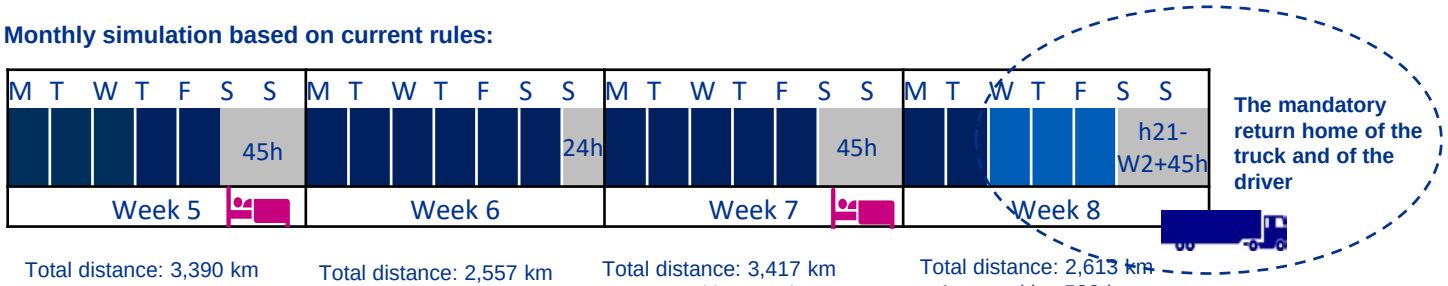

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Distance covered per year performing cross-trade and cabotage operations/truck = 77,760 km/year

Total driving time = 90h / Total rest time = 90h

Source: KPMG survey and analysis

Impact assessment

The full implementation of MP1 regulatory changes is likely to negatively impact the Romanian companies in the sector mainly through the following elements:

- **Miss of revenue performing empty runs on mandatory return home Additional hotel cost related to drivers' rest periods outside the cabin**
- **Higher cost for safe parking places**
- **Additional administrative expenses**

A significant part of the fuel cost that companies normally incur will not generate revenues while performing empty runs on mandatory returns home.

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**

We have included below the estimated effects on the companies acting in the road freight transport sector, following the full implementation of the MP1 regulatory changes. The effects presented below are not cumulative, but indicate the sources of increase in the cost base as a result of MP1 changes.

Additional hotel cost
Annual additional accommodation cost for the regular weekly rests outside of the cabin.
(EUR 228 mil.)

Additional drivers cost
78% percent of respondents need to hire additional drivers to comply with the enhanced requirements as a result of mandatory returns home of drivers at 4 weeks.
(EUR 693 mil.)

Annual missed revenues – truck return home
Based on the concept of missed revenue as a result of empty runs of annual mandatory returns home.
(EUR 524 mil.)

Transfer costs – mandatory return home of drivers
Based on the cost generated with the transportation of drivers home/ to the truck.
(EUR 162 mil.)

Additional toll taxes/ year*
Annual additional toll taxes cost due to the 8 weeks mandatory return home – additional 4 returns home.
(EUR 150 mil.)

Safe parking places
Annual increase parking cost following the requirement for drivers' rest outside of the cabin.
(EUR 29 mil.)

Annual increase of administrative costs
Based on the survey, 76% of the respondents expect and increase in administrative costs by 28% on average in order to respond to the enhanced requirements for the posting of workers.
(EUR 60 mil.)

Additional fuel cost*
Annual additional fuel cost due to the 8 weeks mandatory return home. With the former measures the trucks were returning 2.5 times and with the MP1 measures will have to return 6.5 times – additional 4 returns home.
(EUR 197 mil.)

Costs generated by smart tachographs
Based on a avg. price of Euro 1,000/ tachographs (calculated only for international road freight transport)
(EUR 61 mil.)

Other costs*
Annual additional costs related to maintenance and repairs.
(EUR 77 mil.)

* These are not incremental cost for the companies. Their impact is captured through the calculation of the opportunity cost of empty runs.

It is worth nothing that they will be at the expense of the companies and they will not generate revenue in the context of mandatory returns home.

Source: KPMG survey and analysis

Estimated impact of full implementation of changes on road freight sectors: Romania, Bulgaria and Lithuania

Similar effects as presented for Romania would be expected in other countries as well.

Missed 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 operational expenses will depend on the average salaries in the respective countries. Still, the estimated impact for Romanian companies in the sector will likely be relevant to other countries as well.

The table below presents the estimated impact of the MP1 regulatory changes on the road freight transport sectors in Romania, Bulgaria and Lithuania. The impact for Bulgaria and Lithuania has been extrapolated using the percentage of cross-trade and cabotage operations of each country (i.e. 40% for Bulgaria and 69% for Lithuania. The data has been extracted from Eurostat as at 2018).

Impact of changes on CEE countries			
Country	**Romania**	**Bulgaria**	**Lithuania**
No. of trucks involved in cross-trade and cabotage	60,650	45,600	33,810
Missed revenues (EUR mil.)	524	394	292
Hotel expenses (EUR mil.)	228	171	127
Safe parking cost (EUR mil.	29	22	16
Fuel cost* (EUR mil.)	197	148	110
Toll taxes* (EUR mil.)	150	113	84
Drivers staff cost	+37% increase in costs generated by additional drivers		
Administrative staff costs	+ 28% increase in administrative cost		
Driver transfer costs (EUR mil.)	162	122	90
Smart tachographs (EUR mil.)	61	46	34
Other costs* (EUR mil.)	77	58	43

Source: KPMG survey and analysis

**These are not incremental cost for the companies. Their impact is captured through the calculation of the opportunity cost of empty runs. It is worth nothing that they will be at the expense of the companies and they will not generate revenue in the context of mandatory returns home*

Impact of the MP1 changes on the Romanian economy (1/3)

Full implementation of MP1 changes is expected to induce both missed revenues, as well as a higher cost base for the Romanian freight transport companies involved in cross trade and cabotage operations.

This will significantly erode the profitability of these companies, leading to major changes in their business models, including the decision to discontinue or relocate the operations.

Impact on road freight transport market

The market size of the Romanian transport sector was EUR 10.5 bn in 2019.

Based on our impact assessment, it is estimated that the volume of revenues will decline with **EUR 524 mil.**, due to empty runs of trucks as a result of the mandatory return home.

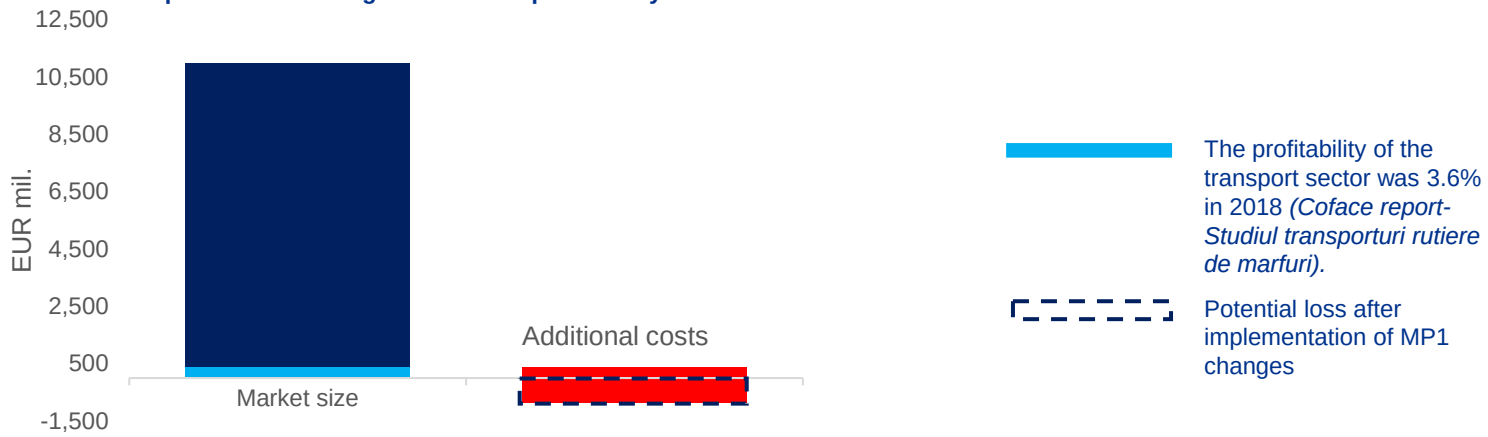
Furthermore, costs are expected to increase significantly, due to:

- Additional hotel cost related to drivers' rest periods outside the cabin: **EUR 228 mil.**
- Additional personnel cost (administrative staff and drivers): **EUR 753 mil.**
- Smart tachographs: **EUR 61 mil.**
- Higher cost for safe parking places: **EUR 29 mil.**
- Drivers transfer cost: **EUR 162 mil.**

When taken on a cumulative basis, this leads to a potential increase in the cost base by approx. **EUR 1,233 mil.**, which, coupled with the missed revenues, is significantly eroding the profitability of Romanian hauliers.

This will trigger major changes in the business models of transport companies, as evidenced by the KPMG Survey. Many road freight transport companies currently in operation will either discontinue or relocate their operations to another country, according to the Survey feedback received.

Impact of MP1 changes on market profitability



Source: KPMG analysis

Impact of the MP1 changes on the Romanian economy (2/3)

As a result of MP1 implementation, 55% road freight transport companies stated that they will discontinue their business, either by relocating to another EU Member State or by closing their businesses.

This may trigger a EUR 4.5 bn decrease in international road freight sector revenues by reference to 2019 levels, and a 0.9% decrease in the total turnover of non-financial companies in Romania.

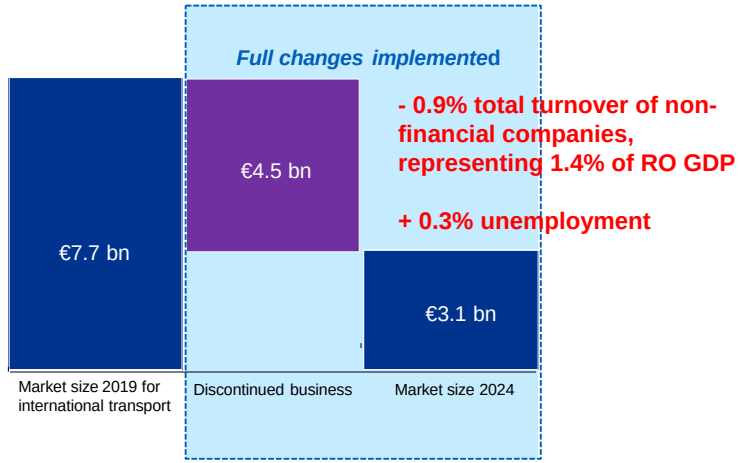
Additionally, release of 26,016 staff by these companies could lead to an increase in unemployment by 0.3%.

Impact on international road freight sector and the economy

The changes in business model of international road freight transport companies as a result of full implementation of Mobility Package 1, as derived from responses to KPMG questionnaire, even if triggered mainly by the impact of changes on cross-trade and cabotage operations, were extrapolated to the entire international road freight market, given that transport companies active in this market generally have mixed operations (cross-trade, cabotage and bilateral trade).

For the purposes of this analysis, revenues for international road freight operations were estimated based on total road freight revenues prorated by the ratio of TKM attributed to this segment from total TKM for the road freight transport in 2019 (73%).

A potential impact for the market size in 2024 (i.e. after full implementation of MP1 changes) is shown below, by reference to the market volumes registered for 2019.



Source: KPMG survey and analysis

Out of the total number of companies that responded that they will change their business strategy in case of full implementation of the Mobility Package 1 (71%):

- 34% of the companies stated that they will relocate their business (i.e. they will contribute to other countries GDP), which is the equivalent to a decrease of EUR 1.8 bn. in Romania's road freight transport revenues;
- 21% of the companies stated that they will close their businesses, which could trigger a further drop in transport revenues of EUR 1.1 bn.;
- 17% of the companies stated that they will limit the international freight transport to non-EU countries, which will decrease the overall supply regarding transport operations (compared with the former supply across EU) (impact not quantified);
- 28% of the companies will change the business strategy to another economic activity. The revenues generated by these companies will be transferred to another economic activity, triggering a loss in the international road freight sector of EUR 1.5 bn.

With the implementation of MP1, the overall impact in the international road freight sector could be a loss in revenues of approximately EUR 4.5 bn: EUR 3 bn. loss for the Romanian economy (representing 0.9% decrease in the total turnover of non-financial companies in Romania, which represents 1.4% of the Romanian GDP) and EUR 1.5 bn. transfer from the international road freight transport sector to another economic activity within Romania (assuming similar volumes of business could be achieved).

Additionally, companies discontinuing their businesses in Romania might release 26,016 staff (excluding drivers that may be relocated together with the business), leading to an increase in unemployment rate of 0.3%.

Impact of the MP1 changes on the Romanian economy (3/3)

Many Romanian transporters will disappear, and multinationals will migrate in other EU countries, closer to the main markets.

Market competitiveness will decrease and foreign investments in Romania will be discouraged.

Impact on the economy

Romania is not competing in the same conditions with other European countries, having higher costs with financing (i.e. no subsidies available in Romania for truck purchasing), a shortage of drivers and a peripheral location in EU (i.e. average additional distance to be performed by the mandatory return home of the trucks at every 8 weeks of 2,450 km roundtrip RO-EU and EU-RO, with 4 additional roundtrips/year.

The MP1 regulatory changes further impact on the competitive position of Romania (as well as other peripheral countries in the EU) and its goods transport sector in the Internal Market of the EU. Given that most of international road freight transport operations are conducted with countries located in center and western European countries, a negative impact will be visible in respect the obligation of the mandatory return of the trucks (e.g. Romania would have an additional annual fuel cost of EUR 197 mil. with empty runs of 9,800 km/ truck/ year).

Many Romanian transporters will close their businesses, while others will migrate to other EU countries, closer to the main markets.

As a result, competitiveness with decrease and the prices of goods may grow because the beneficiaries will pay more for road freight services. Thus, the impact of the MP1 regulatory changes will also translate into discouraging foreign companies to invest or develop their businesses in Romania due to increasing transport prices and increasing time to honor contracts (transported goods).

Source: KPMG analysis

KPMG

Assessment of impact at EU level

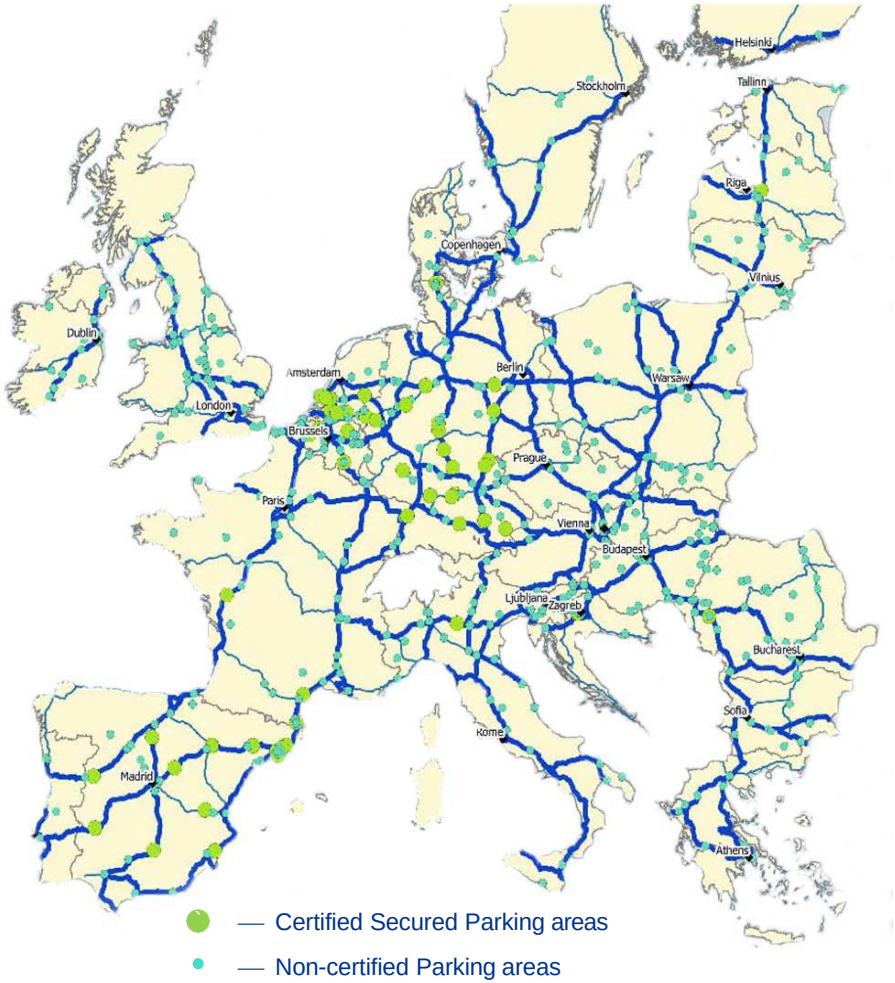
Parking areas for road freight vehicles

The limited number of parking areas able to accommodate the truck drivers within Europe requiring overnight parking will generate an increase of the parking prices which will be reflected in the price of the freight transportation services.

Moreover, a significant investment over an extended timeframe will be required in order to construct new parking areas infrastructure as to meet the rising demand.

Key trends and developments

- There are 7,000 certified parking places for road freight transport vehicles, which are located in a limited number of countries, as represented on the map. These areas are predominantly positioned in Germany, Spain, the Netherlands, and Belgium, which will generate difficulties for the drivers to rely on availability of certified secure parking areas in certain countries and on several corridors.
- At present, the non-certified parking areas are more evenly spread over the entire network of corridors, as represented on the map. However, such non-certified parking places provide no guarantee and the necessary services for drivers.
- There is a shortfall of approx. 100,000 certified areas to accommodate the needs of the 400,000 drivers involved in long-distance transport across Europe on an average weekday. This creates a potential monopoly effect 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.



Source: European Commission (2019), Study on Safe and Secure Parking Places for Trucks

Safe and secure parking areas for road freight transport vehicles

Safe and secure parking areas are a necessity in Europe.

Around 75% of cargo crimes occur in unsecured parking locations.

The shortage of accommodations near parking areas and the ban of spending the weekly rest in the cabin could negatively impact the total time and cost of transport.

Safe and secure parking areas

- The total demand of overnight parking on an average weekday is 400,000 places per night.
- In the EU there are 5,000 parking areas that offer 300,000 places available, creating a net shortfall of approx. 100,000 extra spaces.
- Out of these 300,000 available places, only 7,000, or less than 3%, are certified and labelled *Safe and Secure* across the continent, where an independent check and audit has been undertaken to validate that the parking area has achieved a certain quality level.
- A 2018 EU-funded study revealed that the lack of safe and secure truck parking areas (SSTPA) is a major concern in the EU, with almost 90% of drivers and transport operators stating that the current parking supply is insufficient.
- The European Commission allocated a total budget of **1.4 billion EUR to build, upgrade and improve European transport infrastructure. Out of this budget, 60 mil EUR have been allocated to improve the SSTPAs** network across Europe. The priorities for the investment will include development of new SSTPAs approximately every 100km along the TEN-T core road network and upgrades to the safety, security and services of existing rest areas.
- Safe and secure parking areas are split into four different security levels, Bronze, Silver, Gold and Platinum.
- **The cost of upgrading an existing 30,000 m2 parking area to a Silver level safe and secure parking** area can rise up to approximately **3 mil EUR,** according to an illustrative case study, *CEF Case Study – CBA of a safe and secure parking areas for trucks*. **Therefore, given the €60 million allocated by the European Commission to improve the SSTPAs network across Europe, only 20 out of the existing parking areas could be upgraded to a Silver level safe and secure parking, which would not have a significant impact on the existing shortage.**

Accommodations near parking areas for HGVs

- In the EU region there are approximately 2,000 hotels that provide accommodation near road freight vehicle parking areas, as presented in the adjacent figure;
- In order to reduce the costs and time of travel from the truck to the accommodation location and return, it is important that these locations are located near the parking areas;
- An increase in cost and time caused by the impossibility of accommodating the driver near the parking lot of the truck would be reflected in the time and total cost of transport.

Accommodations near parking areas in EU. Source: app.truckparkingeurope.com

CO2 emission targets

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**

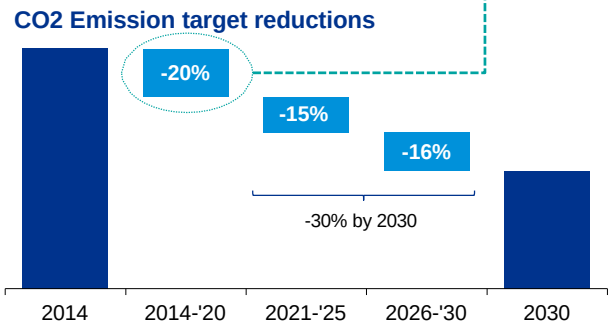
EU heavy-duty vehicle manufacturers believe that the ambition is achievable at a high, but acceptable, cost.

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.

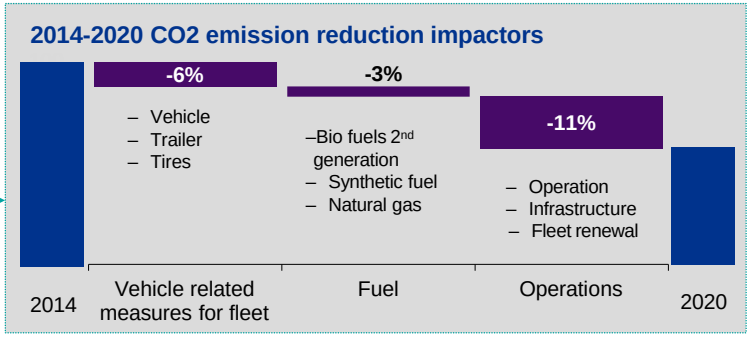
The increased number of empty runs to vehicle's home country will surely conflict with EU's ambition for reduction of greenhouse gas emissions.

- 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 manufacturers are expected to reduce fuel consumption as depicted in the graph below:



Source: ACEA Position Papers: 1) Reducing CO2 Emissions from Heavy-Duty Vehicles 2016, and 2) Future CO2 standards for heavy-duty vehicles 2018, IRU Mobility Package 3, KPMG analysis,

- Targets are based on the number of vehicles sold, thus further improving the fuel efficiency and CO2 emissions of trucks tops the agenda of heavy-duty vehicle manufacturers
- However manufacturers' recommendation is that EU shifts its focus from "new-vehicle-only" approach to a fully integrated approach which could supposedly more than double the current CO2 reduction rate from road freight transport of 1.3% up to 3.5% annually.
- Truck manufacturers have been working together with key stakeholders of the road transport sector to further reduce CO2 emissions within the context of such an integrated approach:



Source: ACEA Position Paper: Reducing CO2 Emissions from Heavy-DutyVehicles 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.

CO2 emissions calculation (1/2)

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.

Methods of calculation

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

Energy-based approach

- 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
- The unit of energy for trucks will typically be litres of fuel

Activity-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:

  CO2 = tons transported x average distance travelled x CO2 emissions factor per ton/km

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

Carbon Emission Factors (gCO2 /tone-km) for 40 tons Truck with Varying Payloads and Levels of Empty Running

Average carbon emission factors are very sensitive to assumptions about vehicle loading and empty running:

load tones	% of truck-kms run empty										
	0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%
10	81	84.7	88.8	93.4	98.5	104.4	111.1	118.8	127.8	138.4	151.1
11	74.8	78.2	81.9	86.1	90.8	96.1	102.1	109.1	117.3	127	138.6
12	69.7	72.8	76.2	80	84.3	89.2	94.7	101.1	108.6	117.5	128.1
13	65.4	68.2	71.4	74.9	78.9	83.4	88.5	94.4	101.3	109.5	119.3
14	61.7	64.4	67.3	70.6	74.2	78.4	83.2	88.7	95.1	102.7	111.8
15	58.6	61	63.8	66.8	70.3	74.2	78.6	83.7	89.7	96.8	105.3
16	55.9	58.2	60.7	63.6	66.8	70.5	74.6	79.5	85.1	91.7	99.7
17	53.5	55.7	58.1	60.8	63.8	67.2	71.2	75.7	81	87.2	94.7
18	51.4	53.5	55.8	58.3	61.2	64.4	68.1	72.4	77.4	83.3	90.4
19	49.6	51.5	53.7	56.1	58.8	61.9	65.4	69.5	74.2	79.8	86.5
20	48	49.8	51.9	54.2	56.8	59.7	63	66.9	71.4	76.7	83
21	46.6	48.3	50.3	52.5	54.9	57.7	60.9	64.5	68.8	73.9	80
22	45.3	47	48.8	50.9	53.3	55.9	59	62.5	66.5	71.4	77.2
23	44.2	45.8	47.6	49.6	51.8	54.3	57.2	60.6	64.5	69.1	74.7
24	43.2	44.7	46.4	48.3	50.5	52.9	55.7	58.9	62.7	67.1	72.4
25	42.3	43.8	45.4	47.3	49.3	51.7	54.3	57.4	61	65.2	70.3
26	41.5	42.9	44.5	46.3	48.3	50.5	53.1	56	59.5	63.6	68.5
27	40.8	42.2	43.7	45.4	47.3	49.5	52	54.8	58.1	62.1	66.8
28	40.2	41.5	43	44.6	46.5	48.6	51	53.7	56.9	60.7	65.3
29	39.7	41	42.4	44	45.7	47.8	50.1	52.7	55.8	59.5	63.9

Source: Measuring and Managing CO2 Emissions of European Chemical Transport, KPMG analysis

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 (2/2)

The transport sector is a major source of gases emissions, with a growing share in national emissions.

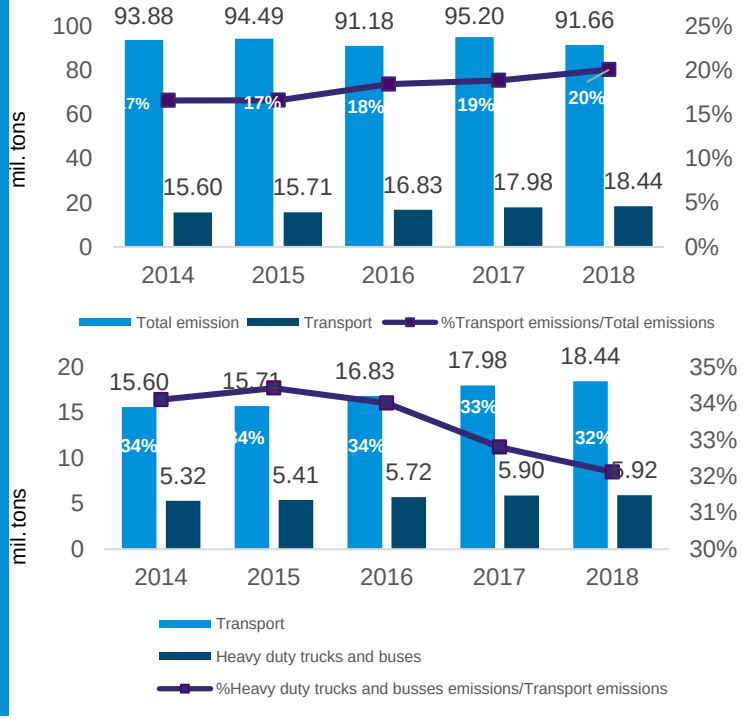
The estimated additional CO2 emissions as a result of the empty runs amount to around 456,886t, which represents 7.7% increase in total CO2 emissions coming from heavy duty trucks and busses transport.

Romania's total greenhouse gas emissions for the period 2014-2018 are on a decreasing trend.

The transport sector is a major source of gases, with an emissions increase from 17% to 20% out of the total emissions.

About 32% of greenhouse gas emissions from transport are from heavy trucks and busses transport.

Greenhouse gas emissions in Romania



Source: European Environment Agency (EEA), KPMG analysis

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	14.6 t
Average additional annual distance travelled (due to mandatory returns home)/ truck	9,800 km
CO2 emissions factor (gCO2 per t-km)	105.3
Number of trucks in operation	60,650
Percent of empty runs of mandatory returns home	100%

The estimated annual additional CO2 as a result of the empty runs amount to around 456,886 t, which represents 7.7% increase in total CO2 emissions coming from heavy duty trucks and busses transport.

This will increase total greenhouse emissions generated by transport sector in Romania by 2.4%.

Source: Eurostat, Measuring and Managing CO2 Emissions of European Chemical Transport, KPMG Survey and analysis

MP1 implications at EU level

MP1 will give a competitive advantage to non-EU Member States which might also trigger a reduction of the road freight transport service supply and loss of income through EU states.

Eastern transport operators will be the most affected, as the measures in the Mobility Package 1 lead to the impossibility of performing international road transport in Western Europe by companies from Eastern Europe.

- MP1 is applicable only to EU Member States, which gives a competitive advantage to non-EU Member States. Due to the fact that non-EU countries do not have to comply to the new measures adopted and can perform international road freight transport based on certain authorizations they can increase their market share over the EU Member States.
- MP1 may trigger a reduction of the road freight transport service supply, an impact on competitiveness, loss of income through EU states, loss of business to third country operators, import services from third countries to EU without social and environmental standards
- Although the amendments to the European regulations introduced by the MP1 will apply on equal terms to all Member States, their likely impact is significantly different. Romanian and Eastern transport operators will be the most affected, as the measures in the Mobility Package 1 lead to the impossibility of performing international road transport in Western Europe by companies from Eastern Europe.

Important notice

Important notice

- The information on which this study was based is limited to information publicly available from official sources which were specifically indicated in each section or generic in the Bibliography section, Annex 1 and information resulted from the KPMG survey distributed to the transport firms registered in Romania. We were not required to establish or assess the level of confidence of these sources or to verify the correctness and completeness of the information provided by them. If we have identified some limitations on the information used, these were specifically indicated in the study.
- The information provided by the study compute the potential quantitative impact on the transport sector and economy of the limitations imposed by the Mobility Package 1. The quantitative impact obtained is using estimates that may differ from the values actually recorded, given the complexity of the macroeconomic environment and the sector's features.
- The analysis carried out used publicly available information up to the date of submission of the study, since KPMG was not required to update or extend it in the event of changes in data, studies or reports used to identify and quantify effects.
- Our conclusions have been drawn on the basis of the information identified according to the methodology described, considering that it is correct, complete and appropriate for the purpose of our study.
- The comments that we provide in the study are not a legal opinion or a recommendation to act in a certain way. The services and comments provided in the study do not involve KPMG taking decision responsibilities. The procedures we have carried out for the conduct of the study are limited in nature and purpose as set out in the commitment letter that underpinned the study.
- KPMG does not ensure that the information submitted in the study meets the objectives of any third party other than UNTRR and that has access to the study. KPMG is not responsible for decisions of public authorities or entities/organizations/individuals with relevant powers and competences.
- KPMG does not owe or accept any obligations to third parties having access to the study, arising in any manner and on any basis, and will not be held liable for any loss, damage or expense of any kind, caused by the use of the study by third parties, information contained therein or statements issued in connection therewith, or otherwise resulting in access to the study by third parties. In these circumstances, if any third party wishes to rely on the study and the statements made by KPMG in relation to them, it will do so only at its own risk. Any third party must make its own assessment of the issues mentioned in this study.

KPMG

Sources of information

Appendix 1

Sources of information

The following sources of information were selected considering their relevance, reliability and impartiality.

- ACEA report - fact sheet trucks
- app.truckparkingeurope.com - https://app.truckparkingeurope.com/#/filters
- ARR reports(2019, 2020)
- ASF - Report on the determination of reference tariffs for compulsory civil liability insurance for damages third parties through vehicle accidents
- EU Energy & Transport in Figures Statistical Pocketbook - https://op.europa.eu/en/publication-detail/-/publication/52f721ed-c6b8-11e8-9424-01aa75ed71a1
- European Environment Agency (EEA) - https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer
- European Commission
  - Greenhouse gas emissions reduction by 2030 - https://ec.europa.eu/clima/policies/strategies/progress_en
  - Study on safe and secure parking places for trucks
  - Safe and secure parking areas across Europe
  - Study to support the impact assessment for the revision of Regulation (EC) No 1071/2009 and Regulation (EC) No 1072/2009
  - Estimating road transport costs between EU regions – JRC working papers on territorial modelling and analysis (No. 04/2019)
- Eurostat
  - Job vacancies
  - Road freight transport Measurement
- IRU report forecasts alarming jump of driver shortage in Europe
- KPMG Bulgaria - Market study - An impact assessment of Mobility Package I. The Bulgarian haulage sector
- Measuring and Managing CO2 Emissions of European Chemical Transport link
- National Bank of Romania, Statistical report, International trade in services
- National Institute of Statistics (INSSE), Gross Investments in transport sector in Romania
- National Road Committee, France (CNR):
  - Comparative study of employment and pay conditions of international lorry drivers in Europe
  - Comparison of operating conditions and costs excluding structural costs, for a 40-tonne HGV
- Official Journal of the European Union - Mobility Package 1 regulations and directives
- Statista
  - European transport market size
  - GDP historical values
  - Transport revenues in Romania
- https://blog.fomcogps.ro/harta-vitezelor-din-europa
- Maintenance & Repair Cost Calculation and Assessment of Resale Value for Different Alternative Commercial Vehicle Powertrain Technologies, EVS30 Symposium Stuttgart, Germany, October 9 - 11, 2017 link