



Assessment of the impact of a provision in the context of the revision of Regulation (EC) No 1071/2009 and Regulation (EC) No 1072/2009

Executive Summary

Study contract no. MOVE/C1/SER/2050-557/SI2.830443

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February – 2021



EUROPEAN COMMISSION

Directorate-General for Mobility and Transport
Directorate C — Land
Unit C.1 — Road Transport

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ISBN : 978-92-76-30203-2

DOI : 10.2832/80047

Catalogue Number : MI-02-21-158-EN-N

Luxembourg: Publications Office of the European Union, 2021

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EXECUTIVE SUMMARY

Objectives and context

Ricardo was commissioned to support the European Commission in the assessment of the impacts of the obligation of regular return of the vehicle to the Member State of establishment (as established in the revised Regulation (EC) No 1071/2009 on access to the occupation of road transport operator).

The provision is defined as follows: *"An undertaking shall organise its vehicle fleet's activity in such a way as to ensure that vehicles at the disposal of the undertaking and used in international carriage return to one of the operational centres in that Member State at least within eight weeks after leaving it."*

The objective of the study is to identify and assess the impacts of this provision on the climate and environment, on congestion and on the economy and internal market. The study considered the potential impact on freight transport operations and the resulting impacts on driver working conditions, taking into account also the parallel implementation of the new requirement that drivers return regularly to their home countries, in accordance with the revised Regulation (EC) 561/2006 on the harmonisation of certain social legislation relating to road transport.

The provision has now been adopted and established in Regulation (EU) 2020/1055 and will apply from 21 February 2022.

Methodology and research tools

The methodological approach applied to meet the objectives of the study was based on the Better Regulation principles. It included the following two tasks:

- **Assessment of current business practices and market conditions:** Developing an understanding of the current market situation is key to assess the impacts of the provision. The methodology includes the development of the baseline (no policy change) scenario against which the impacts of the provision can be assessed. The baseline characterises the current market situation and the expected evolution of the market and business practices in the absence of this provision: in terms of vehicles involved in international road operations, the frequency of their return to their Member State of establishment and their characteristics. It also takes into account the effects of the COVID-19 pandemic.
- **Assessment of impacts of the new provision:** For a number of scenarios representing different market responses to the provision, the analysis examined the impacts arising from the obligation of the return of the vehicle to the Member State of establishment of the operator. The analysis covers the impacts expected in 2023 (first full year of the provision's implementation) on transport activity, the environment, congestion and the economy/internal market. The methodology is based on a combination of quantitative and qualitative assessment:
 - The quantitative assessment is based on a scenario approach to identify and estimate the outcomes in terms of the potential impact on the number, length and load factor of additional vehicle journeys arising from the provision. In addition, the analysis also relied on a cost differentials model that estimates the difference in operating costs for operators of different Member States of establishment when conducting international operations. This is used to understand the cost advantage of operators and how it is expected to develop after the introduction of the provision to help establish how the market might respond. In combination, the identified market responses are used to quantify impacts on transport activity, the environment, congestion and the economy/internal market.
 - Qualitative assessment is also undertaken to provide a more nuanced analysis and complement the quantitative analysis, especially on the

analysis of the impacts on the functioning of the internal market, competition, and other economic impacts (e.g. prices, employment).

The following research tools were used:

- Desk research and data collection to identify, extract and analyse secondary data sources from relevant studies, reports and databases.
- Two surveys to supplement and/or cross-check the evidence gathered through the desk research, including:
 - A survey of the industry and social partners (507 responses from companies engaged in the provision of road freight transport services (e.g. haulier, freight forwarder, logistic provider), trade unions representing drivers of vehicles engaged in the provision of road freight transport services¹, national associations of road haulage / transport operators), and
 - A survey of national authorities (20 respondents).
- A total of four exploratory interviews, 13 interviews and a further two written responses were undertaken to obtain further insights following on the surveys.
- Data requests to fill in gaps outstanding from the surveys and interviews.

Assessment of current business practices and market conditions

The focus of the analysis is on the road freight market which accounts for around three quarters of all inland freight transport activities in the EU27 (in tonne-kilometres). In the future, road freight activity is expected to grow despite the impacts from the COVID-19 pandemic in the short term: a temporary dip in activity is expected but activity is projected to recover and marginally grow in 2023 in the baseline scenario².

The provision concerning the regular return of trucks to the Member State of establishment is directly linked to the extent of international road freight activity, which represented 32% of total road freight activity (in tonne-kilometre) in the EU27 in 2019. For this type of activity, which includes bilateral, cross-trade and cabotage operations, vehicles operated by hauliers based in the East³ carry out a significantly larger portion of the EU total, compared to the size of their domestic market. Their share increases even further when considering cabotage and cross-trade operations:

- Overall, 62% of all international freight activity is carried by vehicles registered in Eastern European Member States.
- In terms of total bilateral operations, vehicles from Western Member States contribute only 21% of the EU27 total compared to 54% undertaken by Eastern Member State vehicles.
- Even more, in terms of cross-trade and cabotage operations, vehicles from the Eastern Member States make up a much larger proportion of the total, providing for 87% and 75% of the total activity respectively.

By definition, the provision is more likely to affect vehicles engaged in operations that do not necessarily involve the return of the vehicle to the Member State of establishment of the operators, that is, cross-trade and cabotage operations. The general pattern for the cross-trade flows in the EU are loading and unloading within a Western European Member

¹ Although not specifically targeted, there was also the option for drivers to complete the survey

² Based on the projections from the PRIMES-TREMOVE, COVID Baseline, developed by E3Modelling in mid-2020 and own interpolations for 2023 (European Commission, 2020).

³ For the purpose of this report, Eastern European Member States include: Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia.

State, performed by a vehicle registered in an Eastern European Member State. Similarly, cabotage operations take place predominantly in Western Member States and are carried out by a combination of hauliers from Eastern, Western, and, to a lesser extent, Southern European Member States.

In this context, the analysis showed that virtually all vehicles of operators based in Western and Southern European Member States tend to return more frequently (i.e., six or more times a year), apart from some Member States (i.e., FI, MT) which have a significant share of vehicles which also return less frequently.

Conversely, only approximately half of the vehicles of Eastern European Member State operators return six or more times per year. There are however significant differences between these Member States: Bulgarian, Latvian, Lithuanian, Romanian and Slovakian vehicles tend to return less frequently (i.e. fewer than six times in a year) but Czech, Hungarian and Slovenian vehicles return more frequently. Furthermore, Estonian and Polish hauliers appear to have an equal or similar share of trucks that return more compared to the share that return less frequently.

Operators whose vehicles return six or more times a year are likely to operate shorter truck cycles⁴ (i.e. less than eight weeks). Therefore, these vehicles are expected to already be compliant with the new provision (i.e. if they operate a maximum of 52 weeks in a year, they are, on average, returning at least once every eight weeks, assuming regular cycles).

On the other hand, lower return frequencies are likely to be associated with truck cycles longer than eight weeks. Among those vehicles returning less frequently (i.e., six or fewer times a year), the analysis showed that the majority tends to return only once a year, which suggests that vehicles tend to be involved in very long truck cycles (if they are not returning every eight weeks).

Most long truck cycles seem to include a number of different types of operations but hauliers that are engaged in longer cycles are also those with significant cross-trade and, to a lesser extent, cabotage operations.

In addition, long truck cycle operators tend to be slightly smaller companies (in terms of employees and revenue) and obtain more business via contracts with freight forwarders/forwarding agents. Overall, the EU road haulage market is dominated by small and medium enterprises (SMEs), where firms in the East tend to be smaller and have a considerably lower turnover compared to Western European road hauliers.

The type of vehicles used by longer truck cycle operators tends to be newer and heavier vehicles (>32 tonnes in GVW and Euro VI). This is similar to the vehicle types used by short truck cycle operators, which suggests that this type of vehicles is prevalent in international operations.

In the future, the patterns and characteristics of longer truck cycles are not expected to significantly change in the absence of the provision (i.e., under the baseline) even when considering the impacts of the COVID-19 pandemic.

Assessment of impacts

A scenario approach was developed to represent the potential market responses to the new obligation and derive the impacts on transport activity, the environment, congestion and the economy. Given the uncertainty on how different operators might adjust to the new obligation, three scenarios were identified and are described in Table ES1 to capture the range of possible market responses.

⁴ A truck cycle is defined as the round trip that encompasses a combination of assignments that a truck carries out between leaving and returning to the country of establishment of the operator

Table ES1: Description of the scenarios assessed in this study

Scenarios	Description
Simple market compliance (SMC)	A scenario where all affected operators would be minimising any changes to the way they conduct their operations, whilst complying with the new provision. Operators would carry out the same number of assignments as in the business-as-usual case (baseline scenario) but as part of shorter cycles from their current Member State of establishment.
High market restructure (HMR)	A scenario where all operators would make more substantial changes to their operations (e.g. forgo some assignments, scale down operations in certain countries, relocate or open a new entity in another country as a result of this provision). The assignments that could no longer be fulfilled in the same cycle would instead be undertaken by an operator/entity established in another Member State. The new Member State of establishment could be either the Member State in which those assignments take place (i.e., from where it departs/arrives or within that Member State) or another Member State from which the cost differential is lowest (i.e. they are closer to the location of the assignment).
Partial market restructure (PMR)	A scenario which reflects a combination of operators that minimise changes to their operations and operators that make more substantial changes. This is constructed based on the survey responses from the consulted hauliers.

The **simple market compliance** is considered to be the most likely scenario, especially in the timeframe of the assessment:

- Given the above scenario descriptions, the simple market compliance scenario can be considered to be the most straightforward outcome, as operators would need to make fewer adjustments in order to comply with the new requirement. The market restructure scenarios require more significant market changes and adaptation, including the potential relocation of hauliers to other countries.
- The analysis of the cost advantage suggests that those operators directly affected by the measure and most likely to take action (i.e. those established in the East) would still maintain their competitive position even if their trucks would need to return more frequently to their operational base and incur additional costs thereof.

The impacts of the other two scenarios are nevertheless provided to capture the full range of potential outcomes although these scenarios are considered less probable.

The main impacts of the scenarios on transport activity and the environment are presented in Table ES2.

Table ES2: Summary of main impacts of the scenarios on transport activity and the environment: total and as a change compared to international freight total values in 2023

Scenarios	SMC	PMR	HMR
Impact on number of journeys created (in thousands)	1,915 (2.0%)	1,016 (1.1%)	1,137 (1.2%)
Impact on vehicle-kilometres (in millions)	2,528 (4.8%)	706 (1.4%)	436 (0.8%)
Impact on CO₂ emissions (in thousand tonnes)	2,900 (4.6%)	810 (1.3%)	500 (0.8%)

Scenarios	SMC	PMR	HMR
Impact on NO_x emissions (in tonnes)	619 (7.8%)	173 (2.2%)	107 (1.4%)
Impact on PM_{2.5} emissions (in tonnes)	221 (5.0%)	62 (1.4%)	38 (0.9%)

Under the simple market compliance scenario, up to 1.9 million **new journeys** could arise in 2023 compared to the baseline (business-as-usual case), representing an increase of 2% in international road freight journeys in 2023. It is assumed that the affected hauliers are not able to find cargo for the additional journeys and thus all potential journeys arising due to the need to return more frequently to the Member State of establishment are included in this scenario⁵.

The majority of the additional journeys in this scenario would be carried out by hauliers based in the Eastern European Member States which are those whose vehicles are more likely to be engaged in cycles longer than eight weeks in the baseline.

By comparison, the restructuring scenarios represent a lower increase in the number of journeys with respect to the baseline (ranging between 1 and 1.1 million new journeys). Under these scenarios, new operators or a new entity of the original operators based in a different Member State would partially or fully replace the original operators. This would lead to additional journeys from vehicles registered in both Western and Eastern European Member States as the new Member States of establishment are likely to be in central Europe, including many Western European countries and a number of Eastern European countries which are not located in the outer periphery.

Of all scenarios, the lowest number of journeys is expected to be generated by the PMR scenario. This is explained by the level of empty running associated with the potential new journeys⁵: a higher share of journeys would originate from East-based hauliers which have lower levels of empty running compared to their Western and Southern counterparts. On the other hand, a larger share of journeys arising from the HMR scenario would be undertaken by West-based hauliers (due to the relocation of hauliers or transfer of activity to the West).

In terms of **vehicle kilometres** which reflect the additional distance travelled in those new journeys, an increase of up to 2.5 billion vehicle kilometres could be observed in 2023 due to the adoption of this measure under the simple market compliance scenario. This represents an increase of 4.8% in international road freight vehicle kilometres in 2023. It reflects the long-distance trips which would be performed by trucks mainly travelling between the East and West in order to return at least every eight weeks to their operational bases in Eastern European Member States.

The increase in vehicle kilometres in the restructuring scenarios would be lower (ranging between 0.4 and 0.7 billion) given the shorter distances travelled under these scenarios as the new operators/entities would be based in Member States closer to where the transport operations take place.

The **environmental impacts** from the provision are directly linked to the potential increase in vehicle-kilometres. Overall, the new provision could result in up to 2.9 million tonnes of additional CO₂ emissions in 2023, under the simple market compliance scenario, representing an increase of 4.6% on the international road freight emissions in

⁵ It is assumed that a journey is only new and additional to the baseline if empty. Otherwise, the operators which are able to find a load to transport in those journeys could be displacing (bilateral) journeys already occurring in the baseline.

2023 in the baseline. Similar to the results in vehicle kilometres, the market restructuring scenarios are responsible for lower impacts: 0.5 to 0.8 million tonnes of additional CO₂ emissions expected in 2023, representing a 0.8% to 1.3% increase in international road freight emissions.

In addition, costs of air pollution due to negative health effects and other damages were estimated at €25.9 million associated to an increase in NO_x and PM_{2.5} emissions in 2023 under the simple market compliance scenario. For the restructuring scenarios, these costs are expected to range between €4.5 and €7.2 million.

Examining three border crossing points (BCP) in the core TEN-T network, the **congestion impacts** of the provision were assessed. Waiting times on the non-Schengen BCPs selected were found to increase in the simple market compliance scenario due to additional return journeys from West to East: increase from 130 to up to 282 minutes on Vidin – Calafat BCP (BG-RO), and from 55 to up to 162 minutes on Nadlac – Nagylak BCP (RO-HU). Conversely, only minor impacts were estimated in scenarios with market restructure due to the lower number of induced return journeys arising between East and West Member States. On the other hand, no significant impacts were found on the BCP between Poland and Germany for any of the scenarios considered, as current waiting times are already very low and traffic would only increase marginally on this BCP.

The analysis also looked into **impacts on the economy/internal market**. The following conclusions were drawn:

- Market operators will incur additional costs in order to comply with the new provision. The nature and size of the compliance costs depends on the market response.
- An analysis of the impact of the more frequent return of vehicles on operating costs of hauliers suggests that Eastern hauliers are still expected to keep their cost advantage compared to Western hauliers for transport operations that take place in Western European countries. While the latter is an important finding, it should be noted that the competitiveness position of hauliers within the market is determined not only by the cost advantage but also other aspects such as quality and timeliness, especially in market segments dependent on more time-sensitive delivery. There is no evidence indicating significant changes in these other competitiveness factors as a result of the measure.
- The new provision could lead to an increase in freight rates due to: (1) hauliers passing through the additional costs arising from the measure and (2) potential changes in the available transport capacity that can increase prices for certain types of operations.
- Competition is expected to be negatively affected due to the change in the available transport capacity in certain market segments as well as a potential increase in the size of firms.
- Employment impacts are expected to be more substantial when there is a more significant restructuring of the market, i.e., operators relocate to a different Member State of establishment as a result of the measure: in the high market restructuring scenario, up to 29% of current truck drivers established in Eastern European countries could be displaced to other EU regions.
- By shortening truck cycles, the measure is also expected to affect how drivers return to their countries, with an increased use of the truck for the return trip also anticipated. This reorganisation could facilitate compliance with the return of the driver obligation.

All in all, the analysis showed that the provision is likely to create additional journeys, regardless of the scenario considered, resulting in potential negative impacts, especially on the environment. At the same time, these negative impacts are not compensated by any additional benefits from trade as the volume of cargo transported by freight is assumed to remain unchanged.

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