

Final Report

Internalisation of external costs

-

Direct impact on the economies of the individual
EU Member States, and the consequences on
the European road haulage industry

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1 Introduction

1.1 Background

(1) The European Commission proposed a revision of Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures¹ in August 2008 (hereinafter called “Revised Eurovignette Directive”), which introduces the “internalisation of external costs” as a potential future part of the road user charges. In the “Handbook”² published on behalf of the European Commission (EC) in early 2008, the scope of external costs is approached from a wide perspective. This handbook indicates examples of what the EC considers to be external costs and sets out cost rates for them in the form of possible road user charges, in addition to direct road cost-related charges. Within the next few years, discussions with regard to elements and rates of additional charges, coupled with various implementation proposals, can be expected.

(2) The International Road Transport Union (IRU) therefore commissioned a scientific and independent study to be conducted by ProgTrans in order to analyse the impacts which such proposals would have on:

- the road user charge revenues collected by the individual EU Member States;
- the costs related to road user charges which have to be paid by the economy of the individual EU Member States in the context of road freight transports; and
- the costs related to road user charges which have to be paid by the national road hauliers of the individual EU Member States.

(3) This report presents the methodology and the results of the detailed and in-depth simulation of the potential future road user charges based on a potential revision of the Eurovignette Directive. Besides a brief explanation of the “external cost” concept, this study includes a description of the traffic model, of the procedure for determining the charges and revenues and of the scenarios

¹ Cf. Commission of the European communities: Proposal for a Directive of the European Parliament and of the Council amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures. COM(2008) 436 final. Brussels, 8.7.2008; and COM(2008) 436 final/2. Brussels, 8.8.2008.

² Cf. CE Delft et al. (processors). Handbook on estimation of external costs in the transport sector, Version 1.1. Commissioned by the European Commission (DG TREN). Delft, February 2008.

used in the simulations. Finally, the results of road user charge revenues and costs are reported from three different perspectives and two views showing the road user charge surpluses or deficits explained in the following.

1.2 Road user charges and external costs

(1) In the context of the discussion of road user charges, two cost definitions or cost categories must be differentiated, both of which are related to the use of roads. These are the “direct costs of infrastructure”, which result from construction and maintenance expenses for the roads and have to be allocated to the individual vehicle categories, and the “external costs of road traffic”, which are related to the operation of vehicles and are not directly borne by the road users. The term “externalities” derives from economic theory, but has an important practical impact in road transport.³

(2) In economic science, an externality of an economic transaction (production or consumption) is an impact on a (third) party that is not directly involved in the transaction. In such a case, prices of the transaction do not reflect the full costs or benefits of a product or service. A positive impact is called an “external benefit”, whilst a negative impact is called an “external cost”. Producers in a market may not bear all of the costs, whilst consumers may not receive full compensation for the benefits of the economic activity. In a competitive market, the existence of externalities leads to either too much or too little production or consumption in terms of overall costs and benefits to society. If external costs exist in the competitive market, the goods will be overproduced, since the producers or consumers do not take into account the external costs when producing or consuming the goods, so the price to be paid for the end product is too low. If there are external benefits, too little of the goods would be produced by private markets as producers and buyers do not take into account the external benefits to others. Here, overall costs and benefits to society are defined as the sum of the economic benefits and costs for all parties involved. As a consequence of external effects, prices give “wrong signals” and should be adjusted. This usually takes place by governmental interventions. The proper internalisation of external effects is a requirement for the correct functioning of markets. It is not a measure against market processes, but one in favour of making them work adequately. This means that only generally accepted externalities should be introduced, and at the “right” prices.

³ Cf. Centre for the Study of Law and Economics. The Internalisation of External Costs in Transport: From the polluter pays to the cheapest cost avoider principle. Saarbrücken, December 2007
 Cf. Coase, R.: The Problem of Social Cost; in: Journal of Law & Economics 3 (1), p. 1-44, 1960
 Cf. Coase, R.: Notes on the Problem of Social Cost; in: Coase, R. (Hrsg.): The Firm, the Market and the Law, University of Chicago Press, Chicago, 1988

(3) Road users in particular generate external costs, e.g. by air or water pollution, noise or exhaust emissions. Other areas are accidents or “trench and selection effects” (with regard to landscape or social networks). A highly controversial aspect is congestion costs; most economists regard them as almost completely internalised⁴, but political decision makers often do not take the relevant theoretical discussion into account and recommend that congestion costs – which undoubtedly do exist – should be regarded as external.

(4) The internalisation of external costs has been advocated by the European Commission for a long time. A very important base paper was the White Paper: “European transport policy for 2010: time to decide” of September 2001. Nevertheless, up to now road user charges have only been allowed to reflect the direct road costs. However, there is currently a debate to change this in the future and for that reason the EC commissioned the elaboration of the “Handbook on estimation of external costs in the transport sector”. It was produced as part of the study “Internalisation Measures and Policies for All External Costs of Transport” (IMPACT), mentioned in the introduction to this report, and serves as the most important source for the “charging scenarios”, to be explained in chapter 4.

⁴

Cf. Cerwenka, P, Meyer-Ruehle, O.: Are Congestion Costs External Costs? in: Traffic Engineering & Control, Vol 50 (2009), No6 (June), p. 275ff.; Congestion costs are completely internalised with regard to congestion time costs; the share of external congestion costs (pollution costs) is very low.

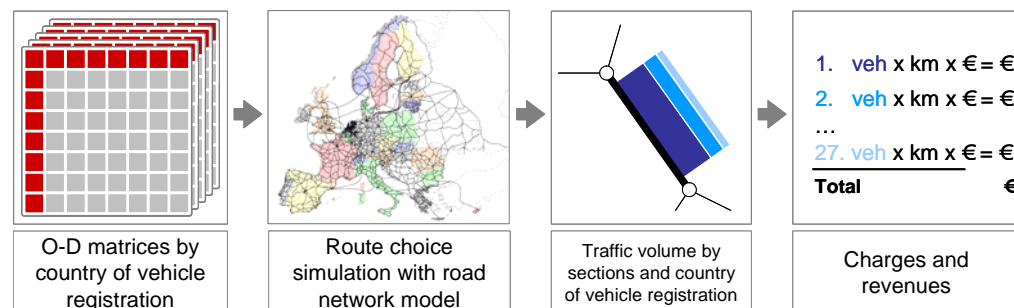
2 Traffic model

2.1 General approach

(1) As a general approach, **Origin-Destination-matrices (O-D-matrices)** were generated for the (charge-related) road goods transport in Europe by using different sources, mainly with data from the European Union's Statistical Office "Eurostat". These matrices were then allocated to the relevant infrastructure (road) network. The resultant traffic volume can finally be multiplied by section with all relevant charges (number of vehicles by section multiplied by the relevant road user charges in the respective section).

(2) The matrices are related to the country of vehicle registration. This approach allows the differentiation of all revenues that the countries collect and all charges that the national vehicle road hauliers have to pay.

Figure 1: General approach



(3) To provide the most valid results, all available sources were used as input for the model. The matrices originate from Eurostat and are based on national surveys. The results of the route choice simulation were checked twice: on the one hand using traffic volumes from different official traffic surveys and on the other hand by official data of vehicle mileage from different statistical sources. The results of the traffic model are therefore very reliable. The most important new aspect shown by the present study is the link between these traffic volumes and the charges on the road network. In addition to that - and also to the Eurostat data - territorial vehicle mileages for all European countries can now be provided.

2.2 Traffic Demand

(1) The traffic demand from Eurostat is reported as O-D-matrices. These matrices contain the exports and imports and their linkage (from all origins to all destinations). The matrices cover 27 countries: the 27 Member States of the European Union excluding Cyprus and Malta plus the two non-EU-member states Norway and Switzerland. On the country level 27 x 27 traffic flows or “relations” are within the model. O-D information for the relations between the 27 study countries and the eastern European countries Russia, Ukraine and Belarus are not included, since analyses of the total external trade and the share of road goods transport between the relevant countries show only marginal shares of these relations for road goods transport. The traffic flow from e.g. country A to country B is also called “relation”.

(2) The main source for the matrices is the Statistical Office of the European Commission (Eurostat) [EU 2009a]. It provides O-D matrices in tonnes per year transported by “heavy goods vehicles” (HGV) with a load capacity above 3.5 tonnes - for some countries other definitions are applied - on a country basis for all relations between the 27 Member States. For Switzerland, Norway and some other important countries like Germany, France and Austria, national sources to show transport intensity are used in addition.

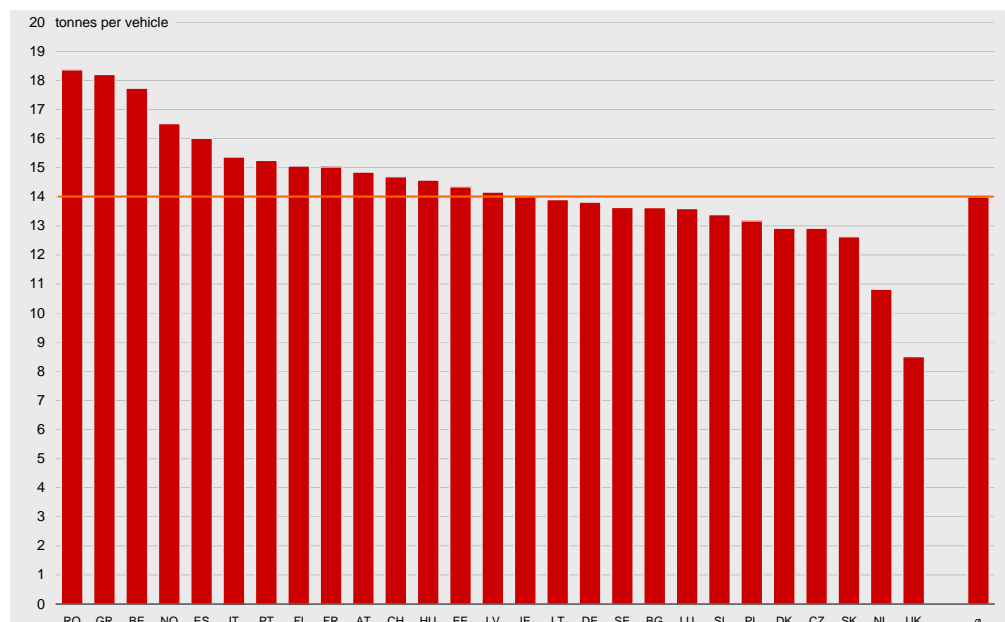
(3) The matrices not only cover 27 x 27 relations; each individual country is also subdivided into so-called traffic cells. This allows a reliable and realistic (“true-to-life”) assignment of transport volumes to the infrastructure network. On this basis, the country matrices are split into 248 traffic cells; resulting in a total of $248 \times 248 = 61'256$ European relations (excluding national traffic). For all these relations, the traffic demand had to be split by the registration country of the heavy goods vehicles. In the end, not just one matrix with 61'256 relations was provided, but 27 matrices, totalling more than 1.65 million relations.

(4) In addition to the base year matrices for 2007, matrices had to be generated for the two forecast years 2020 and 2030. For this purpose, the transport volumes of 2007 were extrapolated by growth factors taken from the European Transport Report 2007/2008 [ProgTrans 2007].

(5) Before simulating the traffic on the network model, the tonnes transported had to be converted into vehicle trips. For that purpose “load factors” (tonnes per HGV or tonne-kilometres per HGV kilometres) were used. These factors were derived from official statistics [EU 2009c] dividing the road transport performance by the traffic performance data (in accordance with the na-

tionality principle). For this reason the load factors depend on the country of registration as shown in Figure 2.

Figure 2: Distance weighted load factors by country of registration



(6) National traffic is not included in the matrices and hence not simulated in the road network model. For national traffic, more relevant (and reliable) data can be obtained directly from Eurostat [EU 2009c]. The data from road goods transport for national traffic are already reported in vehicle mileage, so there is no need to model the route choice. This data was therefore included directly into the step for calculating the charges.

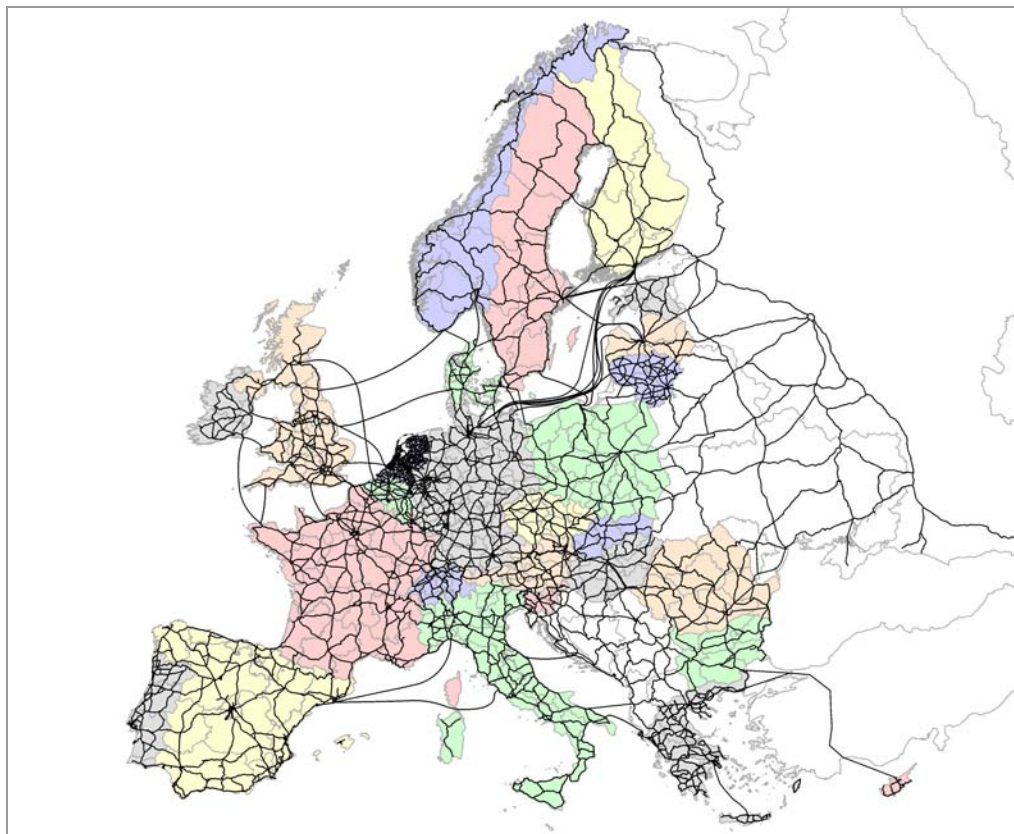
2.3 Route choice

(1) The traffic model simulates the route choice of the vehicle flows in the European network. As such, a detailed model of the (relevant) infrastructure network (cf. Figure 3) was established.

(2) The network model includes “attributes” such as e.g. road types, individual capacities, some “restraints” (e.g. time spent at borders or different amounts of road user charges), intersections, etc. Altogether the network

model shown in Figure 3 contains more than 20'000 links and about 8'000 nodes, covering the long-distance road network of all study countries. The traffic model was then used to simulate the route choice of the vehicle flows in the European road network for all heavy goods vehicles and not only the best or the shortest way (e.g. in Alpine crossing traffic the preference for the Brenner motorway, thus bypassing Switzerland, was put into the model). Therefore all 27 matrices, disaggregated by country of registration, are used as input for the simulation. The traffic model is calibrated by real traffic counting data from different surveys at some main locations in the European network.

Figure 3: *Model of the relevant European road network*

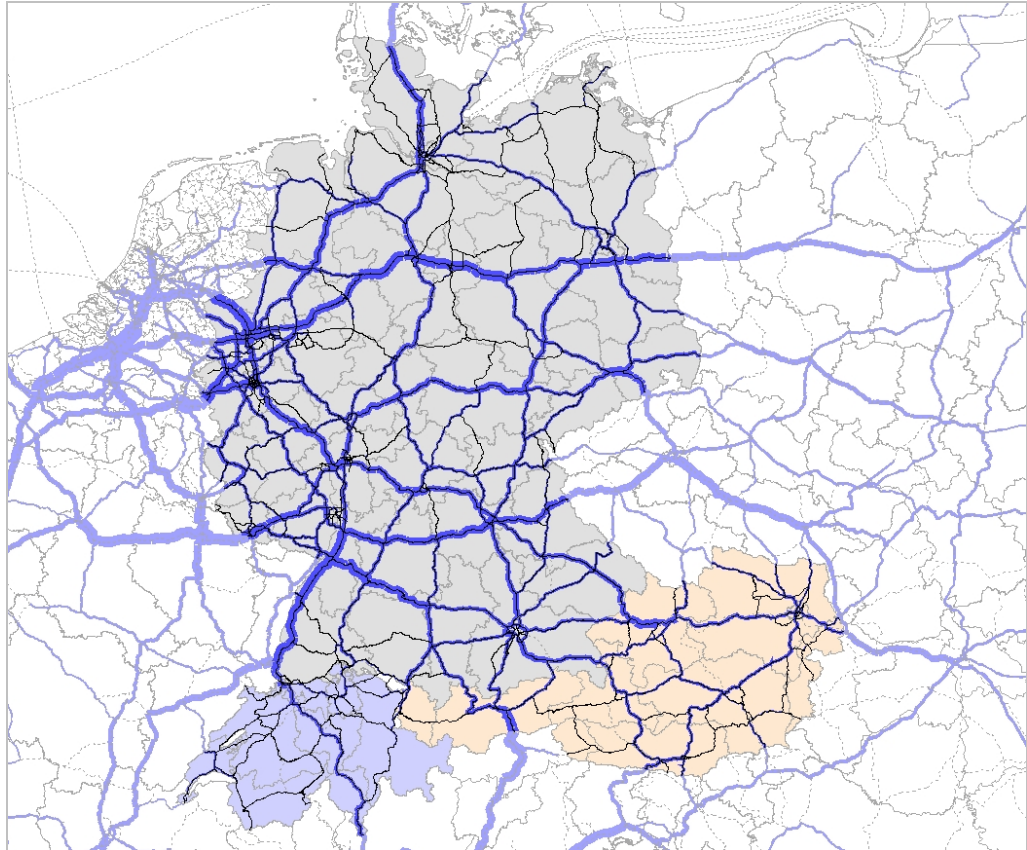


(3) The result of the route choice routine is the traffic volume shown as the number of vehicles for each link (from more than 20'000 in total), disaggregated by 27 countries of registration.

(4) As a first result of the modelling work, Figure 4 shows the European border crossing (international) traffic of European road goods vehicles on the German, Swiss and Austrian road network. The blue lines represent the European road network and the width of the lines indicates the traffic volume on

each link. The base year assignment shows the expected results of the road goods traffic on the main traffic axes.

Figure 4: Assignment results 2007



(5) Based on the traffic demand forecasts for 2020, 2030 and the traffic model 2007, two forecast assignments were generated. Extensions of individual networks were not considered for 2020 and 2030; only new links of greater international importance like the “Fehmarnbelt crossing” were included. The individual network/infrastructure measures will not affect the results significantly as it can be assumed that they will not influence the route choice in the wider network. Moreover, for such “small” infrastructure measures, the same charging conditions as for the existing network are assumed; the underlying general assumption being “corridor thinking”.

2.4 Vehicle mileage

(1) The vehicle mileage was computed by multiplying the number of vehicles per section and year by the length of the section. Before that, the overall traffic volume had to be separated into different vehicle categories. For this, vehicle categories according to the most common charge categories (by weight, number of axles and Euro emission standards) were used. For these charge categories, key figures were produced to split the traffic volume based on Austrian [ASFINAG 2008b], German [BAG 2008] and Swiss [BAV 2008] HGV charge statistics.

(2) The result of the link-related vehicle mileage (disaggregated by vehicle categories, and by country of registration) could then be used for the calculation of the road user charge revenues and costs.

(3) For the national traffic, the overall vehicle mileage per country was taken from Eurostat [EU 2009c]. The national traffic was split – country-related – into charge relevant traffic, on the Austrian, German and Swiss charge statistics as well. For simplicity's sake, it is assumed cabotage will not be allowed, so that all national traffic is handled by the respective national vehicle fleet, e.g. French national traffic is performed exclusively by the French vehicle fleet. This assumption is based on an analysis showing that cabotage performance by foreign shippers is quite negligible in relation to overall national transport performance.

3 Quantification of road user revenues

3.1 Charge rates

(1) The vehicle mileages for each of the total 20'000 links are the result of the traffic model. To compute charge revenues, they are multiplied by the respective charge rates. The charge rates are disaggregated by charging categories in the same way as the vehicle categories (by weight, number of axles and Euro emission standards).

(2) For time-related charges such as vignettes, the number of vehicles required to handle the traffic volume per year was estimated and multiplied by the yearly vignette price. For these specific cases the factor was calibrated on the revenues for those countries for which information was available based on official charge statistics, annual reports of the charge system operators and personal interviews. An overview of the sources is given in Annex IV.

3.2 Perspectives of road user charge revenues and costs

(1) Multiplying the vehicle mileage by the respective charge rates, the road user charge revenues are calculated for all links in the traffic model. To obtain all revenues from road user charges of a country, all country-related link revenues are aggregated. Since these revenues are split by country of vehicle registration, the charges in all countries can also be differentiated by country of vehicle registration. Road user charge revenues can therefore be prepared for **three different perspectives**:

- The **road user charges paid by national road hauliers in inland transport and transport abroad** disaggregated by the countries of operation, or more precisely, the countries where the vehicles are registered disaggregated by countries where the costs arise;
- The **road user charge revenues by country from national and international road hauliers**, disaggregated by nationality of the vehicle fleets which have to pay the charges.

- The **total charge costs for the economy by country studied in national and foreign trade transport**, or in other words, the total road user charges in the respective countries which have to be paid for by their inland and international trade transport irrespective of the nationality of the vehicles conducting the transport.

(2) For the charges (and revenues) resulting from national traffic a weighted average charge rate was used, multiplied by the respective vehicle mileage. This approach is more accurate than a route choice simulation for this type of traffic. It also makes use of detailed Eurostat information on vehicle mileage in national traffic.

(3) The resulting calculated revenues were compared with known numbers from different European countries. For 11 countries, i.e. Austria, Belgium, Czech Republic, Denmark, France, Germany, Luxembourg, Netherlands, Poland, Slovenia and Switzerland, statistical information on country specific toll revenues was available. For the base year, this information was used to calibrate the model and its parameters, which was later used for all scenarios and years to show the differences compared to the base year. These calibrated parameters were also transferred to 13 countries (Bulgaria, Greece, Hungary, Ireland, Italy, Lithuania, Norway, Portugal, Romania, Slovenia, Slovakia, Spain and the United Kingdom) with existing toll systems but for which toll revenue information was not available. The calibrated parameters were transferred to the 13 countries without revenue data from the 11 countries where information was available, based on comparable road infrastructure networks, geographical location and, hence, their importance in European road goods traffic. Three other countries (Estonia, Finland and Latvia) do not raise any road infrastructure charges. To conclude, the missing information on toll revenues does not have an impact on the overall results of the charging.

(4) For the third perspective – the costs for the economy by country in national and foreign trade transport – the origin and destination of the vehicles for each section are well known, as a result of the route choice modelling. It was therefore possible to assign all aggregated charges to each country, differentiated by export and import. For that purpose, all trips performed in the import or export of an individual country were summarised independently of the country of vehicle registration. This means, for example, that it is irrelevant whether a French, German, Spanish or Polish vehicle conducts an export transport from Spain to Austria. All export trips from Spain and their resulting costs were added.

3.3 Road user charge surpluses or deficits

(1) Next to the three perspectives, the road user charge surpluses or deficits were derived by comparing the charges collected and those paid, differentiated by the surplus or deficit by economy and road hauliers of the individual countries:

- **Road user charge surplus/deficit for study countries with regard to the national economy:** This first view balances the total road user charge revenues collected by a country from all (national and foreign) trucks against the total road user charges paid for national and international transports by the economy of that country, resulting in a net distribution effect of road user charges with regard to the whole economy.
- **Road user charge surplus/deficit for study countries with regard to the road hauliers:** This second view accumulates the total revenues from road user charges collected by a country from all (national and foreign) trucks minus the total road user charges paid nationally and abroad by trucks registered in that country. A deficit signifies that the road user charge revenues of a given country are inferior to the amount of road user charges paid by the trucks registered in that country. A surplus corresponds to more revenue being collected by a country than the charges paid by its vehicle fleet. The results from this view show the “net distribution effect”⁵ of road user charges with regard to road hauliers.

The **Road user charge surplus or deficit** for the study countries has also been calculated **with regard to the national economy**. The study balances the total road user charge revenues collected by a country from all (national and foreign) trucks against the total road user charges paid for national and international transports by the economy of the same country, resulting in a net distribution effect of road user charges on the national economy of the study countries. This means that a member state with a surplus could directly or indirectly (e.g. general tax reduction) refund (all) road user charges to its own economy and achieve an extra “surplus” to cover the general state budget.

⁵ Cf. additional explanations and examples in chapter 5.2.1 ff

(2) For national transport, the study indicates only the charge costs from transports with origin and destination within the same country.⁶ The charging costs for foreign trade transport resulting from export and import transport are summarised independently of the country of vehicle registration. Thus, it is irrelevant whether a French, German, Spanish or Polish vehicle conducts an export transport from Spain to Austria. To avoid double counting, the export and import costs are allocated one half each to the shippers and the recipients. Double counting would occur, e.g. in the case of a transport from Spain to France as follows: The transport costs would firstly be allocated to export costs from the Spanish perspective and secondly to import costs from the French perspective. But in fact, the export and import costs are mostly not paid only by the hauliers from one country. Therefore, in this study, the costs for the economy contain half of the country specific total charging costs for transports in export/import from each of the two trading partners.

⁶ Comment: The national transport only includes transports with origin and destination in the same country whereas the inland transport contains the transport within a country but with origin or destination outside the same country (cf. Glossary)

4 Charge scenarios

4.1 Introduction

(1) As mentioned in chapter 1, the European Commission proposed a “Revised Eurovignette Directive” [European Commission 2008a], which will allow the “internalisation of external costs” in road user charges. The field of external costs is wide, elaborated by a Handbook published on behalf of the Commission in early 2008 [CE Delft 2008], which indicates a number of figures as possible road user charges in addition to direct cost-related charges.

(2) Within the next few years, discussions with regard to various implementation proposals can be expected. This study analyses the impacts of such proposals and their amended road user charge rates on European road goods traffic.

(3) The impact analysis of possible or proposed road user charges, including external costs, are related, in principle, to all elements of the above mentioned “Handbook” and to the ongoing discussion in the European Parliament and Council. A major role for the decision makers, besides defining to what extent the existing charges, taxes and duties already cover the use of infrastructure from, and externalities produced by, the road transport operators, would be to decide which of the individual elements from the current proposal or bundles of them should be used, and on what rate level such calculations should be based. In this study such combinations are called (road user charge) “scenarios”.

4.2 Scenario elements

(1) The core elements of future road user charge “scenarios” can be derived from the discussion of the Commission’s proposal by the Transport Committee of the European Parliament on February, 11th 2009 and the first EP plenary vote on March, 11th 2009 by the European Parliament. Based on a report by

Saïd El Khadraoui, the Transport Committee adopted the following ideas and principles on February 11th, 2009⁷):

- *"Air pollution, noise pollution and congestion:* The Commission's original proposal included air and noise pollution and congestion but stopped short of including CO₂ emissions. Some MEPs wanted to add CO₂ to the list of chargeable costs, arguing that lorries, like aeroplanes, are partly responsible for climate change, but the committee voted today to exclude CO₂ emissions from the text. The proposal to include congestion charging met opposition from MEPs in the EPP-ED group, who argued that it would be too heavy a burden on the sector in this period of economic downturn and that such a charge would be discriminatory, as private cars are also responsible for congestion. The committee reached a compromise which allows Member States to apply a congestion charge on lorries on the condition that they apply a similar charge to "all other road users". Member States would also have to submit a cost/benefit analysis and an action plan setting out their measures to reduce congestion before applying the charge.
- *"Intelligent" pricing system:* The Eurovignette Directive is accompanied by a calculation method designed to adapt toll prices according to the environmental standard of the vehicle (known as "Euro 0 to VI"), the type of road used and the time period. Electronic tolling systems would calculate the right price according to these criteria.
- *"Polluter pays more": average extra cost for road users would be small:* The Eurovignette calculation method means that the overall extra cost for road users would only rise by approximately 3% if Member States choose to apply the charges, according to an impact study carried out by the Commission. Heavy polluters (Euro 0) would pay more, eco-friendly lorries (Euro VI and "clean energy" lorries) would pay little or no charges for air pollution. The same principle applies to the congestion charge: reduced rates would incite drivers to travel during off-peak times.
- *"Earmarking" revenues to invest in greener transport:* Bracing themselves for a probable future fight with EU finance ministers, MEPs from all political groups united in their support for "earmarking": Member States should be obliged to invest the revenue generated from Eurovi-

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Cf. http://www.europarl.europa.eu/news/expert/infopress_page/062-48814-040-02-07-910-20090209IPR48793-09-02-2009-2009-false/default_en.htm

gnette charges into plans to improve environmental standards of vehicles and develop alternative transport infrastructure. On roads in mountainous regions and conurbations, a "mark-up" cost is introduced. The extra revenue from this mark-up would be invested in alternative parallel transport links (for instance, a mark-up introduced on the Alpine section of the Lyon-Genoa motorway would finance a parallel railway route).

- *Extension of rules to all major roads and 3.5 tonne vehicles:* The existing Eurovignette rules only apply to roads which are part of the "Trans-European Network" - specifically designated international roads linking EU countries - and to vehicles above 12 tonnes. According to the new draft text, Eurovignette rules would apply to all TEN roads and roads "which customarily carry a significant volume of international goods transport" and would extend to 3.5 tonne vehicles (from 2012). Cities would maintain their right to impose local charges on their roads (such as the London congestion charge)."

(2) The European Parliament notes in this quoted press release that: "The rules are not binding but seek to set a common EU standard for Member States who choose to apply the charges." The European Parliament adopted the Transport Committee's Report in the first reading plenary vote on March, 11th 2009.

4.3 Scenario definition

(1) As the scope of road user charges and external costs varies according to the externalities being included, and in order to represent results on that basis, a Base Case and four scenarios were established:

- The **Base Case** was only used to produce calculations for 2007 – based on the current Eurovignette Directive 2006/38/EC of 17th May, 2007

[European Commission 1999]⁸ – in order to calibrate the traffic model and the model for quantifying the balances.

- The “**Base case plus**” scenario is built on the traffic demand of 2007, 2020 and 2030, calculating the situation of road user charging in 2009, 2020 and 2030. The charge rates have been changed to the level of 2009 and, additionally, the introduction of distance-related road user charges is assumed in those countries which have not yet introduced such charges. The charges would be at an average level, including an emission-related differentiation. Using this case, only the effects arising from the change in traffic demand up to 2030 can be quantified.
 - A “**European Commission case**” was used to produce calculations for 2009 and forecasts for 2020 and 2030, based on the Commission’s 2008 proposal to amend the “Revised Eurovignette Directive” 1999/62/EC [European Commission 2008a]. Using this and both the next cases, the effects are first quantified where “only” the charging rates will vary, but not the traffic demand. By then adding the traffic demand forecasts, the surpluses or deficits for the forecasting horizons 2020 and 2030 are calculated.
 - The “**Handbook minimum case**” was used to produce calculations for 2009 and forecasts for 2020 / 2030 for the whole range of HGV road user charges being discussed by the European Institutions and in the “Handbook” at a charge rate level as described (cf. chapter 4.4).
 - Similarly, the “**Handbook maximum case**” was used to produce calculations for 2009 and forecasts for 2020 and 2030 for the whole range of HGV road user charges in the “Handbook” at a charge rate level as described (cf. chapter 4.4).
- (2) The different scenarios as well as the three study years point out two different paths for the future development of road user charging:
- The first development path leaves charge rates unchanged; only transport demand and, hence, vehicle mileage change up to 2030.
 - In the second path, the impact of varying charge rates is analysed.

⁸ Comment: Latvia, Estonia and Finland do not raise any road infrastructure charges in the Base Case 2007.

A general overview of the 13 scenario cases is given in the following figure:

Figure 5: Scenario cases

Year	Base case	Base case+	EC case	Handbook minimum case	Handbook maximum case
2007	No. 1				
2009		No. 2	No. 5	No. 8	No. 11
2020		No. 3	No. 6	No. 9	No. 12
2030		No. 4	No. 7	No. 10	No. 13

4.4 Scenario variation of charge rates

(1) Based upon the scenario explanations given, the variation of the charge rates is defined as follows: The charge rates for the external costs can be taken from the Handbook and the “Revised Eurovignette Directive” from August 2008 [European Commission 2008a]. The scope of external costs from these sources is approached from a wide perspective.

(2) Various charge rates for external costs presented in the Handbook and the “Revised Eurovignette Directive” vary by vehicle weight classes (e.g. air pollution costs) whereas others are differentiated by countries. The maximum and minimum charge rates differ widely between a minimum of 0.022 and a maximum of 3.695 EUR per vkm. If the maximum charge rates for congestion costs amounting to 3.15 EUR per vkm were left out, the maximum charge rate level would amount to 0.545 EUR per vkm. Table 1 gives a brief overview of the maximum and minimum charge rates for the relevant external, as well as congestion, costs:

Table 1: Overview of charge rates with regard to external costs from the Handbook and the “Revised Eurovignette Directive”

External costs	Handbook		EC Annex III	Comments
	minimum	maximum		
	EUR per vkm			
Congestion and scarcity costs	0.0000	3.1500	0.0200	
Accident costs	-0.0077	0.0077		Variation by country
Air pollution cost	0.0140	0.1490	0.0600	Variation by vehicle classes
Noise costs	0.0006	0.3098	0.0180	
Climate change	0.0030	0.0410		Variation by vehicle classes
Other external costs				
Soil and water pollution	0.0000	0.0105		
Up- and downstream proc.	0.0119	0.0273		Variation by vehicle classes
Total EUR per vkm	0.0218	3.6953	0.0980	

Source: CE Delft 2008, European Commission 2008a

Table 2: Minimum and maximum charge rates for accidents by country according to the Handbook (in EUR)

Country	Accident costs		Country	Accident costs	
	min	max		min	max
	Charge rates [in EUR]			Charge rates [in EUR]	
AT	-0.0041	0.0041	IT	-0.0034	0.0034
BE	-0.0047	0.0047	LT	-0.0025	0.0025
BG	-0.0009	0.0009	LU	-0.0077	0.0077
CH	-0.0031	0.0031	LV	-0.0025	0.0025
CY	-0.0036	0.0036	MT	-0.0009	0.0009
CZ	-0.0024	0.0024	NL	-0.0023	0.0023
DE	-0.0029	0.0029	NO	-0.0028	0.0028
DK	-0.0032	0.0032	PL	-0.0023	0.0023
EE	-0.0023	0.0023	PT	-0.0045	0.0045
ES	-0.0037	0.0037	RO	-0.0008	0.0008
FI	-0.0025	0.0025	SE	-0.0019	0.0019
FR	-0.0048	0.0048	SI	-0.0032	0.0032
GR	-0.0038	0.0038	SK	-0.0019	0.0019
HU	-0.0020	0.0020	UK	-0.0019	0.0019
IE	-0.0044	0.0044			

Source: CE Delft 2008

(3) For the (negative) accident costs, published in the Handbook and shown in Table 2, the following assumptions by the authors of the Handbook were made: “For the lower margin [...] the average accident risk is internalised by the transport users. Based on this assumption and due to the under proportional increase in the number of accidents with increasing traffic volumes and

the fact that payments of insurances and social security to traffic accident victims are considered, the results are negative marginal costs. The upper margin is calculated following the assumption that the average accident risk is **not** internalised.”⁹

(4) The charge rates for the three external cost categories “air pollution”, “climate change”, and “up- and downstream processes” are disaggregated twice; by weight classes and by vehicle emission categories (Euro emission standards). Except for climate change costs, which vary in the minimum and maximum case, the other two external costs are equal.

⁹ Cf. CE Delft et al. (processors). Handbook on estimation of external costs in the transport sector, Version 1.1. Commissioned by the European Commission (DG TREN). p. 44, Delft, February 2008.

Table 3: Minimum and maximum charge rates differentiated by vehicle categories according to the Handbook (in EUR)

Vehicle categories by weight and emission classes		Air pollution costs		Climate change costs		Other external costs of up- and downstream processes	
		min	max	min	max	min	max
Charge rates [in EUR]							
< 7.5 t	0	0.0900	0.0900	0.0030	0.0210	0.0140	0.0140
	I	0.0530	0.0530	0.0030	0.0190	0.0124	0.0124
	II	0.0500	0.0500	0.0030	0.0180	0.0120	0.0120
	III	0.0390	0.0390	0.0030	0.0190	0.0125	0.0125
	IV	0.0230	0.0230	0.0030	0.0180	0.0117	0.0117
	V	0.0140	0.0140	0.0030	0.0180	0.0119	0.0119
	EEV	0.0140	0.0140	0.0030	0.0180	0.0119	0.0119
7.5 - 16 t	0	0.1110	0.1110	0.0050	0.0300	0.0201	0.0201
	I	0.0760	0.0760	0.0040	0.0260	0.0174	0.0174
	II	0.0690	0.0690	0.0040	0.0260	0.0170	0.0170
	III	0.0550	0.0550	0.0040	0.0260	0.0174	0.0174
	IV	0.0330	0.0330	0.0040	0.0250	0.0163	0.0163
	V	0.0200	0.0200	0.0040	0.0250	0.0165	0.0165
	EEV	0.0200	0.0200	0.0040	0.0250	0.0165	0.0165
16 - 32 t	0	0.1180	0.1180	0.0050	0.0300	0.0200	0.0200
	I	0.0730	0.0730	0.0040	0.0260	0.0174	0.0174
	II	0.0710	0.0710	0.0040	0.0250	0.0168	0.0168
	III	0.0530	0.0530	0.0040	0.0260	0.0174	0.0174
	IV	0.0320	0.0320	0.0040	0.0240	0.0162	0.0162
	V	0.0200	0.0200	0.0040	0.0250	0.0165	0.0165
	EEV	0.0200	0.0200	0.0040	0.0250	0.0165	0.0165
>32 t	0	0.1490	0.1490	0.0060	0.0410	0.0273	0.0273
	I	0.1060	0.1060	0.0060	0.0360	0.0241	0.0241
	II	0.0960	0.0960	0.0050	0.0350	0.0235	0.0235
	III	0.0760	0.0760	0.0060	0.0360	0.0239	0.0239
	IV	0.0450	0.0450	0.0050	0.0330	0.0223	0.0223
	V	0.0280	0.0280	0.0050	0.0340	0.0226	0.0226
	EEV	0.0280	0.0280	0.0050	0.0340	0.0226	0.0226

Source: CE Delft 2008

(5) In contrast to the external costs collection shown in the Handbook, the “Revised Eurovignette Directive” differentiates only between three types of external costs shown in the following Table 4. The air pollution costs vary by Euro emission standards, while the charge rates for air pollution and noise costs remain constant.

Table 4: Charge rates differentiated by Euro emission standards according to the “Revised Eurovignette Directive” (in EUR)

Emission classes	Air pollution costs	Congestion costs	Noise costs
	Charge rates [in EUR]		
0	0.13	0.02	0.018
I	0.08	0.02	0.018
II	0.08	0.02	0.018
III	0.06	0.02	0.018
IV	0.04	0.02	0.018
V	0.02	0.02	0.018
EEV	0.02	0.02	0.018

Source: CE Delft 2008, European Commission 2008a

(6) The charge rates taken from the Handbook and the “Revised Eurovignette Directive”, shown earlier, have been assumed as constant over time and are applied to all three study years 2009, 2020 and 2030. The rates are “real” charge rates at a constant price from the year 2008. They have not been adjusted for inflation over time, in order to leave out inflationary effects and to keep the total charging results comparable. By using this approach, only the effects arising from the change in traffic demand up to 2030 are quantified.

5 Results: Perspectives and road user charge surplus or deficit in different scenarios

5.1 Introduction: general overview of the results chapter

(1) *In the following, the detailed results are presented in tables and figures for each of the five scenarios (Base Case, Base Case plus, European Commission case, Handbook minimum and maximum case). In each case, the three perspectives (Road user charges, road user charge revenues and impact on the economy) as well as road user charge surpluses or deficits are shown. At the end of Chapter 5, all these are compared, whilst Chapter 6 provides an overall look at the main results and conclusions.*

(2) The following five subchapters by scenarios generally have the same composition:

1. tables and figures for the **Road user charge surplus/deficit for study countries with regard to the national economy**
2. tables and figures for the **Road user charge surplus/deficit for study countries with regard to the road hauliers**
3. **Main findings** for the individual aspects and scenario-specific conclusions

(3) The content of the individual chapters in combination with the individual study years is shown in Figure 6. It shows that the results for the Base Case scenario 2007 only relate to one year (2007), whereas the results for the four other scenarios are always given for the years 2009, 2020, and 2030. That means that for the base case, one table and one figure with the data for the year 2007 will be presented.

Figure 6: Overview of the general composition of the results chapter

Overview on scenario tables and figures			Scenarios													
			Chapter 5.2	Chapter 5.3				Chapter 5.4			Chapter 5.5			Chapter 5.6		
			Base case	Base case plus				European Commission case			Handbook minimum case			Handbook maximum case		
			only 2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030	
Perspectives	Road user charge revenues by country from	national hauliers														
		international hauliers														
		Total														
	Total charge costs for the economy by country in	national transport														
		foreign trade transport														
		Total														
	Road user charge surpluses/deficits by country with regard to the national economy	in Mio. EUR														
		in %														
	Road user charges paid by national hauliers in	inland transport														
		transport abroad														
		Total														
	Road user charge surpluses/deficits by country with regard to the road hauliers	in Mio. EUR														
		in %														

(4) The subchapters for the **Road user charge surplus/deficit for study countries with regard to the road hauliers** include three tables and three figures representing the three study years 2009, 2020 and 2030. On the one hand each of the tables display the revenues from road user charges collected by a country from all (national and international) hauliers paid within a country for using the respective inland infrastructure network (inland transport). On the other hand the road user charges paid by national road hauliers in inland transport and transport abroad are listed. Furthermore, the country-related road user charge surpluses or deficits between the revenues and charges are shown.

(5) The subchapters of the **Road user charge surplus/deficit for study countries with regard to the national economy** also contain three tables and three figures for the three study years. Each of the tables presents the total revenues from road user charges collected by a country from all (national and international) road hauliers paid in inland transport and transport abroad and the total road user charges paid for national and international transports by the economy of the same country. Finally, the road user charge surpluses or deficits result in a net distribution effect of road user charges with regard to the whole economy.

(6) The subchapter **main findings** include the conclusion/results of the respective scenarios for the three perspectives as well as the surplus/deficit. At the end, a final conclusion for the relevant scenario is drawn.

(7) To summarise the above explanation, Figure 7 gives an overview of the scenario-specific tables and figures:

Figure 7: Overview of the general composition of the results chapter

Overview on scenario tables and figures		Scenarios				
		Chapter 5.2 Base case only 2007	Chapter 5.3 Base case plus 2009, 2020, 2030	Chapter 5.4 European commission 2009, 2020, 2030	Chapter 5.5 Handbook minimum case 2009, 2020, 2030	Chapter 5.6 Handbook maximum case 2009, 2020, 2030
Perspectives	Road user charge surpluses/deficits by country with regard to the national economy	- Table 5	- Table 7	- Table 13	- Table 19	- Table 25
			- Table 8	- Table 14	- Table 20	- Table 26
			- Table 9	- Table 15	- Table 21	- Table 27
		- Figure 8	- Figure 10	- Figure 14	- Figure 18	- Figure 22
	Road user charge surpluses/deficits by country with regard to the road hauliers	- Table 6	- Table 10	- Table 16	- Table 22	- Table 28
			- Table 11	- Table 17	- Table 23	- Table 29
			- Table 12	- Table 18	- Table 24	- Table 30
		- Figure 9	- Figure 11	- Figure 15	- Figure 19	- Figure 23

5.2 Base case 2007

5.2.1 Road user charge surplus/deficit for the national economy

Table 5: Base case 2007: Road user charge surplus/deficit for study countries with regard to the national economy

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	985	570	170	739	246	33
BE	119	61	193	254	-135	-53
BG	81	80	11	91	-11	-12
CH	891	645	79	724	167	23
CZ	222	57	133	190	32	17
DE	3'351	2'150	944	3'095	256	8
DK	163	51	101	152	12	8
EE	0	0	3	3	-3	-100
ES	881	690	437	1'127	-246	-22
FI	0	0	3	3	-3	-100
FR	2'387	1'156	599	1'755	632	36
GR	63	58	15	73	-10	-14
HU	120	114	60	174	-55	-31
IE	4	0	7	7	-2	-35
IT	626	288	544	831	-206	-25
LT	27	25	12	37	-11	-29
LU	10	2	31	33	-23	-70
LV	0	0	9	9	-9	-100
NL	100	42	263	306	-206	-67
NO	8	0	16	16	-7	-47
PL	131	122	168	290	-159	-55
PT	130	101	71	172	-42	-24
RO	214	211	50	260	-46	-18
SE	45	5	66	70	-25	-36
SI	78	46	46	93	-15	-16
SK	12	5	58	63	-52	-81
UK	8	0	86	86	-78	-90
Total	10'655	6'478	4'177	10'655	-	-

(1) The following specific example for France should make understanding the theoretical explanation of the tables in chapter 5.1 easier and will ease the reading of the results from all other countries.

(2) The revenues from road user charges in France shown in Table 5 amount to a total of 2'387 million EUR in 2007, of which the French economy

has to pay 1'156 million EUR for national transports and a further 599 million EUR for international transports.

(3) The international goods transportation in France, to which the French economy does not contribute, accounts for 632 million EUR.

(4) From an economic point of view, the net distributional effects arise from the balance between the national revenues from road user charges (2'387 million EUR) and the impact of the French economy from road user charges (1'755 million EUR). In the case of France, there is a surplus within the Base Case Scenario which increases the national income by 632 million EUR (according to the current road pricing directive 2006/38/EC of 17th May, 2007 [European Commission 1999], this amount is theoretically covering the "direct costs" for building, expanding and maintaining infrastructure.).

(5) Depending on the geographic location of the respective countries, there can be negative effects on the national income as well. Thus, for example, Spain achieved revenues through road pricing amounting to 881 million EUR. According to the Base Case Scenario, the Spanish economy has to spend an overall amount of 1'127 million EUR for their goods transports at home and abroad. From an economic point of view, there is a negative distributional effect (deficit) and the national income loss is equivalent to the amount of this deficit (minus 246 million EUR).

5.2.2 Road user charge surplus/deficit for the road hauliers

Table 6: Base case 2007: Road user charge surplus/deficit for study countries with regard to the road hauliers

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	658	327	985	658	108	766	219	29
BE	74	45	119	74	74	148	-29	-20
BG	81	0	81	81	15	95	-15	-16
CH	688	203	891	688	23	710	181	25
CZ	120	102	222	120	188	309	-86	-28
DE	2'486	865	3'351	2'486	325	2'811	540	19
DK	108	56	163	108	68	176	-12	-7
EE	0	0	0	0	4	4	-4	-100
ES	790	91	881	790	381	1'171	-291	-25
FI	0	0	0	0	5	5	-5	-100
FR	1'344	1'042	2'387	1'344	111	1'456	931	64
GR	60	3	63	60	22	82	-19	-23
HU	116	3	120	116	130	246	-126	-51
IE	1	3	4	1	11	12	-8	-64
IT	413	213	626	413	306	718	-93	-13
LT	26	1	27	26	43	69	-42	-61
LU	4	6	10	4	69	72	-63	-86
LV	0	0	0	0	12	12	-12	-100
NL	77	22	100	77	266	344	-244	-71
NO	3	5	8	3	13	16	-8	-50
PL	129	2	131	129	430	559	-428	-77
PT	122	8	130	122	117	239	-108	-45
RO	213	2	214	213	79	292	-78	-27
SE	13	33	45	13	30	43	3	6
SI	55	23	78	55	85	141	-63	-45
SK	8	4	12	8	128	136	-124	-91
UK	3	6	8	3	21	24	-15	-64
Total	7'592	3'063	10'655	7'592	3'063	10'655	-	-

(1) The revenues from road user charges in France shown in Table 6 amount to a total of 2'387 million EUR in 2007, of which the French hauliers have to pay 1'344 million EUR for inland transports. A further 111 million EUR have to be paid by French hauliers for transports abroad.

(2) The road user charge revenues of France to which the French hauliers do not contribute account for 1'042 million EUR.

(3) From an economic point of view, the net distributional effects arise from the balance between the national revenues from road user charges (2'387 million EUR) and the impact of the French hauliers from road user charges for inland transport and transport abroad (1'456 million EUR). In the

case of France, there is a surplus within the Base Case Scenario which increases the national income by 931 million EUR (according to the current road pricing directive 2006/38/EC of 17th May, 2007 [European Commission 1999], this amount is theoretically covering the “direct costs” for building, expanding and maintaining infrastructure.).

(4) Depending on the geographic location of the respective countries, there can be negative effects on the national income as well. Thus, for example, Spain achieved revenues through road pricing amounting to 881 million EUR. According to the Base Case Scenario, the Spanish hauliers have to spend an overall amount of 1'456 million EUR for goods transport in inland transport and transport abroad. From an economic point of view, there is a negative distributional effect (deficit) and the national income loss is equivalent to the amount of this deficit (minus 291 million EUR).

5.2.3 Main findings

(1) The Base Case results are showing overall charges for the base year 2007 of 10.66 billion (bn) EUR (cf. Table 6 with regard to the hauliers perspective). It is clear that countries with large vehicle fleets, large TEN infrastructure networks and high charge rates both at home and for their vehicles travelling abroad, will account for large percentages of the 27-country total. As a consequence, Germany ranks first, followed by France both for road **haulier charge payments** and for **collecting revenues** (cf. Figure 9). However, whilst Spain is in third place from the road hauliers viewpoint, it drops to 5th place as regards the collection of revenues, whilst Austria and Switzerland, with high charge rates, are 3rd and 4th here. Finland and the Baltic countries, Estonia and Latvia, figure at the other end of the scale because they did not raise any HGV specific charges for the use of their road network in the year 2007 (Base Case 2007).

(2) The perspective related to the **costs for economy** needs a bit more explanation. Here it is assumed that, in order to avoid double counting, each of the two trading partners pays one half of the total charges relating to imports and exports. Another important aspect of this perspective is that for the 27 countries as a whole, national traffic accounts for about 61 % of the charges and international traffic 39 %, underlining the greater importance of national traffic in which charges paid by road hauliers and revenues collected by the state balance each other completely. Besides the national traffic, the importance in international trade measured in quantitative parameters, as well as the geographic location of the foreign trade partners in combination with the countries' own location, are two final aspects.

(3) The analysis of **road user charge surplus/deficit** balances the revenues and costs in two different ways. The first way measured the road user charge revenues gathered by countries against the costs for the economy in national and foreign trade transport. We found that Austria (33 %), Switzerland (23 %), Germany (8 %) and France (36 %) clearly collected more revenue than the costs to their economy. The Czech Republic (17 %) and Denmark (8 %) also showed a surplus. This means that the remaining 21 countries collected less revenue than the costs incurred to their economy. In the second way it reveals which countries gather higher revenues than those paid by their road hauliers to foreign countries. Somewhat similarly to the first type, only 5 countries fall into that category: Austria, Switzerland Germany, France and Sweden (almost negligible in the latter). In all the other 22 countries, hauliers paid more charges abroad than their governments collected at home.

Figure 8: Base case 2007: Road user charge surplus/deficit for study countries with regard to the national economy (in Mil. EUR)

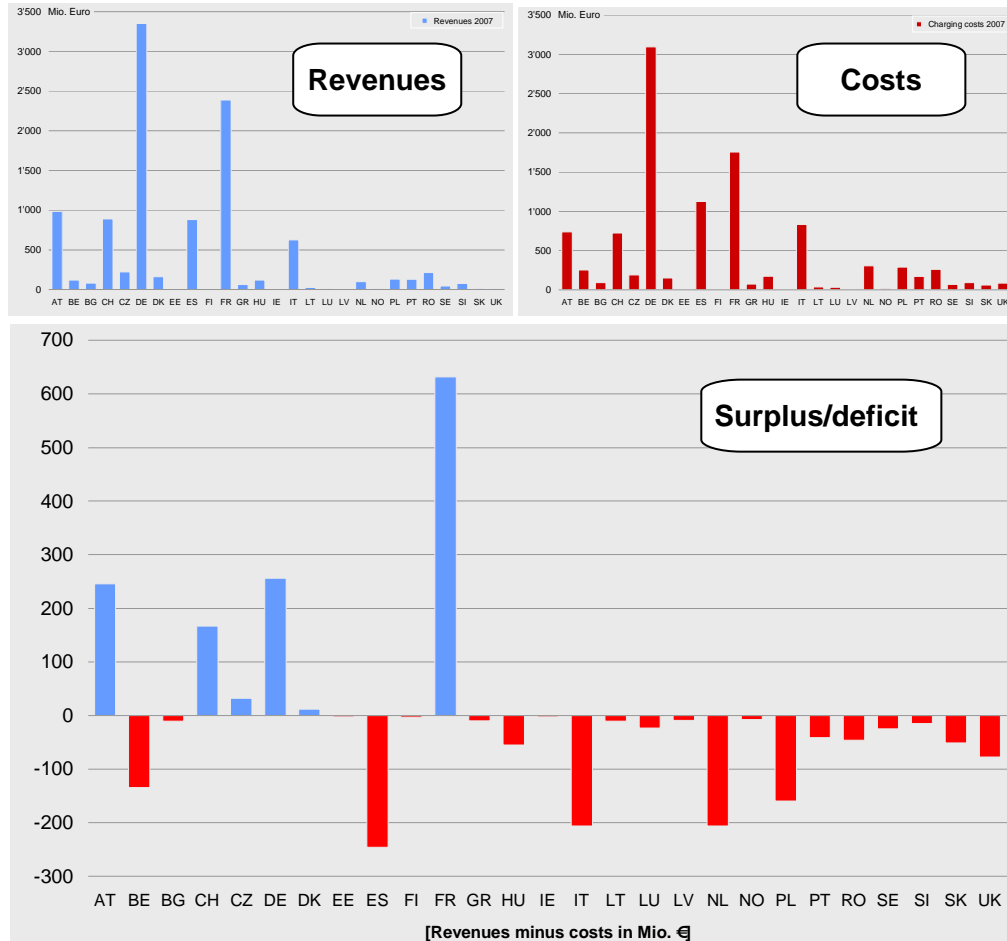
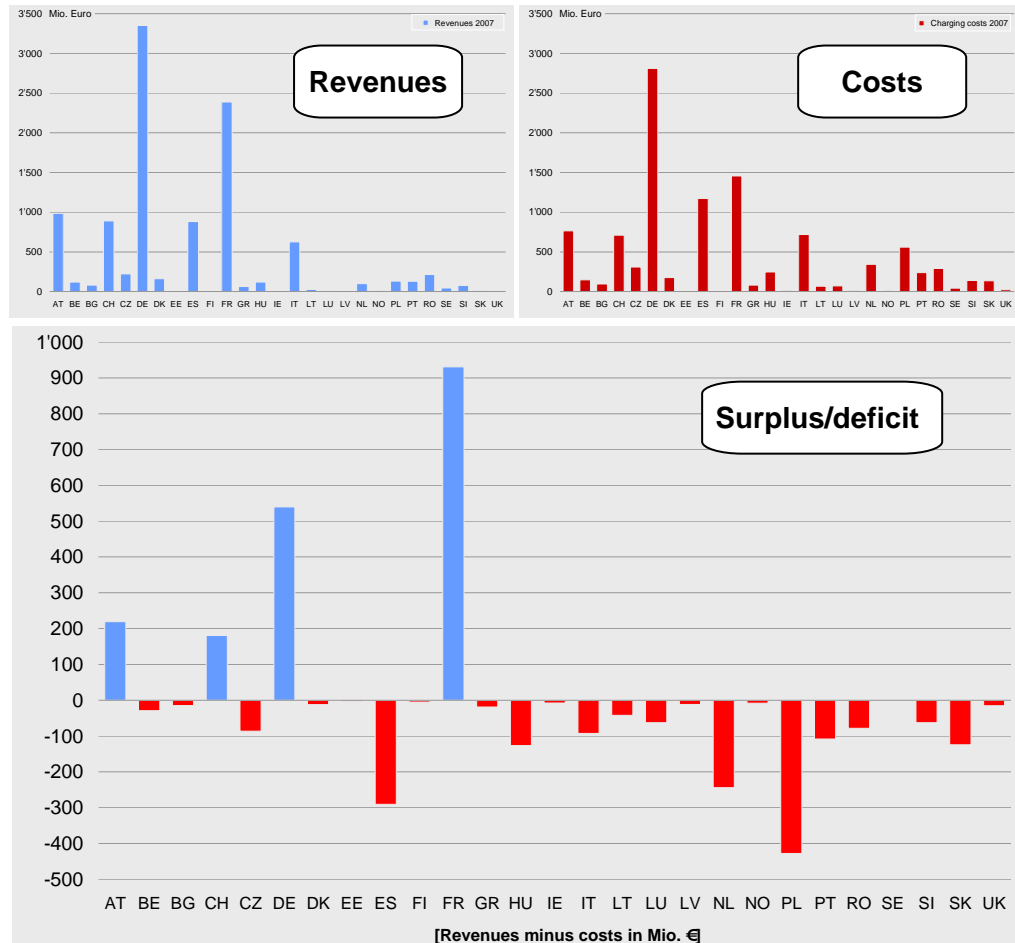


Figure 9: Base case 2007: Road user charge surplus/deficit for study countries with regard to the road hauliers (in Mil. EUR)



(4) For the amount of the surpluses/deficits, the length of the routes between origin and destination of the flows of goods, as well as the intensity of the border-crossing goods transportation, are decisive. Thus, the amount of surpluses/deficits shown in Table 5 is mainly dependant on the geographic location of a country and reflects the economic location advantages and disadvantages. The more “centrally” a country is located, the more positive are the net distributional effects in relation to the national income. Peripheral countries, on the other hand, face location disadvantages - even without the charging of external costs.

5.3 Base case+: Scenario on traffic demand 2009, 2020, 2030

5.3.1 Road user charge surplus/deficit for the national economy

Table 7: Base case+ 2009: Road user charge surplus/deficit for study countries with regard to the national economy

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	990	570	219	789	201	26
BE	292	236	248	484	-192	-40
BG	58	58	10	68	-10	-14
CH	987	645	181	826	161	20
CZ	364	197	164	361	3	1
DE	4'183	2'150	1'271	3'421	762	22
DK	213	129	140	269	-56	-21
EE	13	13	3	16	-3	-19
ES	1'208	690	730	1'420	-211	-15
FI	136	131	6	137	-1	-1
FR	2'837	1'156	910	2'066	771	37
GR	70	58	23	80	-10	-13
HU	108	102	70	172	-64	-37
IE	92	73	51	123	-31	-25
IT	639	288	633	920	-281	-31
LT	27	25	19	44	-18	-40
LU	15	7	47	53	-39	-73
LV	0	0	10	10	-10	-100
NL	465	408	369	777	-312	-40
NO	115	94	27	121	-6	-5
PL	545	540	263	804	-259	-32
PT	157	101	171	271	-115	-42
RO	60	60	54	114	-54	-47
SE	179	144	83	227	-49	-21
SI	81	46	61	107	-26	-25
SK	79	74	63	137	-58	-42
UK	1'381	1'222	252	1'474	-93	-6
Total	15'294	9'218	6'076	15'294	-	-

(1) The revenues from road user charges in Spain shown in Table 7 amount to a total of 1'208 million EUR in 2009, of which the Spanish economy has to pay 690 million EUR for national transports and a further 730 million EUR for international transports.

(2) *From an economic point of view, the net distributional effects arise from the balance between the national revenues from road user charges (1'208 million EUR) and the impact of the Spanish economy from road user charges (1'420 million EUR). In the case of Spain, there is a deficit within the Base Case plus Scenario which decreases the national income by -211 million EUR.*

(3) *Depending on the geographic location of the respective countries, there can be positive effects on the national income as well. Thus, for example, Austria achieved revenues through road pricing amounting to 990 million EUR. According to the Base Case plus Scenario, the Austrian economy has to spend an overall amount of 789 million EUR for their goods transports at home and abroad. From an economic point of view, there is a positive distributional effect (surplus) and the benefit to the national income is equivalent to the amount of this surplus (plus 201 million EUR).*

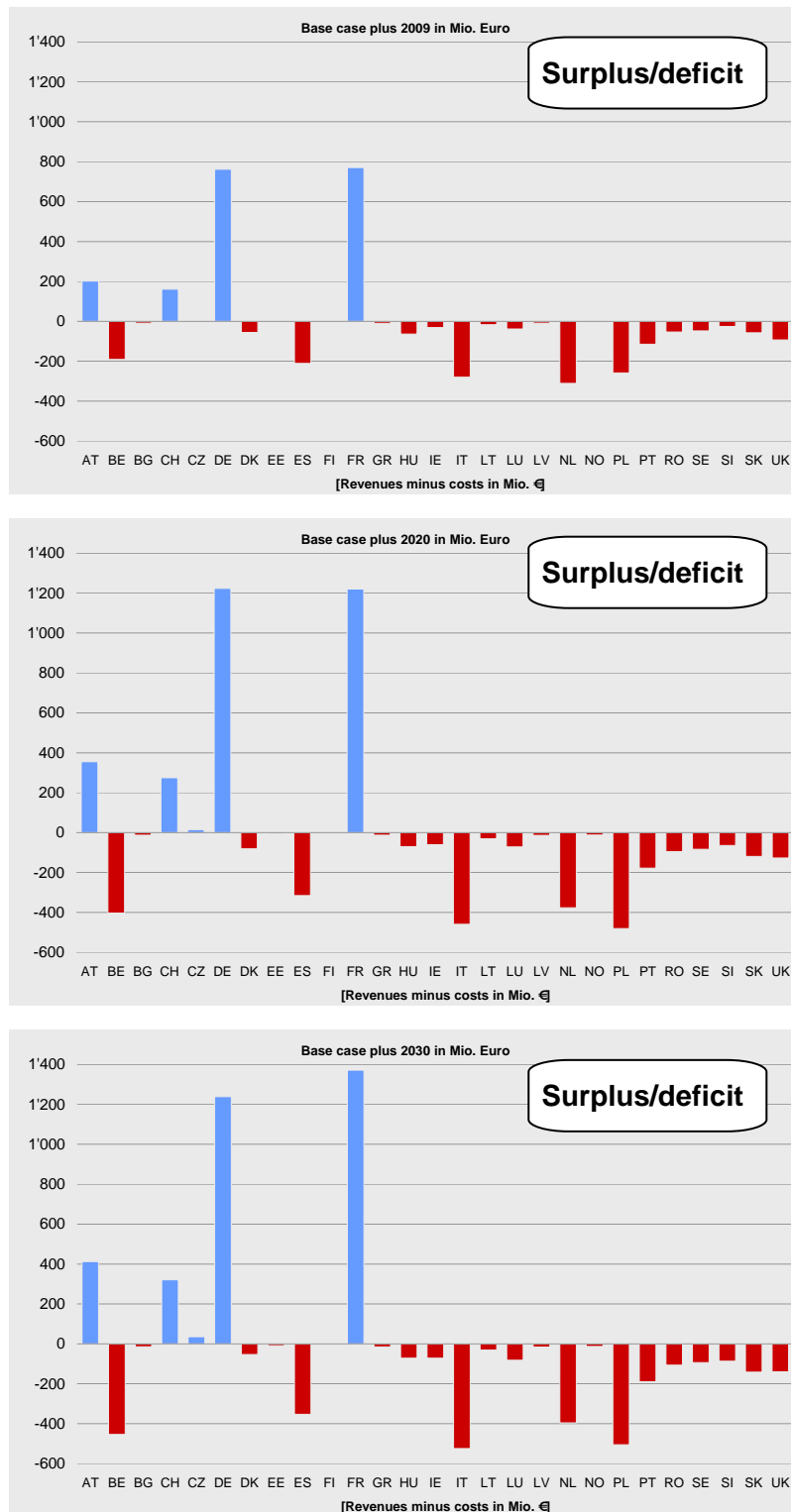
Table 8: *Base case+ 2020: Road user charge surplus/deficit for study countries with regard to the national economy*

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	1'419	658	407	1'065	355	33
BE	370	289	484	773	-404	-52
BG	85	85	14	99	-13	-14
CH	1'263	729	259	989	275	28
CZ	459	220	225	445	14	3
DE	5'714	2'711	1'780	4'491	1'224	27
DK	325	152	254	406	-81	-20
EE	13	13	7	20	-6	-32
ES	1'726	982	1'060	2'042	-316	-15
FI	158	150	9	159	0	0
FR	3'634	1'416	999	2'414	1'220	51
GR	95	77	31	108	-13	-12
HU	127	119	79	198	-71	-36
IE	145	116	89	206	-61	-30
IT	819	296	983	1'279	-460	-36
LT	34	32	33	65	-31	-47
LU	19	8	84	91	-72	-79
LV	0	0	14	14	-14	-100
NL	506	434	449	883	-377	-43
NO	148	120	41	161	-12	-8
PL	722	714	490	1'204	-482	-40
PT	192	100	271	371	-179	-48
RO	90	89	96	185	-96	-52
SE	221	157	149	306	-84	-28
SI	140	64	141	205	-65	-32
SK	92	84	128	212	-120	-57
UK	1'514	1'259	383	1'642	-128	-8
Total	20'031	11'075	8'956	20'031	-	-

Table 9: Base case+ 2030: Road user charge surplus/deficit for study countries with regard to the national economy

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	1'603	662	528	1'190	412	35
BE	380	295	540	835	-455	-54
BG	87	87	15	102	-15	-14
CH	1'391	791	280	1'071	321	30
CZ	486	217	234	451	35	8
DE	6'419	3'002	2'177	5'180	1'239	24
DK	393	159	288	447	-54	-12
EE	13	12	10	22	-9	-41
ES	1'854	1'060	1'147	2'208	-354	-16
FI	162	154	9	163	-1	-1
FR	3'932	1'598	963	2'561	1'371	54
GR	103	83	35	118	-15	-13
HU	132	122	82	204	-73	-36
IE	165	132	105	237	-72	-30
IT	864	300	1'089	1'389	-525	-38
LT	37	34	34	68	-31	-46
LU	20	8	95	103	-83	-80
LV	0	0	16	16	-16	-100
NL	518	440	474	914	-396	-43
NO	159	128	45	173	-14	-8
PL	730	721	515	1'236	-506	-41
PT	198	99	289	389	-190	-49
RO	93	92	107	200	-107	-54
SE	237	159	173	332	-94	-28
SI	160	70	177	247	-87	-35
SK	93	83	152	235	-142	-61
UK	1'560	1'269	432	1'701	-140	-8
Total	21'788	11'778	10'010	21'788	-	-

Figure 10: Base case+: Road user charge surplus/deficit for study countries with regard to the national economy (2009, 2020 and 2030 in Mil. EUR)



5.3.2 Road user charge surplus/deficit for the road hauliers

Table 10: Base case+ 2009: Road user charge surplus/deficit for study countries with regard to the road hauliers

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	663	327	990	663	154	817	173	21
BE	248	44	292	248	121	370	-77	-21
BG	58	0	58	58	20	78	-20	-25
CH	704	283	987	704	35	739	248	34
CZ	261	103	364	261	273	534	-170	-32
DE	2'718	1'465	4'183	2'718	414	3'132	1'051	34
DK	172	41	213	172	97	269	-56	-21
EE	13	0	13	13	7	20	-6	-33
ES	943	266	1'208	943	544	1'487	-279	-19
FI	133	3	136	133	7	140	-4	-3
FR	1'411	1'426	2'837	1'411	167	1'579	1'258	80
GR	63	7	70	63	28	92	-22	-24
HU	104	4	108	104	163	267	-159	-60
IE	78	15	92	78	36	114	-21	-19
IT	416	224	639	416	382	797	-158	-20
LT	26	1	27	26	62	88	-61	-70
LU	8	6	15	8	99	107	-93	-86
LV	0	0	0	0	17	17	-17	-100
NL	443	22	465	443	439	882	-417	-47
NO	103	12	115	103	13	116	-1	-1
PL	544	1	545	544	643	1'187	-642	-54
PT	141	16	157	141	257	398	-241	-61
RO	60	0	60	60	101	161	-101	-63
SE	151	28	179	151	37	188	-9	-5
SI	56	25	81	56	111	167	-86	-52
SK	77	3	79	77	159	235	-156	-66
UK	1'274	107	1'381	1'274	40	1'314	67	5
Total	10'870	4'424	15'294	10'870	4'424	15'294	-	-

(1) The revenues from road user charges in Spain shown in Table 10 amount to a total of 1'208 million EUR in 2009, of which the Spanish hauliers have to pay 943 million EUR for inland transports. A further 544 million EUR have to be paid by Spanish hauliers for transports abroad.

(2) The road user charge revenues of Spain to which the Spanish hauliers do not contribute account for 266 million EUR.

(3) From an economic point of view, the net distributional effects arise from the balance between the national revenues from road user charges (1'208 million EUR) and the impact of the Spanish hauliers from road user charges for inland transport and transport abroad (1'487 million EUR). In the

case of Spain, there is a deficit within the Base Case plus Scenario which decreases the national income by -279 million EUR.

(4) Depending on the geographic location of the respective countries, there can be positive effects on the national income as well. Thus, for example, the United Kingdom achieved revenues through road pricing amounting to 1'381 million EUR. According to the Base Case plus Scenario, the hauliers from the UK have to spend an overall amount of 1'314 million EUR for goods transport in inland transport and transport abroad. From an economic point of view, there is a positive distributional effect (surplus) and the benefit to the national income is equivalent to the amount of this surplus (plus 67 million EUR).

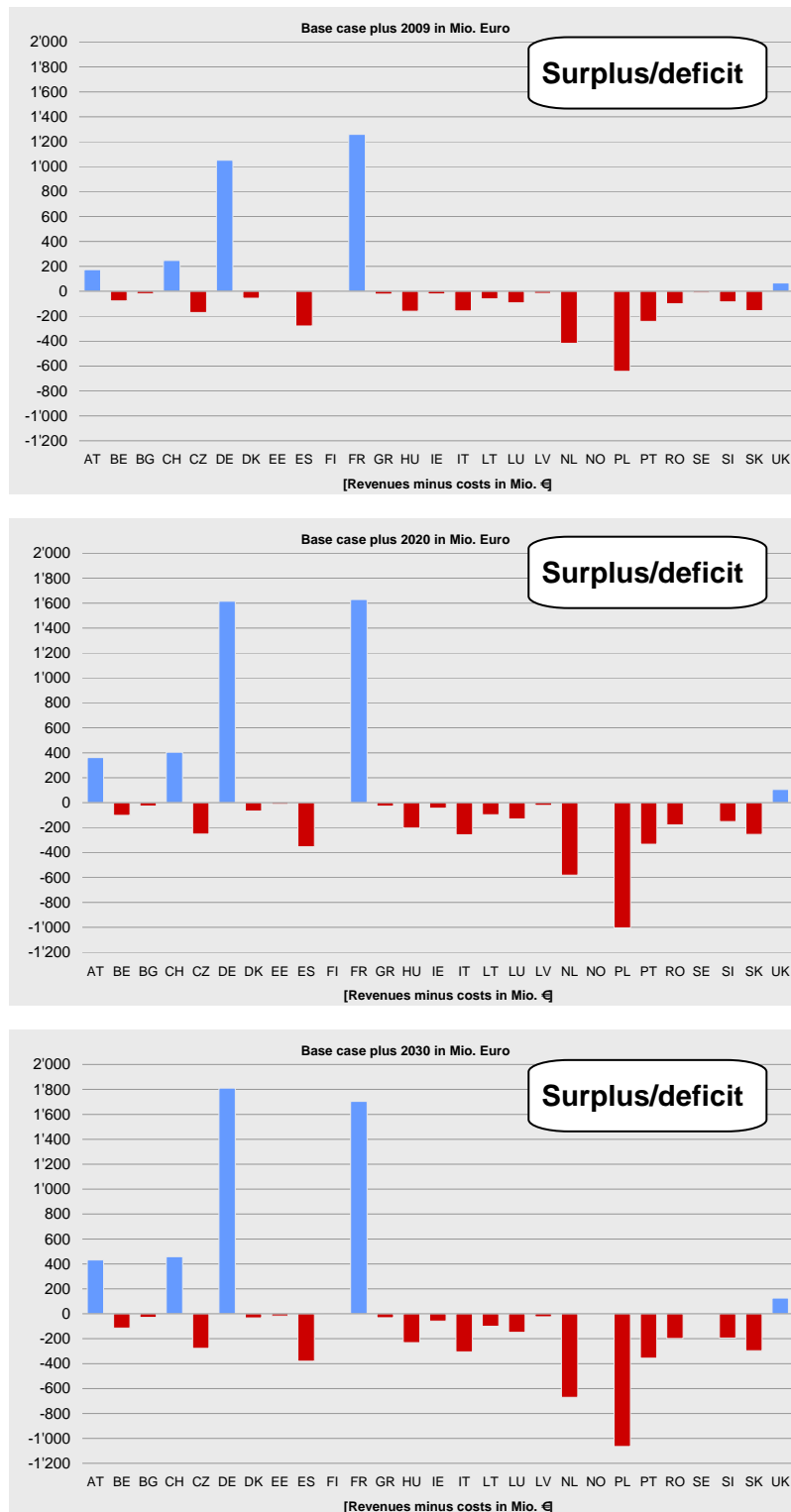
Table 11: Base case+ 2020: Road user charge surplus/deficit for study countries with regard to the road hauliers

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	829	591	1'419	829	230	1'059	361	34
BE	308	62	370	308	164	472	-102	-22
BG	85	0	85	85	27	112	-27	-24
CH	812	451	1'263	812	47	859	404	47
CZ	317	143	459	317	395	712	-253	-35
DE	3'514	2'201	5'714	3'514	585	4'099	1'615	39
DK	234	91	325	234	159	393	-69	-17
EE	13	0	13	13	13	26	-13	-49
ES	1'328	398	1'726	1'328	752	2'080	-354	-17
FI	154	5	158	154	8	162	-4	-2
FR	1'744	1'890	3'634	1'744	262	2'005	1'629	81
GR	85	10	95	85	37	123	-28	-23
HU	121	6	127	121	211	332	-205	-62
IE	123	22	145	123	67	189	-45	-24
IT	480	339	819	480	597	1'077	-258	-24
LT	33	1	34	33	98	130	-96	-74
LU	10	9	19	10	141	151	-132	-87
LV	0	0	0	0	23	23	-23	-100
NL	477	29	506	477	610	1'087	-581	-53
NO	132	17	148	132	16	148	0	0
PL	720	2	722	720	1'007	1'727	-1'005	-58
PT	165	27	192	165	361	525	-333	-63
RO	90	0	90	90	178	267	-178	-66
SE	167	54	221	167	58	225	-4	-2
SI	93	47	140	93	198	291	-151	-52
SK	88	4	92	88	259	347	-255	-74
UK	1'347	168	1'514	1'347	62	1'409	105	7
Total	13'466	6'565	20'031	13'466	6'565	20'031	-	

Table 12: Base case+ 2030: Road user charge surplus/deficit for study countries with regard to the road hauliers

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	883	720	1'603	883	288	1'171	432	37
BE	314	66	380	314	180	494	-114	-23
BG	87	0	87	87	29	117	-29	-25
CH	882	509	1'391	882	51	933	458	49
CZ	322	163	486	322	440	763	-277	-36
DE	3'934	2'485	6'419	3'934	674	4'608	1'811	39
DK	248	145	393	248	177	426	-33	-8
EE	12	0	13	12	18	31	-18	-59
ES	1'427	427	1'854	1'427	807	2'235	-380	-17
FI	158	4	162	158	9	167	-5	-3
FR	1'938	1'994	3'932	1'938	290	2'228	1'704	76
GR	92	11	103	92	42	134	-32	-24
HU	125	7	132	125	239	364	-232	-64
IE	139	26	165	139	84	223	-59	-26
IT	496	367	864	496	672	1'169	-305	-26
LT	35	1	37	35	102	137	-100	-73
LU	11	10	20	11	158	169	-148	-88
LV	0	0	0	0	24	24	-24	-100
NL	486	32	518	486	704	1'189	-671	-56
NO	140	19	159	140	18	158	1	0
PL	728	2	730	728	1'067	1'794	-1'065	-59
PT	168	30	198	168	386	555	-357	-64
RO	93	0	93	93	198	291	-198	-68
SE	170	67	237	170	61	231	6	3
SI	107	53	160	107	247	355	-195	-55
SK	88	5	93	88	301	389	-296	-76
UK	1'365	196	1'560	1'365	70	1'434	126	9
Total	14'450	7'338	21'788	14'450	7'338	21'788	-	-

Figure 11: Base case+: Road user charge surplus/deficit for study countries with regard to the road hauliers (2009, 2020 and 2030 in Mil. EUR)



5.3.3 Main findings

(1) The **Base case plus** scenario is based on the traffic demand of 2007 and charge rates of 2009. In addition, the introduction of distance-related road user charges is assumed in those countries which have not yet introduced such charges. These changes result in an increase of total road user charges in the 27 study countries by 5 bn EUR or an increase of 43 % compared to the Base Case 2007. Up to 2020, the total increase would amount to 20.0 bn EUR, having increased on average by 2.5 % per annum (p.a.). In 2030 the total would have risen to 21.8 bn EUR, after a further increase of 0.7 % p.a. in these 10 years.

(2) As regards the **revenues from national and international road hauliers**, Germany, France and Spain account for 55 % of the total revenues in 2009. Except Estonia whose revenues will decrease by 4.2 % until 2030, all other countries will record increasing revenues (cf. Figure 13). Germany's increase by 2.2 Bn EUR represents more than one third of the total growth. With a clear gap, the revenues in France will grow by 1.1 bn EUR, followed by Spain with 0.6 Bn EUR. On the other end, Estonia will get 13 and Luxembourg 15 Mil. EUR in 2009. Latvia does not get any revenues because it does not have a toll infrastructure network (Latvia has only national roads, motorways are absent). More than two thirds of the total revenues are paid by national hauliers and less than one third come from international hauliers. The share of revenues from international hauliers will increase slightly up to 2030.

(3) The **charges paid by national road hauliers in national and international transport** are headed by German and French road haulier costs (cf. Figure 13). Spain, UK and Poland follow in 3rd to 5th position. These 5 countries account for more than half of the overall total charges paid. By 2030, whilst the country ranking remains almost unchanged, Spain will have overtaken France and the three top countries will account for 55 % of the total revenues. Revenues in the UK e.g. rise by 9 % in 21 years. Other findings are that Slovenia's currently low charges will more than double by 2030 and that Ireland and Romania will also see higher than average increases.

(4) Looking at the total **costs for the economy in national and foreign trade transport**, by 2030 foreign trade transport costs will have grown compared to national transport: 46 % as compared to 40 % in 2009. Road hauliers in Germany, France, Spain and Italy will be the top payers of road user charges.

Figure 12: Base case+: Road user charge surplus/deficit for study countries with regard to the national economy (2009, 2020 and 2030 in Mil. EUR)

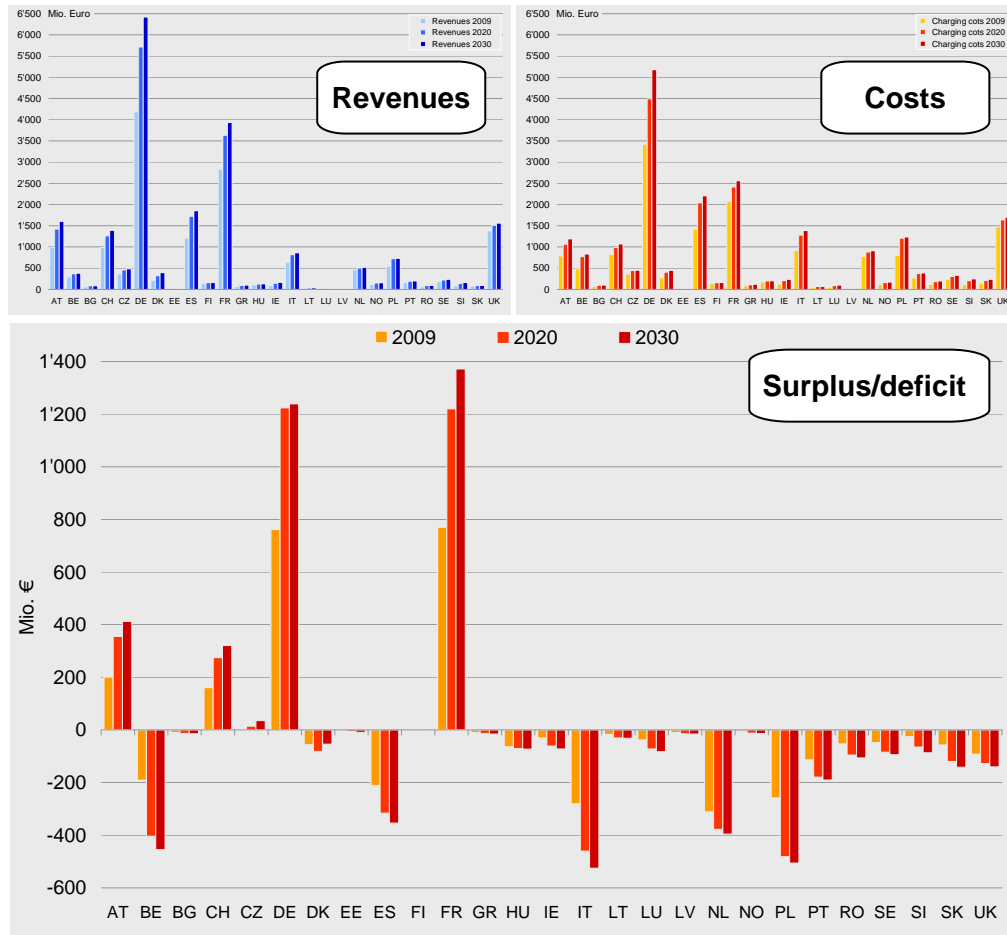


Figure 13: Base case+: Road user charge surplus/deficit for study countries with regard to the road hauliers (2009, 2020 and 2030 in Mil. EUR)



(5) The **revenues and costs for national and foreign trade transport** are shown in Figure 12. Only 5 countries show a surplus of revenues from national and international road hauliers greater than the amount their economy has to pay in road user charges for national and foreign trade transport. These are France (37 %), Austria (26 %), Germany (22 %), Switzerland (20 %) and the Czech Republic (1 %). Up to 2030, these five countries will see a higher surplus, whereas the remaining countries will mostly see a larger deficit or, in other words, their total costs for road user charges for national and foreign trade transport will increase faster than the revenues from national and international hauliers.

(6) In 2009, France will note that **revenues stemming from national and international road hauliers will exceed the charges paid by national road**

hauliers in national and international transport, by about 80 %. Besides France, only Switzerland and Germany (both 34 %), Austria (21 %) and the United Kingdom (5 %) will have a surplus. Up to 2030 the relation between revenues and costs will slightly decrease in France (76 %), whereas Switzerland, Germany, Austria and the United Kingdom will see a higher surplus. Up to 2030, the Scandinavian countries, Sweden and Norway, will reach a surplus of 3 % and 0.4 %. In absolute numbers, Germany especially will improve its surplus up to 2030, with a surplus to the German State amounting to 1.0 Bn EUR in 2009, increasing up to 2030 by 0.8 Bn EUR to 1.8 Bn EUR.

5.4 European Commission case: 2009, 2020, 2030

5.4.1 Road user charge surplus/deficit for the national economy

Table 13: European Commission case 2009: Road user charge surplus/deficit for study countries with regard to the national economy

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	1'320	790	338	1'128	192	17
BE	487	179	498	677	-189	-28
BG	31	28	20	49	-18	-36
CH	1'281	879	256	1'135	145	13
CZ	657	362	282	644	13	2
DE	6'825	3'508	2'159	5'668	1'157	20
DK	230	86	241	327	-97	-30
EE	15	15	8	23	-7	-33
ES	2'261	1'296	1'251	2'547	-286	-11
FI	161	149	16	165	-5	-3
FR	4'496	1'836	1'513	3'349	1'148	34
GR	174	144	44	188	-15	-8
HU	146	64	142	207	-61	-30
IE	118	83	97	180	-61	-34
IT	1'349	666	1'007	1'673	-324	-19
LT	39	16	44	60	-21	-35
LU	27	7	82	89	-62	-70
LV	0	0	24	24	-24	-100
NL	559	352	700	1'052	-493	-47
NO	142	108	51	159	-17	-11
PL	484	327	512	839	-355	-42
PT	277	178	304	482	-206	-43
RO	43	37	107	144	-101	-70
SE	197	91	157	248	-51	-21
SI	141	81	99	180	-39	-22
SK	84	52	121	173	-90	-52
UK	1'713	1'395	449	1'844	-131	-7
Total	23'255	12'731	10'524	23'255	-	-

(1) The revenues from road user charges in Italy shown in Table 13 amount to a total of 1'349 million EUR in 2009, of which the Italian economy has to pay 666 million EUR for national transports and a further 1'007 million EUR for international transports.

(2) *From an economic point of view, the net distributional effects arise from the balance between the national revenues from road user charges (1'349 million EUR) and the impact of the Italian economy from road user charges (1'673 million EUR). In the case of Italy, there is a deficit within the European Commission case which decreases the national income by -324 million EUR.*

(3) *Depending on the geographic location of the respective countries, there can be positive effects on the national income as well. Thus, for example, the Czech Republic achieved revenues through road pricing amounting to 657 million EUR. According to the European Commission case, the Czech economy has to spend an overall amount of 644 million EUR for their goods transports at home and abroad. From an economic point of view, there is a positive distributional effect (surplus) and the benefit to the national income is equivalent to the amount of this surplus (plus 13 million EUR).*

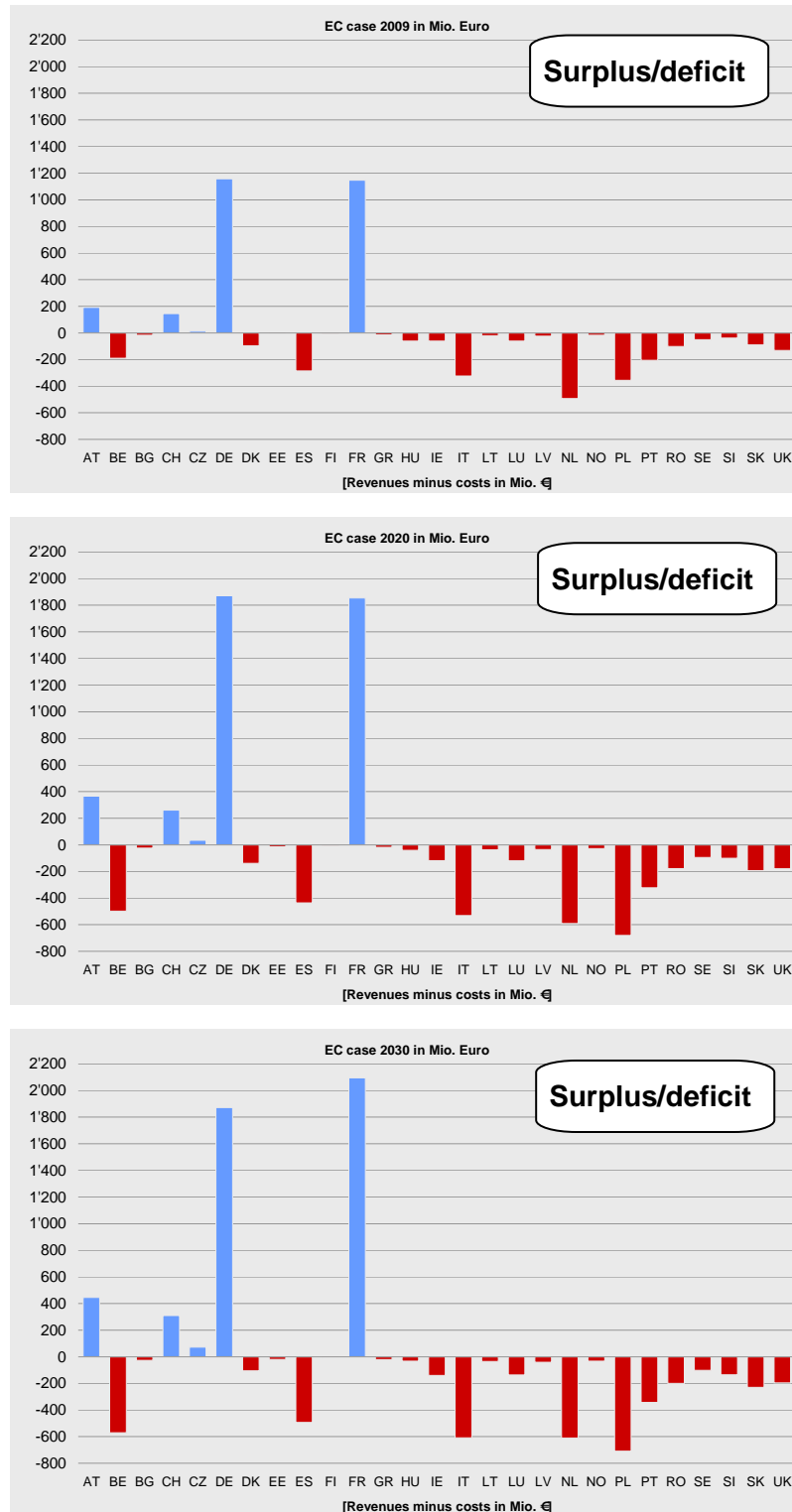
Table 14: *European Commission case 2020: Road user charge surplus/deficit for study countries with regard to the national economy*

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	1'908	913	629	1'542	366	24
BE	654	219	933	1'152	-498	-43
BG	45	41	28	69	-24	-35
CH	1'355	729	366	1'095	260	24
CZ	828	405	388	793	35	4
DE	9'323	4'423	3'029	7'452	1'871	25
DK	404	102	442	543	-140	-26
EE	16	14	16	30	-15	-48
ES	3'234	1'845	1'826	3'671	-436	-12
FI	189	171	24	194	-5	-3
FR	5'761	2'248	1'660	3'908	1'854	47
GR	235	193	60	253	-18	-7
HU	198	75	165	240	-42	-17
IE	185	133	171	304	-119	-39
IT	1'746	687	1'590	2'277	-531	-23
LT	58	20	75	95	-37	-39
LU	36	8	148	156	-120	-77
LV	0	0	35	35	-35	-100
NL	633	375	848	1'223	-591	-48
NO	185	137	77	214	-29	-13
PL	700	432	948	1'380	-680	-49
PT	339	178	484	661	-323	-49
RO	64	55	187	242	-177	-73
SE	285	99	281	379	-94	-25
SI	240	111	229	340	-101	-30
SK	110	59	245	304	-194	-64
UK	1'948	1'438	690	2'127	-179	-8
Total	30'679	15'109	15'571	30'679	-	-

Table 15: *European Commission case 2030: Road user charge surplus/deficit for study countries with regard to the national economy*

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	2'185	919	821	1'740	445	26
BE	686	223	1'033	1'257	-570	-45
BG	47	42	31	73	-27	-36
CH	1'495	791	395	1'185	309	26
CZ	874	399	403	802	72	9
DE	10'472	4'899	3'701	8'599	1'873	22
DK	501	106	501	607	-106	-17
EE	15	14	20	34	-19	-55
ES	3'476	1'992	1'977	3'969	-493	-12
FI	193	175	25	200	-7	-4
FR	6'237	2'537	1'605	4'142	2'094	51
GR	254	207	68	275	-22	-8
HU	216	77	172	249	-33	-13
IE	212	151	202	353	-141	-40
IT	1'863	695	1'776	2'471	-609	-25
LT	65	21	79	100	-35	-35
LU	39	8	167	176	-136	-78
LV	0	0	41	41	-41	-100
NL	663	379	893	1'272	-610	-48
NO	200	146	87	233	-32	-14
PL	727	437	999	1'435	-708	-49
PT	350	176	517	693	-343	-49
RO	67	57	210	266	-199	-75
SE	322	100	324	424	-102	-24
SI	275	122	288	410	-136	-33
SK	117	58	289	347	-229	-66
UK	2'033	1'449	780	2'229	-196	-9
Total	33'584	16'180	17'404	33'584	-	-

Figure 14: European Commission case: Road user charge surplus/deficit for study countries with regard to the national economy (2009, 2020 and 2030 in Mil. EUR)



5.4.2 Road user charge surplus/deficit for the road hauliers

Table 16: *European Commission case 2009: Road user charge surplus/deficit for study countries with regard to the road hauliers*

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	909	410	1'320	909	258	1'168	152	13
BE	241	246	487	241	204	445	43	10
BG	31	0	31	31	37	68	-37	-54
CH	949	331	1'281	949	58	1'007	273	27
CZ	475	181	657	475	455	930	-273	-29
DE	4'435	2'390	6'825	4'435	722	5'157	1'668	32
DK	150	79	230	150	169	319	-89	-28
EE	15	0	15	15	15	30	-14	-49
ES	1'765	497	2'261	1'765	888	2'653	-392	-15
FI	154	6	161	154	19	173	-12	-7
FR	2'239	2'258	4'496	2'239	289	2'528	1'968	78
GR	157	16	174	157	50	207	-34	-16
HU	94	52	146	94	277	371	-225	-61
IE	92	27	118	92	67	159	-40	-25
IT	893	456	1'349	893	544	1'437	-88	-6
LT	25	15	39	25	115	140	-101	-72
LU	11	16	27	11	171	182	-155	-85
LV	0	0	0	0	39	39	-39	-100
NL	480	79	559	480	790	1'270	-711	-56
NO	122	20	142	122	26	148	-6	-4
PL	446	38	484	446	1'093	1'540	-1'055	-69
PT	249	28	277	249	454	703	-426	-61
RO	41	1	43	41	191	232	-190	-82
SE	109	88	197	109	58	167	30	18
SI	98	43	141	98	176	274	-134	-49
SK	66	18	84	66	278	344	-260	-76
UK	1'498	214	1'713	1'498	67	1'565	148	9
Total	15'746	7'509	23'255	15'746	7'509	23'255	-	-

(1) The revenues from road user charges in Italy shown in Table 16 amount to a total of 1'349 million EUR in 2009, of which the Italian hauliers have to pay 893 million EUR for inland transports. A further 544 million EUR have to be paid by Italian hauliers for transports abroad.

(2) The road user charge revenues of Italy to which the Italian hauliers do not contribute account for 456 million EUR.

(3) From an economic point of view, the net distributional effects arise from the balance between the national revenues from road user charges (1'349 million EUR) and the impact of the Italian hauliers from road user charges for inland transport and transport abroad (1'437 million EUR). In the

case of Italy, there is a deficit within the European Commission case which decreases the national income by -88 million EUR.

(4) Depending on the geographic location of the respective countries, there can be positive effects on the national income as well. Thus, for example Germany achieved revenues through road pricing amounting to 6'825 million EUR. According to the European Commission case, the German hauliers have to spend an overall amount of 5'157 million EUR for goods transport in inland transport and transport abroad. From an economic point of view, there is a positive distributional effect (surplus) and the benefit to the national income is equivalent to the amount of this surplus (plus 1'668 million EUR).

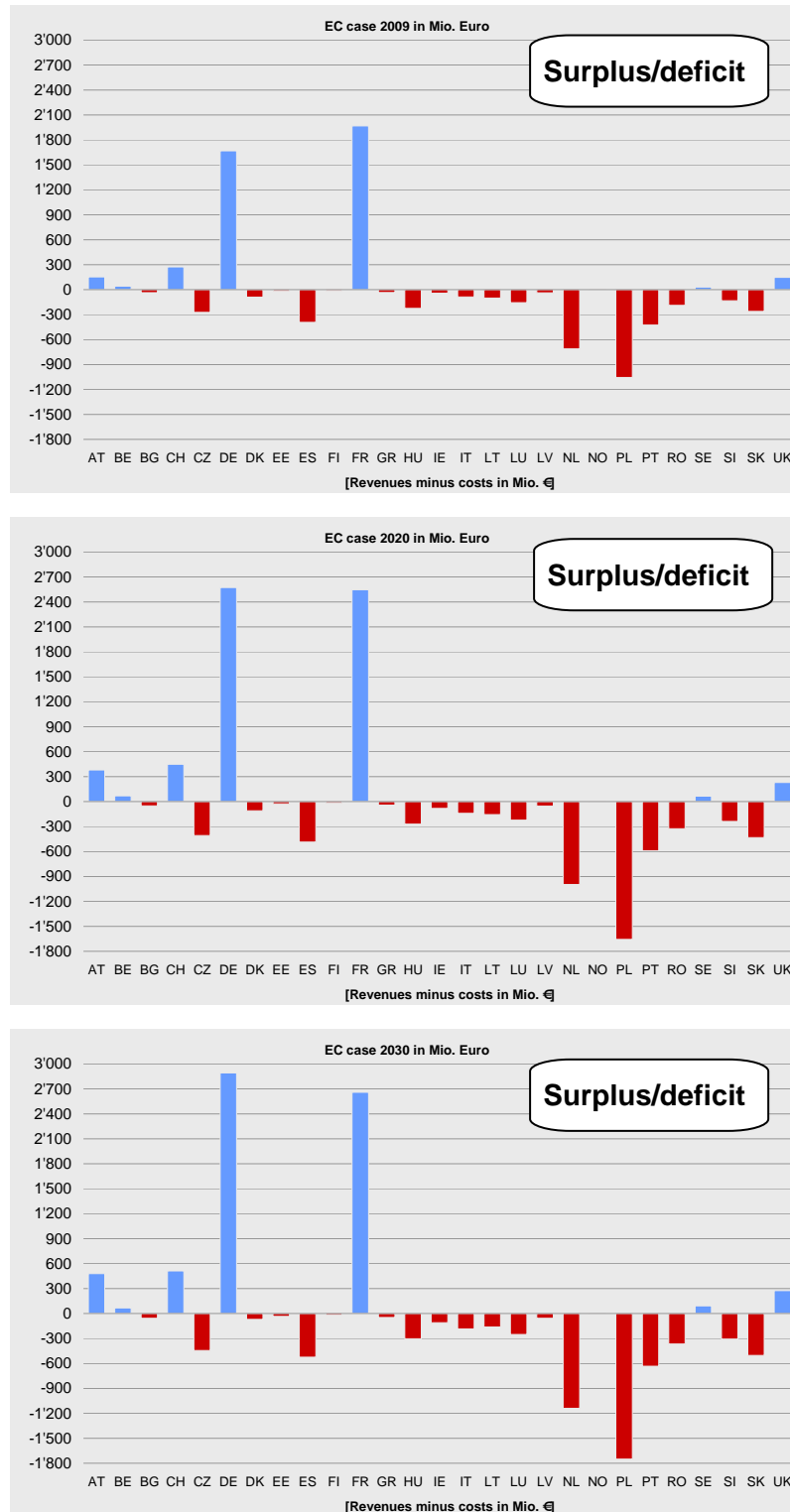
Table 17: European Commission case 2020: Road user charge surplus/deficit for study countries with regard to the road hauliers

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	1'138	770	1'908	1'138	390	1'528	380	25
BE	309	345	654	309	275	584	70	12
BG	45	0	45	45	51	96	-51	-53
CH	827	529	1'355	827	79	906	450	50
CZ	575	252	828	575	659	1'235	-407	-33
DE	5'733	3'590	9'323	5'733	1'018	6'750	2'573	38
DK	231	173	404	231	283	514	-110	-21
EE	15	1	16	15	28	43	-27	-63
ES	2'490	745	3'234	2'490	1'232	3'721	-487	-13
FI	179	10	189	179	25	205	-16	-8
FR	2'767	2'995	5'761	2'767	449	3'216	2'546	79
GR	212	23	235	212	65	277	-42	-15
HU	112	86	198	112	356	468	-270	-58
IE	144	41	185	144	124	268	-83	-31
IT	1'030	716	1'746	1'030	857	1'887	-141	-7
LT	34	24	58	34	182	216	-158	-73
LU	15	21	36	15	244	259	-223	-86
LV	0	0	0	0	52	52	-52	-100
NL	530	103	633	530	1'098	1'628	-995	-61
NO	157	29	185	157	34	190	-5	-3
PL	638	62	700	638	1'720	2'358	-1'658	-70
PT	291	48	339	291	640	931	-592	-64
RO	62	3	64	62	330	391	-327	-84
SE	128	157	285	128	92	220	65	29
SI	159	81	240	159	318	477	-238	-50
SK	83	27	110	83	459	543	-433	-80
UK	1'613	335	1'948	1'613	105	1'717	231	13
Total	19'515	11'164	30'679	19'515	11'164	30'679	-	-

Table 18: *European Commission case 2030: Road user charge surplus/deficit for study countries with regard to the road hauliers*

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	1'217	967	2'185	1'217	488	1'705	479	28
BE	318	368	686	318	302	620	66	11
BG	46	0	47	46	57	103	-56	-55
CH	898	597	1'495	898	86	984	511	52
CZ	585	288	874	585	733	1'319	-445	-34
DE	6'418	4'054	10'472	6'418	1'162	7'580	2'892	38
DK	253	248	501	253	318	572	-71	-12
EE	14	1	15	14	36	50	-35	-70
ES	2'676	800	3'476	2'676	1'324	4'001	-525	-13
FI	184	9	193	184	27	211	-18	-8
FR	3'076	3'160	6'237	3'076	501	3'578	2'659	74
GR	228	26	254	228	74	302	-48	-16
HU	118	99	216	118	403	520	-304	-58
IE	163	49	212	163	158	321	-110	-34
IT	1'076	786	1'863	1'076	972	2'048	-185	-9
LT	38	27	65	38	189	227	-162	-71
LU	16	24	39	16	274	290	-250	-86
LV	0	0	0	0	57	57	-57	-100
NL	546	116	663	546	1'257	1'803	-1'140	-63
NO	168	33	200	168	37	205	-5	-2
PL	658	69	727	658	1'820	2'478	-1'751	-71
PT	298	52	350	298	685	983	-633	-64
RO	64	3	67	64	370	434	-367	-85
SE	133	189	322	133	97	231	92	40
SI	184	91	275	184	399	583	-308	-53
SK	87	30	117	87	533	620	-503	-81
UK	1'641	392	2'033	1'641	118	1'759	274	16
Total	21'105	12'478	33'584	21'105	12'478	33'584	-	-

Figure 15: European Commission case: Road user charge surplus/deficit for study countries with regard to the road hauliers (2009, 2020 and 2030 in Mil. EUR)



5.4.3 Main findings

(1) The Commission's proposal is based on a different development compared to the two Base Cases, as the basic assumption is that the Commission's 2008 proposal to amend the 1999 Eurovignette Directive has been implemented in the three study years 2009, 2020 and 2030.

(2) The first point to note is that total charges in 2009 are estimated at 23.3 bn EUR, more than double the 10.66 bn EUR in the two base cases. The growth in total charges from 2009 to 2020 is 2.6 % p.a., decreasing to 1.1 % p.a. in the next 10 years; these rates are fairly close to the Base Case plus (2.5 % and 0.8 %).

(3) As in the Base Case plus, the most important contributors to the **road user charges** are hauliers from Germany (22 %), Spain (11 %) and France (11 %) shown in Figure 17. But, whilst Germany and Spain register an increase of 2.1% p.a. in the 21 year period covered, i.e. more than the average growth of 1.8%, charges paid by French road hauliers increase by 1.6%. Six other countries (United Kingdom (UK), Poland, the Netherlands, Austria, Switzerland and Czech Republic) occupy a middle place in 2009, but within this group, Polish hauliers' charges rise by 2.3 % p.a. to 2030, whilst British hauliers' charges grow at 0.6 % and the Swiss charges actually decrease by 0.1 % p.a. Such changes in consequences over the 21 year period also occur at the lower end of the scale.

(4) Looking at the **revenues from national and international road hauliers**, the relevant tables and figures show that following Germany in its "normal" first position, accounting for almost 30 % of total revenues. France (19 %) has now taken the second position from Spain (10 %) whose revenues are also expected to grow less than average to 2030, whereas both German and French revenues increase faster. Such faster increases are particularly evident for Slovenia (3.2 % p.a. to 2030) Lithuania and Austria, whereas the UK, Netherlands and Switzerland can see their income grow at a rate of 0.7 to 0.8 % p.a.

Figure 16: European Commission case: Road user charge surplus/deficit for study countries with regard to the national economy (2009, 2020 and 2030 in Mil. EUR)

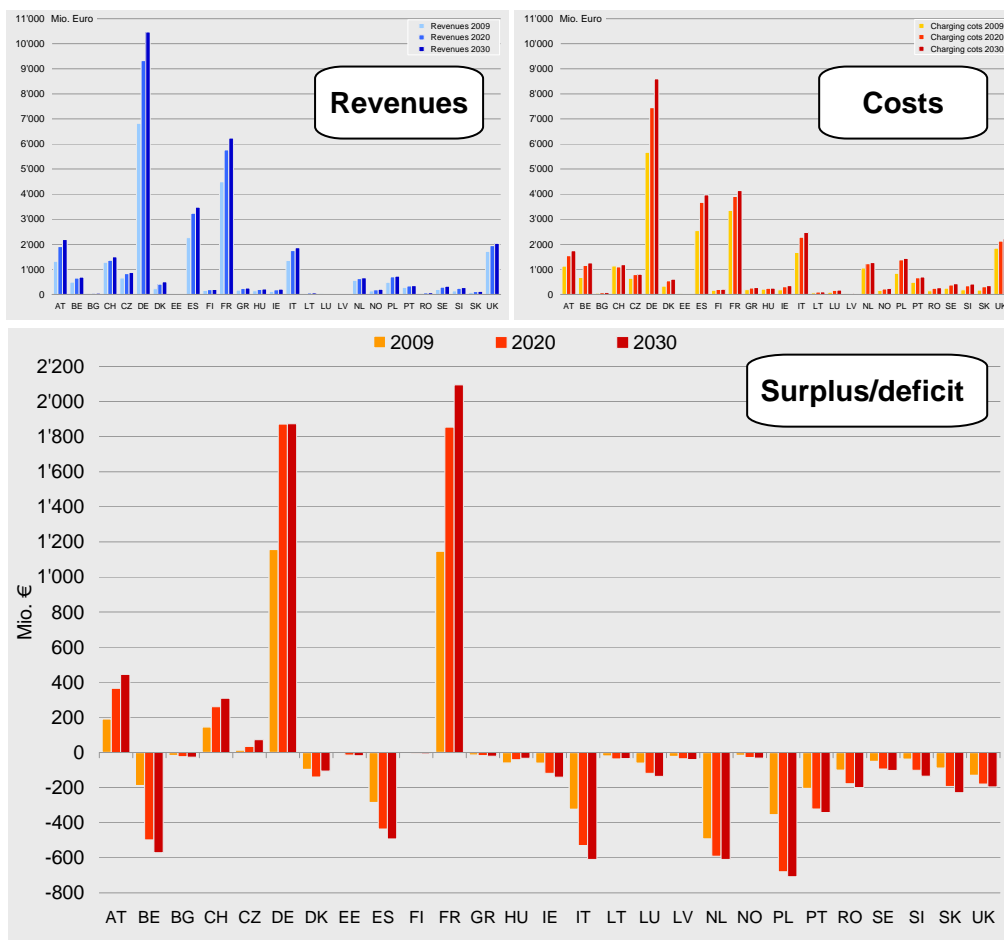
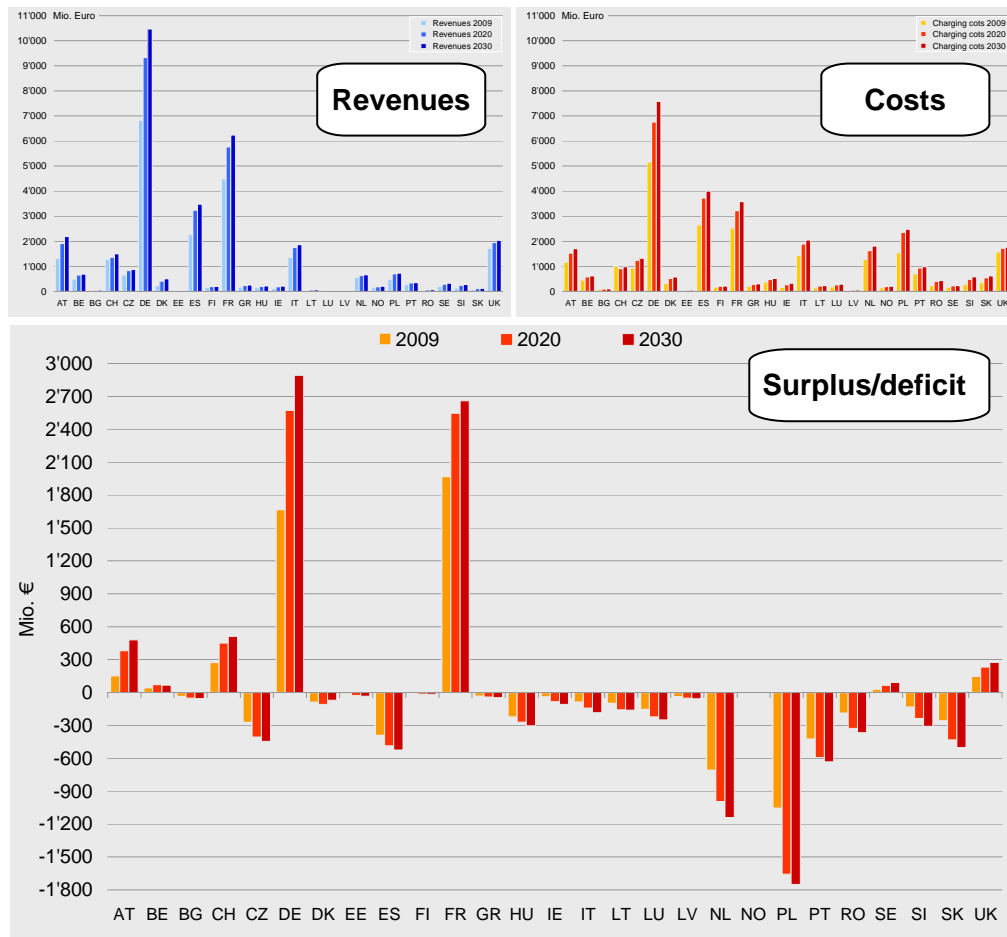


Figure 17: European Commission case: Road user charge surplus/deficit for study countries with regard to the road hauliers (2009, 2020 and 2030 in Mil. EUR)



(5) Turning to the **costs for the economy in national and foreign trade transport**, it should be borne in mind that foreign trade transport covered 10.5 bn EUR or 45 % of total charges in 2009. The rise to 17.4 bn EUR or a 52 % increase in 2030, indicates the growth of international, relative to national, transport. Here again Germany leads, but its share of the total is restricted to 21 %. France - in 2nd place - shows a small increase up to 2020, but then decreases marginally by 2030. As a result, France will be overtaken by Spain and Italy, the latter growing fast. The Italian growth rate is overtaken by Belgium, which rises to 5th place for the first time in these analyses. Growth rates to 2030 between 4 and 5 % p.a. are also registered by Slovenia, Estonia, Austria and Slovakia, whilst Poland also grows faster than the average 2.4 %.

(6) The above conclusions lead to the establishment of **surpluses or deficits**, shown in Figure 14 and Figure 15. The first figure compares the **revenues with the road user charge costs for the economy by country in national and foreign trade transport**. In France, Germany, Austria, Switzerland and the Czech Republic the revenues collected exceeded the costs, whereas at the other end of the scale, Luxembourg and Romania only gathered about 30 % of them in 2009. This share is further reduced to 22-25 % in 2030. The spans of surpluses/deficits are indeed wide as clearly shown in the figures.

(7) The second figure shows the difference between the **revenues from national and international road hauliers and the charges paid by its road hauliers**. In 2009, seven countries had a surplus by collecting more than their hauliers paid out: these were France, Germany, Switzerland, Sweden, Austria, Belgium and the UK; all maintained this surplus in 2030, however, not necessarily in the same order.

5.5 Handbook minimum case: 2009, 2020, 2030

5.5.1 Road user charge surplus/deficit for the national economy

Table 19: Handbook minimum case 2009: Road user charge surplus/deficit for study countries with regard to the national economy

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	1'073	570	310	880	194	22
BE	388	142	437	579	-192	-33
BG	30	28	18	46	-16	-34
CH	1'236	849	238	1'087	149	14
CZ	591	326	255	580	11	2
DE	6'207	3'191	1'949	5'140	1'067	21
DK	197	67	217	284	-88	-31
EE	14	13	7	20	-6	-32
ES	2'008	1'150	1'124	2'274	-266	-12
FI	142	132	14	145	-4	-3
FR	4'083	1'667	1'366	3'033	1'050	35
GR	149	123	39	162	-14	-8
HU	115	51	126	176	-61	-35
IE	104	73	86	159	-55	-34
IT	1'181	576	918	1'494	-313	-21
LT	31	12	38	50	-20	-39
LU	22	6	73	79	-57	-72
LV	0	0	21	21	-21	-100
NL	466	293	622	915	-449	-49
NO	126	95	46	140	-15	-10
PL	377	254	454	709	-332	-47
PT	247	159	272	431	-184	-43
RO	34	29	95	124	-90	-73
SE	162	72	140	212	-50	-24
SI	126	73	90	162	-36	-22
SK	68	42	108	150	-82	-55
UK	1'515	1'233	402	1'635	-120	-7
Total	20'689	11'225	9'464	20'689	-	-

(1) The revenues from road user charges in the Netherlands shown in Table 19 amounts to a total of 466 million EUR in 2009, of which the Dutch economy has to pay 293 million EUR for national transports and a further 622 million EUR for international transports.

(2) *From an economic point of view, the net distributional effects arise from the balance between the national revenues from road user charges (466 million EUR) and the impact of the Dutch economy from road user charges (915 million EUR). In the case of the Netherlands, there is a deficit within the Handbook Minimum case which decreases the national income by -449 million EUR.*

(3) *Depending on the geographic location of the respective countries, there can be positive effects on the national income as well. Thus, for example, Switzerland achieved revenues through road pricing amounting to 1'236 million EUR. According to the Handbook Minimum case, the Swiss economy has to spend an overall amount of 1'087 million EUR for their goods transports at home and abroad. From an economic point of view, there is a positive distributional effect (surplus) and the benefit to the national income is equivalent to the amount of this surplus (plus 149 million EUR).*

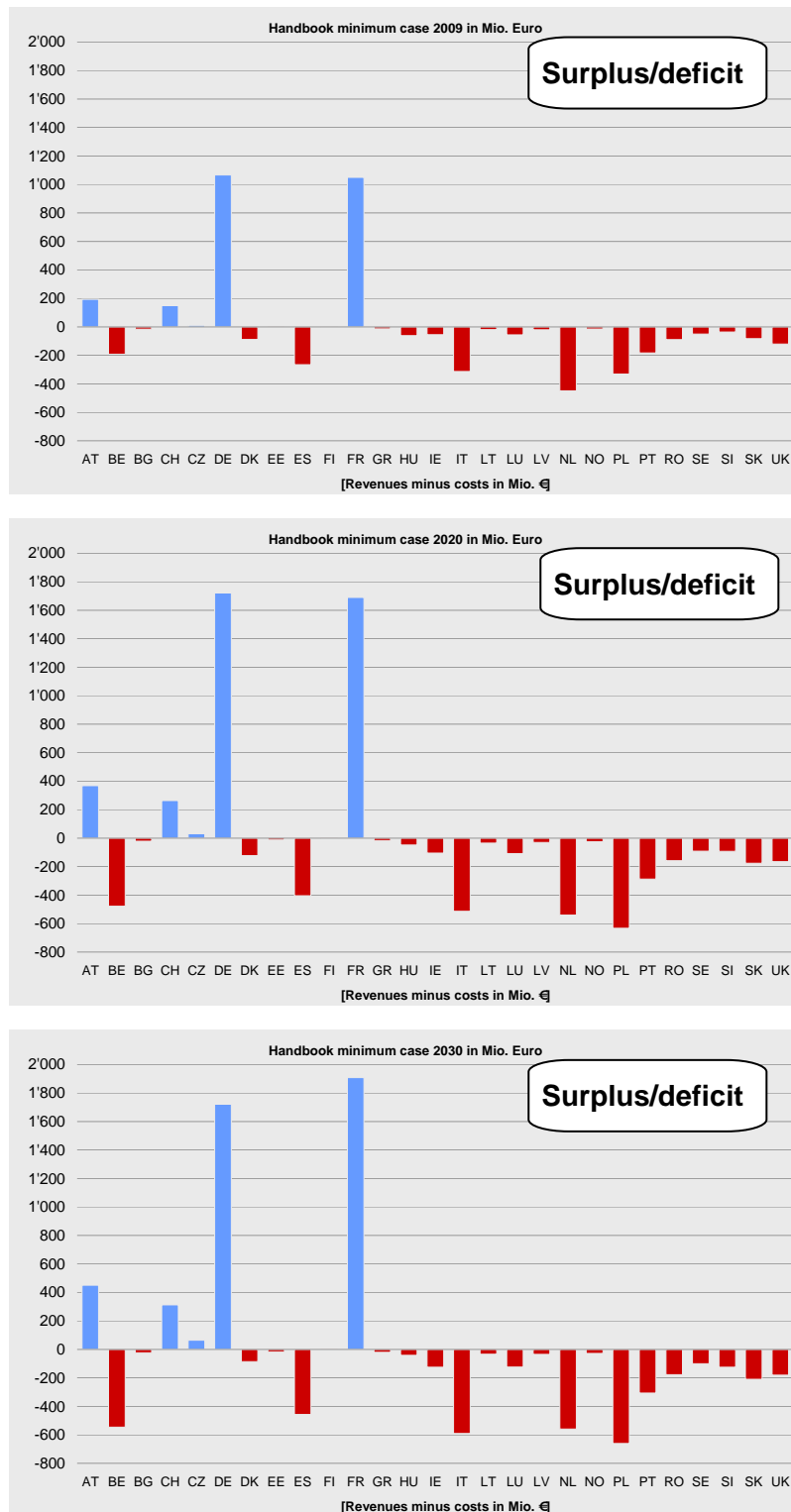
Table 20: *Handbook minimum case 2020: Road user charge surplus/deficit for study countries with regard to the national economy*

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	1'604	658	578	1'236	369	30
BE	521	174	825	999	-478	-48
BG	44	41	25	66	-22	-33
CH	1'565	961	340	1'301	264	20
CZ	745	365	350	715	30	4
DE	8'479	4'022	2'736	6'759	1'720	25
DK	356	79	400	479	-123	-26
EE	14	13	14	27	-13	-47
ES	2'872	1'638	1'639	3'277	-405	-12
FI	167	150	20	171	-4	-2
FR	5'232	2'041	1'501	3'542	1'690	48
GR	201	165	53	218	-17	-8
HU	156	59	145	204	-48	-23
IE	163	116	152	269	-106	-39
IT	1'530	594	1'450	2'044	-514	-25
LT	45	15	65	81	-35	-44
LU	30	7	132	139	-109	-78
LV	0	0	31	31	-31	-100
NL	527	312	754	1'067	-539	-51
NO	164	121	69	190	-25	-13
PL	545	336	841	1'177	-633	-54
PT	303	159	432	591	-288	-49
RO	51	44	166	209	-158	-76
SE	239	78	253	331	-92	-28
SI	216	100	209	309	-93	-30
SK	89	48	218	265	-176	-66
UK	1'724	1'270	618	1'888	-165	-9
Total	27'581	13'564	14'017	27'581	-	-

Table 21: *Handbook minimum case 2030: Road user charge surplus/deficit for study countries with regard to the national economy*

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	1'868	662	755	1'417	450	32
BE	547	177	916	1'093	-546	-50
BG	46	42	27	70	-24	-34
CH	1'721	1'041	367	1'409	312	22
CZ	787	359	364	723	64	9
DE	9'524	4'455	3'348	7'803	1'721	22
DK	453	83	456	539	-86	-16
EE	13	12	18	30	-17	-56
ES	3'087	1'768	1'775	3'543	-457	-13
FI	170	155	21	176	-6	-3
FR	5'663	2'303	1'454	3'756	1'907	51
GR	217	177	61	238	-20	-9
HU	171	61	151	212	-41	-20
IE	186	131	180	312	-125	-40
IT	1'633	601	1'623	2'224	-591	-27
LT	51	17	68	85	-34	-40
LU	33	7	150	157	-124	-79
LV	0	0	35	35	-35	-100
NL	552	316	795	1'111	-559	-50
NO	178	128	79	207	-29	-14
PL	565	340	886	1'226	-661	-54
PT	313	157	462	619	-306	-49
RO	53	45	186	231	-178	-77
SE	273	79	295	374	-101	-27
SI	248	110	264	373	-125	-34
SK	95	47	257	304	-209	-69
UK	1'799	1'280	699	1'979	-180	-9
Total	30'247	14'553	15'693	30'247	-	-

Figure 18: Handbook minimum case: Road user charge surplus/deficit for study countries with regard to the national economy (2009, 2020 and 2030 in Mil. EUR)



5.5.2 Road user charge surplus/deficit for the road hauliers

Table 22: *Handbook minimum case 2009: Road user charge surplus/deficit for study countries with regard to the road hauliers*

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	683	391	1'073	683	234	916	157	17
BE	191	196	388	191	184	375	12	3
BG	30	0	30	30	33	63	-33	-52
CH	916	320	1'236	916	52	969	268	28
CZ	428	163	591	428	412	840	-248	-30
DE	4'034	2'174	6'207	4'034	648	4'681	1'526	33
DK	126	70	197	126	152	278	-82	-29
EE	13	0	14	13	13	26	-13	-48
ES	1'567	441	2'008	1'567	803	2'370	-362	-15
FI	136	6	142	136	16	152	-10	-7
FR	2'032	2'050	4'083	2'032	260	2'293	1'790	78
GR	135	14	149	135	45	180	-31	-17
HU	74	41	115	74	250	324	-209	-65
IE	80	24	104	80	60	140	-36	-26
IT	780	401	1'181	780	505	1'284	-104	-8
LT	19	11	31	19	103	122	-91	-75
LU	9	13	22	9	153	163	-140	-86
LV	0	0	0	0	34	34	-34	-100
NL	400	66	466	400	706	1'106	-640	-58
NO	108	18	126	108	23	131	-5	-4
PL	347	30	377	347	987	1'334	-957	-72
PT	222	25	247	222	406	628	-381	-61
RO	33	1	34	33	170	203	-169	-83
SE	87	74	162	87	53	140	22	15
SI	88	38	126	88	161	249	-123	-49
SK	54	14	68	54	250	303	-236	-78
UK	1'324	190	1'515	1'324	60	1'385	130	9
Total	13'918	6'772	20'689	13'918	6'772	20'689	-	-

(1) The revenues from road user charges in the Netherlands shown in Table 22 amount to a total of 466 million EUR in 2009, of which the Dutch hauliers have to pay 400 million EUR for inland transports. A further 706 million EUR have to be paid by Italian hauliers for transports abroad.

(2) The road user charge revenues of Italy to which the Italian hauliers do not contribute account for 66 million EUR.

(3) From an economic point of view, the net distributional effects arise from the balance between the national revenues from road user charges (466 million EUR) and the impact of the Dutch hauliers from road user charges for inland transport and transport abroad (1'106 million EUR). In the case of the

Netherlands, there is a deficit within the Handbook Minimum case which decreases the national income by -640 million EUR.

(4) Depending on the geographic location of the respective countries, there can be positive effects on the national income as well. Thus, for example, Sweden achieved revenues through road pricing amounting to 162 million EUR. According to the Handbook Minimum case, the Swedish hauliers have to spend an overall amount of 140 million EUR for goods transport in inland transport and transport abroad. From an economic point of view, there is a positive distributional effect (surplus) and the benefit to the national income is equivalent to the amount of this surplus (plus 12 million EUR).

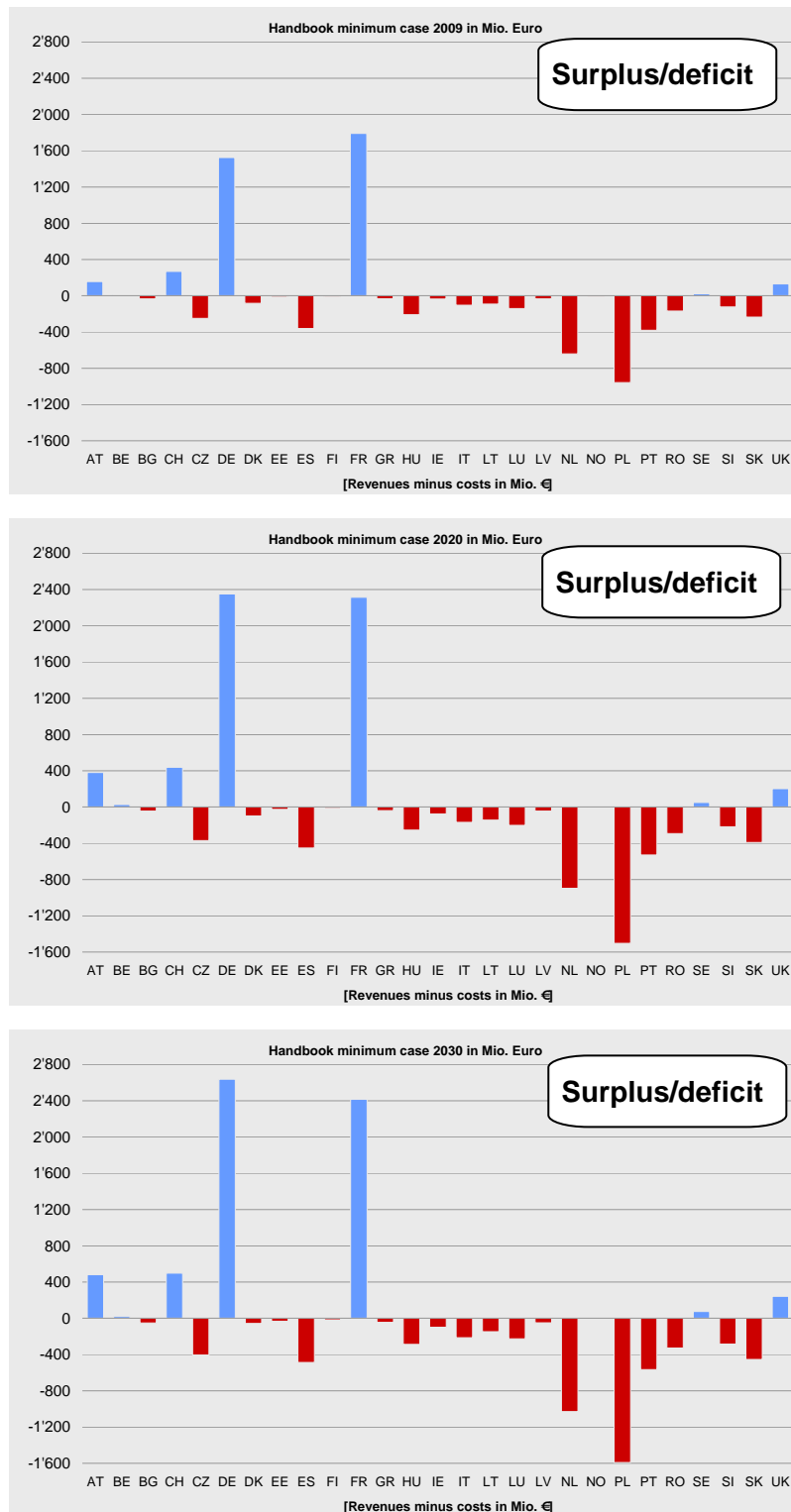
Table 23: Handbook minimum case 2020: Road user charge surplus/deficit for study countries with regard to the road hauliers

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	871	733	1'604	871	353	1'224	380	31
BE	246	275	521	246	248	494	27	5
BG	44	0	44	44	45	90	-45	-50
CH	1'054	510	1'565	1'054	71	1'126	439	39
CZ	518	227	745	518	598	1'116	-371	-33
DE	5'213	3'265	8'479	5'213	915	6'129	2'350	38
DK	200	156	356	200	255	455	-99	-22
EE	13	1	14	13	25	38	-24	-63
ES	2'211	661	2'872	2'211	1'113	3'324	-452	-14
FI	158	8	167	158	21	179	-13	-7
FR	2'512	2'720	5'232	2'512	406	2'918	2'314	79
GR	181	20	201	181	59	240	-39	-16
HU	88	68	156	88	322	411	-254	-62
IE	126	36	163	126	111	237	-75	-31
IT	902	628	1'530	902	796	1'698	-168	-10
LT	27	19	45	27	162	189	-143	-76
LU	12	18	30	12	219	232	-201	-87
LV	0	0	0	0	45	45	-45	-100
NL	441	86	527	441	982	1'423	-896	-63
NO	138	26	164	138	30	168	-4	-2
PL	496	48	545	496	1'552	2'049	-1'504	-73
PT	260	43	303	260	572	832	-529	-64
RO	49	2	51	49	294	343	-292	-85
SE	103	135	239	103	85	188	50	27
SI	144	73	216	144	291	434	-218	-50
SK	67	22	89	67	412	480	-391	-81
UK	1'426	298	1'724	1'426	95	1'520	203	13
Total	17'502	10'079	27'581	17'502	10'079	27'581	-	-

Table 24: *Handbook minimum case 2030: Road user charge surplus/deficit for study countries with regard to the road hauliers*

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	945	922	1'868	945	442	1'387	481	35
BE	254	293	547	254	272	526	21	4
BG	45	0	46	45	50	96	-50	-52
CH	1'145	576	1'721	1'145	78	1'222	499	41
CZ	527	260	787	527	665	1'192	-406	-34
DE	5'837	3'687	9'524	5'837	1'050	6'887	2'636	38
DK	221	232	453	221	288	509	-56	-11
EE	13	1	13	13	32	45	-31	-70
ES	2'376	710	3'087	2'376	1'197	3'574	-487	-14
FI	162	8	170	162	23	185	-15	-8
FR	2'793	2'870	5'663	2'793	454	3'247	2'416	74
GR	195	22	217	195	67	262	-45	-17
HU	93	78	171	93	365	458	-287	-63
IE	143	43	186	143	142	285	-98	-35
IT	942	690	1'633	942	905	1'847	-214	-12
LT	30	21	51	30	169	198	-148	-74
LU	13	20	33	13	246	259	-226	-87
LV	0	0	0	0	50	50	-50	-100
NL	455	97	552	455	1'127	1'582	-1'030	-65
NO	148	30	178	148	34	182	-4	-2
PL	511	54	565	511	1'645	2'156	-1'591	-74
PT	266	47	313	266	613	879	-566	-64
RO	51	2	53	51	330	381	-328	-86
SE	108	165	273	108	90	198	74	38
SI	166	82	248	166	366	532	-284	-53
SK	71	25	95	71	479	549	-454	-83
UK	1'451	349	1'799	1'451	107	1'558	242	16
Total	18'962	11'284	30'247	18'962	11'284	30'247	-	-

Figure 19: Handbook minimum case: Road user charge surplus/deficit for study countries with regard to the road hauliers (2009, 2020 and 2030 in Mil. EUR)



5.5.3 Main findings

(1) In the **Handbook minimum case**, the total road user charges in the 27 study countries would be about 50 % higher than in the Base Case (cf. Figure 21) and are expected to grow on average by 1.8 % p.a. **Charges paid by national road hauliers** registered in the three top countries (Germany, Spain, France) account for 45 % of the total throughout the period 2009-2030. Another 25 % in total are contributed by hauliers in the UK, Poland, Italy and Netherlands, but Polish hauliers are expected to increase their contribution by 2030. Other countries whose hauliers' payments grow faster than average are Slovenia, Ireland, Romania, Denmark, Slovakia and Estonia.

(2) The revenues from charges (**from national and international road hauliers**) are gathered by governments in rather different proportions. Germany clearly heads the list with 30 % of the total in 2009, rising to nearly 32 % in 2030. The next 6 countries (Spain, France, Austria, Switzerland, Italy and the UK) account for another 54 % of the total. Of these France, Italy and the UK lose some percentage points by 2030, whilst Austria, Bulgaria, Germany, Spain, Ireland, Romania, Lithuania, Poland, Sweden and especially Denmark, as well as Slovenia, are expected to collect more revenues or gather them faster than the average by 2030. On the other hand, Finland, Estonia, Netherlands, Portugal and Slovakia will lose percentage points. Latvia is recorded as not having any earnings because there is no motorway network on which any charges could be raised.

(3) Turning to **costs for the economy in national and foreign trade transport**, total costs for the economy would be 9.5 bn EUR in 2009, rising to 15.7 bn EUR in 2030. The percentages of individual countries are different from those of the revenues by country in the preceding paragraph. Here Germany accounts for only 21 % and the next four countries (France, Spain, Italy and Netherlands) for another 43 %, leaving 36 % to be shared by the other 23 countries. The French position is rather remarkable in that there is hardly any increase up to 2030 (0.3 % p.a.). The UK again slips down the table, its rate of increase to 2030 being half the average of the 27.

Figure 20: Handbook minimum case: Road user charge surplus/deficit for study countries with regard to the national economy (2009, 2020 and 2030 in Mil. EUR)

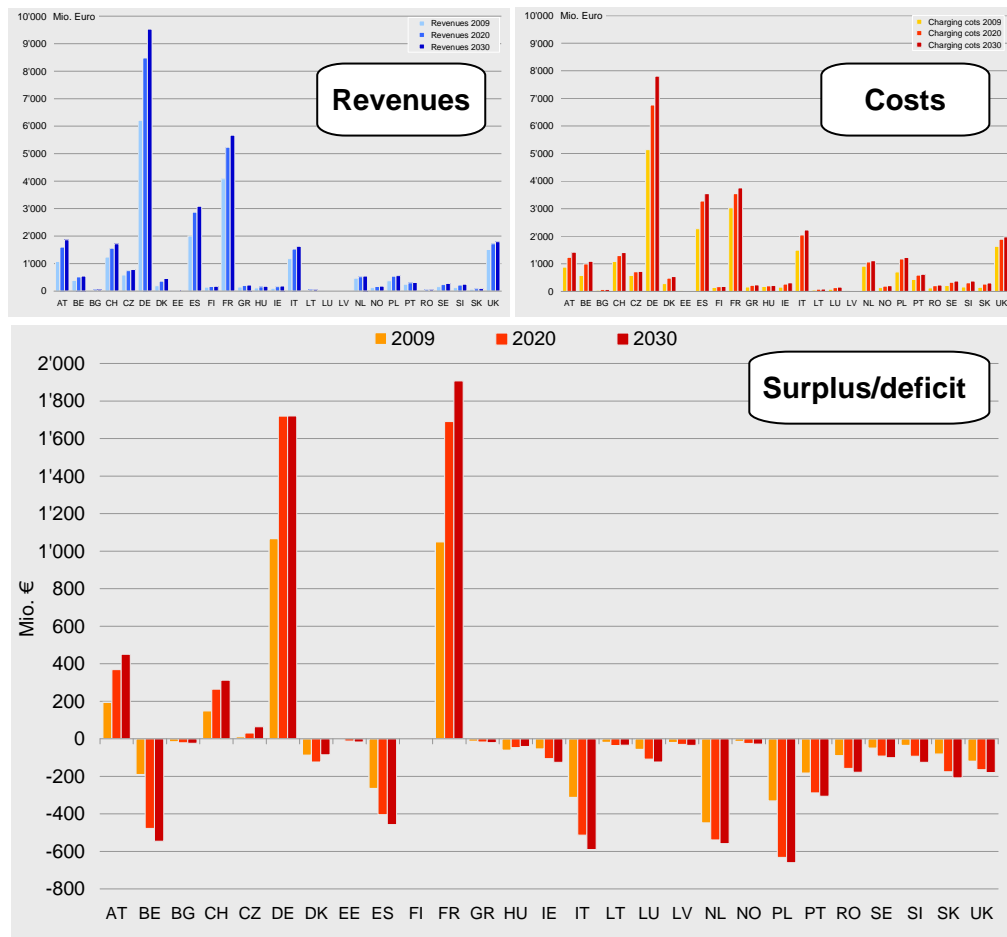
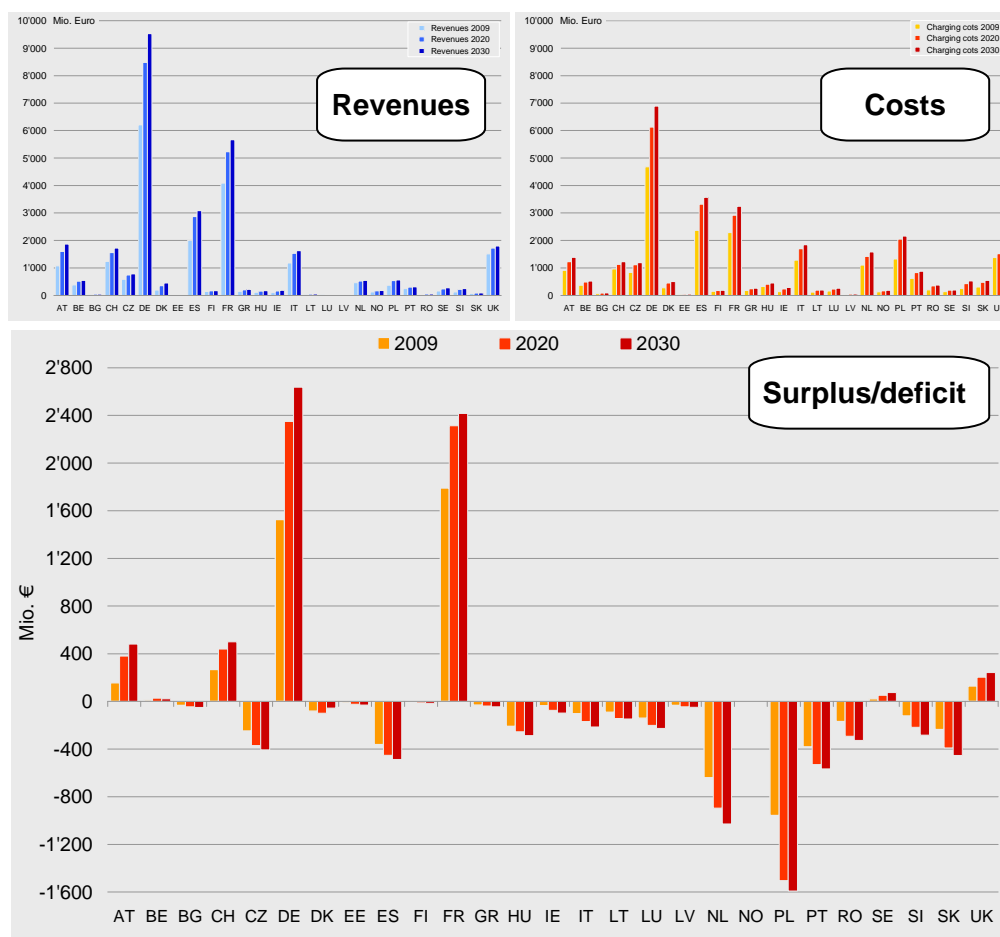


Figure 21: Handbook minimum case: Road user charge surplus/deficit for study countries with regard to the road hauliers (2009, 2020 and 2030 in Mil. EUR)



(4) As far as the **surpluses or deficits** are concerned, in 2009 only seven countries are expected to gather more through charges than their fleets pay out: France, Germany, Switzerland, Austria, Sweden, the UK and Belgium. Once again in this case, Romania and Luxembourg are in the worst position covering only 17 % and 14 % of what their road hauliers pay. In the second view - balancing the revenues of a country with their costs for the economy - only five countries record a positive surplus in 2009 between their earnings and the costs accruing to their shippers/receivers of goods: France, Austria, Germany, Switzerland and the Czech Republic. These five would be able to improve their surplus slightly by 2030.

5.6 Handbook maximum case: 2009, 2020, 2030

5.6.1 Road user charge surplus/deficit for the national economy

Table 25: Handbook maximum case 2009: Road user charge surplus/deficit for study countries with regard to the national economy

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	10'278	6'770	3'661	10'431	-154	-1
BE	11'766	4'372	7'519	11'890	-124	-1
BG	1'072	997	313	1'311	-239	-18
CH	2'702	645	2'353	2'998	-296	-10
CZ	8'663	4'773	3'587	8'360	302	4
DE	81'030	41'654	27'098	68'751	12'278	18
DK	4'164	2'383	3'056	5'439	-1'275	-23
EE	237	227	139	366	-129	-35
ES	31'838	18'320	15'893	34'214	-2'376	-7
FI	2'484	2'308	294	2'602	-117	-5
FR	51'128	20'942	18'412	39'354	11'774	30
GR	3'078	2'564	651	3'215	-137	-4
HU	3'955	1'748	2'172	3'920	35	1
IE	1'767	1'286	1'391	2'677	-911	-34
IT	21'227	11'300	11'462	22'762	-1'535	-7
LT	1'079	435	749	1'185	-106	-9
LU	471	127	1'061	1'188	-717	-60
LV	0	0	418	418	-418	-100
NL	11'994	7'583	10'000	17'583	-5'589	-32
NO	2'071	1'664	720	2'385	-313	-13
PL	13'689	9'249	7'498	16'748	-3'059	-18
PT	3'649	2'361	4'057	6'418	-2'769	-43
RO	1'184	1'027	1'593	2'620	-1'436	-55
SE	4'587	2'474	2'233	4'708	-121	-3
SI	1'818	1'051	1'161	2'212	-395	-18
SK	2'054	1'278	1'763	3'040	-986	-32
UK	26'353	21'569	5'973	27'542	-1'189	-4
Total	304'338	169'110	135'227	304'338	-	-

(1) The revenues from road user charges in Denmark shown in Table 25 amount to a total of 4'164 million EUR in 2009, of which the Danish economy has to pay 2'383 million EUR for national transports and a further 3'056 million EUR for international transports.

(2) *From an economic point of view, the net distributional effects arise from the balance between the national revenues from road user charges (4'164 million EUR) and the impact of the Danish economy from road user charges (5'439 million EUR). In the case of Denmark, there is a deficit within the Handbook Maximum case which decreases the national income by -1'275 million EUR.*

(3) *Depending on the geographic location of the respective countries, there can be positive effects on the national income as well. Thus, for example, Hungary achieved revenues through road pricing amounting to 3'955 million EUR. According to the Handbook Maximum case, the Hungarian economy has to spend an overall amount of 3'920 million EUR for their goods transports at home and abroad. From an economic point of view, there is a positive distributional effect (surplus) and the benefit to the national income is equivalent to the amount of this surplus (plus 35 million EUR).*

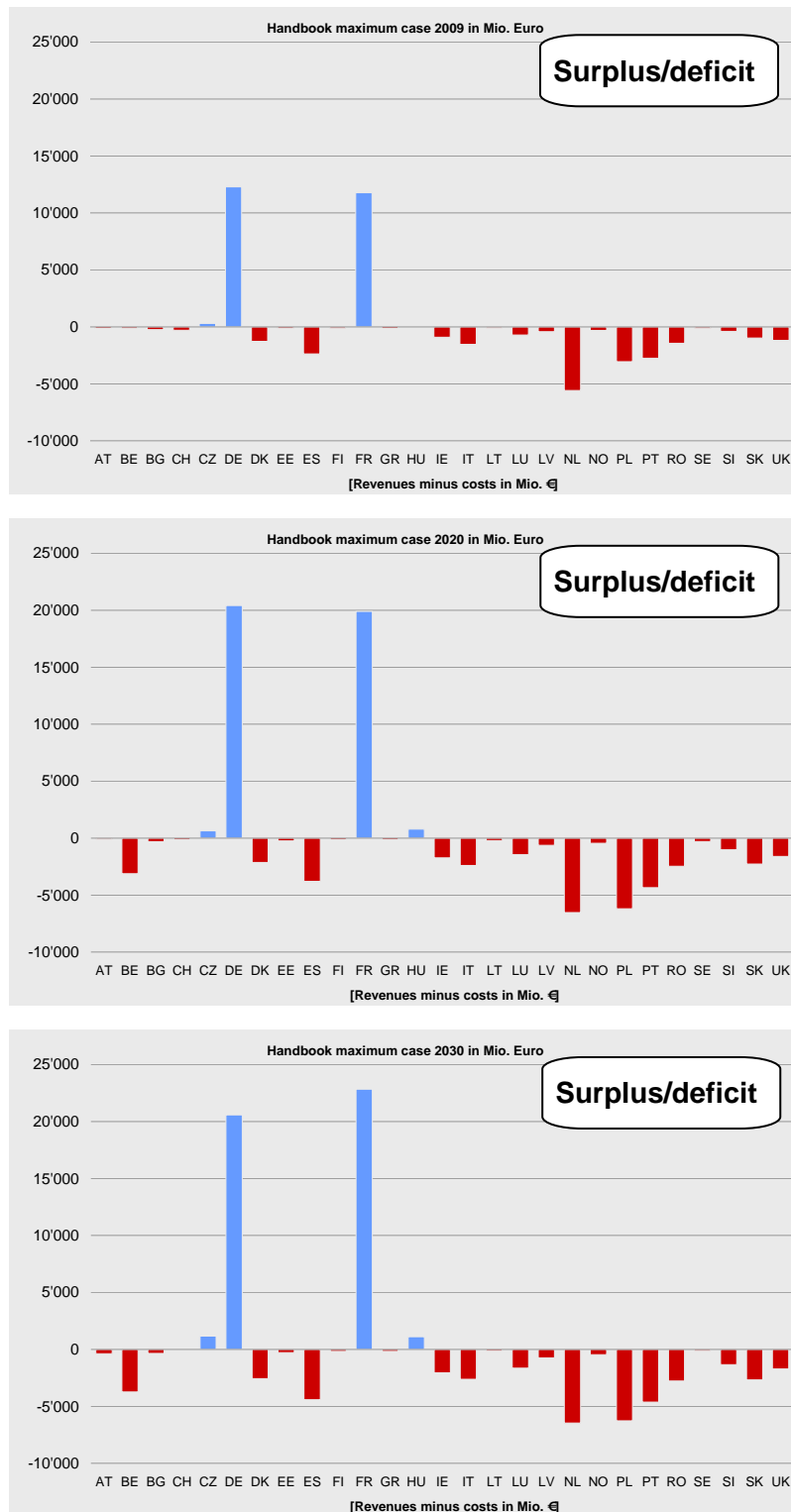
Table 26: Handbook maximum case 2020: Road user charge surplus/deficit for study countries with regard to the national economy

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	14'416	7'820	6'697	14'517	-101	-1
BE	15'704	5'351	13'473	18'824	-3'120	-17
BG	1'563	1'454	426	1'880	-317	-17
CH	3'939	729	3'347	4'076	-137	-3
CZ	10'915	5'343	4'932	10'275	640	6
DE	110'687	52'509	37'778	90'287	20'400	23
DK	6'115	2'803	5'441	8'244	-2'129	-26
EE	246	223	263	486	-240	-49
ES	45'573	26'081	23'291	49'373	-3'800	-8
FI	2'923	2'641	430	3'071	-148	-5
FR	65'463	25'640	19'927	45'567	19'896	44
GR	4'160	3'447	863	4'310	-150	-3
HU	5'374	2'032	2'553	4'585	789	17
IE	2'759	2'056	2'437	4'493	-1'734	-39
IT	27'285	11'644	18'039	29'682	-2'397	-8
LT	1'595	547	1'255	1'802	-207	-11
LU	641	144	1'942	2'087	-1'445	-69
LV	0	0	623	623	-623	-100
NL	13'558	8'080	12'005	20'085	-6'527	-32
NO	2'682	2'119	1'012	3'131	-449	-14
PL	19'792	12'222	13'759	25'981	-6'189	-24
PT	4'458	2'354	6'457	8'812	-4'354	-49
RO	1'790	1'527	2'726	4'253	-2'463	-58
SE	6'068	2'684	3'680	6'364	-295	-5
SI	3'025	1'442	2'605	4'047	-1'022	-25
SK	2'693	1'440	3'516	4'956	-2'263	-46
UK	29'850	22'226	9'238	31'464	-1'614	-5
Total	403'272	204'559	198'714	403'272	-	-

Table 27: Handbook maximum case 2030: Road user charge surplus/deficit for study countries with regard to the national economy

Country	Total road user charge revenues by country	Total road user charge costs of economy by country in			Road user charge surplus or deficit for countries with regard to the national economy	
		national transport	foreign trade transport	Total		
	Mio. EUR	in Mio. EUR			Mio. EUR	in %
AT	16'128	7'867	8'647	16'514	-386	-2
BE	16'458	5'458	14'738	20'196	-3'738	-19
BG	1'611	1'493	473	1'966	-355	-18
CH	4'400	791	3'601	4'392	8	0
CZ	11'527	5'259	5'104	10'363	1'164	11
DE	124'330	58'157	45'596	103'753	20'577	20
DK	6'205	2'933	5'840	8'773	-2'568	-29
EE	234	209	305	514	-280	-54
ES	48'945	28'159	25'192	53'351	-4'406	-8
FI	2'984	2'713	445	3'159	-174	-6
FR	70'852	28'934	19'076	48'011	22'841	48
GR	4'490	3'693	970	4'663	-173	-4
HU	5'874	2'094	2'672	4'766	1'108	23
IE	3'142	2'329	2'857	5'186	-2'044	-39
IT	28'992	11'788	19'823	31'611	-2'619	-8
LT	1'794	589	1'332	1'921	-127	-7
LU	696	146	2'188	2'334	-1'639	-70
LV	0	0	736	736	-736	-100
NL	14'187	8'176	12'468	20'644	-6'457	-31
NO	2'876	2'258	1'082	3'340	-464	-14
PL	20'546	12'342	14'470	26'812	-6'265	-23
PT	4'602	2'333	6'901	9'234	-4'631	-50
RO	1'868	1'581	3'069	4'650	-2'782	-60
SE	6'481	2'723	3'878	6'601	-120	-2
SI	3'426	1'585	3'183	4'767	-1'342	-28
SK	2'879	1'430	4'122	5'552	-2'673	-48
UK	31'063	22'400	10'379	32'780	-1'717	-5
Total	436'591	217'442	219'148	436'591	-	-

Figure 22: Handbook maximum case: Road user charge surplus/deficit for study countries with regard to the national economy (2009, 2020 and 2030 in Mil. EUR)



5.6.2 Road user charge surplus/deficit for the road hauliers

Table 28: Handbook maximum case 2009: Road user charge surplus/deficit for study countries with regard to the road hauliers

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	7'590	2'687	10'278	7'590	3'189	10'779	-501	-5
BE	5'834	5'932	11'766	5'834	2'519	8'354	3'412	41
BG	1'064	7	1'072	1'064	532	1'597	-525	-33
CH	1'003	1'699	2'702	1'003	713	1'716	986	57
CZ	6'271	2'392	8'663	6'271	5'549	11'820	-3'157	-27
DE	52'656	28'374	81'030	52'656	9'371	62'027	19'003	31
DK	3'025	1'139	4'164	3'025	2'181	5'206	-1'042	-20
EE	232	5	237	232	246	478	-240	-50
ES	24'850	6'988	31'838	24'850	10'550	35'401	-3'563	-10
FI	2'384	100	2'484	2'384	357	2'741	-256	-9
FR	25'492	25'636	51'128	25'492	3'690	29'182	21'946	75
GR	2'799	279	3'078	2'799	651	3'450	-372	-11
HU	2'555	1'400	3'955	2'555	3'473	6'028	-2'073	-34
IE	1'401	366	1'767	1'401	944	2'345	-578	-25
IT	14'268	6'959	21'227	14'268	5'070	19'337	1'889	10
LT	678	401	1'079	678	1'614	2'292	-1'213	-53
LU	195	276	471	195	2'178	2'373	-1'902	-80
LV	0	0	0	0	642	642	-642	-100
NL	10'317	1'677	11'994	10'317	10'661	20'978	-8'983	-43
NO	1'838	233	2'071	1'838	386	2'225	-153	-7
PL	12'614	1'075	13'689	12'614	13'719	26'333	-12'644	-48
PT	3'283	366	3'649	3'283	5'975	9'258	-5'609	-61
RO	1'142	41	1'184	1'142	2'720	3'863	-2'679	-69
SE	2'822	1'765	4'587	2'822	628	3'450	1'137	33
SI	1'272	546	1'818	1'272	2'013	3'285	-1'468	-45
SK	1'619	436	2'054	1'619	3'622	5'241	-3'186	-61
UK	23'111	3'242	26'353	23'111	830	23'940	2'412	10
Total	210'313	94'025	304'338	210'313	94'025	304'338	-	-

(1) The revenues from road user charges in Denmark shown in Table 28 amount to a total of 4'164 million EUR in 2009, of which the Danish hauliers have to pay 3'025 million EUR for inland transports. A further 2'181 million EUR have to be paid by Danish hauliers for transports abroad.

(2) The road user charge revenues of Denmark to which the Danish hauliers do not contribute account for 1'139 million EUR.

(3) From an economic point of view, the net distributional effects arise from the balance between the national revenues from road user charges (4'164 million EUR) and the impact of the Danish hauliers from road user charges for inland transport and transport abroad (5'206 million EUR). In the

case of Denmark, there is a deficit within the Handbook Maximum case which decreases the national income by -1'042 million EUR.

(4) Depending on the geographic location of the respective countries, there can be positive effects on the national income as well. Thus, for example Belgium achieved revenues through road pricing amounting to 11'766 million EUR. According to the Handbook Maximum case, the Belgian hauliers have to spend an overall amount of 8'354 million EUR for goods transport in inland transport and transport abroad. From an economic point of view, there is a positive distributional effect (surplus) and the benefit to the national income is equivalent to the amount of this surplus (plus 3'412 million EUR).

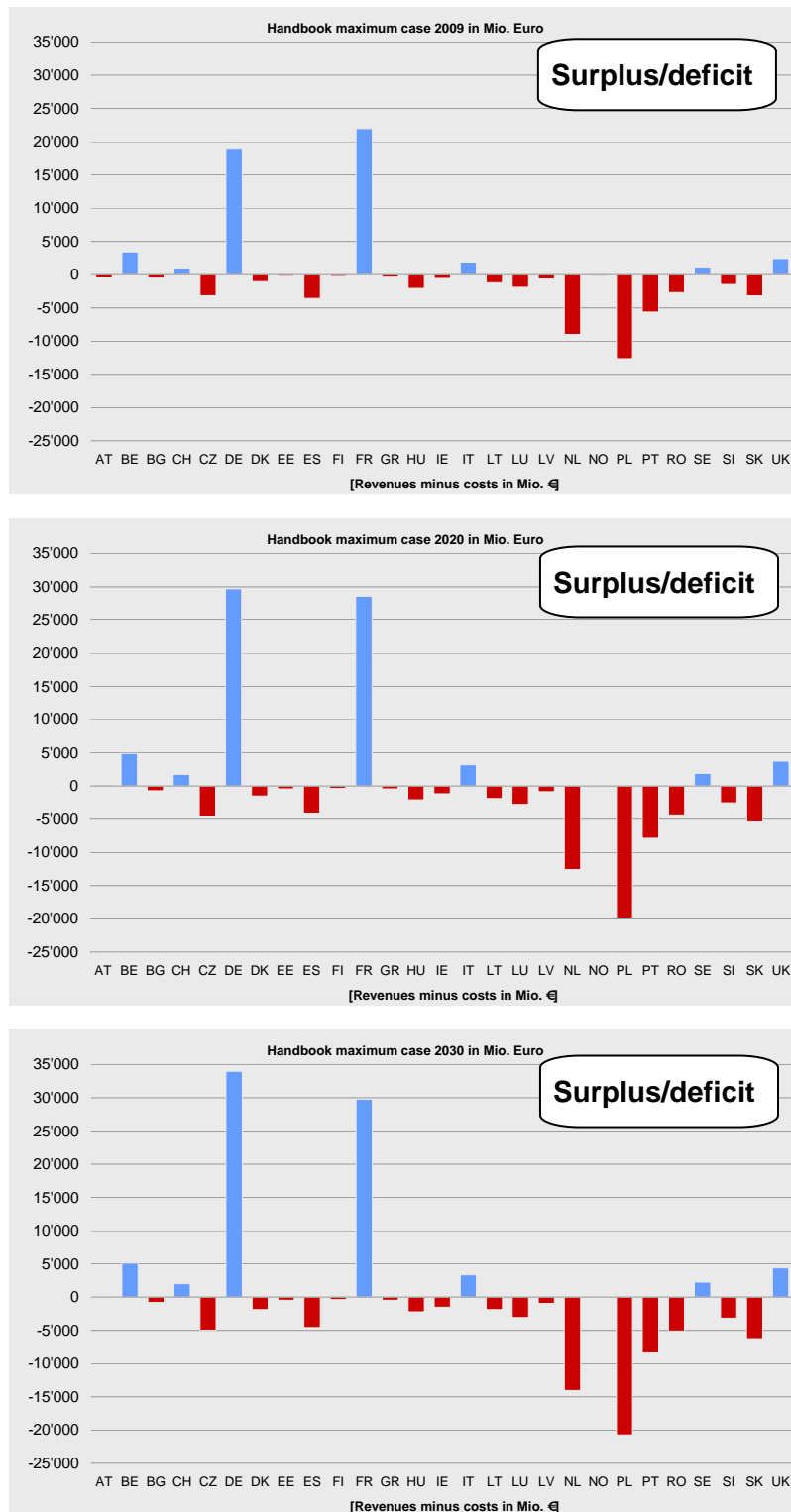
Table 29: Handbook maximum case 2020: Road user charge surplus/deficit for study countries with regard to the road hauliers

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	9'381	5'035	14'416	9'381	4'863	14'243	173	1
BE	7'423	8'281	15'704	7'423	3'374	10'796	4'907	45
BG	1'555	8	1'563	1'555	725	2'281	-717	-31
CH	1'228	2'711	3'939	1'228	974	2'202	1'737	79
CZ	7'588	3'327	10'915	7'588	7'993	15'581	-4'666	-30
DE	68'060	42'628	110'687	68'060	12'930	80'990	29'697	37
DK	3'976	2'139	6'115	3'976	3'621	7'598	-1'483	-20
EE	235	11	246	235	432	667	-421	-63
ES	35'098	10'475	45'573	35'098	14'683	49'781	-4'208	-8
FI	2'775	147	2'923	2'775	498	3'273	-351	-11
FR	31'493	33'969	65'463	31'493	5'513	37'006	28'457	77
GR	3'756	404	4'160	3'756	826	4'582	-423	-9
HU	3'035	2'339	5'374	3'035	4'395	7'429	-2'055	-28
IE	2'202	557	2'759	2'202	1'701	3'903	-1'144	-29
IT	16'224	11'061	27'285	16'224	7'871	24'095	3'190	13
LT	940	654	1'595	940	2'526	3'466	-1'872	-54
LU	263	378	641	263	3'139	3'402	-2'761	-81
LV	0	0	0	0	850	850	-850	-100
NL	11'367	2'191	13'558	11'367	14'743	26'109	-12'551	-48
NO	2'347	335	2'682	2'347	482	2'829	-147	-5
PL	18'039	1'753	19'792	18'039	21'617	39'656	-19'864	-50
PT	3'831	627	4'458	3'831	8'484	12'315	-7'857	-64
RO	1'718	71	1'790	1'718	4'577	6'296	-4'506	-72
SE	3'212	2'856	6'068	3'212	960	4'172	1'896	45
SI	1'998	1'028	3'025	1'998	3'551	5'548	-2'523	-45
SK	2'040	653	2'693	2'040	6'055	8'095	-5'402	-67
UK	24'843	5'007	29'850	24'843	1'261	26'104	3'746	14
Total	264'627	138'645	403'272	264'627	138'645	403'272	-	-

Table 30: *Handbook maximum case 2030: Road user charge surplus/deficit for study countries with regard to the road hauliers*

Country	Road user charge revenues by country from			Road user charges paid by national hauliers in			Road user charge surplus or deficit for countries with regard to the road hauliers	
	national hauliers	inter-national hauliers	Total	inland transport	transport abroad	Total		
	in Mio. EUR			in Mio. EUR			Mio. EUR	in %
AT	9'937	6'191	16'128	9'937	6'051	15'988	140	1
BE	7'645	8'813	16'458	7'645	3'699	11'344	5'114	45
BG	1'603	8	1'611	1'603	811	2'414	-803	-33
CH	1'339	3'062	4'400	1'339	1'057	2'396	2'004	84
CZ	7'722	3'805	11'527	7'722	8'791	16'512	-4'985	-30
DE	76'203	48'127	124'330	76'203	14'163	90'366	33'964	38
DK	4'082	2'123	6'205	4'082	4'016	8'098	-1'893	-23
EE	223	11	234	223	489	712	-478	-67
ES	37'706	11'240	48'945	37'706	15'802	53'508	-4'563	-9
FI	2'842	142	2'984	2'842	526	3'368	-383	-11
FR	35'019	35'833	70'852	35'019	6'048	41'067	29'785	73
GR	4'039	451	4'490	4'039	921	4'959	-470	-9
HU	3'191	2'683	5'874	3'191	4'885	8'076	-2'202	-27
IE	2'492	649	3'142	2'492	2'171	4'663	-1'521	-33
IT	16'868	12'124	28'992	16'868	8'779	25'647	3'345	13
LT	1'055	739	1'794	1'055	2'608	3'663	-1'869	-51
LU	279	416	696	279	3'488	3'768	-3'072	-82
LV	0	0	0	0	956	956	-956	-100
NL	11'727	2'460	14'187	11'727	16'505	28'233	-14'045	-50
NO	2'503	373	2'876	2'503	499	3'002	-126	-4
PL	18'586	1'960	20'546	18'586	22'702	41'288	-20'742	-50
PT	3'922	680	4'602	3'922	9'080	13'002	-8'399	-65
RO	1'793	75	1'868	1'793	5'165	6'958	-5'090	-73
SE	3'300	3'181	6'481	3'300	926	4'227	2'254	53
SI	2'270	1'156	3'426	2'270	4'317	6'588	-3'162	-48
SK	2'137	742	2'879	2'137	6'989	9'126	-6'247	-68
UK	25'254	5'809	31'063	25'254	1'409	26'664	4'399	16
Total	283'738	152'853	436'591	283'738	152'853	436'591	-	-

Figure 23: Handbook maximum case: Road user charge surplus/deficit for study countries with regard to the road hauliers (2009, 2020 and 2030 in Mil. EUR)



5.6.3 Main findings

(1) The Handbook **maximum** case distinguishes itself from all the other cases by the enormously high level of the charges to be analysed. Starting at a total of over 300 bn EUR in 2009 covering all 27 study countries, it rises to 437 bn EUR in 2030. Such amounts are about 30 times larger than the base case and 15 times larger than the Handbook minimum case. The huge differences are due to the full internalisation of **Congestion costs**. It should be kept in mind that Chapter 1.2 noted one opinion, that congestion costs are really internal costs, being borne by all traffic participants; and another view was that only a small share of such costs could be considered as external costs in the area of accidents due to congestion. Moreover, the Handbook minimum case stipulates that accident costs may sometimes be considered as “negative” from the view of externalities and would, in such a case, actually reduce the rate of external costs to be charged.

(2) Bearing in mind the extraordinary dimension just noted, it is still necessary to analyse this case as was done for the other four. **Road user charges paid by German road hauliers** account for about 21 % of the total throughout the period. The next three countries (Spain, France and Poland) account for another 30 %, whilst the UK, Netherlands and Italy make up a further 21 % in 2009, but only 18 % in 2030. Five lower ranked countries (Czech Republic, Austria, Portugal, Belgium and Hungary) take up 15 %, leaving 13 % for the remaining 15 countries.

(3) To compare them with the charges, we analysed the **revenues by country from national and international road hauliers**. In the present case, Germany is again clearly ahead with nearly 27 % of the total, rising to over 28 % in 2030. France takes its uncontested 2nd place, with 17 %, declining slightly to 16 % in 2030. Spain is in 3rd position at 10 %, up to 11 % in 2030 and ahead of the UK which has 9 % to start with, but goes down to 7 % in 2030. In the mid-sized group of Italy, Poland, Belgium, Netherlands and Austria, Poland and Austria improve their position, whilst the Dutch go down in percentage share. Small-sized countries, such as Luxembourg and Estonia, with their short travel opportunities, earn little from road user charges.

Figure 24: Handbook maximum case: Road user charge surplus/deficit for study countries with regard to the national economy (2009, 2020 and 2030 in Mil. EUR)

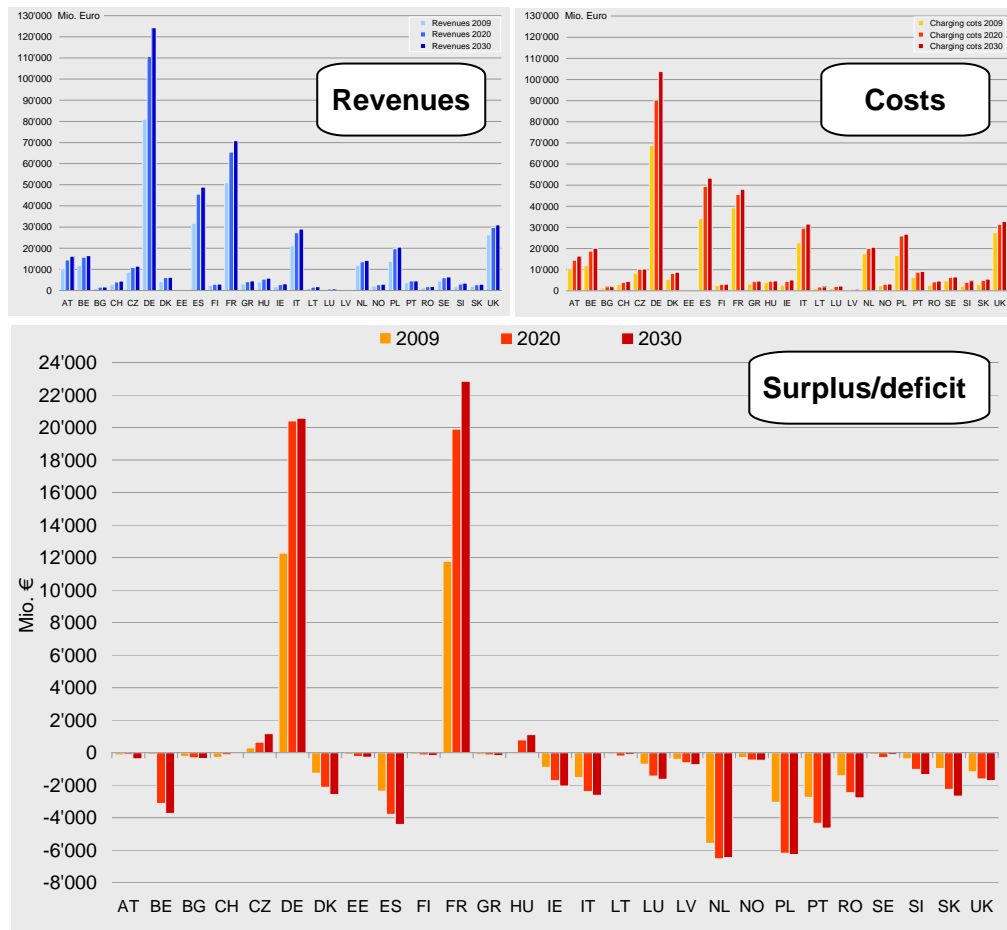
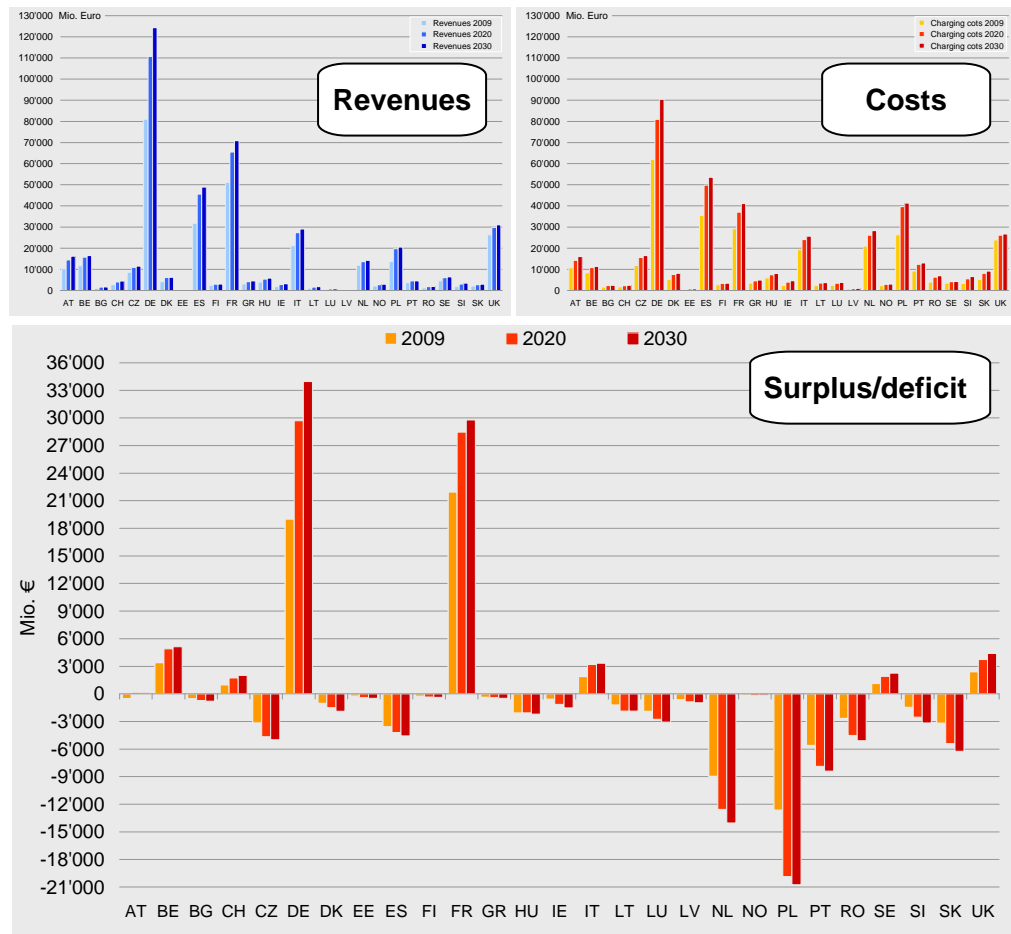


Figure 25: Handbook maximum case: Road user charge surplus/deficit for study countries with regard to the road hauliers (2009, 2020 and 2030 in Mil. EUR)



(4) From the perspective of the **costs for the economy**, we note that shippers/receivers account for about 44 % of total traffic charges in 2009, rising to 50 % in 2030, very much in line with the Handbook minimum case. Germany takes up about 20 %, France (2nd) and Spain (3rd) change places in the first forecast period and other changes are also along the lines of the Minimum Case, as regards improvements or deterioration.

(5) This resemblance in positions and movement to the Minimum Case is also reflected in the analysis of **surpluses/deficits**, though of course the amounts in EUR are much higher.

5.7 Comparison of scenario results

5.7.1 Total charge costs for the economy by country

Table 31: Comparison of scenarios: Total charge costs for the economy by country in national and foreign trade transport 2009 in Mil. EUR

Country	Total charge costs for the economy by country in national and foreign trade transport [in Mio. EUR]				
	Base case 2007	Base case plus	European commission case	Handbook minimum case	Handbook maximum case
AT	739	789	1'128	880	10'431
BE	254	484	677	579	11'890
BG	91	68	49	46	1'311
CH	724	826	1'135	1'087	2'998
CZ	190	361	644	580	8'360
DE	3'095	3'421	5'668	5'140	68'751
DK	152	269	327	284	5'439
EE	3	16	23	20	366
ES	1'127	1'420	2'547	2'274	34'214
FI	3	137	165	145	2'602
FR	1'755	2'066	3'349	3'033	39'354
GR	73	80	188	162	3'215
HU	174	172	207	176	3'920
IE	7	123	180	159	2'677
IT	831	920	1'673	1'494	22'762
LT	37	44	60	50	1'185
LU	33	53	89	79	1'188
LV	9	10	24	21	418
NL	306	777	1'052	915	17'583
NO	16	121	159	140	2'385
PL	290	804	839	709	16'748
PT	172	271	482	431	6'418
RO	260	114	144	124	2'620
SE	70	227	248	212	4'708
SI	93	107	180	162	2'212
SK	63	137	173	150	3'040
UK	86	1'474	1'844	1'635	27'542
Total	10'655	15'294	23'255	20'689	304'338

Table 32: Comparison of scenarios: Total charge costs for the economy by country in national and foreign trade transport 2020 in Mil. EUR

Country	Total charge costs for the economy by country in national and foreign trade transport [in Mio. EUR]				
	Base case 2007	Base case plus	European commission case	Handbook minimum case	Handbook maximum case
AT	-	1'065	1'542	1'236	14'517
BE	-	773	1'152	999	18'824
BG	-	99	69	66	1'880
CH	-	989	1'095	1'301	4'076
CZ	-	445	793	715	10'275
DE	-	4'491	7'452	6'759	90'287
DK	-	406	543	479	8'244
EE	-	20	30	27	486
ES	-	2'042	3'671	3'277	49'373
FI	-	159	194	171	3'071
FR	-	2'414	3'908	3'542	45'567
GR	-	108	253	218	4'310
HU	-	198	240	204	4'585
IE	-	206	304	269	4'493
IT	-	1'279	2'277	2'044	29'682
LT	-	65	95	81	1'802
LU	-	91	156	139	2'087
LV	-	14	35	31	623
NL	-	883	1'223	1'067	20'085
NO	-	161	214	190	3'131
PL	-	1'204	1'380	1'177	25'981
PT	-	371	661	591	8'812
RO	-	185	242	209	4'253
SE	-	306	379	331	6'364
SI	-	205	340	309	4'047
SK	-	212	304	265	4'956
UK	-	1'642	2'127	1'888	31'464
Total	-	20'031	30'679	27'581	403'272

Table 33: Comparison of scenarios: Total charge costs for the economy by country in national and foreign trade transport 2030 in Mil. EUR

Country	Total charge costs for the economy by country in national and foreign trade transport [in Mio. EUR]				
	Base case 2007	Base case plus	European commission case	Handbook minimum case	Handbook maximum case
AT	-	1'190	1'740	1'417	16'514
BE	-	835	1'257	1'093	20'196
BG	-	102	73	70	1'966
CH	-	1'071	1'185	1'409	4'392
CZ	-	451	802	723	10'363
DE	-	5'180	8'599	7'803	103'753
DK	-	447	607	539	8'773
EE	-	22	34	30	514
ES	-	2'208	3'969	3'543	53'351
FI	-	163	200	176	3'159
FR	-	2'561	4'142	3'756	48'011
GR	-	118	275	238	4'663
HU	-	204	249	212	4'766
IE	-	237	353	312	5'186
IT	-	1'389	2'471	2'224	31'611
LT	-	68	100	85	1'921
LU	-	103	176	157	2'334
LV	-	16	41	35	736
NL	-	914	1'272	1'111	20'644
NO	-	173	233	207	3'340
PL	-	1'236	1'435	1'226	26'812
PT	-	389	693	619	9'234
RO	-	200	266	231	4'650
SE	-	332	424	374	6'601
SI	-	247	410	373	4'767
SK	-	235	347	304	5'552
UK	-	1'701	2'229	1'979	32'780
Total	-	21'788	33'584	30'247	436'591

5.7.2 Road user charges paid by national road hauliers

Table 34: Comparison of scenarios: Road user charges paid by national road hauliers in inland transport and transport abroad 2009 in Mil. EUR

Country of vehicle registration	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. EUR]				
	Base case 2007	Base case plus	European commission case	Handbook minimum case	Handbook maximum case
AT	766	817	1'168	916	10'779
BE	148	370	445	375	8'354
BG	95	78	68	63	1'597
CH	710	739	1'007	969	1'716
CZ	309	534	930	840	11'820
DE	2'811	3'132	5'157	4'681	62'027
DK	176	269	319	278	5'206
EE	4	20	30	26	478
ES	1'171	1'487	2'653	2'370	35'401
FI	5	140	173	152	2'741
FR	1'456	1'579	2'528	2'293	29'182
GR	82	92	207	180	3'450
HU	246	267	371	324	6'028
IE	12	114	159	140	2'345
IT	718	797	1'437	1'284	19'337
LT	69	88	140	122	2'292
LU	72	107	182	163	2'373
LV	12	17	39	34	642
NL	344	882	1'270	1'106	20'978
NO	16	116	148	131	2'225
PL	559	1'187	1'540	1'334	26'333
PT	239	398	703	628	9'258
RO	292	161	232	203	3'863
SE	43	188	167	140	3'450
SI	141	167	274	249	3'285
SK	136	235	344	303	5'241
UK	24	1'314	1'565	1'385	23'940
Total	10'655	15'294	23'255	20'689	304'338

Table 35: *Comparison of scenarios: Road user charges paid by national road hauliers in inland transport and transport abroad 2020 in Mil. EUR*

Country of vehicle registration	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. EUR]				
	Base case	Base case plus	European commission case	Handbook minimum case	Handbook maximum case
AT	-	1'059	1'528	1'224	14'243
BE	-	472	584	494	10'796
BG	-	112	96	90	2'281
CH	-	859	906	1'126	2'202
CZ	-	712	1'235	1'116	15'581
DE	-	4'099	6'750	6'129	80'990
DK	-	393	514	455	7'598
EE	-	26	43	38	667
ES	-	2'080	3'721	3'324	49'781
FI	-	162	205	179	3'273
FR	-	2'005	3'216	2'918	37'006
GR	-	123	277	240	4'582
HU	-	332	468	411	7'429
IE	-	189	268	237	3'903
IT	-	1'077	1'887	1'698	24'095
LT	-	130	216	189	3'466
LU	-	151	259	232	3'402
LV	-	23	52	45	850
NL	-	1'087	1'628	1'423	26'109
NO	-	148	190	168	2'829
PL	-	1'727	2'358	2'049	39'656
PT	-	525	931	832	12'315
RO	-	267	391	343	6'296
SE	-	225	220	188	4'172
SI	-	291	477	434	5'548
SK	-	347	543	480	8'095
UK	-	1'409	1'717	1'520	26'104
Total	-	20'031	30'679	27'581	403'272

Table 36: *Comparison of scenarios: Road user charges paid by national road hauliers in inland transport and transport abroad 2030 in Mil. EUR*

Country of vehicle registration	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. EUR]				
	Base case	Base case plus	European commission case	Handbook minimum case	Handbook maximum case
AT	-	1'171	1'705	1'387	15'988
BE	-	494	620	526	11'344
BG	-	117	103	96	2'414
CH	-	933	984	1'222	2'396
CZ	-	763	1'319	1'192	16'512
DE	-	4'608	7'580	6'887	90'366
DK	-	426	572	509	8'098
EE	-	31	50	45	712
ES	-	2'235	4'001	3'574	53'508
FI	-	167	211	185	3'368
FR	-	2'228	3'578	3'247	41'067
GR	-	134	302	262	4'959
HU	-	364	520	458	8'076
IE	-	223	321	285	4'663
IT	-	1'169	2'048	1'847	25'647
LT	-	137	227	198	3'663
LU	-	169	290	259	3'768
LV	-	24	57	50	956
NL	-	1'189	1'803	1'582	28'233
NO	-	158	205	182	3'002
PL	-	1'794	2'478	2'156	41'288
PT	-	555	983	879	13'002
RO	-	291	434	381	6'958
SE	-	231	231	198	4'227
SI	-	355	583	532	6'588
SK	-	389	620	549	9'126
UK	-	1'434	1'759	1'558	26'664
Total	-	21'788	33'584	30'247	436'591

5.7.3 Road user charge revenues by country

Table 37: Comparison of scenarios: Road user charge revenues by country from national and international road hauliers 2009 in Mil. EUR

Country of vehicle operation	Road user charge revenues by country from national and international road hauliers [in Mio. EUR]				
	Base case 2007	Base case plus	European commission case	Handbook minimum case	Handbook maximum case
AT	985	990	1'320	1'073	10'278
BE	119	292	487	388	11'766
BG	81	58	31	30	1'072
CH	891	987	1'281	1'236	2'702
CZ	222	364	657	591	8'663
DE	3'351	4'183	6'825	6'207	81'030
DK	163	213	230	197	4'164
EE	0	13	15	14	237
ES	881	1'208	2'261	2'008	31'838
FI	0	136	161	142	2'484
FR	2'387	2'837	4'496	4'083	51'128
GR	63	70	174	149	3'078
HU	120	108	146	115	3'955
IE	4	92	118	104	1'767
IT	626	639	1'349	1'181	21'227
LT	27	27	39	31	1'079
LU	10	15	27	22	471
LV	0	0	0	0	0
NL	100	465	559	466	11'994
NO	8	115	142	126	2'071
PL	131	545	484	377	13'689
PT	130	157	277	247	3'649
RO	214	60	43	34	1'184
SE	45	179	197	162	4'587
SI	78	81	141	126	1'818
SK	12	79	84	68	2'054
UK	8	1'381	1'713	1'515	26'353
Total	10'655	15'294	23'255	20'689	304'338

Table 38: Comparison of scenarios: Road user charge revenues by country from national and international road hauliers 2020 in Mil. EUR

Country of vehicle operation	Road user charge revenues by country from national and international road hauliers [in Mio. EUR]				
	Base case	Base case plus	European commission case	Handbook minimum case	Handbook maximum case
AT	-	1'419	1'908	1'604	14'416
BE	-	370	654	521	15'704
BG	-	85	45	44	1'563
CH	-	1'263	1'355	1'565	3'939
CZ	-	459	828	745	10'915
DE	-	5'714	9'323	8'479	110'687
DK	-	325	404	356	6'115
EE	-	13	16	14	246
ES	-	1'726	3'234	2'872	45'573
FI	-	158	189	167	2'923
FR	-	3'634	5'761	5'232	65'463
GR	-	95	235	201	4'160
HU	-	127	198	156	5'374
IE	-	145	185	163	2'759
IT	-	819	1'746	1'530	27'285
LT	-	34	58	45	1'595
LU	-	19	36	30	641
LV	-	0	0	0	0
NL	-	506	633	527	13'558
NO	-	148	185	164	2'682
PL	-	722	700	545	19'792
PT	-	192	339	303	4'458
RO	-	90	64	51	1'790
SE	-	221	285	239	6'068
SI	-	140	240	216	3'025
SK	-	92	110	89	2'693
UK	-	1'514	1'948	1'724	29'850
Total	-	20'031	30'679	27'581	403'272

Table 39: Comparison of scenarios: Road user charge revenues by country from national and international road hauliers 2030 in Mil. EUR

Country of vehicle operation	Road user charge revenues by country from national and international road hauliers [in Mio. EUR]				
	Base case	Base case plus	European commission case	Handbook minimum case	Handbook maximum case
AT	-	1'603	2'185	1'868	16'128
BE	-	380	686	547	16'458
BG	-	87	47	46	1'611
CH	-	1'391	1'495	1'721	4'400
CZ	-	486	874	787	11'527
DE	-	6'419	10'472	9'524	124'330
DK	-	393	501	453	6'205
EE	-	13	15	13	234
ES	-	1'854	3'476	3'087	48'945
FI	-	162	193	170	2'984
FR	-	3'932	6'237	5'663	70'852
GR	-	103	254	217	4'490
HU	-	132	216	171	5'874
IE	-	165	212	186	3'142
IT	-	864	1'863	1'633	28'992
LT	-	37	65	51	1'794
LU	-	20	39	33	696
LV	-	0	0	0	0
NL	-	518	663	552	14'187
NO	-	159	200	178	2'876
PL	-	730	727	565	20'546
PT	-	198	350	313	4'602
RO	-	93	67	53	1'868
SE	-	237	322	273	6'481
SI	-	160	275	248	3'426
SK	-	93	117	95	2'879
UK	-	1'560	2'033	1'799	31'063
Total	-	21'788	33'584	30'247	436'591

5.7.4 Main findings

- (1) The implementation of the measures planned by the European Commission will lead to significant increases in charging costs in comparison to today's situation. Today's situation means the **Base case** results 2007, with toll systems and charge rates valid at that time. For 2009 (**Base case plus**), the introduction of a distance-related road user charge in those countries (including the "eurovignette countries") in which they have not yet been implemented and charge rates for 2009 are already assumed and therefore the results are not comparable.
- (2) The **European Commission** case is based on the traffic demand and the charge rates for infrastructure costs from the Base case plus. In addition to the charge rates of the Base case plus, the relevant external costs for congestion, air pollution and noise, as presented in the "Revised Eurovignette Directive", are assumed.
- (3) This corresponds also to the **Handbook minimum and maximum case**. The Base case plus and the relevant charge rates provide the basis for the two Handbook cases. When the 7 external cost units are added, it can be seen that the charge rates between the Handbook minimum and maximum cases differ widely - between 0.02 and 3.7 EUR per vkm.
- (4) The differences between the Base case plus scenario, on the one hand, and the European Commission case, as well as the two Handbook cases, on the other hand, reflect the integration of the external and congestion costs into the road user charging system. These differences are shown in Table 40.
- (5) It can be seen that the implementation of the planned measures by the European Commission would lead to significant increases in charging costs compared to today's situation, i.e. the **Base case 2007**, in which the road hauliers already paid 10.5 billion EUR in road charges in the countries out of the 27 study countries which had already introduced road charges.

Table 40: Overview of scenario results 2007, 2009, 2020 and 2030

Year	Road user charge revenues [in Mil. EUR]				
	Base case	Base case plus	European commission case	Handbook minimum case	Handbook maximum case
2007	10'655	-	-	-	-
2009	-	15'294	23'255	20'689	304'338
2020	-	20'031	30'679	27'581	403'272
2030	-	21'788	33'584	30'247	436'591
Year	Share of external and congestion costs				
2007	-	-	-	-	-
2009	-	-	7'961	5'395	289'044
2020	-	-	10'648	7'550	383'241
2030	-	-	11'796	8'459	414'803
Year	Comparison to base case 2007 in %				
2007	-	-	-	-	-
2009	-	44%	118%	94%	2756%
2020	-	88%	188%	159%	3685%
2030	-	104%	215%	184%	3998%

(6) For 2009 (**Base case plus**), distance-related road user charges have been introduced for all countries, including those that have not yet introduced such charges. This results in an increase of 44 % compared to the Base case 2007, which brings the total road user charges to 15 billion EUR in 2009 and close to 22 billion EUR in 2030.

(7) Because of comparably high charge rates in the **EC** and the **Handbook minimum case**, the charging results are reasonably close to each other. However, with 23.3 billion EUR in the EC and 20.7 billion EUR in the Handbook minimum case, the total road user charges will have more than doubled in 2009 as compared to the Base case 2007. By 2030, the total road user charges in both cases will have more than tripled, resulting in 30.3 and 33.6 billion EUR.

(8) Due to the full internalisation of congestion costs of more than 3 EUR per vkm, as mentioned in the **Handbook maximum case**, the road user charge revenues for 2009 would be a staggering 29 times, or 293 billion EUR, higher than in the Base case 2007. If this scenario were to be introduced, road hauliers would be charged 304.3 billion EUR in 2009 and 436.6 billion EUR in 2030.

6 Conclusion: Main study results

(1) It should first be stated that there has been success in analysing and presenting European road goods traffic, studying a period of more than 20 years into the future in a reliable way. This has enabled the generation and presentation of the road user charge surpluses/deficits as requested by the client. This analysis is based on public statistics and other information from numerous sources, with the help of transport planning methods.

(2) The approach used for creating road user charge surpluses or deficits permits the evaluation of the impacts of several prospective charge development paths and scenarios from three perspectives:

- Road user charges paid by national road hauliers in inland transport and transport abroad;
- Road user charge revenues by country from national and international road hauliers;
- Total road user charge costs for the economy by study countries in national and foreign trade transport.

(3) The total road user charge revenues for all scenarios and years are shown in the following Figure 26 and Figure 27. The first figure compares the results for all 5 scenarios and highlights the exceptional position of the Handbook maximum case compared with the four others. In addition and in order to illustrate the differences in the 4 cases other than the Handbook maximum case, Figure 27 shows the same numbers excluding the latter. The European Commission case shows the biggest road user charge revenues in all three study years, but only slightly higher than the Handbook minimum case. These figures are also available for the three different perspectives and the respective 27 study countries shown in Annex I.

Figure 26: Comparison of total road user charge revenues by scenario and years in Mil. EUR

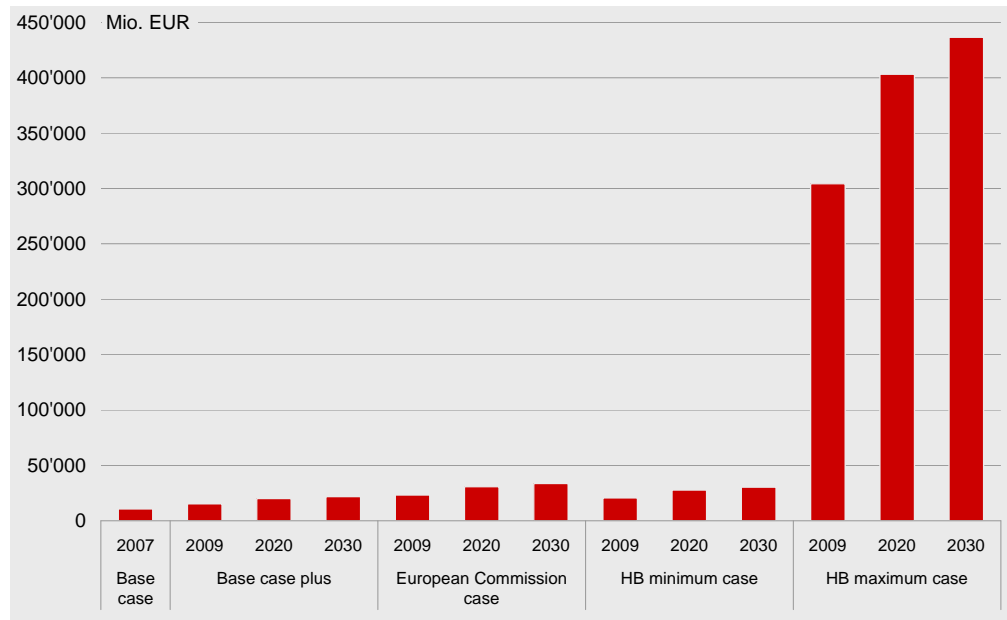
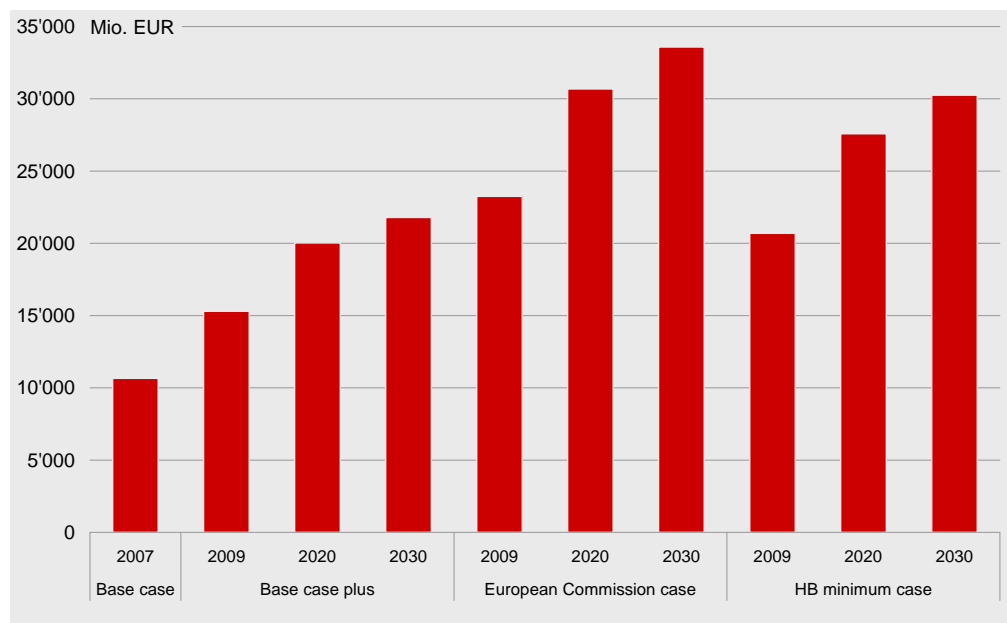


Figure 27: Comparison of total road user charge revenues by scenario and years in Mil. EUR (without Handbook maximum case)



(4) In general the **charges paid by national road hauliers** are influenced by three main aspects, i.e.

- the size of the vehicle fleets of the individual study countries as well as their vehicle mileage;
- the amount of toll charges that have to be paid in the home country; and
- in the main foreign countries travelled in.

As an example we may select Germany, which combines all aspects and therefore has to pay the highest charging costs in Europe, whereas vehicles registered in Poland can be called “European waggoners” since they travel more in foreign countries than in their own.

(5) Examined from the perspective of **revenues from national and international hauliers**, there are two main reasons responsible for different revenues: The central European location of the countries with the highest revenues coupled with their size and the length of their road infrastructure network. Both aspects apply especially to Germany and France. Austria and Switzerland - with comparatively high charge rates – benefit from their central European location as the main Alpine transit countries, but less from the dimension of their countries. Finally, Italy and Spain have high revenues because of the extent of their territory with large networks.

(6) The **costs for the economy** are mainly determined by the volume of foreign trade and the distance of the foreign trade partners from their location. High volumes and long distances apply to Germany, France and Spain whilst the East European countries do not match these criteria and hence obtain lower revenues and pay lower costs.

(7) Two approaches to **surpluses/deficits** combine the above three perspectives: The first is the relation between the road user charge revenues by country to the costs of trucks registered in the same country. The second is the difference between these revenues and the costs for national and foreign trade transport. Both will mostly be positive in large countries with extensive road networks, such as Germany and France. In the case of Switzerland, what matters is the relatively high charging rates in comparison with other countries and the fact that charging applies to the entire road infrastructure network and not only to the higher-ranking roads. Their central European location, as the main alpine transit countries, will lead to surpluses for Switzerland and Austria.

Figure 28: Surplus or deficit for all study countries



Key to symbols: white: not considered; green: surplus; red: deficit; yellow: variation according to scenario and/or time [mainly negative]

Source: ProgTrans

(8) As can be seen in the above figure, there is a clear lack of balance between countries if the concept of internalisation of external costs is introduced, both as regards costs for road hauliers and for the national economy. There are only a few winners – those that experience a surplus (green) and many losers – those that experience a deficit (red). The surpluses or deficits of coun-

tries coloured in yellow vary according to the different scenarios and/or years, but are also negative overall for the clear majority. The outstanding conclusion is that only two countries, i.e. Germany and France, would profit from the introduction of internalisation of external costs in all scenarios and years. As against that, 15 countries would have to meet serious deficits from such an introduction in all scenarios and years. The remaining 10 countries would have varying degrees of surpluses and deficits depending on the scenario and year.

Table 41: Range of surplus or deficit by study country (in Mil. EUR)

Country	Range of surplus or deficit for			
	national economy		road hauliers	
	Minimum	Maximum	Minimum	Maximum
	in Mio. EUR			
AT	-386	450	-501	481
BE	-3'738	-124	-114	5'114
BG	-355	-10	-803	-15
CH	-296	321	181	2'004
CZ	3	1'164	-4'985	-86
DE	256	20'577	540	33'964
DK	-2'568	12	-1'893	-12
EE	-280	-3	-478	-4
ES	-4'406	-211	-4'563	-279
FI	-174	-0	-383	-4
FR	632	22'841	931	29'785
GR	-173	-10	-470	-19
HU	-73	1'108	-2'202	-126
IE	-2'044	-2	-1'521	-8
IT	-2'619	-206	-305	3'345
LT	-207	-11	-1'872	-42
LU	-1'639	-23	-3'072	-63
LV	-736	-9	-956	-12
NL	-6'527	-206	-14'045	-244
NO	-464	-6	-153	1
PL	-6'265	-159	-20'742	-428
PT	-4'631	-42	-8'399	-108
RO	-2'782	-46	-5'090	-78
SE	-295	-25	-9	2'254
SI	-1'342	-15	-3'162	-63
SK	-2'673	-52	-6'247	-124
UK	-1'717	-78	-15	4'399

(9) Table 41 shows the impact in absolute figures from the introduction of the internalisation of external costs in the road charges on the surplus or deficit for the respective study countries. It shows them from the point of view of the national economy as well as for the road hauliers over the different years examined.

(10) As mentioned before, in all scenarios **Germany** and **France** will especially profit from the internalisation of external costs; in return, their road hauliers will also have to pay the most. In the end, however, a clear benefit will be left over for both countries. The large amount of revenues can be attributed to their central European location, their size, their extensive road networks and the strong linkage in foreign trade, as well as their huge vehicle fleets and vehicle mileage. Germany will rank in first position in all scenarios, both in revenues and charges, as well as in economy costs.

(11) The State in **Spain** would receive substantial revenue from road user charges, but suffer a clear deficit from the internalisation of external costs in all years and scenarios. This is mainly due to Spain's geographically peripheral position and fewer revenues from transit and cross-border traffic.

(12) Revenues in **Austria** will increase above the average level over time. This results mostly from the growing cross-alpine transport. With the entry of Hungary and Bulgaria into the EU in 2004 and of Romania in 2007, it can be assumed that, with the growing division of labour favouring countries with low labour costs, foreign trade transport between the Northern countries and the new EU Member States will steadily grow over time. For this purpose, a major part has to cross the Alps through Austria.

(13) In contrast to Austria, the revenues in **Switzerland** - except in the Handbook maximum case - will increase at a lower level. A faster increase is likely to be avoided by their alpine transport policy, where infrastructure capacity problems already exist on main traffic axes like the Gotthard tunnel, which will increase as road goods transport grows. The country intends to shift a large part of this transit traffic to rail transport and plans to implement a so-called "Alpentransitbörse" (a limitation of alpine crossing HGV trips, combined with trading the required permits) which will limit road cross-border traffic. The comparison of the revenues and costs by year and scenario shows comparable numbers between the Base Case plus, European Commission Case and the Handbook minimum case. In the case of Switzerland, the Handbook maximum does not stand out as much as in other countries. To take an example, the charges paid by Swiss road hauliers 2009 in the Handbook maximum

case exceed the Base case plus by “just” 130 % (in contrast to Germany where it exceeds it 20 times). This mainly results from the relatively high Swiss charge rates already in the Base case plus compared to the charge rates in other countries.

(14) The revenues and costs of the **United Kingdom** tend to increase only slightly over time, because their vehicle fleet mostly moves in the home country and carries out fewer trips in foreign countries. Over all cases, the maximum share of charges paid by British road hauliers in transport abroad amounts to about 7 %; in comparison to Polish trucks which have a share of more than 50 %. In addition, it appears that foreign trucks drive to the UK less frequently than to other countries. The share of revenues from international hauliers in the UK amounts to a maximum of about 19 % over all cases and years, as compared with France where that share is about 50 %.

(15) The importance of **Poland** will increase over the years to come. Their growing vehicle fleet, and hence their vehicle mileage, will lead to rising charging costs. As their revenues will not increase at the same rate, the deficit between revenues collected and charges paid will widen. Poland would be one of the countries with the largest deficits in all scenarios and years, together with the **Netherlands**.

(16) The still low importance of foreign trade and the location of the **Baltic States** and the new EU Member States, **Bulgaria** and **Romania**, on the fringes of the EU, explain their low revenues and costs. Furthermore, their road infrastructure needs to be developed; in the case of Latvia there is no toll road infrastructure at all. For the Baltic States, maritime as well as rail transport carry significant shares of goods traffic, especially in specific categories. Finally it must be recognised that the foreign trade economy of Estonia, Latvia and Lithuania is still oriented to the East and their big neighbour Russia.

(17) Both the revenues and charges of the four Scandinavian countries **Denmark, Sweden, Finland** and **Norway** are close to each other at an almost comparable low level. Only the Danish revenues and charges are somewhat higher. Except in the Base case plus 2009 and 2020, Sweden can report in all other cases and years a surplus of more revenues collected than charges paid. In contrast to Sweden, Norway presents a surplus just twice (Base case plus 2020 and 2030). All other countries have to bear deficits. The geographical location of Sweden near Denmark, Germany and Poland, as well as central to Norway and Finland, might be a reason for their surpluses.

(18) Some states, particularly for the Handbook maximum case, show surpluses or only small deficits in the study year 2009, whereas they expect sizeable deficits in the years 2020 and 2030. Next to country specific developments as in Belgium, this is due to the overall stronger transport performance increase between 2009 and 2020, as compared with the following decade up to 2030. In addition, cross-border transport will increase more strongly than national transport, due to the overall increase in globalisation and the relocation of manufacturing bases to Eastern Europe leading to longer transport distances. These developments will result in a greater increase of road user charges paid abroad than in revenues collected by these states from inland transports conducted by national and international hauliers.

(19) The **Handbook Maximum Case** also shows that the allocation effects of road user charges between the European countries vary significantly: The revenues of centrally located countries will increase faster than the expenses of their economic sector and their road haulage industry. Such countries would have a larger margin for financing fiscal compensation measures, but this margin would be lower in the peripheral countries, in particular if they have a high level of external trade and their trucks are carrying out more international transports.

(20) To conclude, it is clear that adding the internalisation of external costs in today's road user charges for the road freight transport sector will dramatically affect the individual EU Member States, their road hauliers and their national and foreign trade economy in very different ways, pointing clearly towards a negative impact and a serious internal problem for the EU as a whole.

(21) In all scenarios the internalisation of external costs would lead to substantially increasing costs for the road freight transport industry as well as for the foreign trade economy. In the end, this will not remain without consequences for European competitiveness and will harm the internal aim of equal opportunities for economic development, employment and competitiveness.

ANNEXES

Annex I: Country tables and figures: Comparison of road user charge surpluses or deficits for all scenarios and years

Annex II: Revenues and road haulier costs in national and international transport by country 2007, 2009, 2020 and 2030

Annex III: Glossary

Annex IV: Sources

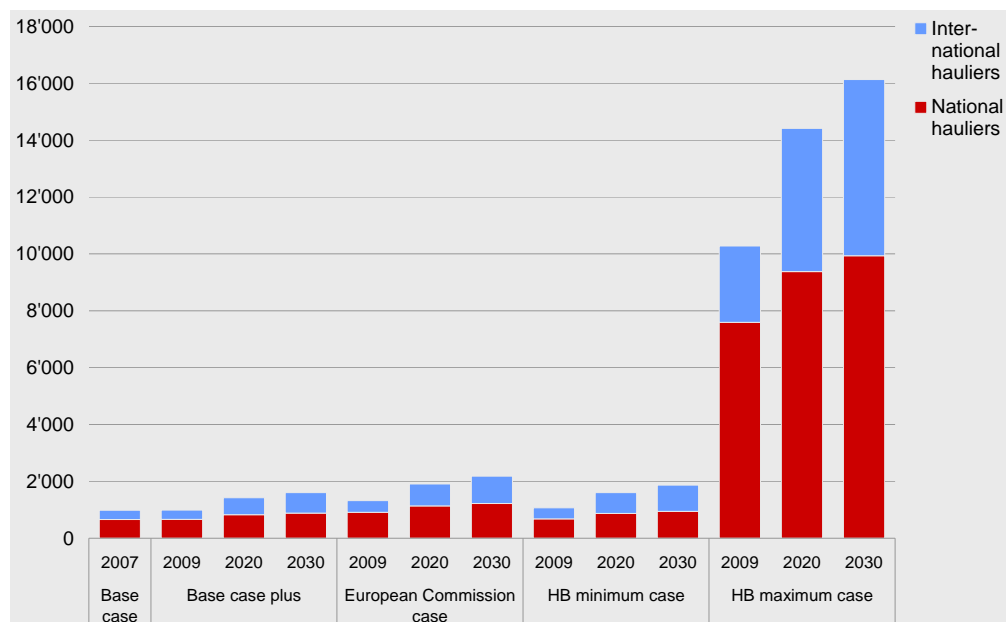
Annex I: Country tables and figures: Comparison of road user charge surpluses or deficits for all scenarios and years

Austria

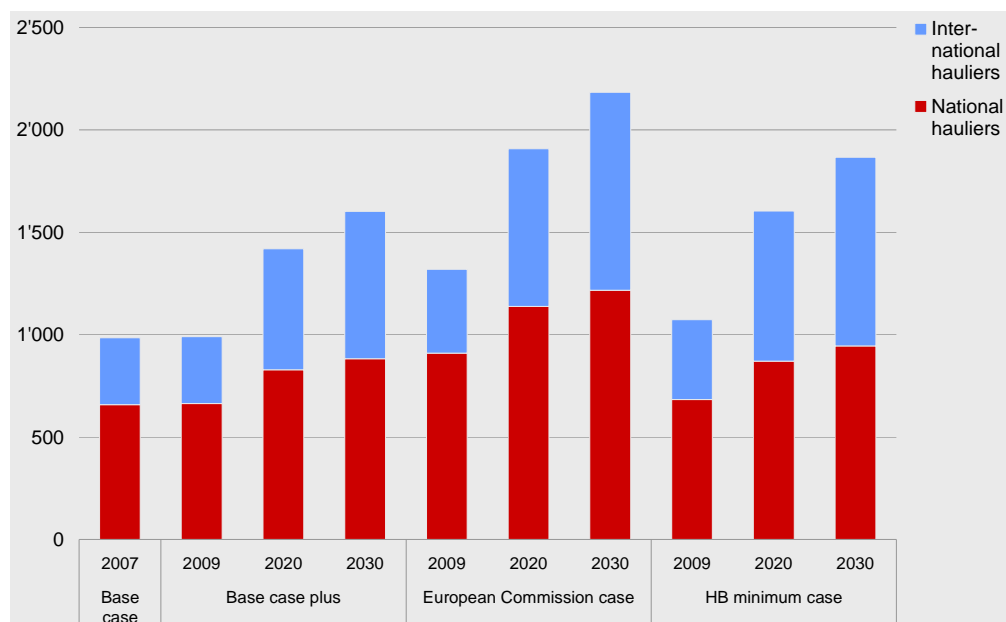
Annex I - Table 1: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits AT		Base case	Base case plus				European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030	
		Mio. EUR	in Mio. EUR				in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by AT from	national hauliers	658	663	829	883	909	1'138	1'217	683	871	945	7'590	9'381	9'937	
	international hauliers	327	327	591	720	410	770	967	391	733	922	2'687	5'035	6'191	
	Total	985	990	1'419	1'603	1'320	1'908	2'185	1'073	1'604	1'868	10'278	14'416	16'128	
Road user charges paid by trucks registered in AT for	inland transport	658	663	829	883	909	1'138	1'217	683	871	945	7'590	9'381	9'937	
	transport abroad	108	154	230	288	258	390	488	234	353	442	3'189	4'863	6'051	
	Total	766	817	1'059	1'171	1'168	1'528	1'705	916	1'224	1'387	10'779	14'243	15'988	
Road user charge surpluses/deficits for AT with regard to the road hauliers	in Mio. EUR	219	173	361	432	152	380	479	157	380	481	-501	173	140	
	in %	29	21	34	37	13	25	28	17	31	35	-5	1	1	
Total charge costs of economy in AT for	national transport	570	570	658	662	790	913	919	570	658	662	6'770	7'820	7'867	
	foreign trade transport	170	219	407	528	338	629	821	310	578	755	3'661	6'697	8'647	
	Total	739	789	1'065	1'190	1'128	1'542	1'740	880	1'236	1'417	10'431	14'517	16'514	
Road user charge surpluses/deficits for AT with regard to the national economy	in Mio. EUR	246	201	355	412	192	366	445	194	369	450	-154	-101	-386	
	in %	33	26	33	35	17	24	26	22	30	32	-1	-1	-2	

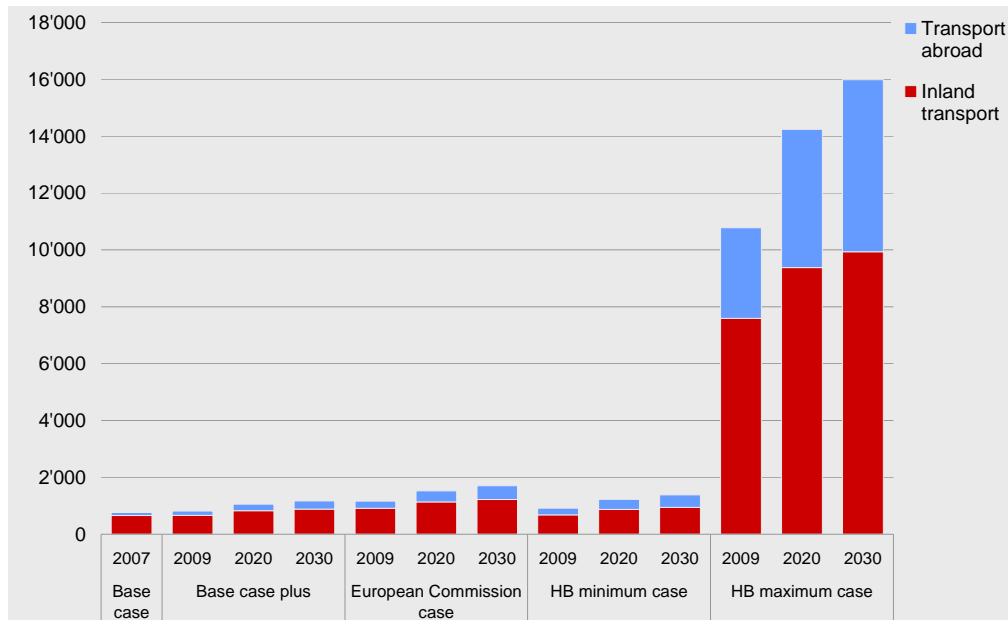
Annex I - Figure 1: Comparison of road user charge revenues for Austria from national and international road hauliers by scenarios and years (in Mil. EUR)



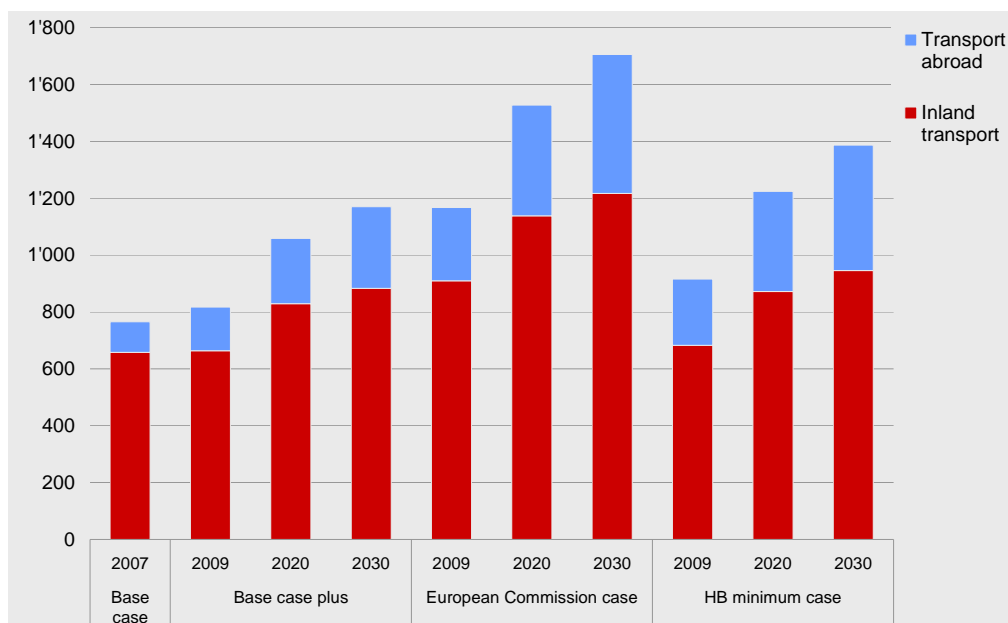
Annex I - Figure 2: Comparison of road user charge revenues for Austria from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



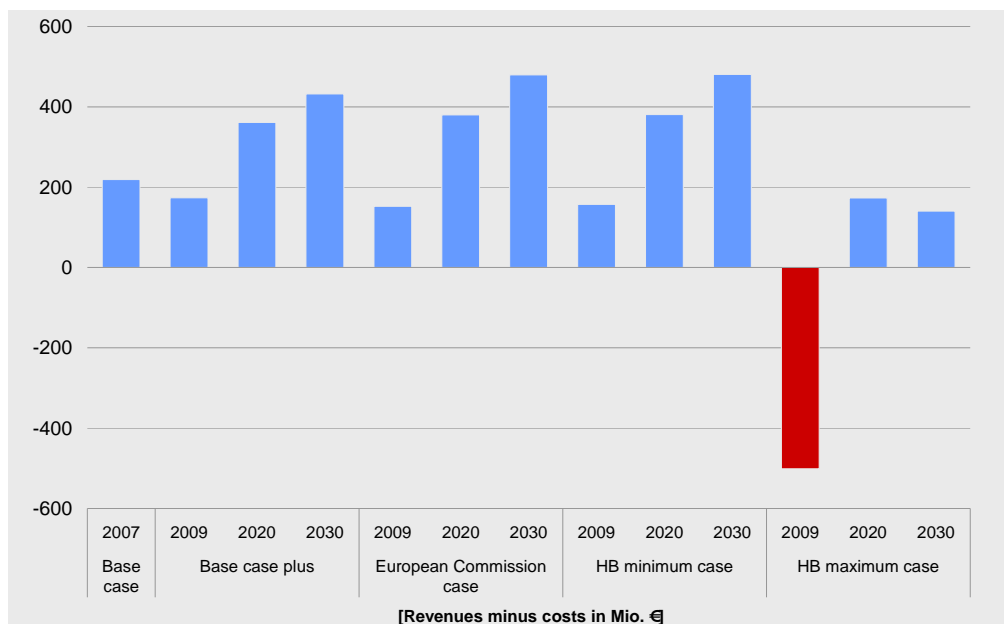
Annex I - Figure 3: Comparison of road user charges paid by Austrian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



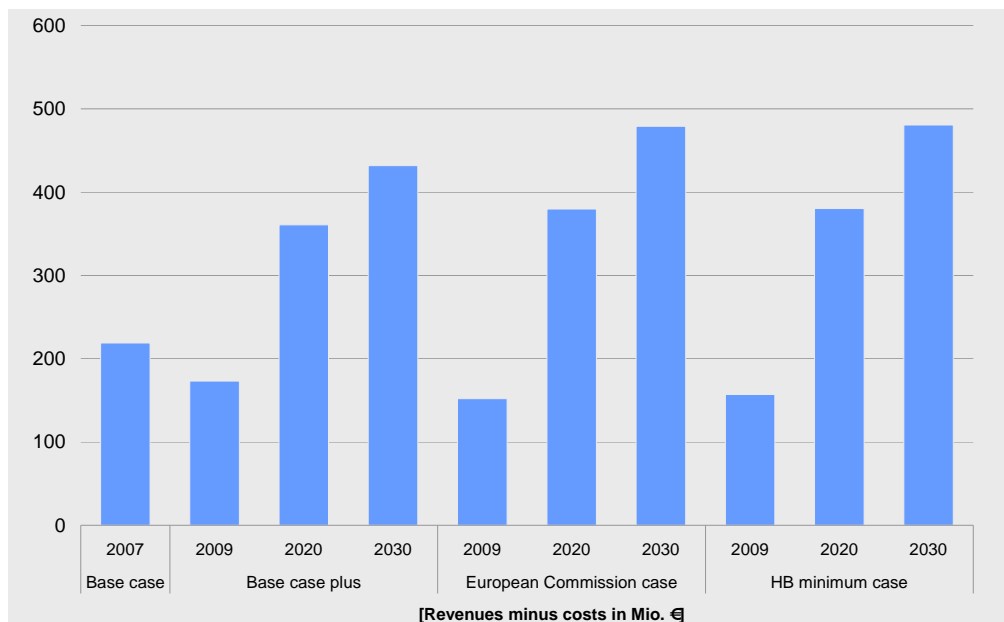
Annex I - Figure 4: Comparison of road user charges paid by Austrian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



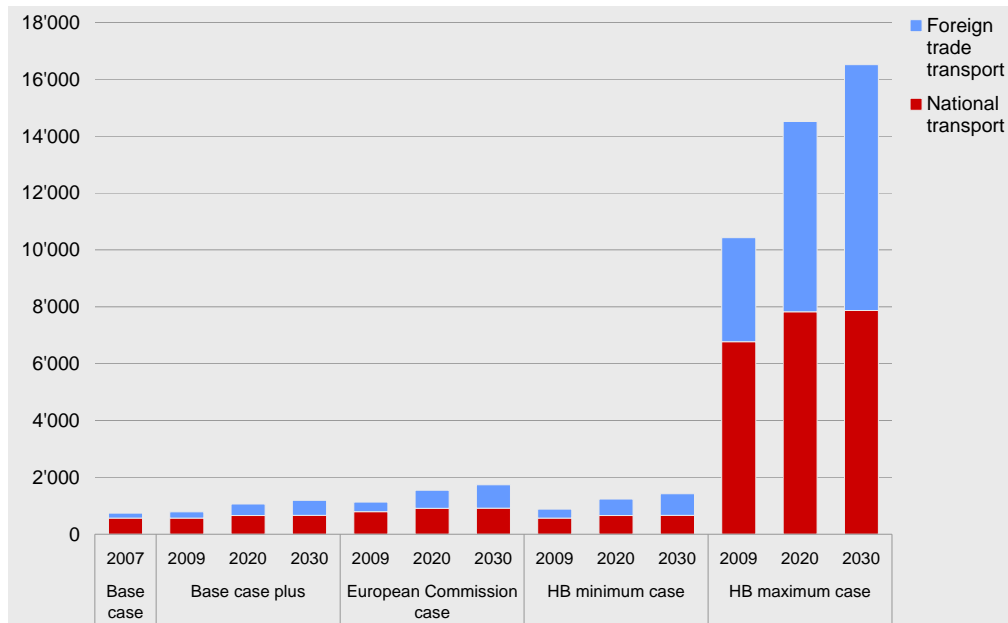
Annex I - Figure 5: Comparison of road user charge surpluses or deficits for Austria with regard to the road hauliers by scenarios and years (in Mil. EUR)



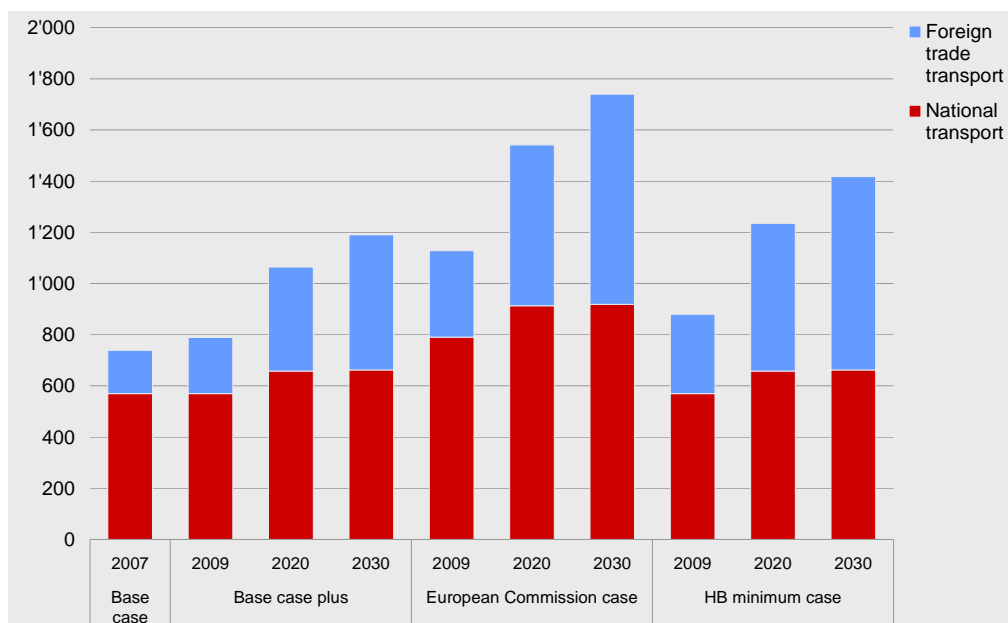
Annex I - Figure 6: Comparison of road user charge surpluses or deficits for Austria with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



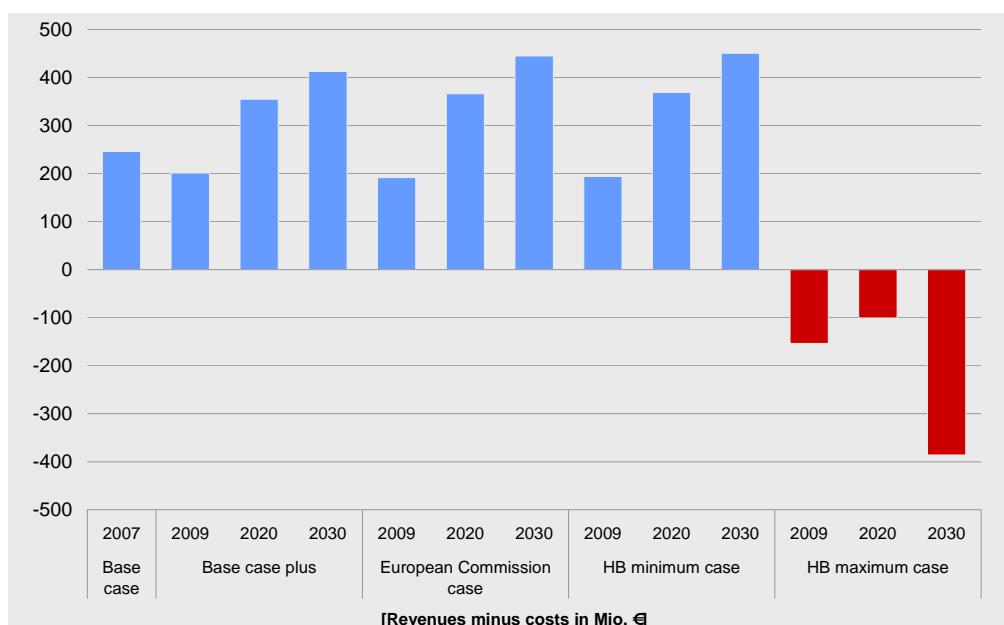
Annex I - Figure 7: Comparison of road user charge costs for the Austrian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



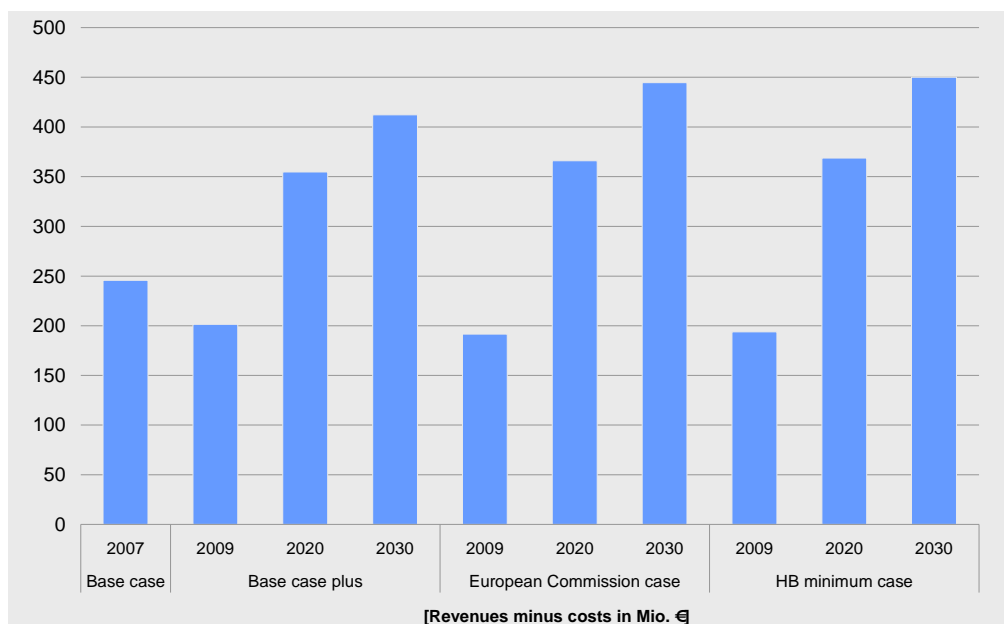
Annex I - Figure 8: Comparison of road user charge costs for the Austrian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 9: Comparison of road user charge surpluses or deficits for Austria with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 10: Comparison of road user charge surpluses or deficits for Austria with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

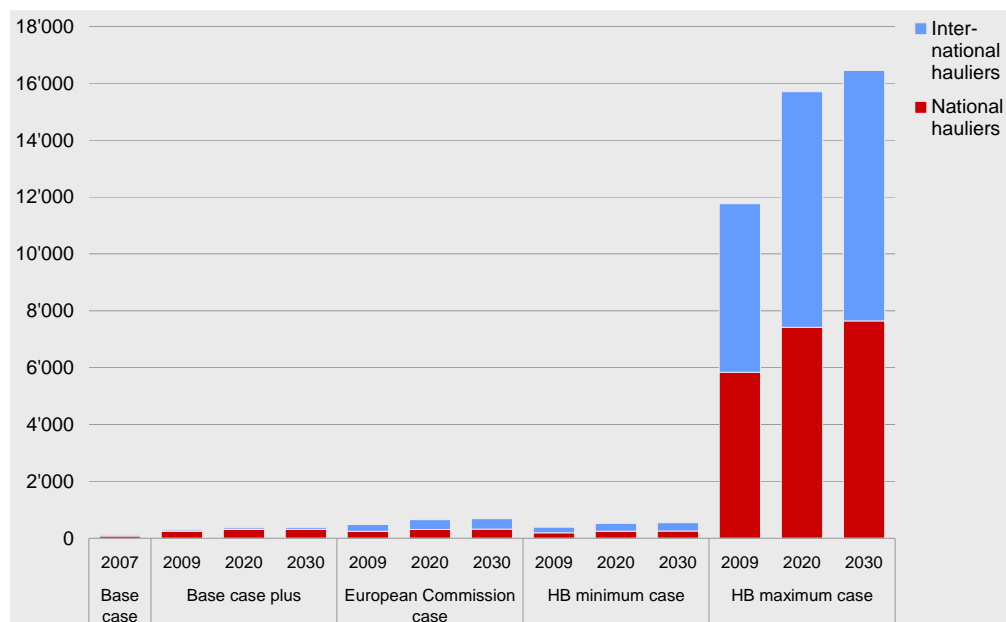


Belgium

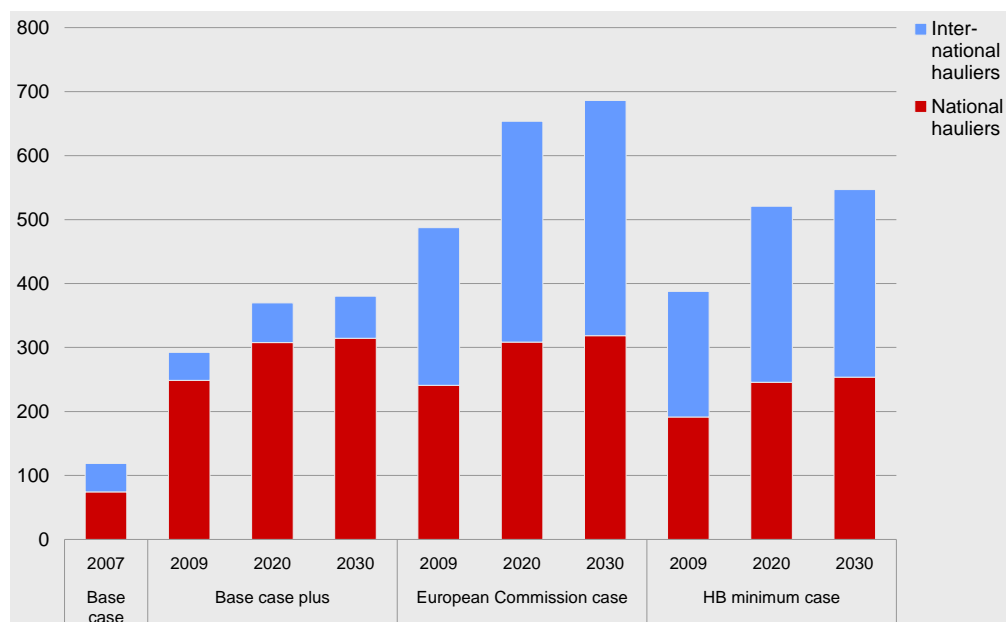
Annex I - Table 2: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits BE		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by BE from	national hauliers	74	248	308	314	241	309	318	191	246	254	5'834	7'423	7'645
	international hauliers	45	44	62	66	246	345	368	196	275	293	5'932	8'281	8'813
	Total	119	292	370	380	487	654	686	388	521	547	11'766	15'704	16'458
Road user charges paid by trucks registered in BE for	inland transport	74	248	308	314	241	309	318	191	246	254	5'834	7'423	7'645
	transport abroad	74	121	164	180	204	275	302	184	248	272	2'519	3'374	3'699
	Total	148	370	472	494	445	584	620	375	494	526	8'354	10'796	11'344
Road user charge surpluses/deficits for BE with regard to the road hauliers	in Mio. EUR	-29	-77	-102	-114	43	70	66	12	27	21	3'412	4'907	5'114
	in %	-20	-21	-22	-23	10	12	11	3	5	4	41	45	45
Total charge costs of economy in BE for	national transport	61	236	289	295	179	219	223	142	174	177	4'372	5'351	5'458
	foreign trade transport	193	248	484	540	498	933	1'033	437	825	916	7'519	13'473	14'738
	Total	254	484	773	835	677	1'152	1'257	579	999	1'093	11'890	18'824	20'196
Road user charge surpluses/deficits for BE with regard to the national economy	in Mio. EUR	-135	-192	-404	-455	-189	-498	-570	-192	-478	-546	-124	-3'120	-3'738
	in %	-53	-40	-52	-54	-28	-43	-45	-33	-48	-50	-1	-17	-19

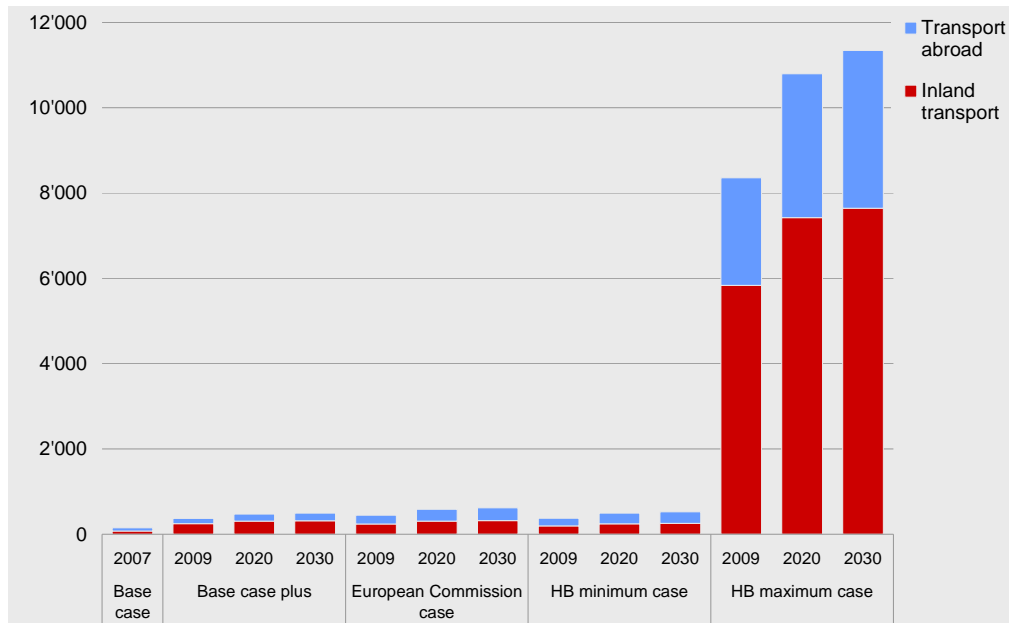
Annex I - Figure 11: Comparison of road user charge revenues for Belgium from national and international road hauliers by scenarios and years (in Mil. EUR)



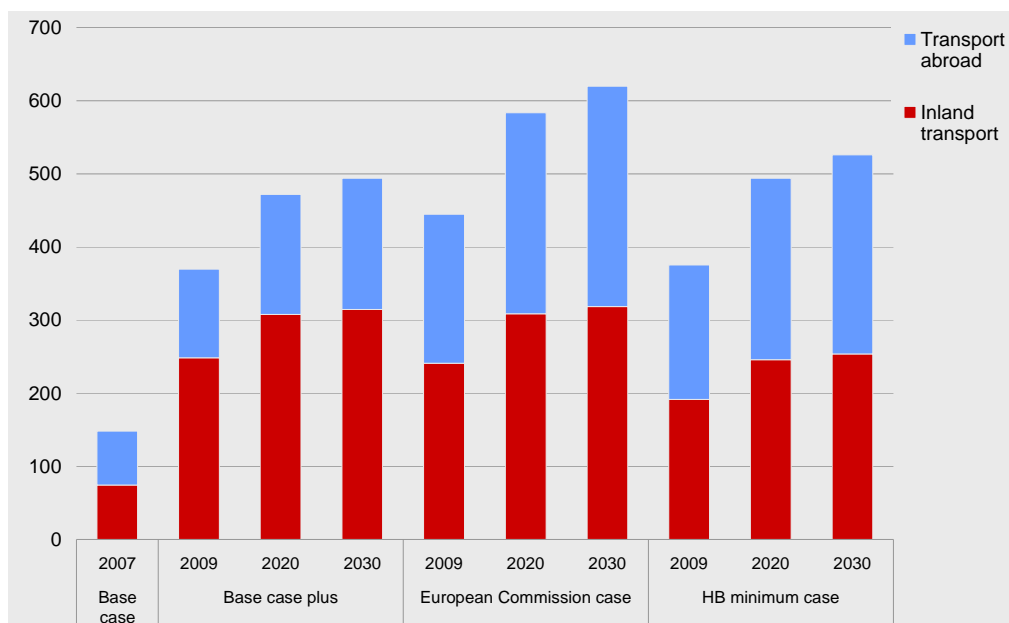
Annex I - Figure 12: Comparison of road user charge revenues for Belgium from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



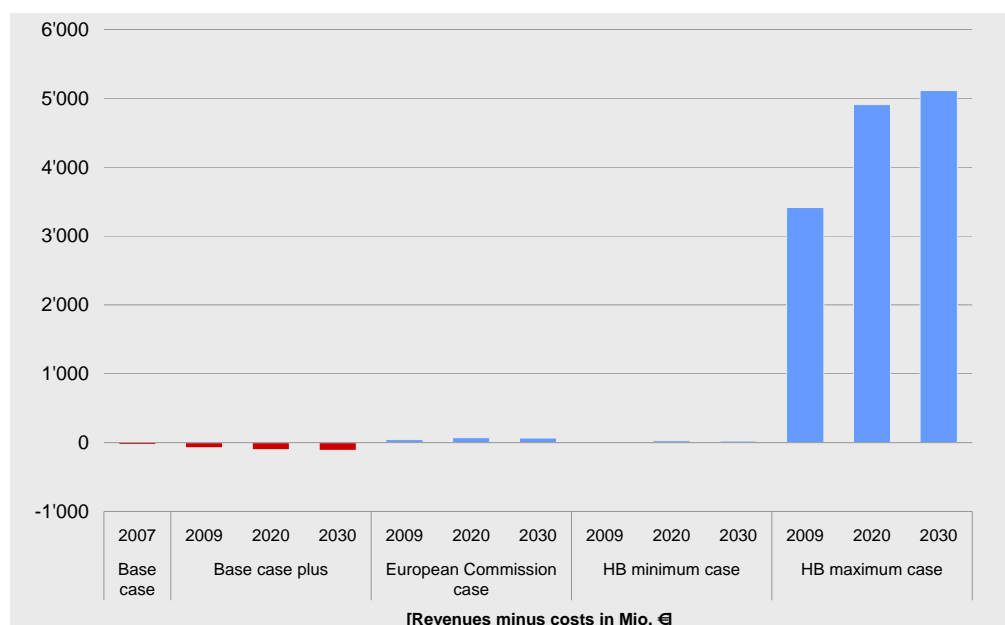
Annex I - Figure 13: Comparison of road user charges paid by Belgian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



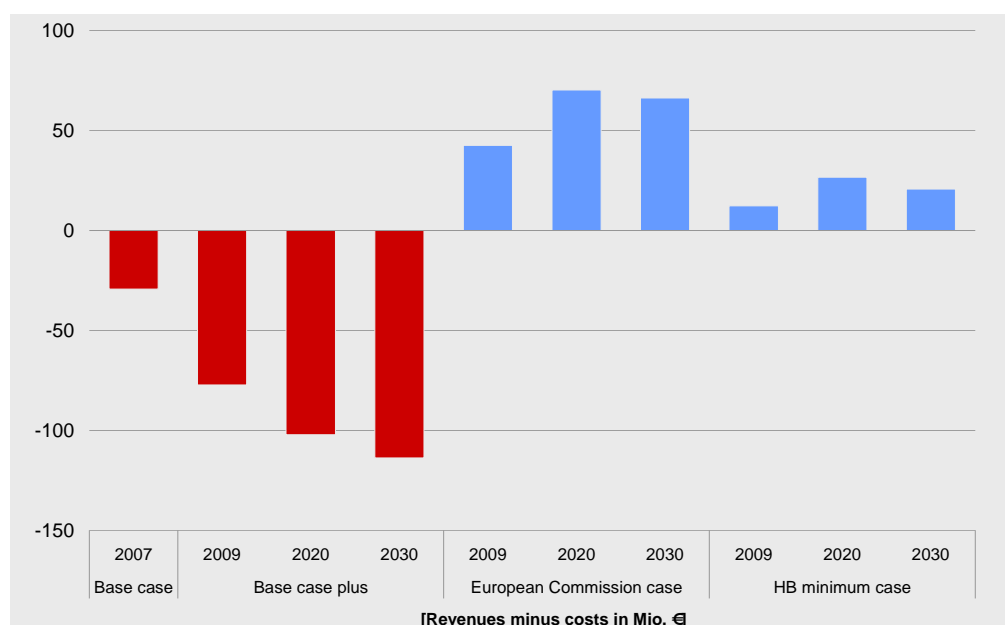
Annex I - Figure 14: Comparison of road user charges paid by Belgian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



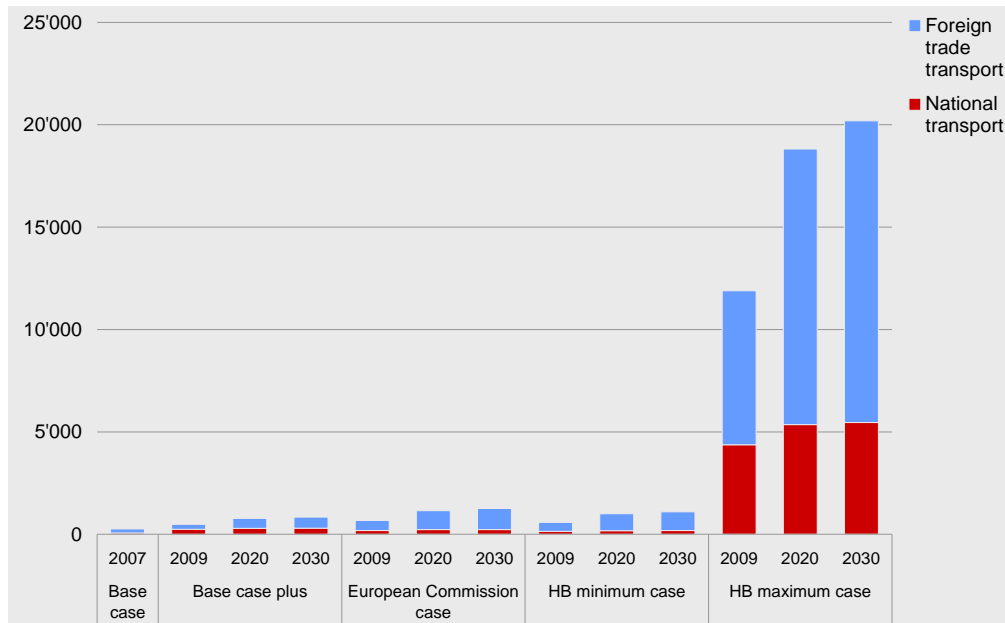
Annex I - Figure 15: Comparison of road user charge surpluses or deficits for Belgium with regard to the road hauliers by scenarios and years (in Mil. EUR)



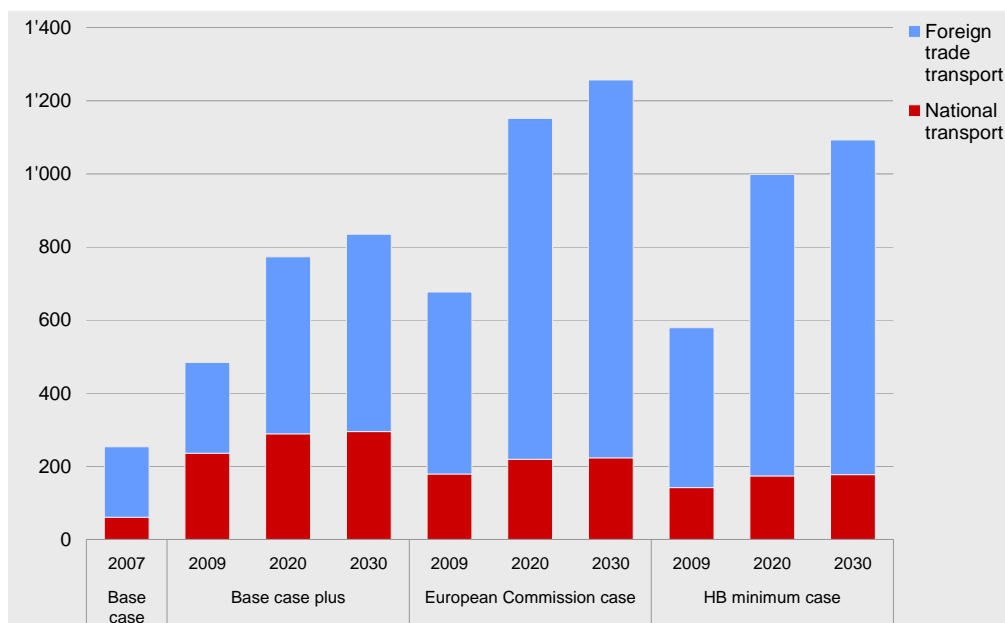
Annex I - Figure 16: Comparison of road user charge surpluses or deficits for Belgium with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



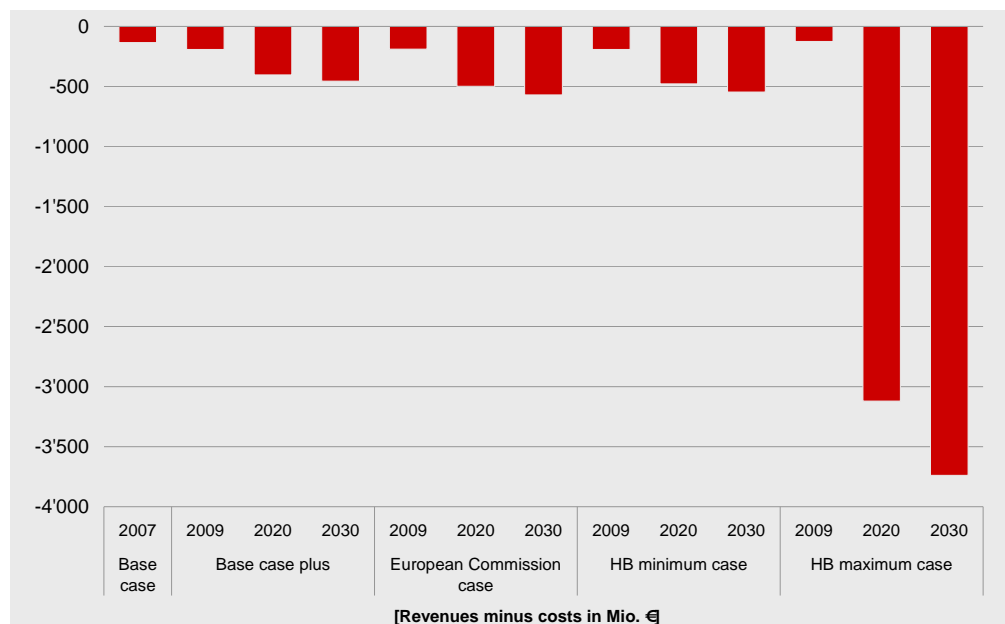
Annex I - Figure 17: Comparison of road user charge costs for the Belgian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



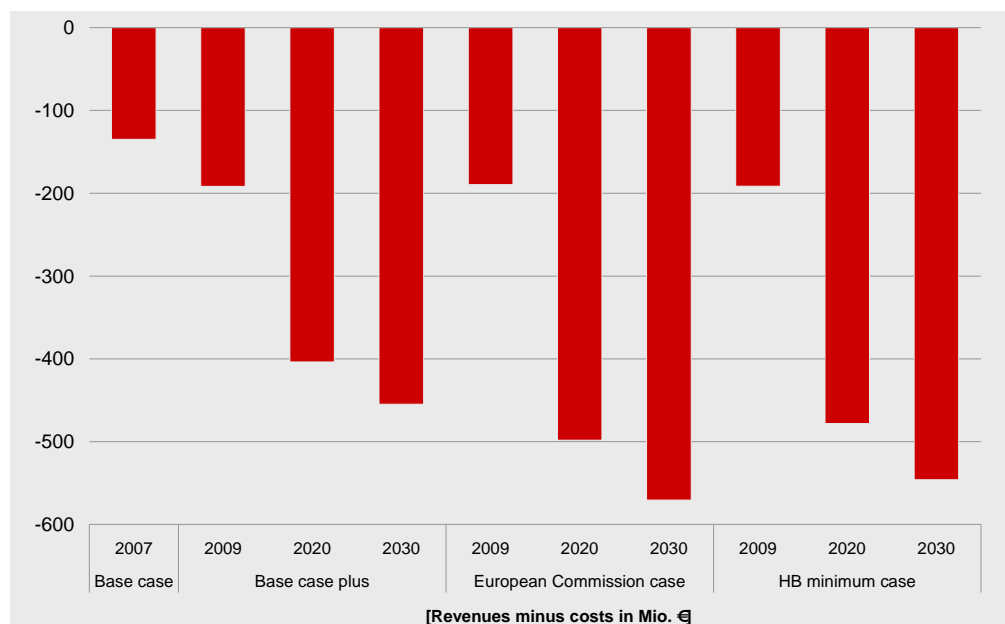
Annex I - Figure 18: Comparison of road user charge costs for the Belgian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 19: Comparison of road user charge surpluses or deficits for Belgium with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 20: Comparison of road user charge surpluses or deficits for Belgium with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

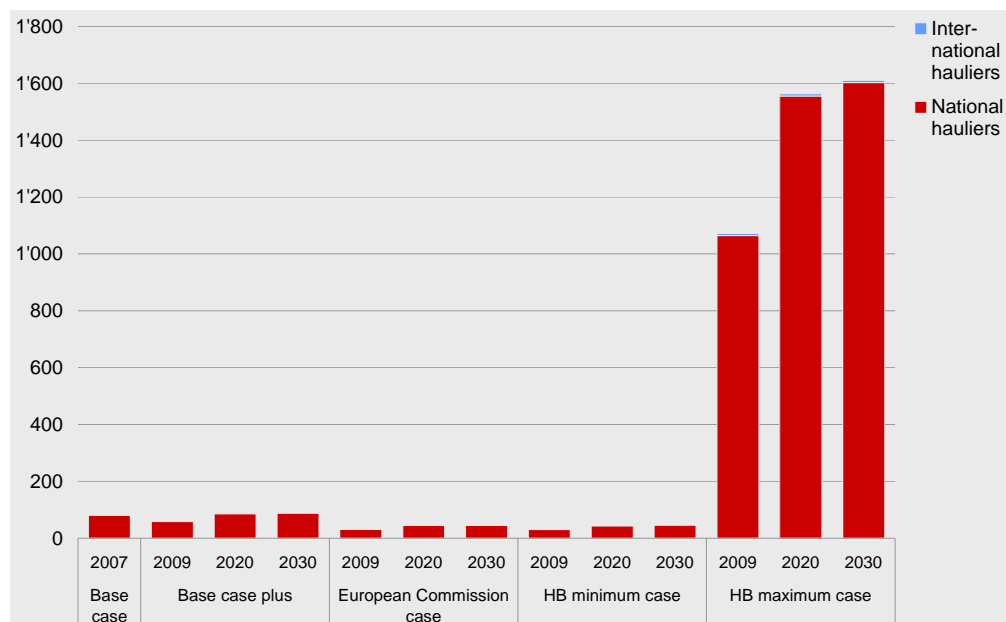


Bulgaria

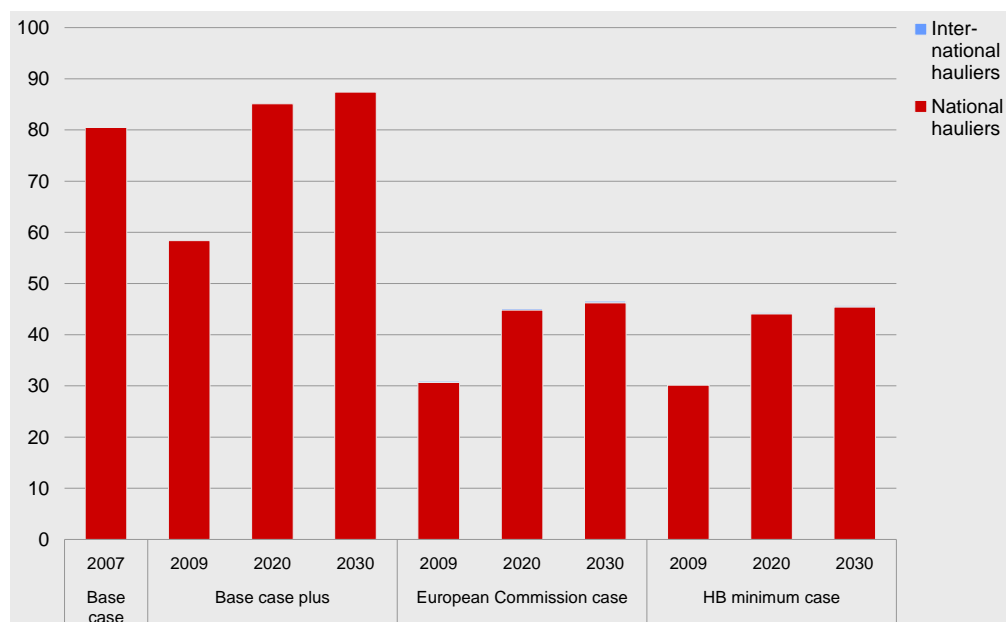
Annex I - Table 3: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits BG		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by BG from	national hauliers	81	58	85	87	31	45	46	30	44	45	1'064	1'555	1'603
	international hauliers	0	0	0	0	0	0	0	0	0	0	7	8	8
	Total	81	58	85	87	31	45	46	30	44	45	1'072	1'563	1'611
Road user charges paid by trucks registered in BG for	inland transport	81	58	85	87	31	45	46	30	44	45	1'064	1'555	1'603
	transport abroad	15	20	27	29	37	51	57	33	45	50	532	725	811
	Total	95	78	112	117	68	96	103	63	90	96	1'597	2'281	2'414
Road user charge surpluses/deficits for BG with regard to the road hauliers	in Mio. EUR	-15	-20	-27	-29	-37	-51	-56	-33	-45	-50	-525	-717	-803
	in %	-16	-25	-24	-25	-54	-53	-55	-52	-50	-52	-33	-31	-33
Total charge costs of economy in BG for	national transport	80	58	85	87	28	41	42	28	41	42	997	1'454	1'493
	foreign trade transport	11	10	14	15	20	28	31	18	25	27	313	426	473
	Total	91	68	99	102	49	69	73	46	66	70	1'311	1'880	1'966
Road user charge surpluses/deficits for BG with regard to the national economy	in Mio. EUR	-11	-10	-13	-15	-18	-24	-27	-16	-22	-24	-239	-317	-355
	in %	-12	-14	-14	-14	-36	-35	-36	-34	-33	-34	-18	-17	-18

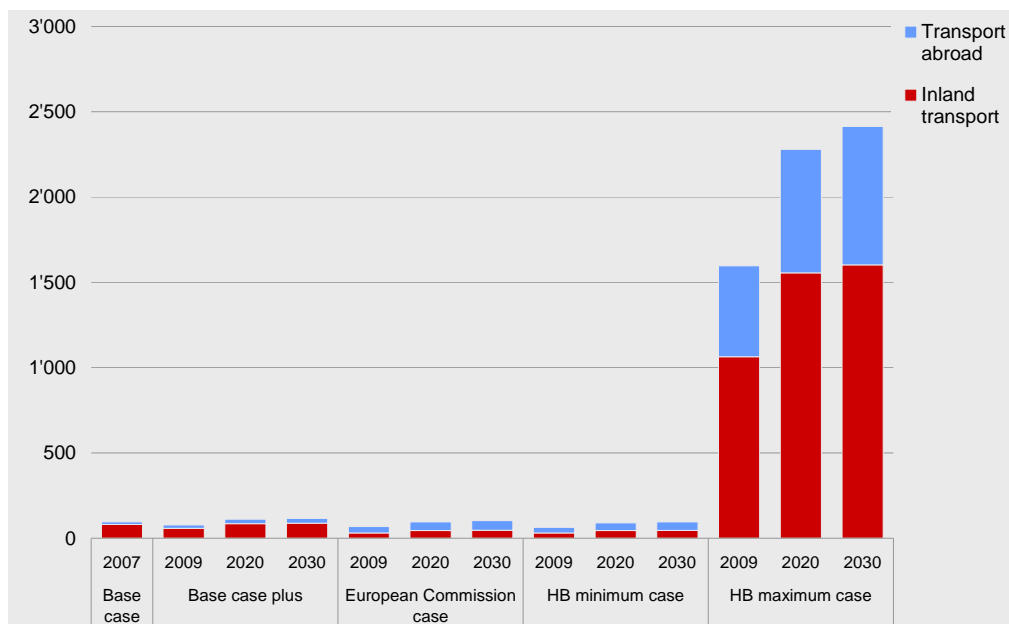
Annex I - Figure 21: Comparison of road user charge revenues for Bulgaria from national and international road hauliers by scenarios and years (in Mil. EUR)



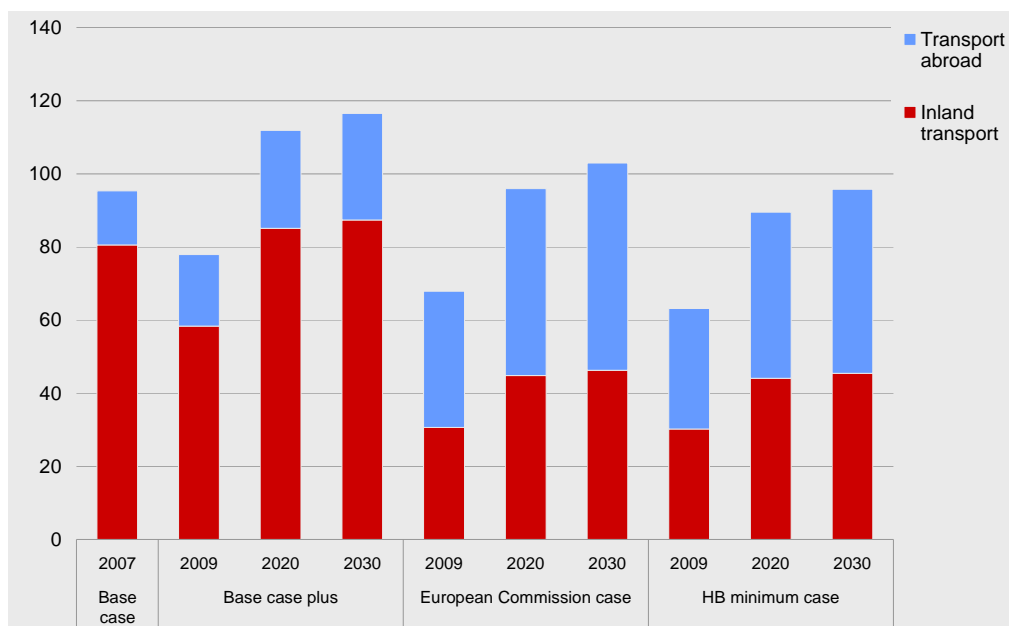
Annex I - Figure 22: Comparison of road user charge revenues for Bulgaria from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



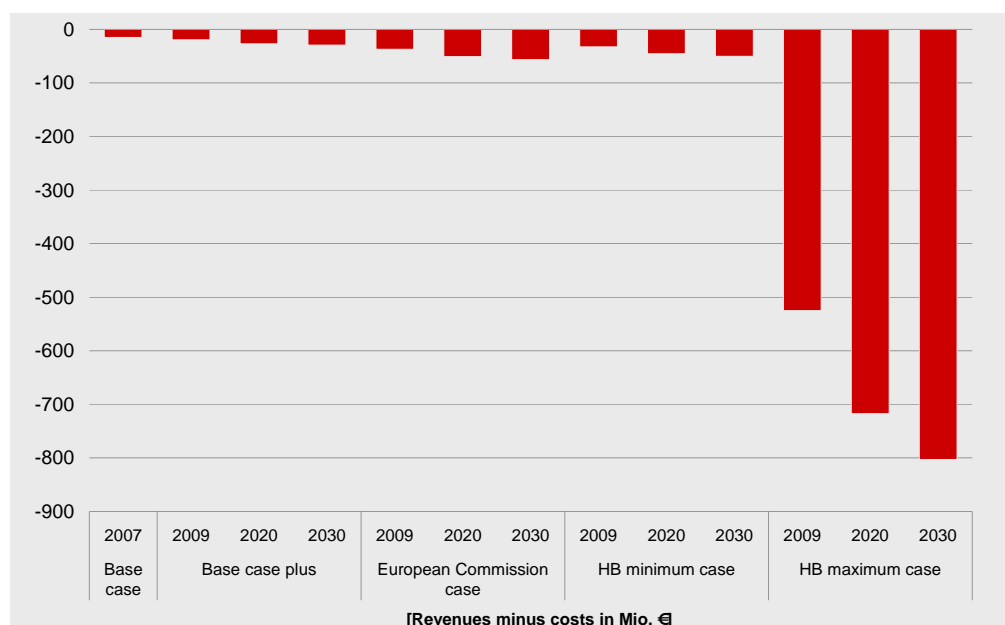
Annex I - Figure 23: Comparison of road user charges paid by Bulgarian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



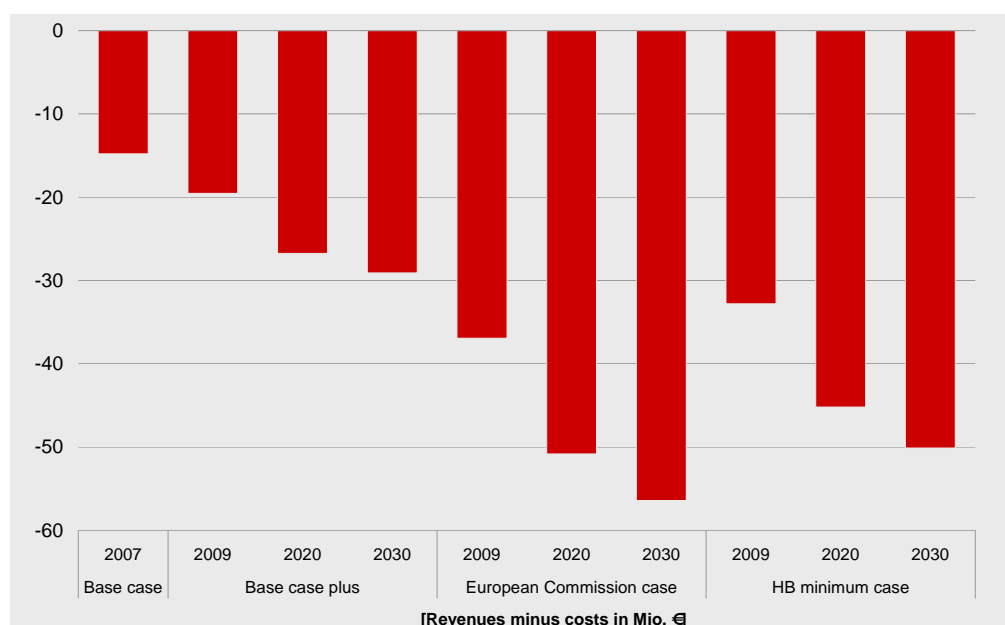
Annex I - Figure 24: Comparison of road user charges paid by Bulgarian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



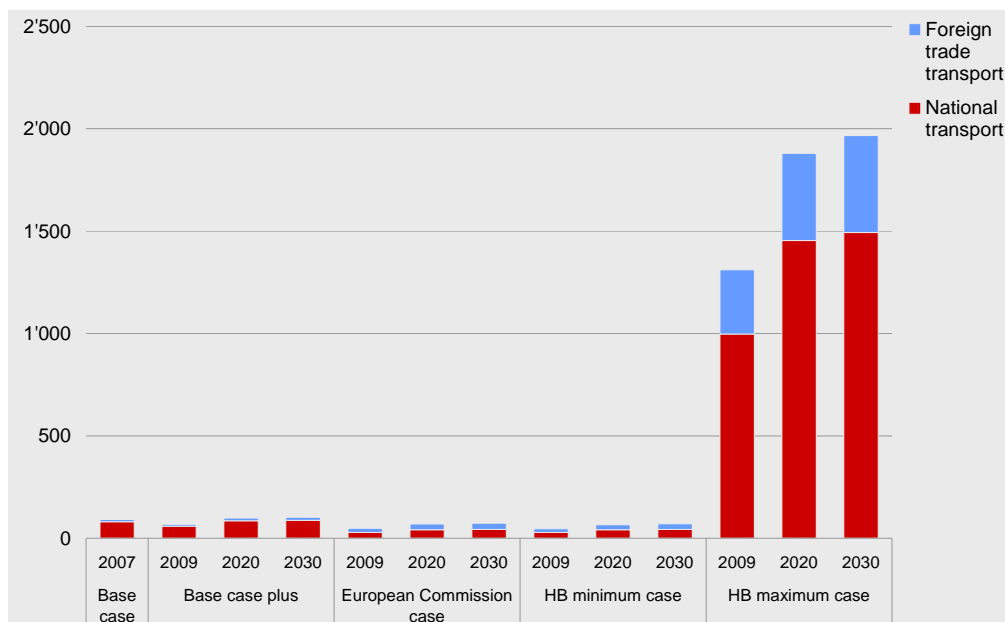
Annex I - Figure 25: Comparison of road user charge surpluses or deficits for Bulgaria with regard to the road hauliers by scenarios and years (in Mil. EUR)



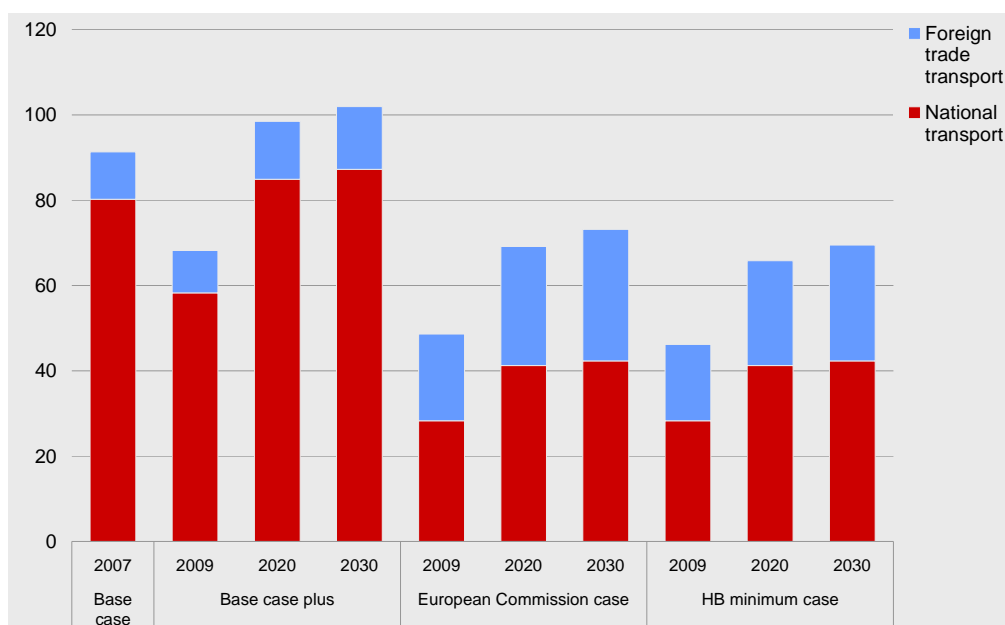
Annex I - Figure 26: Comparison of road user charge surpluses or deficits for Bulgaria with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



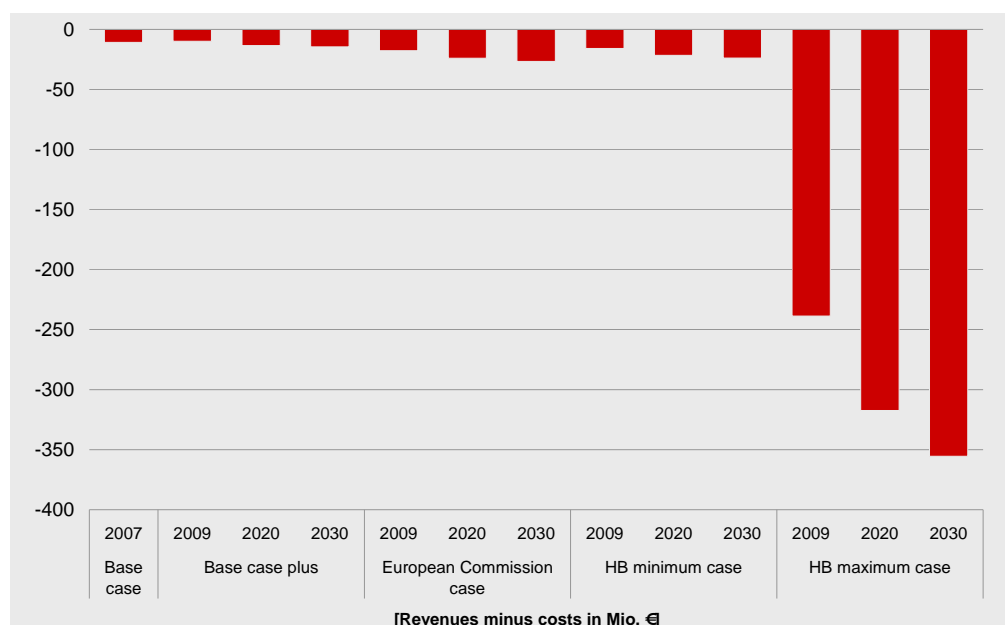
Annex I - Figure 27: Comparison of road user charge costs for the Bulgarian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



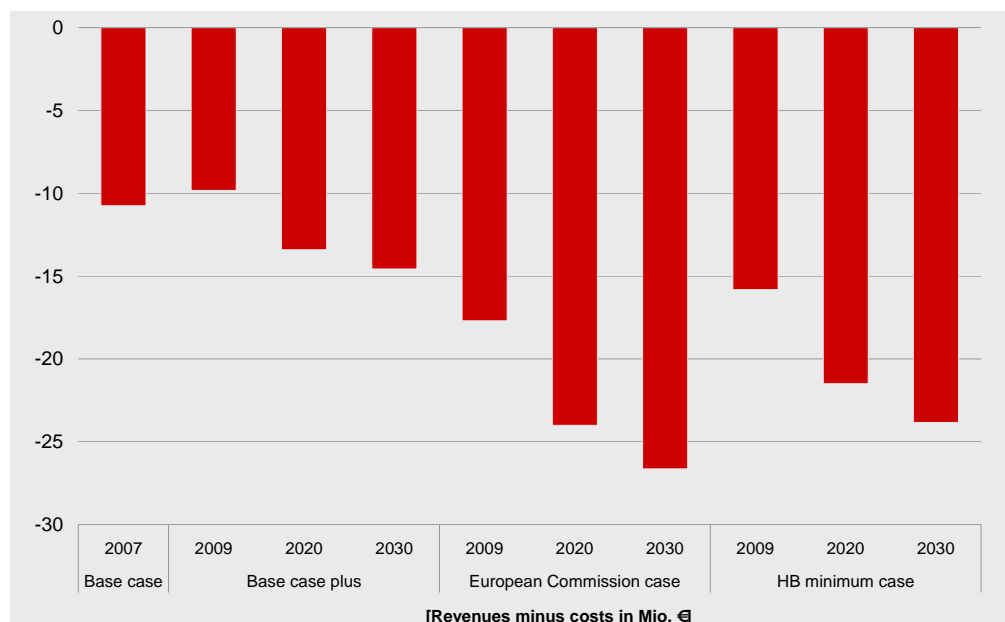
Annex I - Figure 28: Comparison of road user charge costs for the Bulgarian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 29: Comparison of road user charge surpluses or deficits for Bulgaria with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 30: Comparison of road user charge surpluses or deficits for Bulgaria with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

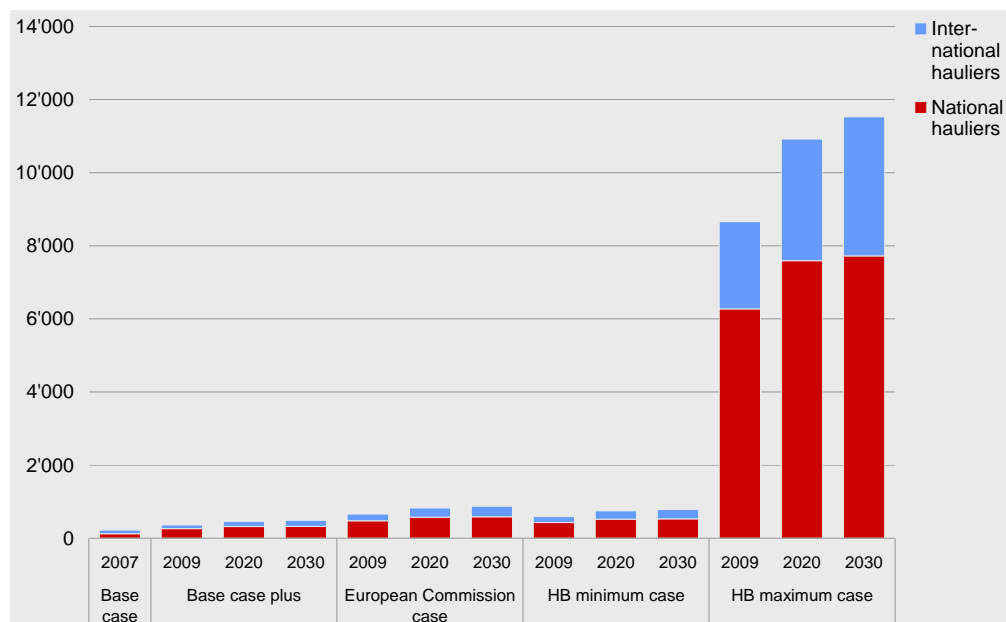


Czech Republic

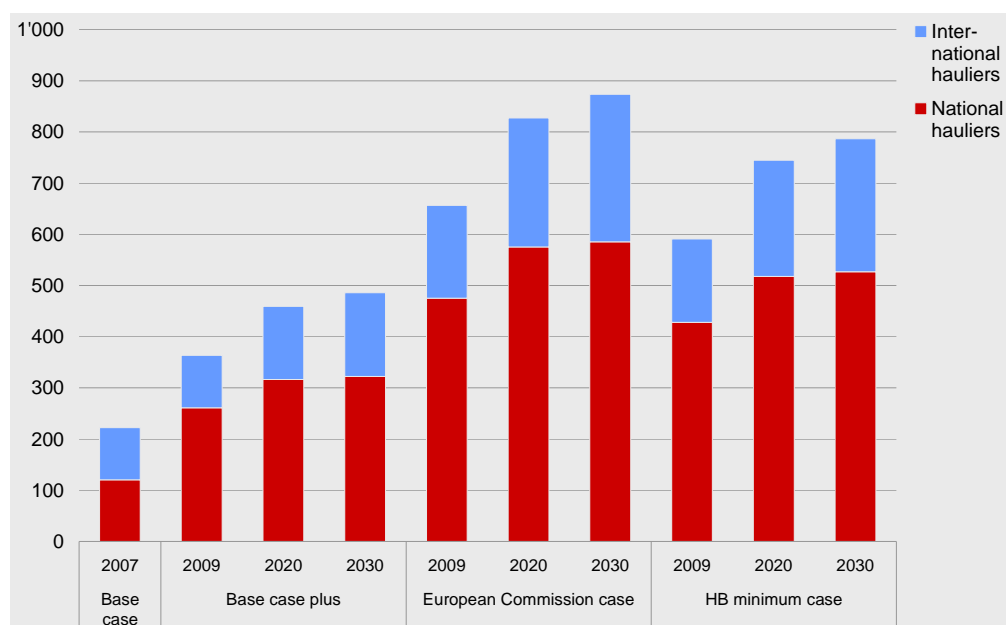
Annex I - Table 4: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits CZ		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by CZ from	national hauliers	120	261	317	322	475	575	585	428	518	527	6'271	7'588	7'722
	international hauliers	102	103	143	163	181	252	288	163	227	260	2'392	3'327	3'805
	Total	222	364	459	486	657	828	874	591	745	787	8'663	10'915	11'527
Road user charges paid by trucks registered in CZ for	inland transport	120	261	317	322	475	575	585	428	518	527	6'271	7'588	7'722
	transport abroad	188	273	395	440	455	659	733	412	598	665	5'549	7'993	8'791
	Total	309	534	712	763	930	1'235	1'319	840	1'116	1'192	11'820	15'581	16'512
Road user charge surpluses/deficits for CZ with regard to the road hauliers	in Mio. EUR	-86	-170	-253	-277	-273	-407	-445	-248	-371	-406	-3'157	-4'666	-4'985
	in %	-28	-32	-35	-36	-29	-33	-34	-30	-33	-34	-27	-30	-30
Total charge costs of economy in CZ for	national transport	57	197	220	217	362	405	399	326	365	359	4'773	5'343	5'259
	foreign trade transport	133	164	225	234	282	388	403	255	350	364	3'587	4'932	5'104
	Total	190	361	445	451	644	793	802	580	715	723	8'360	10'275	10'363
Road user charge surpluses/deficits for CZ with regard to the national economy	in Mio. EUR	32	3	14	35	13	35	72	11	30	64	302	640	1'164
	in %	17	1	3	8	2	4	9	2	4	9	4	6	11

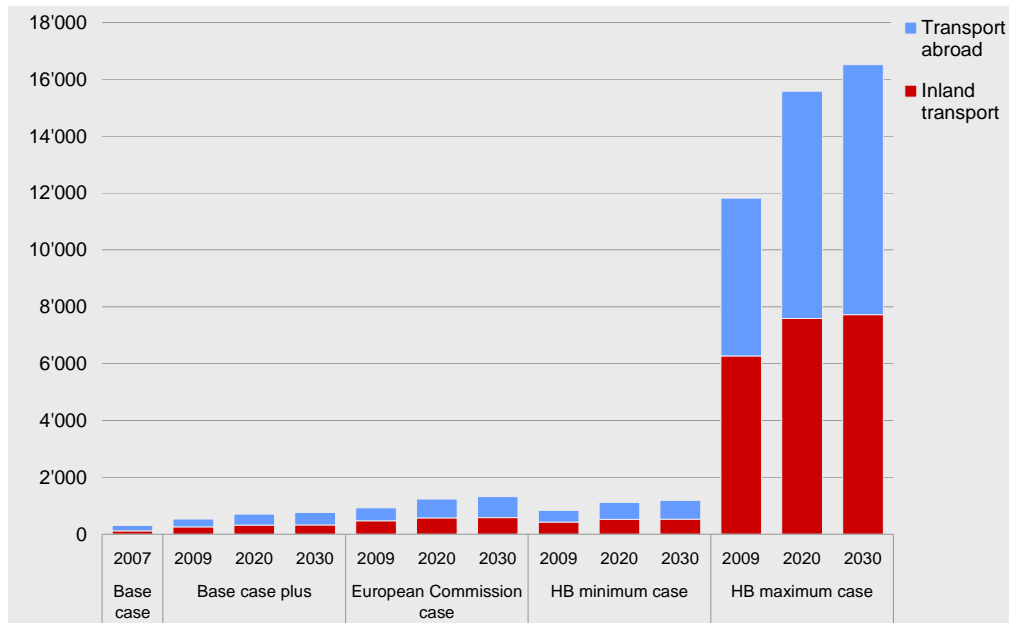
Annex I - Figure 31: Comparison of road user charge revenues for Czech Republic from national and international road hauliers by scenarios and years (in Mil. EUR)



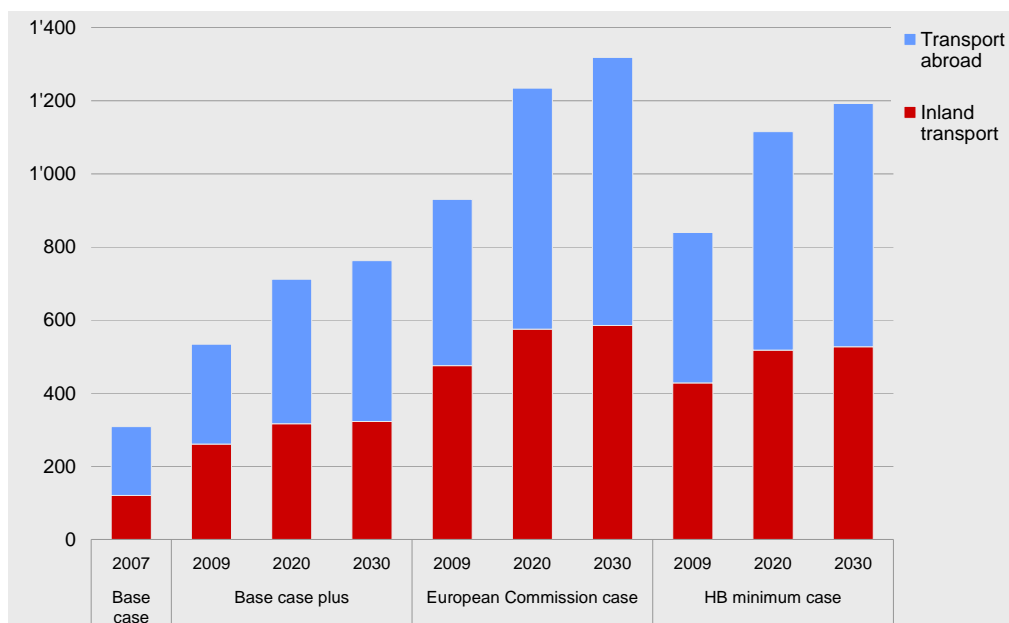
Annex I - Figure 32: Comparison of road user charge revenues for Czech Republic from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



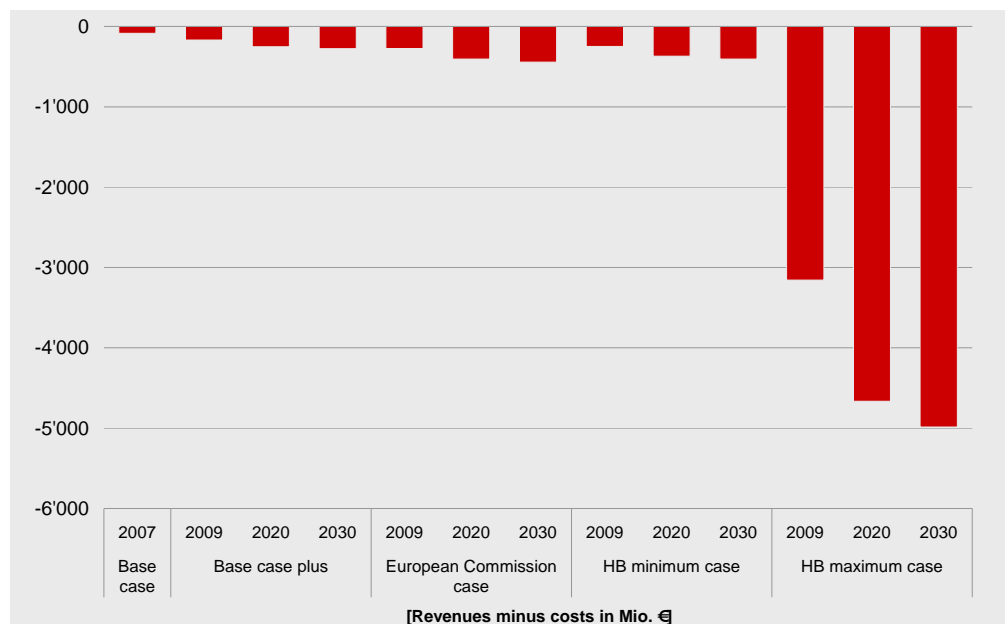
Annex I - Figure 33: Comparison of road user charges paid by Czech road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



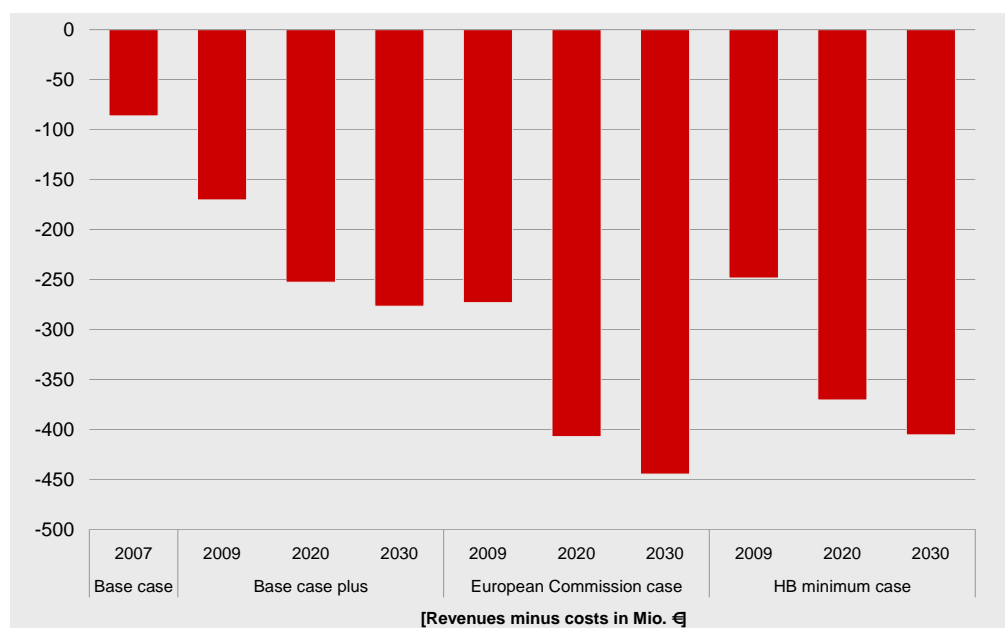
Annex I - Figure 34: Comparison of road user charges paid by Czech road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



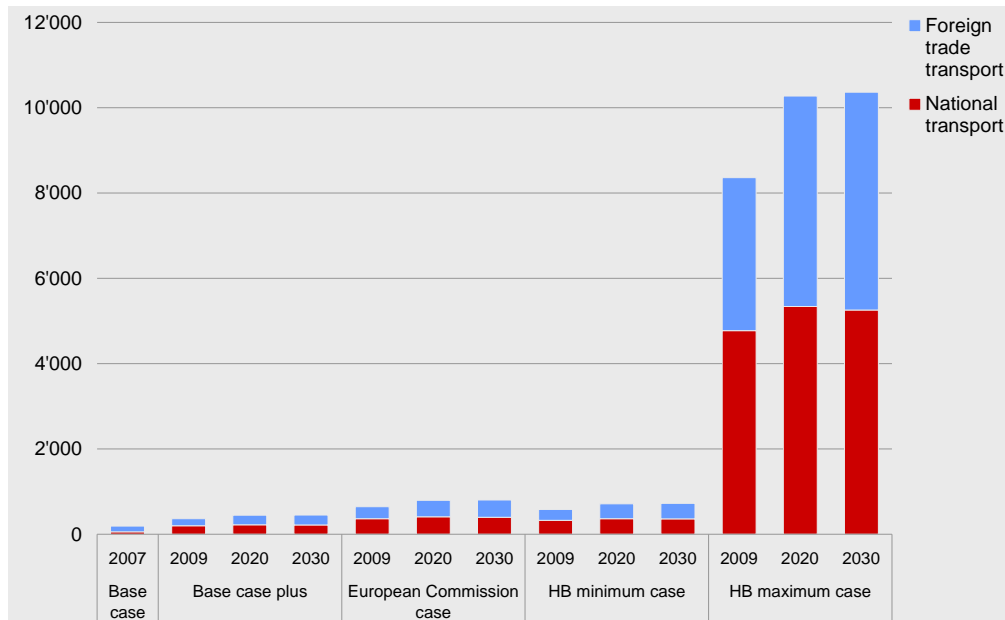
Annex I - Figure 35: Comparison of road user charge surpluses or deficits for Czech Republic with regard to the road hauliers by scenarios and years (in Mil. EUR)



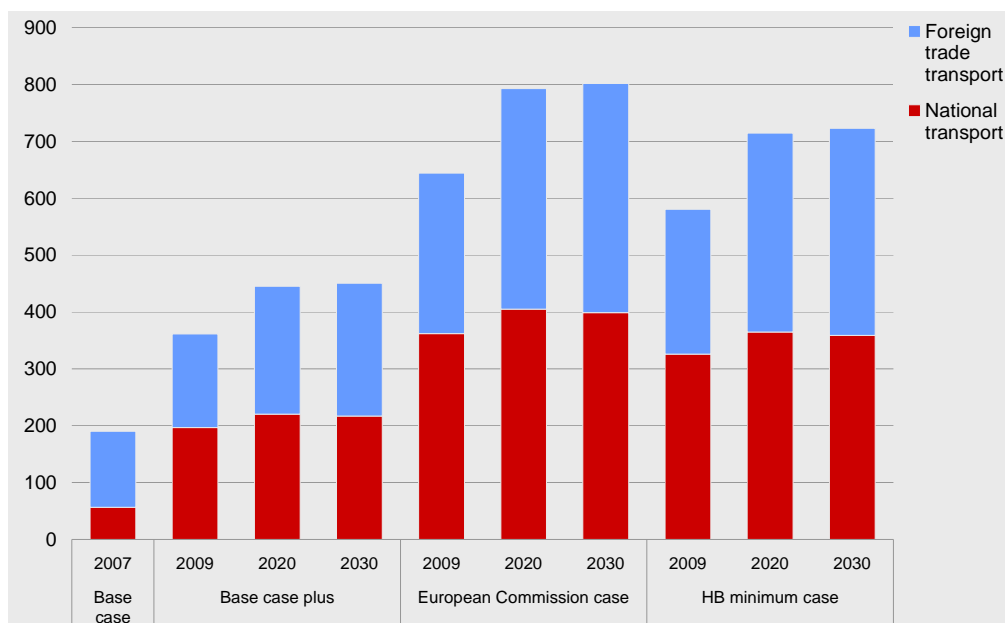
Annex I - Figure 36: Comparison of road user charge surpluses or deficits for Czech Republic with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



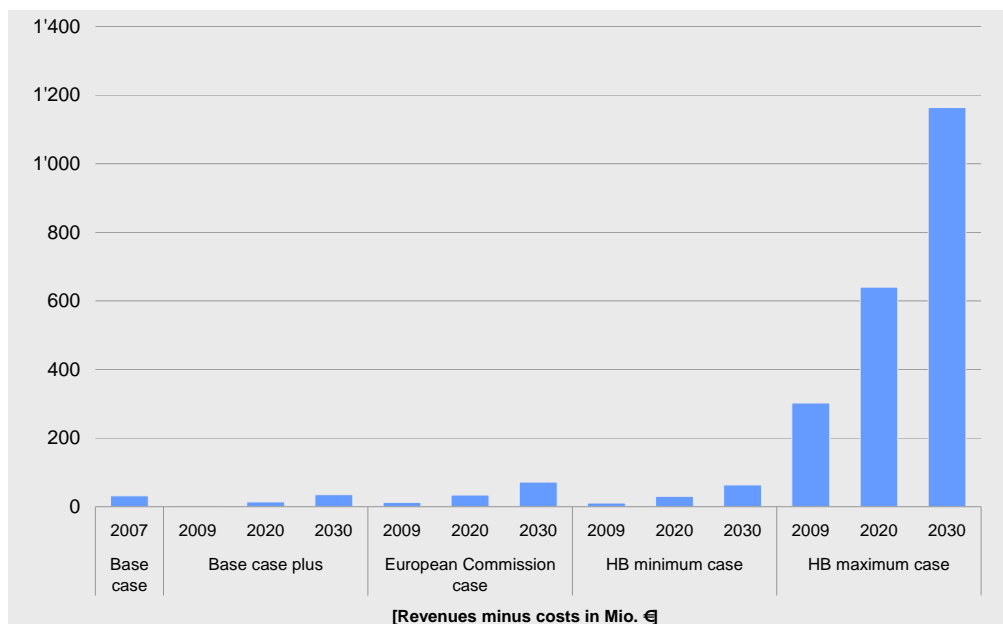
Annex I - Figure 37: Comparison of road user charge costs for the Czech economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



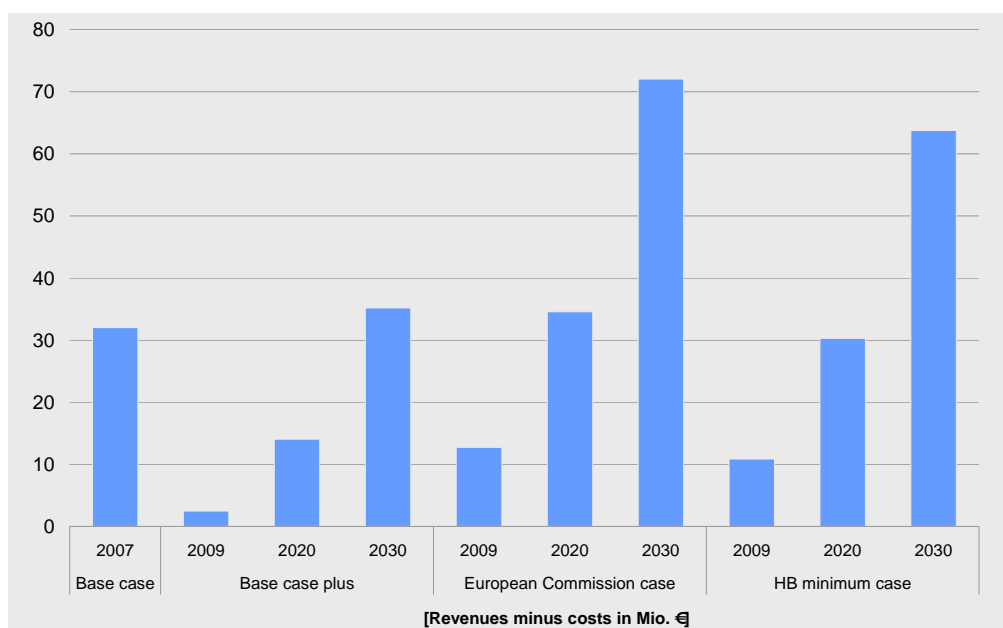
Annex I - Figure 38: Comparison of road user charge costs for the Czech economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 39: Comparison of road user charge surpluses or deficits for Czech Republic with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 40: Comparison of road user charge surpluses or deficits for Czech Republic with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

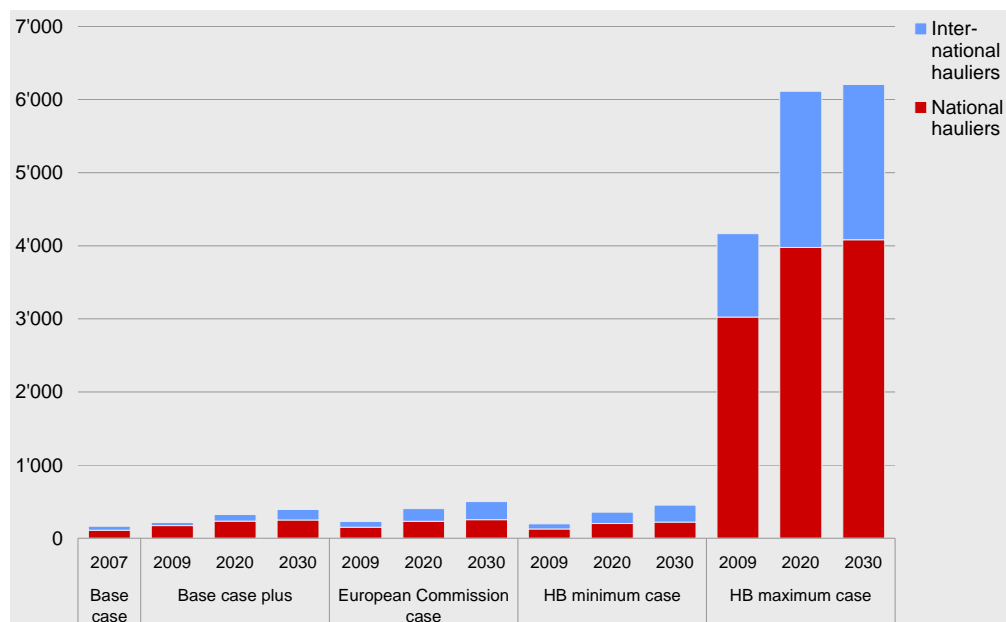


Denmark

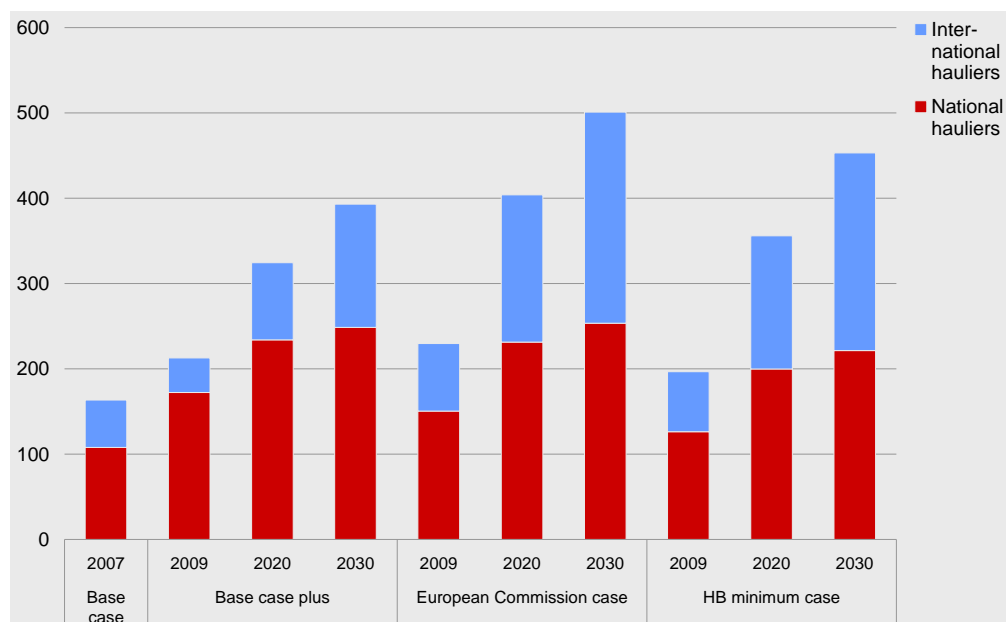
Annex I - Table 5: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits DK		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by DK from	national hauliers	108	172	234	248	150	231	253	126	200	221	3'025	3'976	4'082
	international hauliers	56	41	91	145	79	173	248	70	156	232	1'139	2'139	2'123
	Total	163	213	325	393	230	404	501	197	356	453	4'164	6'115	6'205
Road user charges paid by trucks registered in DK for	inland transport	108	172	234	248	150	231	253	126	200	221	3'025	3'976	4'082
	transport abroad	68	97	159	177	169	283	318	152	255	288	2'181	3'621	4'016
	Total	176	269	393	426	319	514	572	278	455	509	5'206	7'598	8'098
Road user charge surpluses/deficits for DK with regard to the road hauliers	in Mio. EUR	-12	-56	-69	-33	-89	-110	-71	-82	-99	-56	-1'042	-1'483	-1'893
	in %	-7	-21	-17	-8	-28	-21	-12	-29	-22	-11	-20	-20	-23
Total charge costs of economy in DK for	national transport	51	129	152	159	86	102	106	67	79	83	2'383	2'803	2'933
	foreign trade transport	101	140	254	288	241	442	501	217	400	456	3'056	5'441	5'840
	Total	152	269	406	447	327	543	607	284	479	539	5'439	8'244	8'773
Road user charge surpluses/deficits for DK with regard to the national economy	in Mio. EUR	12	-56	-81	-54	-97	-140	-106	-88	-123	-86	-1'275	-2'129	-2'568
	in %	8	-21	-20	-12	-30	-26	-17	-31	-26	-16	-23	-26	-29

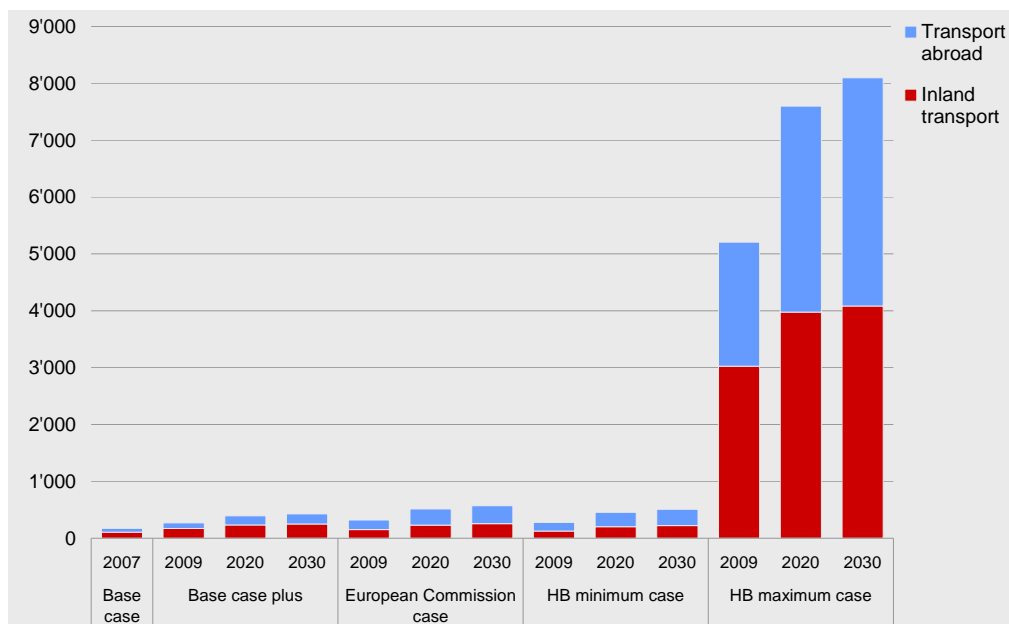
Annex I - Figure 41: Comparison of road user charge revenues for Denmark from national and international road hauliers by scenarios and years (in Mil. EUR)



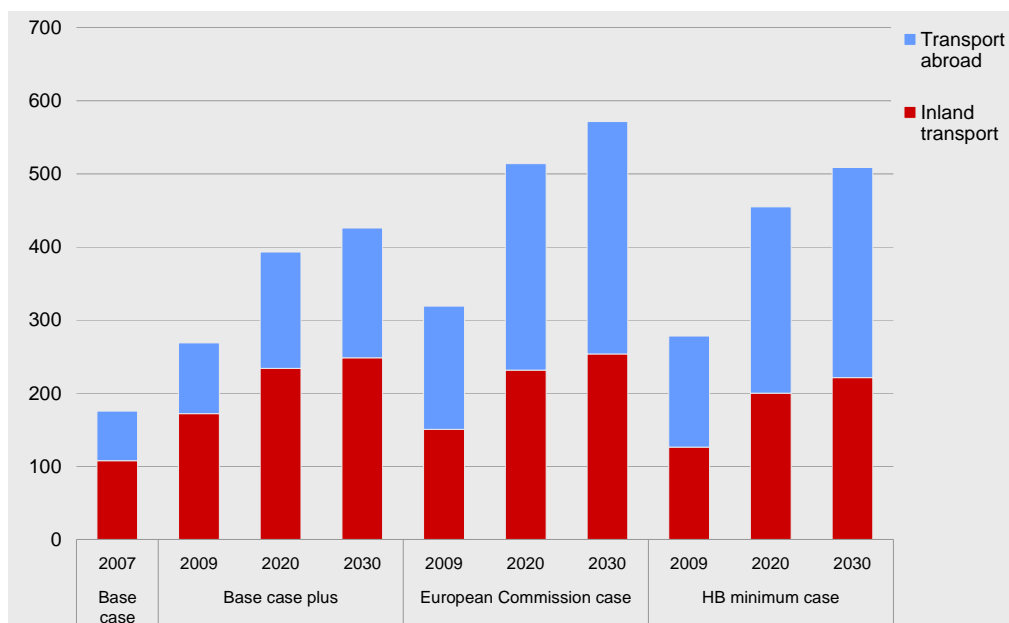
Annex I - Figure 42: Comparison of road user charge revenues for Denmark from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



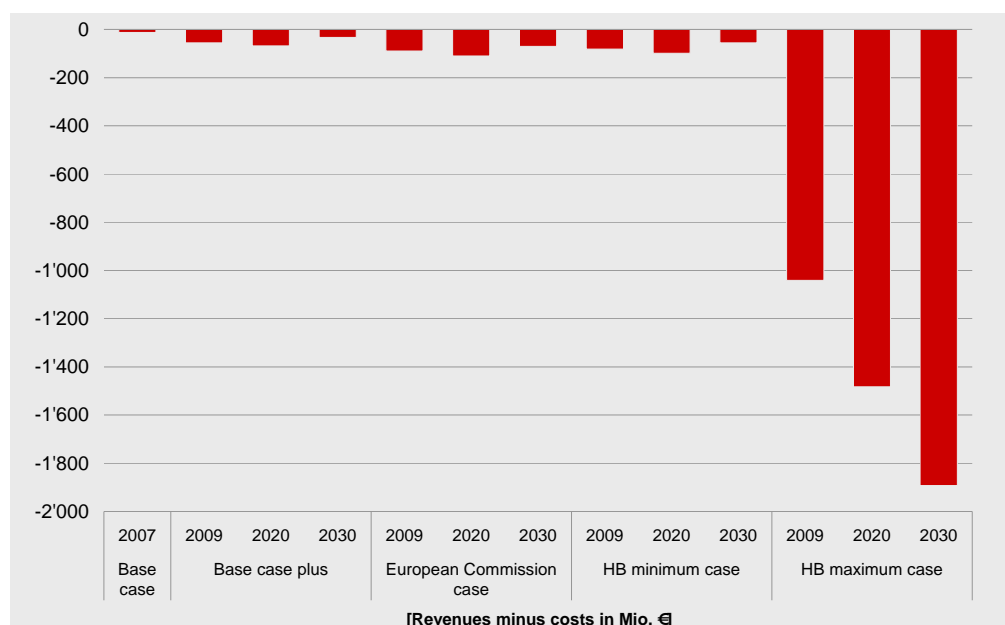
Annex I - Figure 43: Comparison of road user charges paid by Danish road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



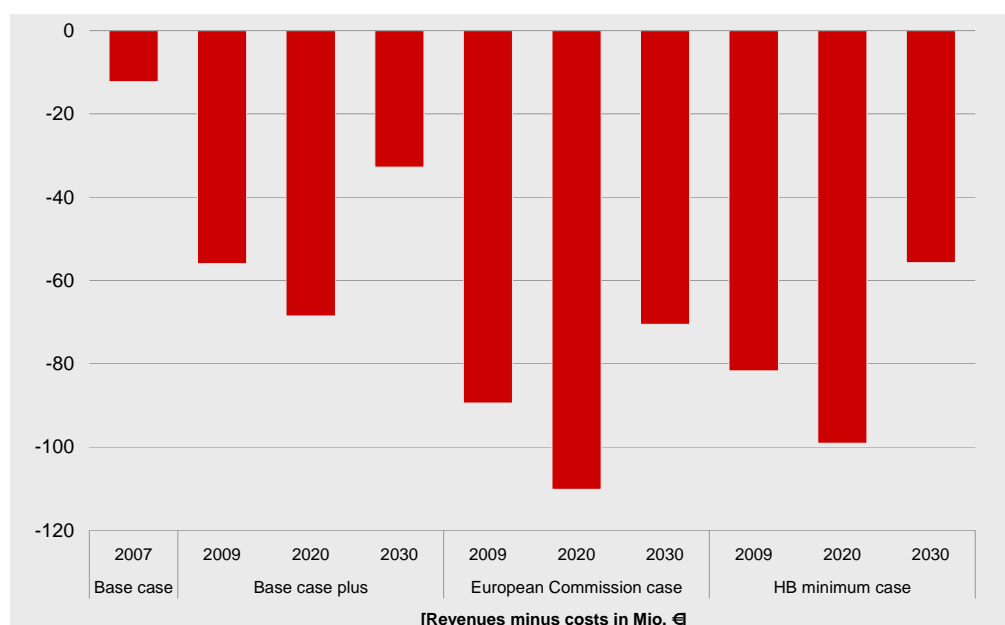
Annex I - Figure 44: Comparison of road user charges paid by Danish road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



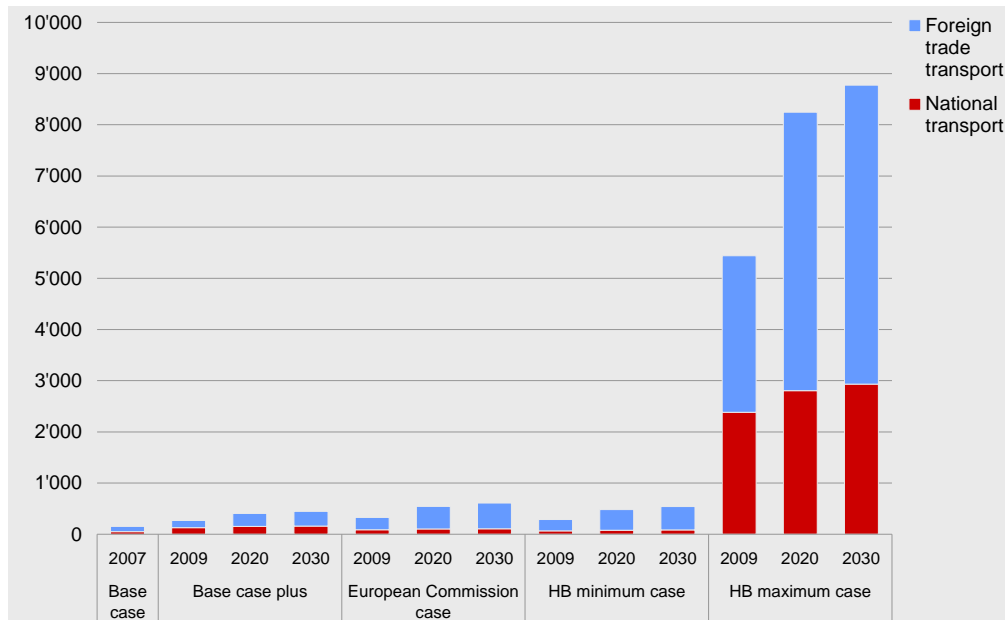
Annex I - Figure 45: Comparison of road user charge surpluses or deficits for Denmark with regard to the road hauliers by scenarios and years (in Mil. EUR)



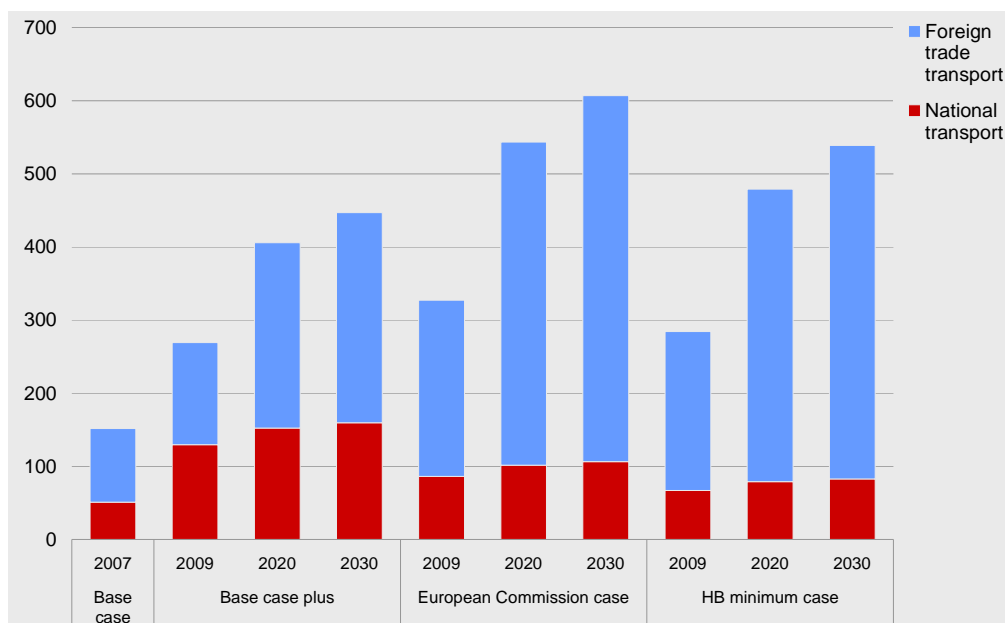
Annex I - Figure 46: Comparison of road user charge surpluses or deficits for Denmark with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



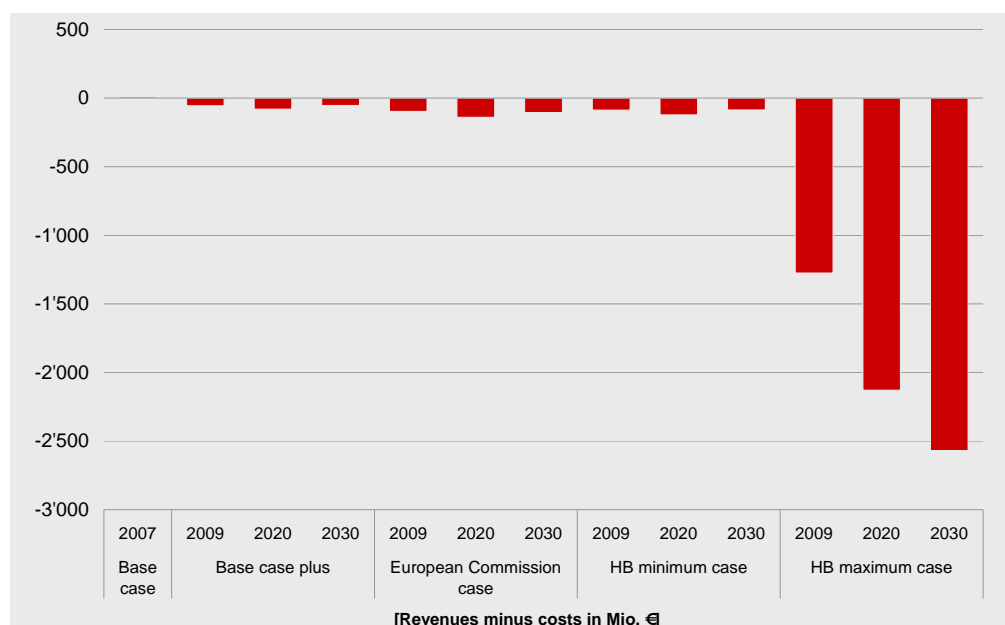
Annex I - Figure 47: Comparison of road user charge costs for the Danish economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



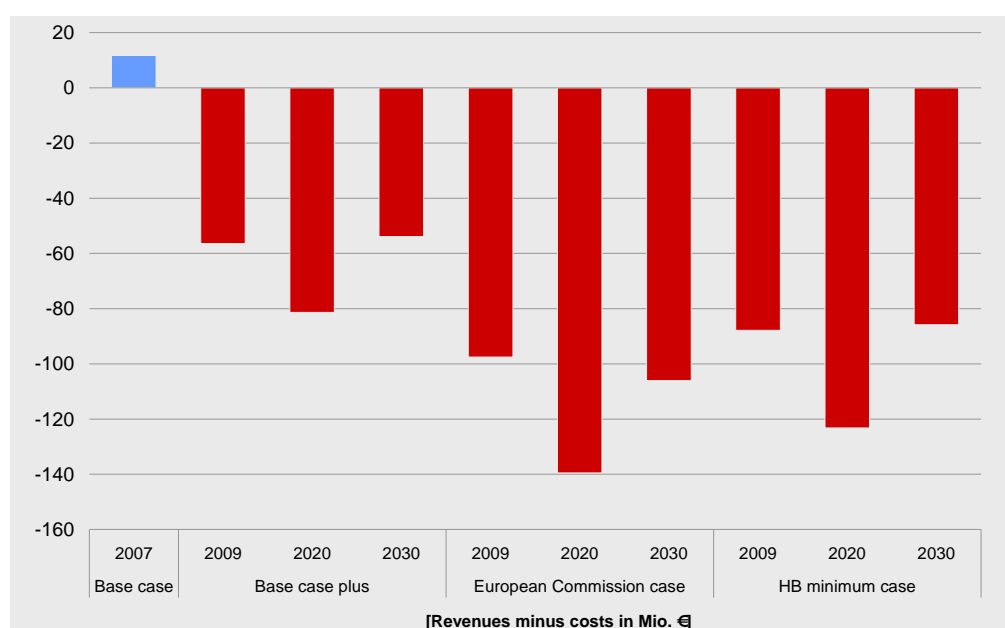
Annex I - Figure 48: Comparison of road user charge costs for the Danish economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 49: Comparison of road user charge surpluses or deficits for Denmark with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 50: Comparison of road user charge surpluses or deficits for Denmark with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

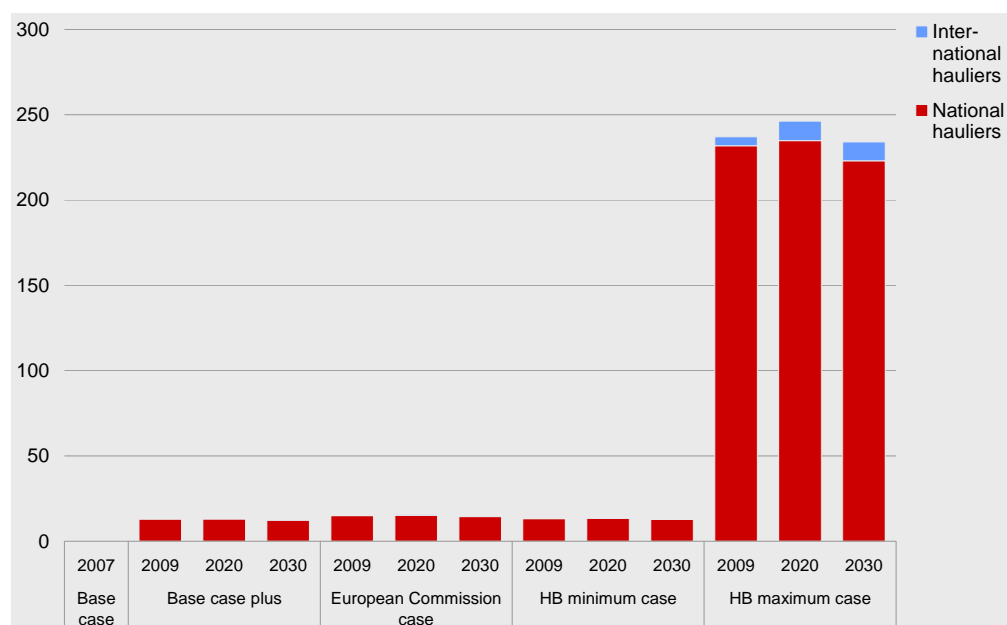


Estonia

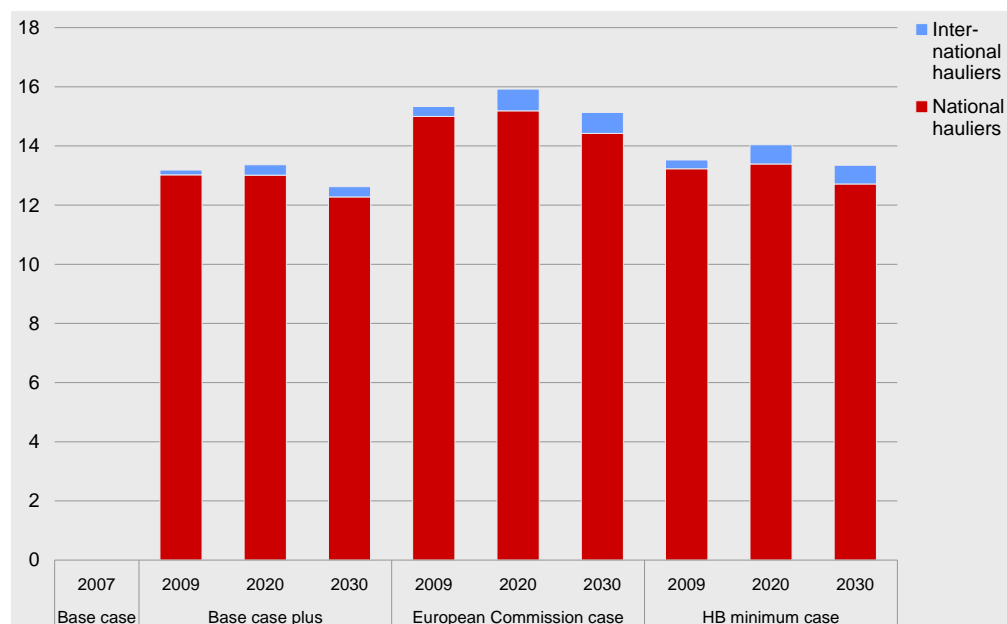
Annex I - Table 6: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits EE		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by EE from	national hauliers	0	13	13	12	15	15	14	13	13	13	232	235	223
	international hauliers	0	0	0	0	0	1	1	0	1	1	5	11	11
	Total	0	13	13	13	15	16	15	14	14	13	237	246	234
Road user charges paid by trucks registered in EE for	inland transport	0	13	13	12	15	15	14	13	13	13	232	235	223
	transport abroad	4	7	13	18	15	28	36	13	25	32	246	432	489
	Total	4	20	26	31	30	43	50	26	38	45	478	667	712
Road user charge surpluses/deficits for EE with regard to the road hauliers	in Mio. EUR	-4	-6	-13	-18	-14	-27	-35	-13	-24	-31	-240	-421	-478
	in %	-100	-33	-49	-59	-49	-63	-70	-48	-63	-70	-50	-63	-67
Total charge costs of economy in EE for	national transport	0	13	13	12	15	14	14	13	13	12	227	223	209
	foreign trade transport	3	3	7	10	8	16	20	7	14	18	139	263	305
	Total	3	16	20	22	23	30	34	20	27	30	366	486	514
Road user charge surpluses/deficits for EE with regard to the national economy	in Mio. EUR	-3	-3	-6	-9	-7	-15	-19	-6	-13	-17	-129	-240	-280
	in %	-100	-19	-32	-41	-33	-48	-55	-32	-47	-56	-35	-49	-54

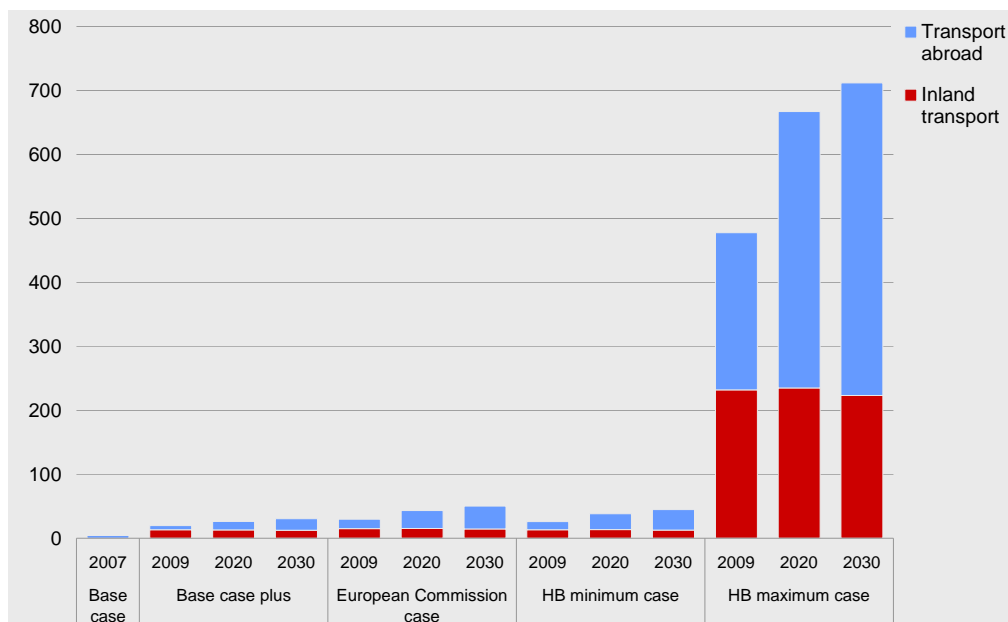
Annex I - Figure 51: Comparison of road user charge revenues for Estonia from national and international road hauliers by scenarios and years (in Mil. EUR)



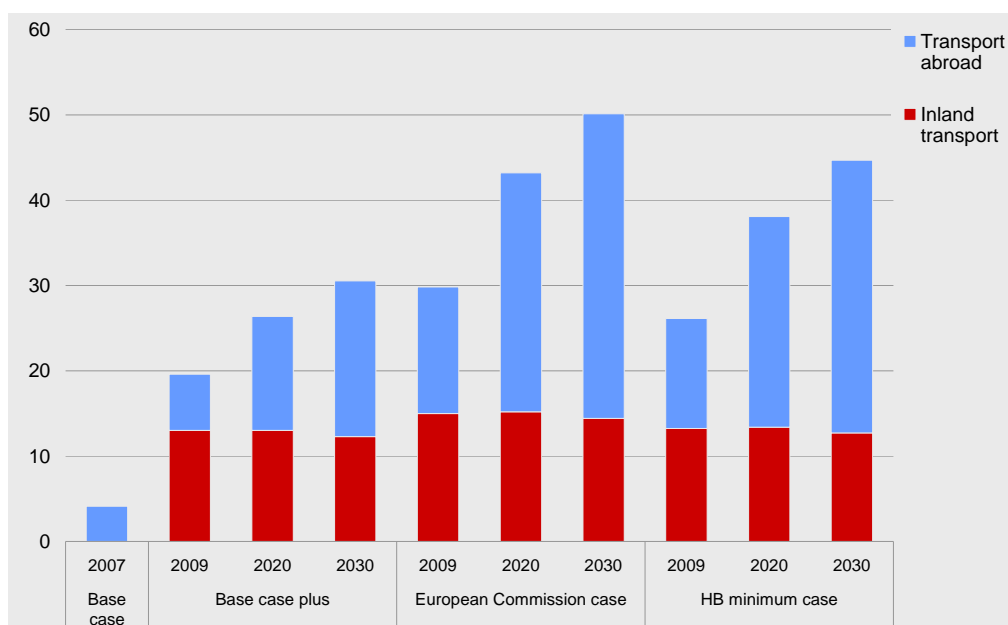
Annex I - Figure 52: Comparison of road user charge revenues for Estonia from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



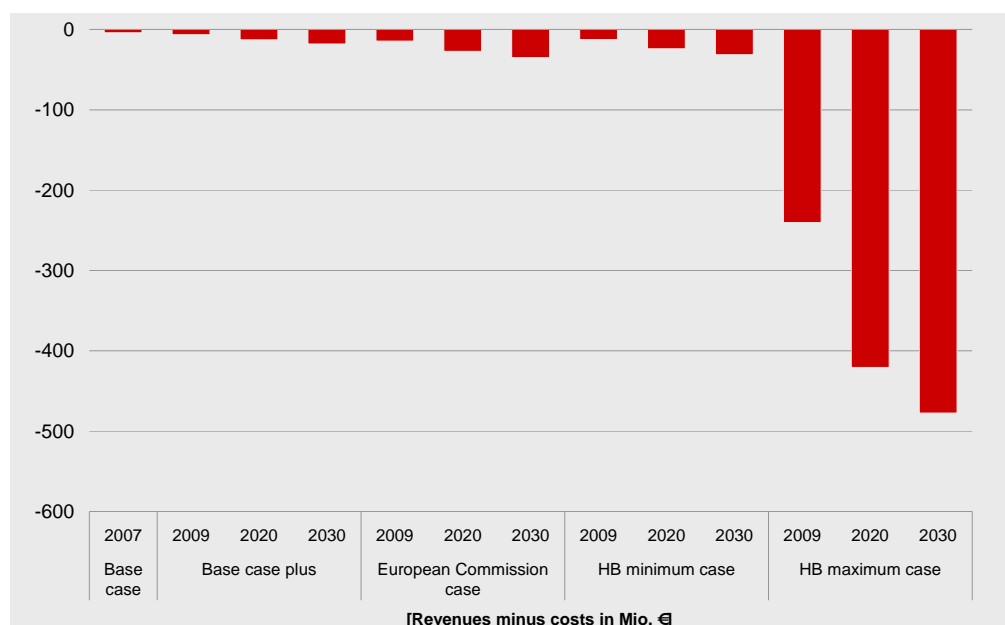
Annex I - Figure 53: Comparison of road user charges paid by Estonian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



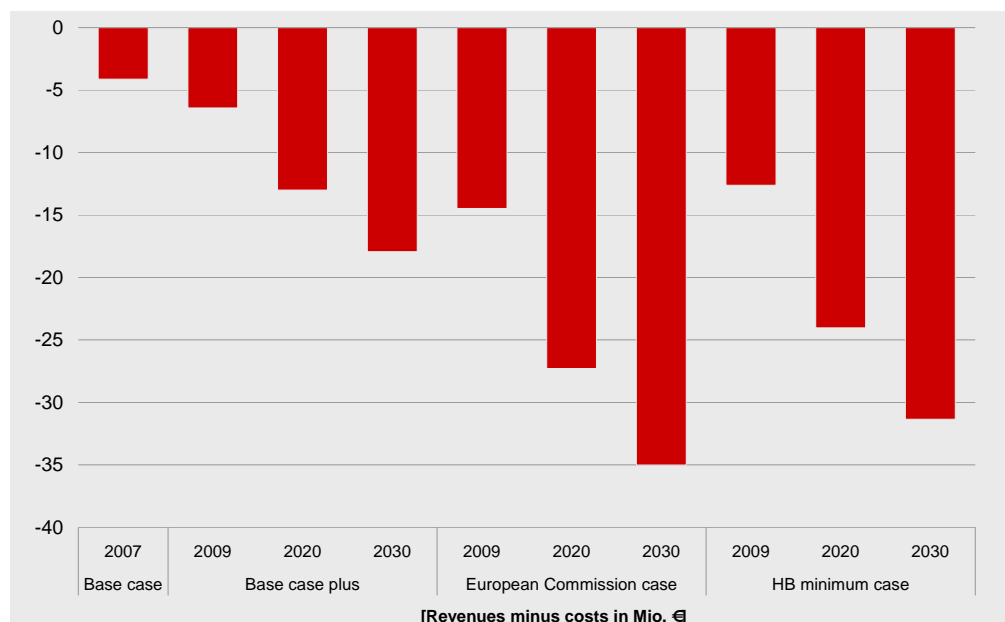
Annex I - Figure 54: Comparison of road user charges paid by Estonian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



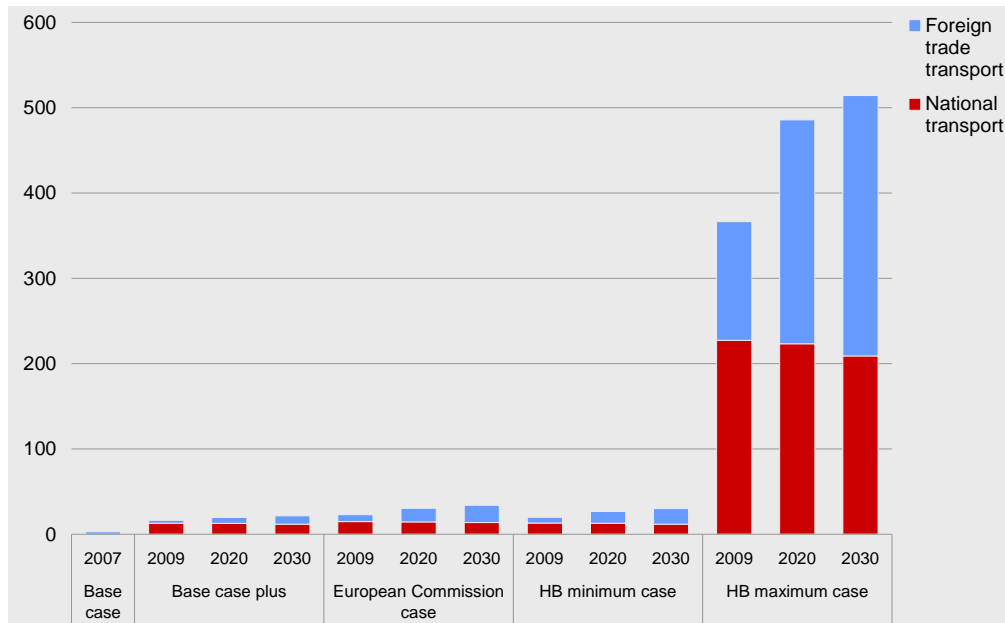
Annex I - Figure 55: Comparison of road user charge surpluses or deficits for Estonia with regard to the road hauliers by scenarios and years (in Mil. EUR)



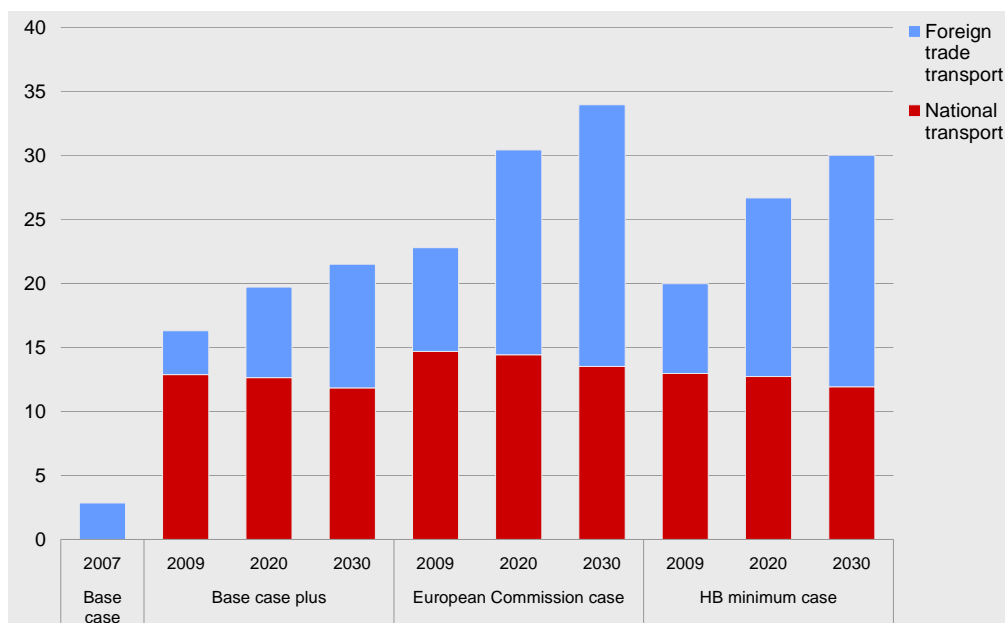
Annex I - Figure 56: Comparison of road user charge surpluses or deficits for Estonia with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



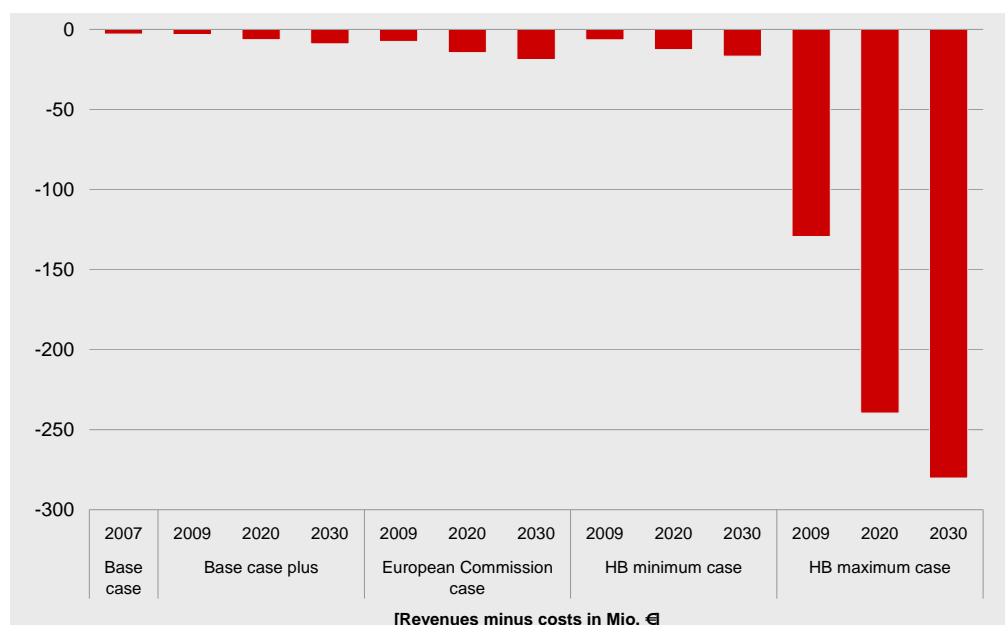
Annex I - Figure 57: Comparison of road user charge costs for the Estonian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



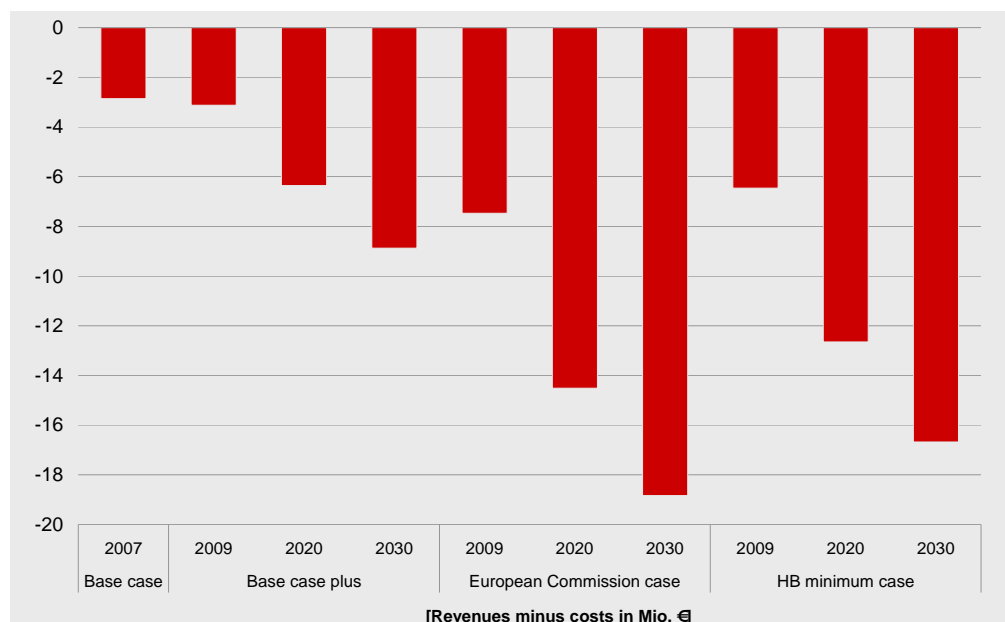
Annex I - Figure 58: Comparison of road user charge costs for the Estonian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 59: Comparison of road user charge surpluses or deficits for Estonia with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 60: Comparison of road user charge surpluses or deficits for Estonia with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

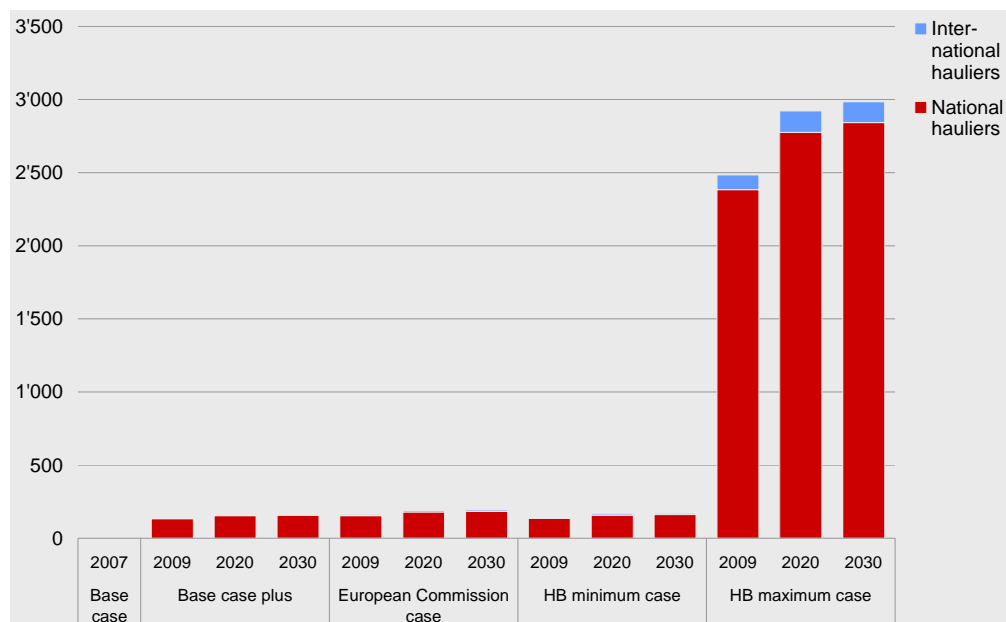


Finland

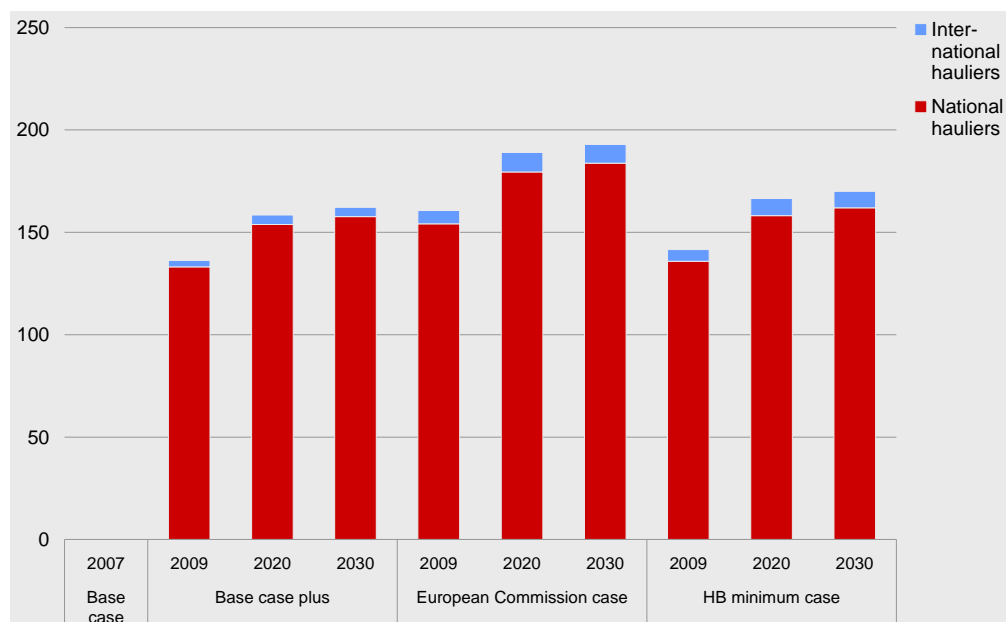
Annex I - Table 7: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits FI		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by FI from	national hauliers	0	133	154	158	154	179	184	136	158	162	2'384	2'775	2'842
	international hauliers	0	3	5	4	6	10	9	6	8	8	100	147	142
	Total	0	136	158	162	161	189	193	142	167	170	2'484	2'923	2'984
Road user charges paid by trucks registered in FI for	inland transport	0	133	154	158	154	179	184	136	158	162	2'384	2'775	2'842
	transport abroad	5	7	8	9	19	25	27	16	21	23	357	498	526
	Total	5	140	162	167	173	205	211	152	179	185	2'741	3'273	3'368
Road user charge surpluses/deficits for FI with regard to the road hauliers	in Mio. EUR	-5	-4	-4	-5	-12	-16	-18	-10	-13	-15	-256	-351	-383
	in %	-100	-3	-2	-3	-7	-8	-8	-7	-7	-8	-9	-11	-11
Total charge costs of economy in FI for	national transport	0	131	150	154	149	171	175	132	150	155	2'308	2'641	2'713
	foreign trade transport	3	6	9	9	16	24	25	14	20	21	294	430	445
	Total	3	137	159	163	165	194	200	145	171	176	2'602	3'071	3'159
Road user charge surpluses/deficits for FI with regard to the national economy	in Mio. EUR	-3	-1	0	-1	-5	-5	-7	-4	-4	-6	-117	-148	-174
	in %	-100	-1	0	-1	-3	-3	-4	-3	-2	-3	-5	-5	-6

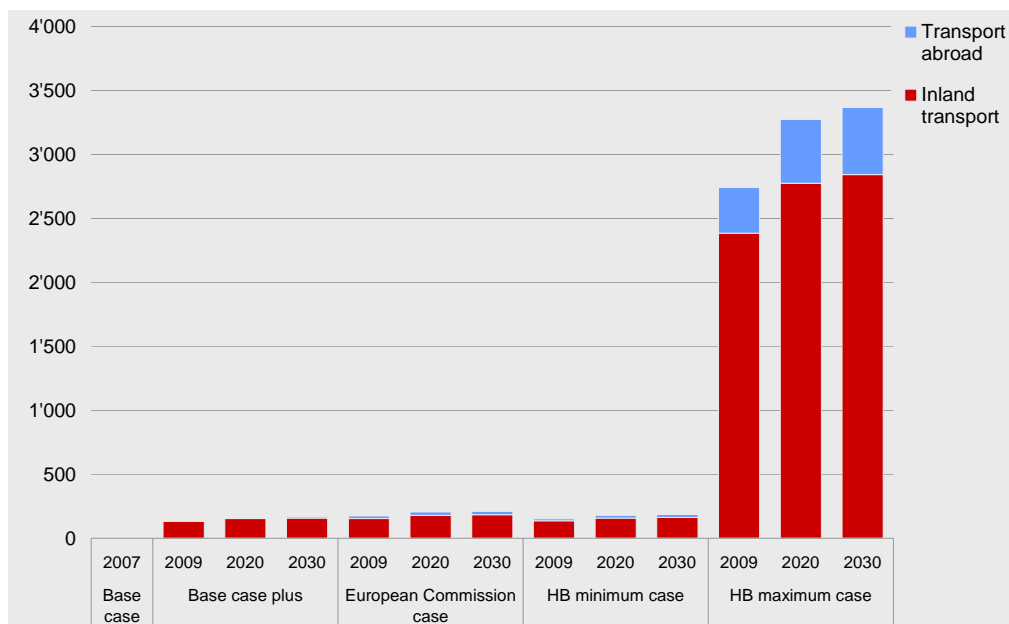
Annex I - Figure 61: Comparison of road user charge revenues for Finland from national and international road hauliers by scenarios and years (in Mil. EUR)



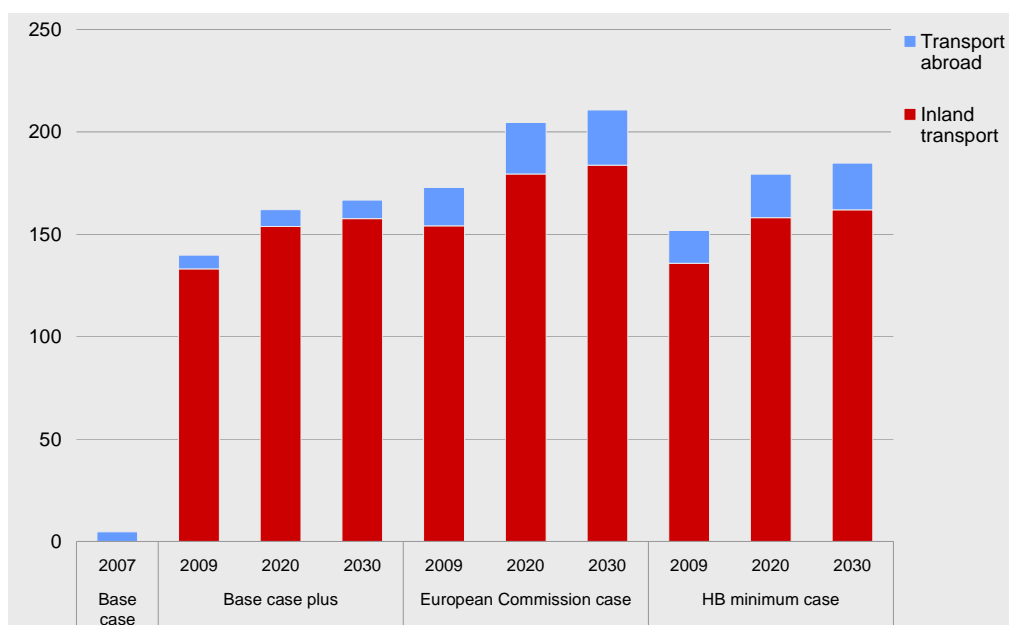
Annex I - Figure 62: Comparison of road user charge revenues for Finland from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



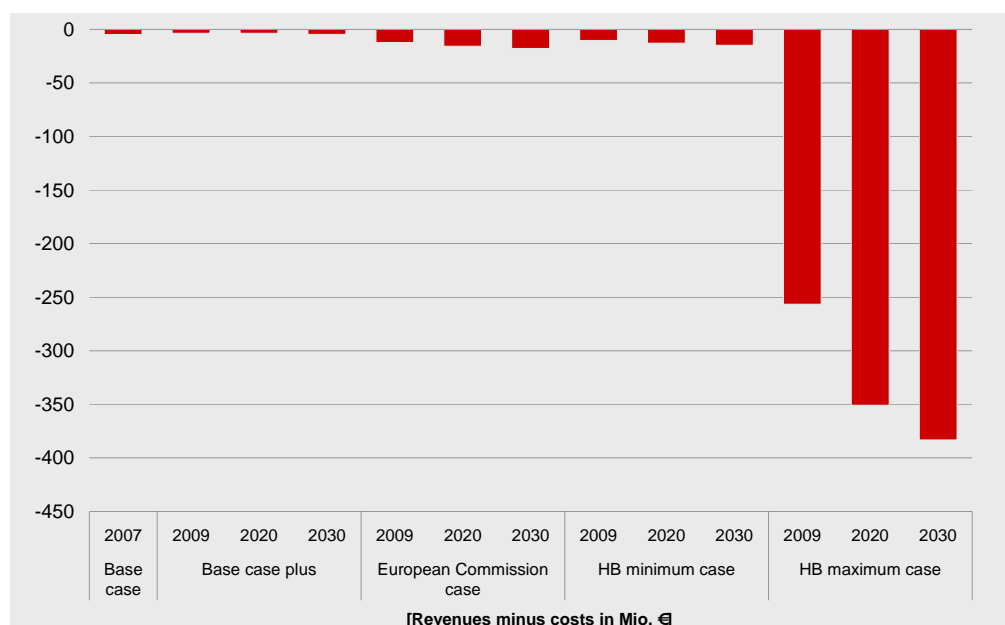
Annex I - Figure 63: Comparison of road user charges paid by Finnish road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



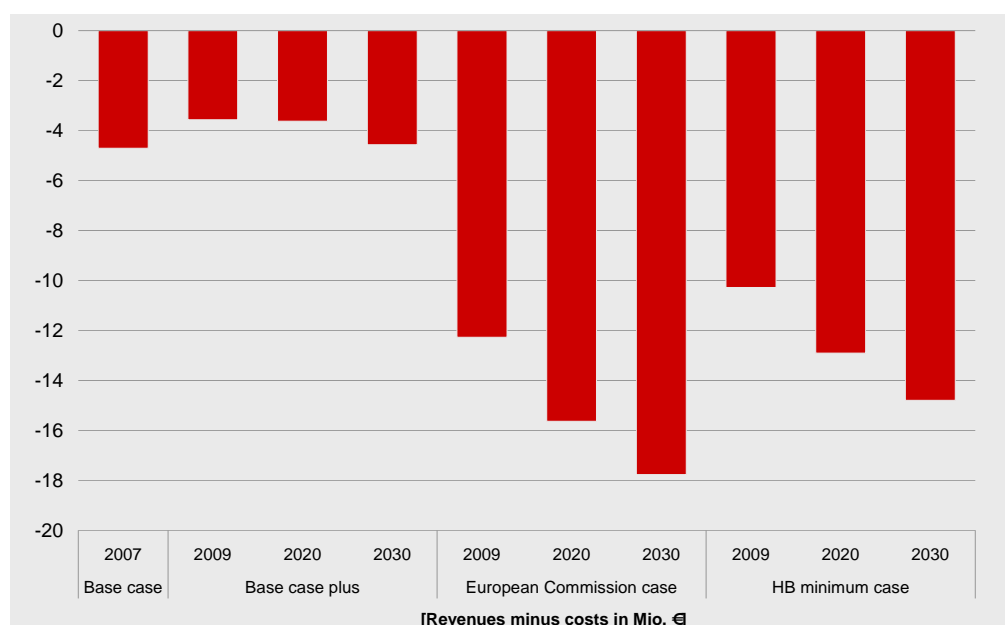
Annex I - Figure 64: Comparison of road user charges paid by Finnish road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



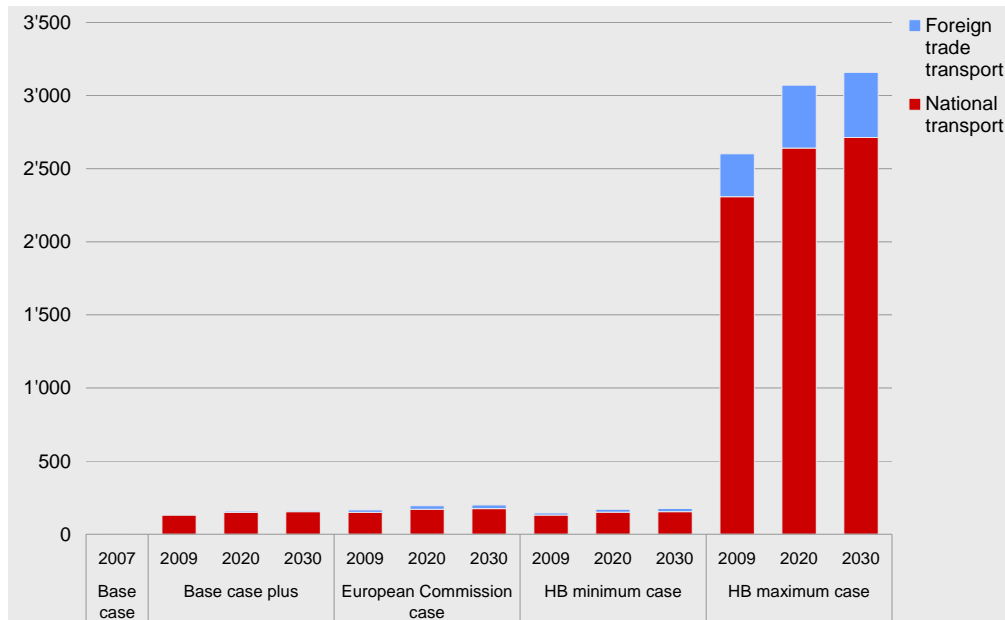
Annex I - Figure 65: Comparison of road user charge surpluses or deficits for Finland with regard to the road hauliers by scenarios and years (in Mil. EUR)



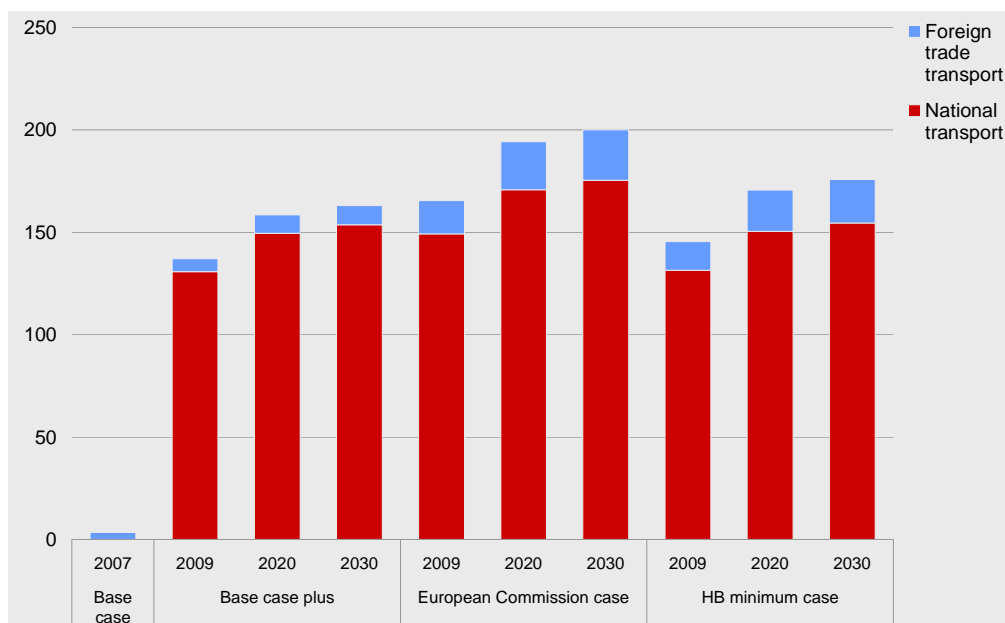
Annex I - Figure 66: Comparison of road user charge surpluses or deficits for Finland with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



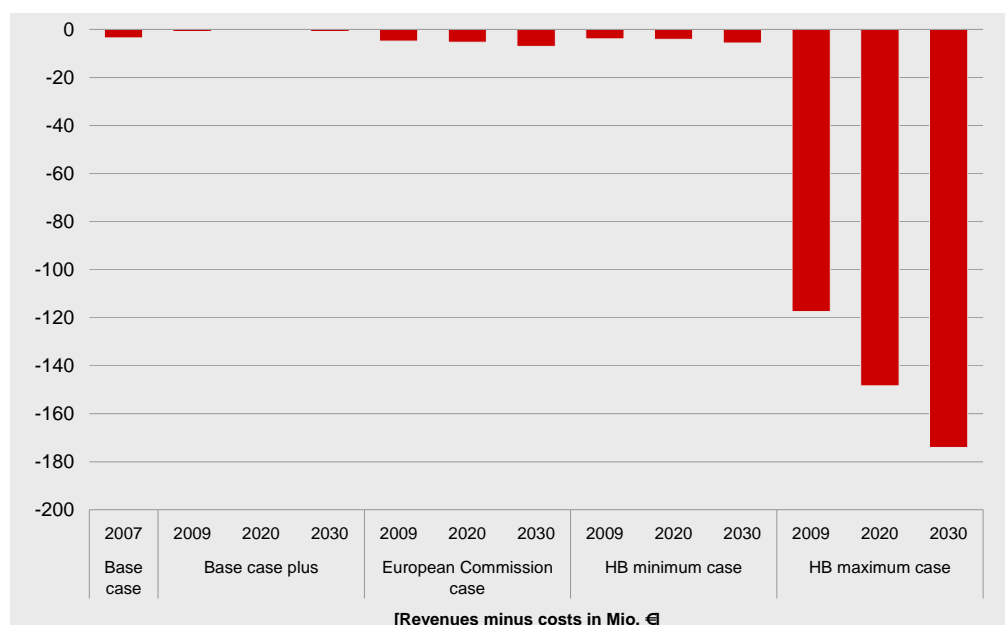
Annex I - Figure 67: Comparison of road user charge costs for the Finnish economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



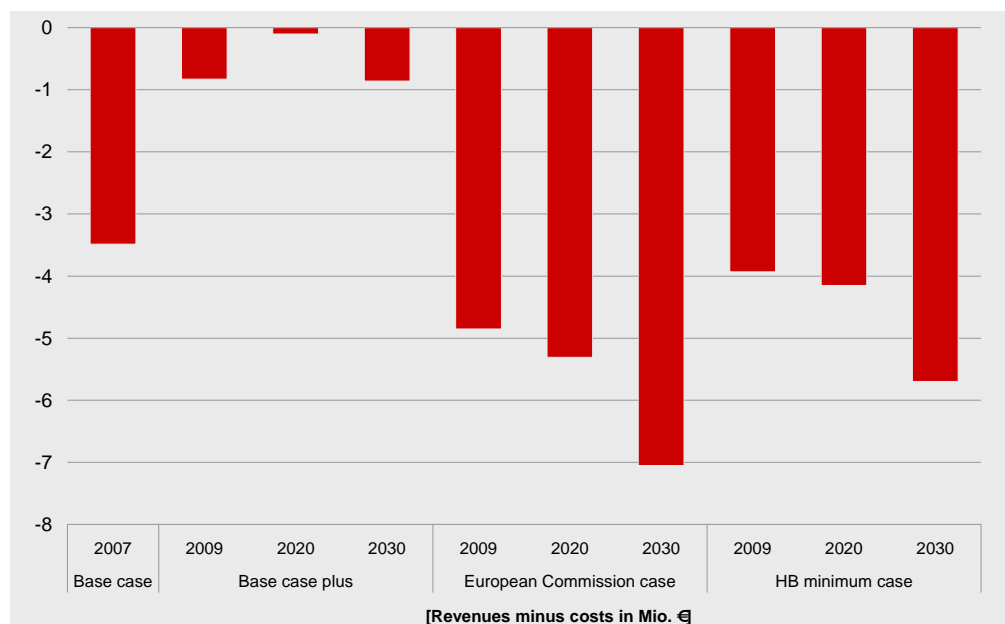
Annex I - Figure 68: Comparison of road user charge costs for the Finnish economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 69: Comparison of road user charge surpluses or deficits for Finland with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 70: Comparison of road user charge surpluses or deficits for Finland with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

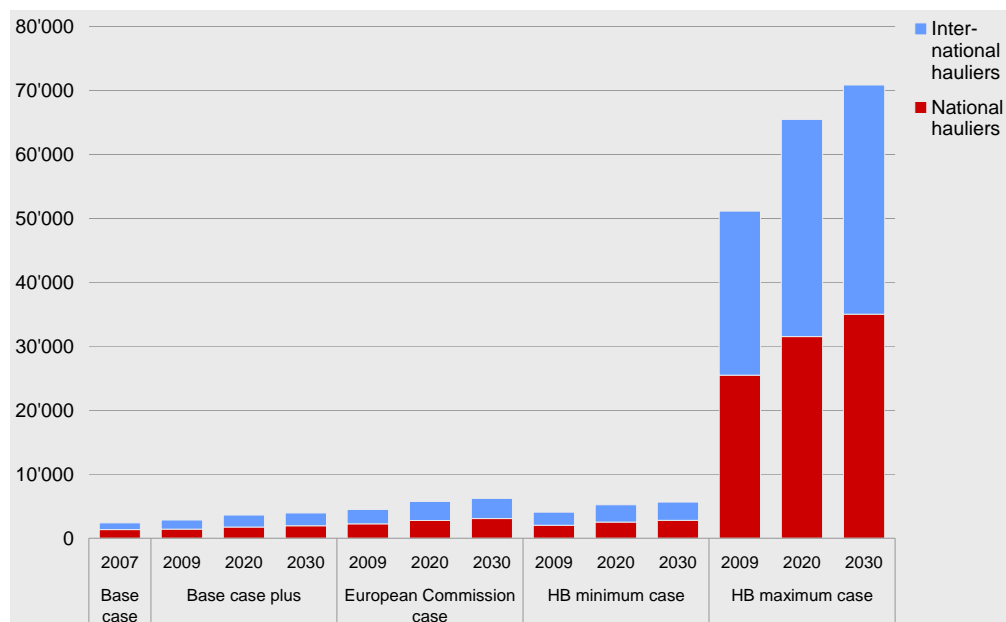


France

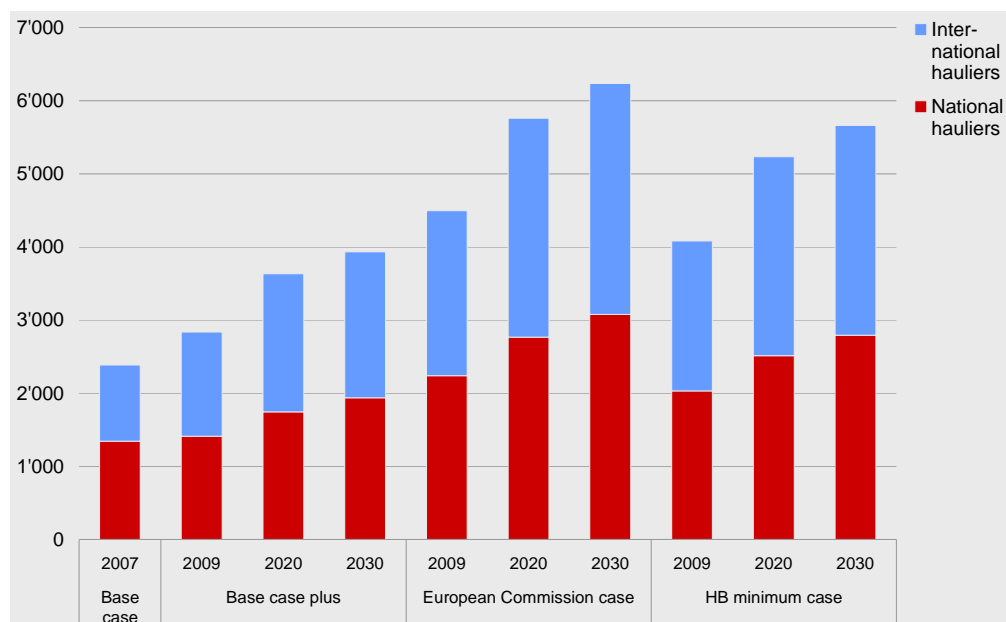
Annex I - Table 8: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits FR		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by FR from	national hauliers	1'344	1'411	1'744	1'938	2'239	2'767	3'076	2'032	2'512	2'793	25'492	31'493	35'019
	international hauliers	1'042	1'426	1'890	1'994	2'258	2'995	3'160	2'050	2'720	2'870	25'636	33'969	35'833
	Total	2'387	2'837	3'634	3'932	4'496	5'761	6'237	4'083	5'232	5'663	51'128	65'463	70'852
Road user charges paid by trucks registered in FR for	inland transport	1'344	1'411	1'744	1'938	2'239	2'767	3'076	2'032	2'512	2'793	25'492	31'493	35'019
	transport abroad	111	167	262	290	289	449	501	260	406	454	3'690	5'513	6'048
	Total	1'456	1'579	2'005	2'228	2'528	3'216	3'578	2'293	2'918	3'247	29'182	37'006	41'067
Road user charge surpluses/deficits for FR with regard to the road hauliers	in Mio. EUR	931	1'258	1'629	1'704	1'968	2'546	2'659	1'790	2'314	2'416	21'946	28'457	29'785
	in %	64	80	81	76	78	79	74	78	79	74	75	77	73
Total charge costs of economy in FR for	national transport	1'156	1'156	1'416	1'598	1'836	2'248	2'537	1'667	2'041	2'303	20'942	25'640	28'934
	foreign trade transport	599	910	999	963	1'513	1'660	1'605	1'366	1'501	1'454	18'412	19'927	19'076
	Total	1'755	2'066	2'414	2'561	3'349	3'908	4'142	3'033	3'542	3'756	39'354	45'567	48'011
Road user charge surpluses/deficits for FR with regard to the national economy	in Mio. EUR	632	771	1'220	1'371	1'148	1'854	2'094	1'050	1'690	1'907	11'774	19'896	22'841
	in %	36	37	51	54	34	47	51	35	48	51	30	44	48

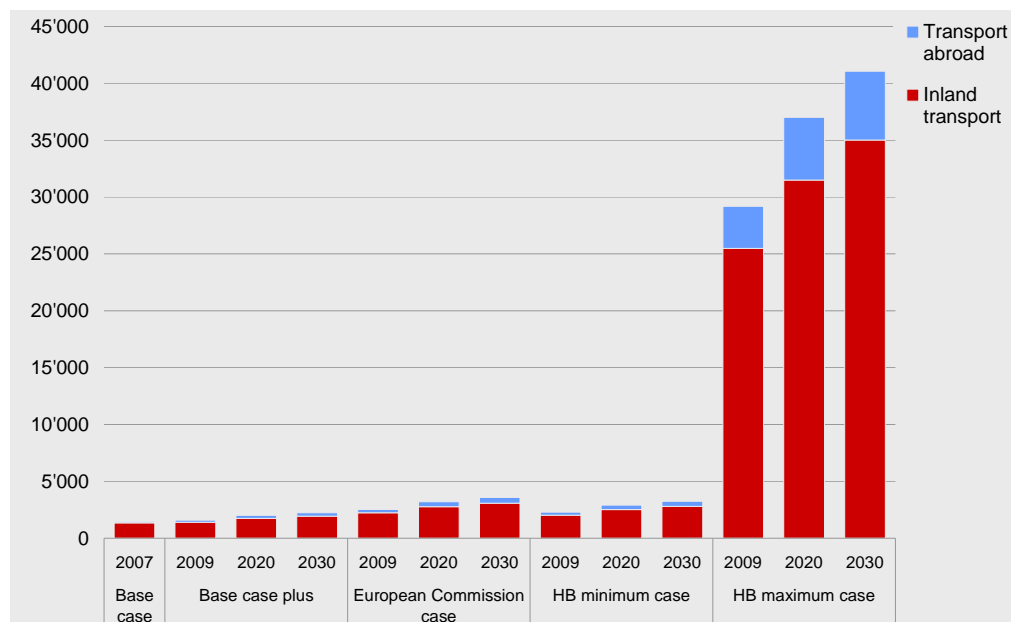
Annex I - Figure 71: Comparison of road user charge revenues for France from national and international road hauliers by scenarios and years (in Mil. EUR)



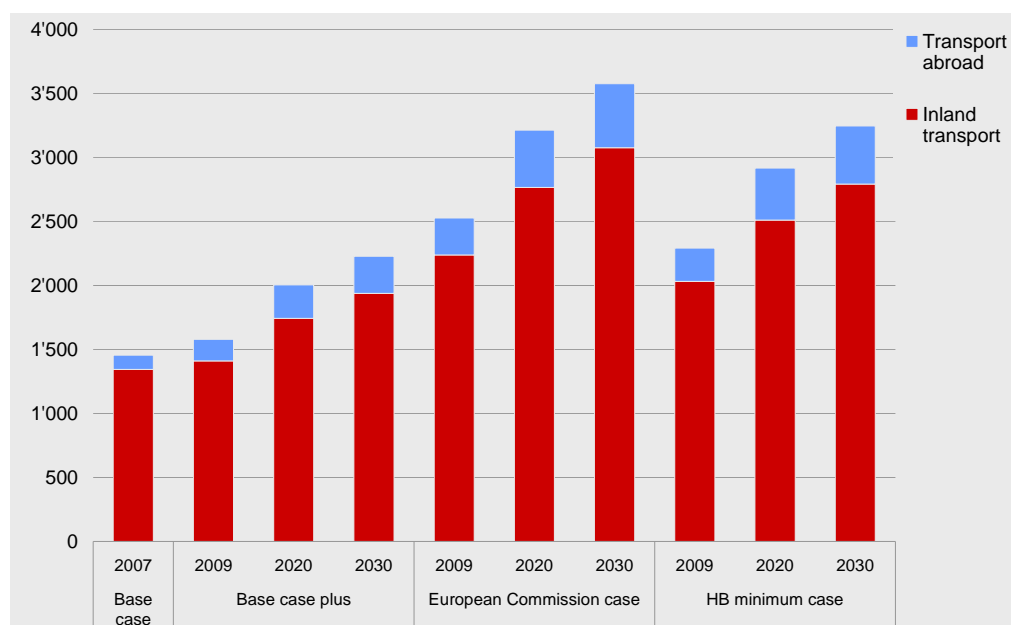
Annex I - Figure 72: Comparison of road user charge revenues for France from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



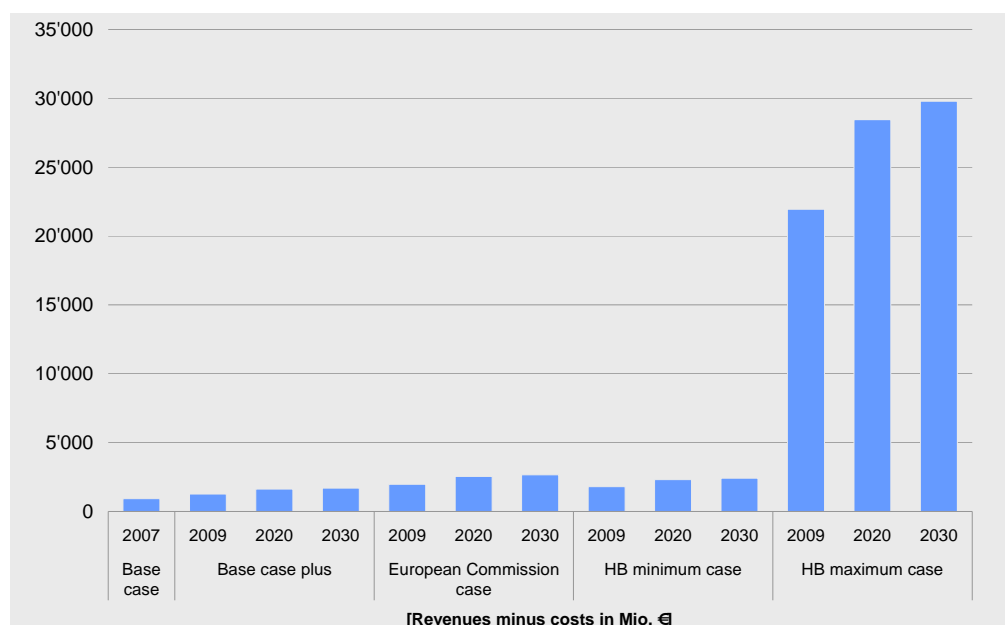
Annex I - Figure 73: Comparison of road user charges paid by French road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



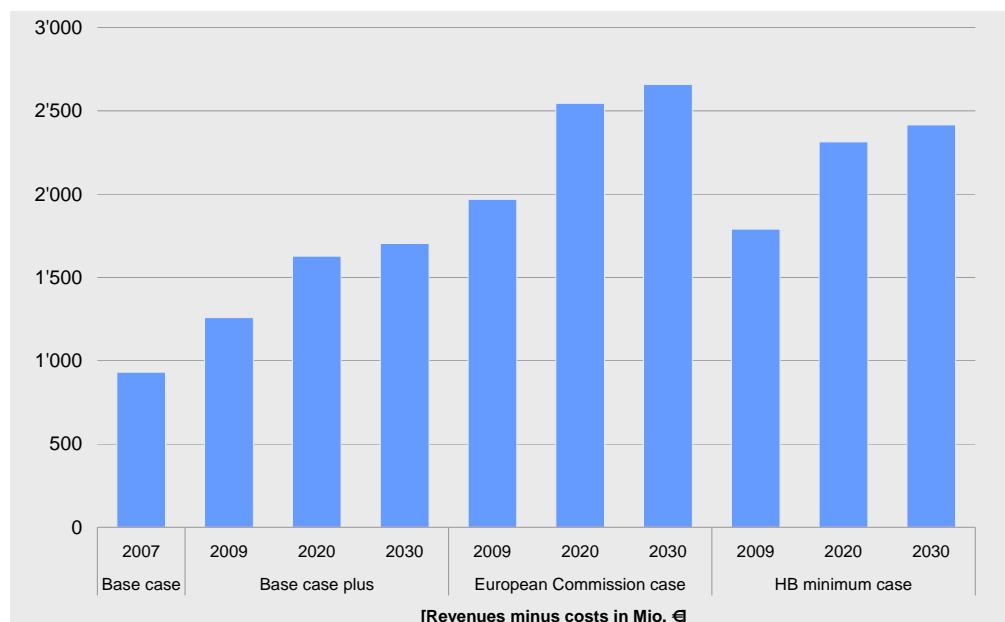
Annex I - Figure 74: Comparison of road user charges paid by French road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



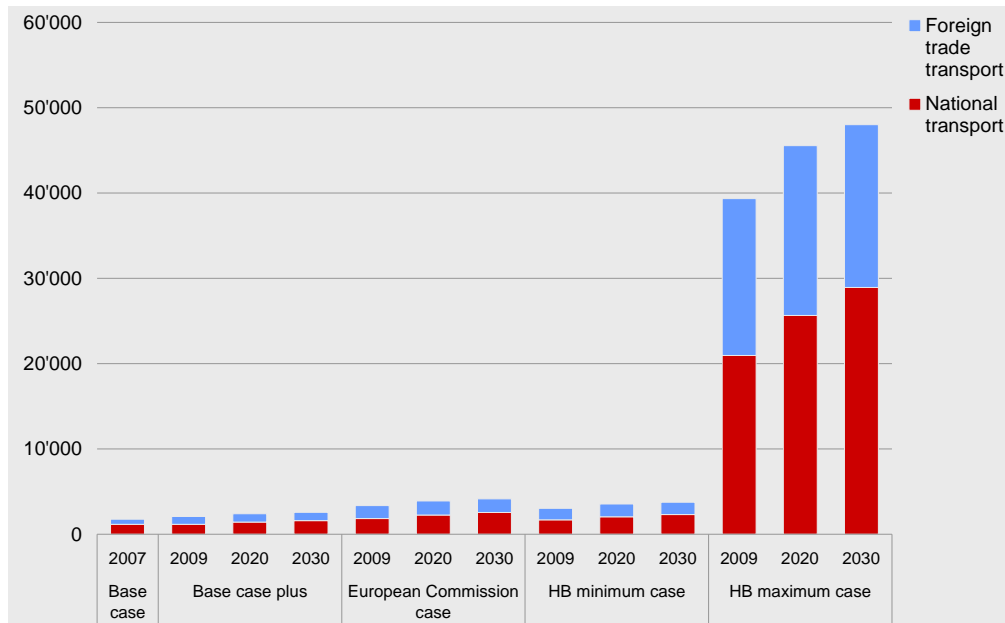
Annex I - Figure 75: Comparison of road user charge surpluses or deficits for France with regard to the road hauliers by scenarios and years (in Mil. EUR)



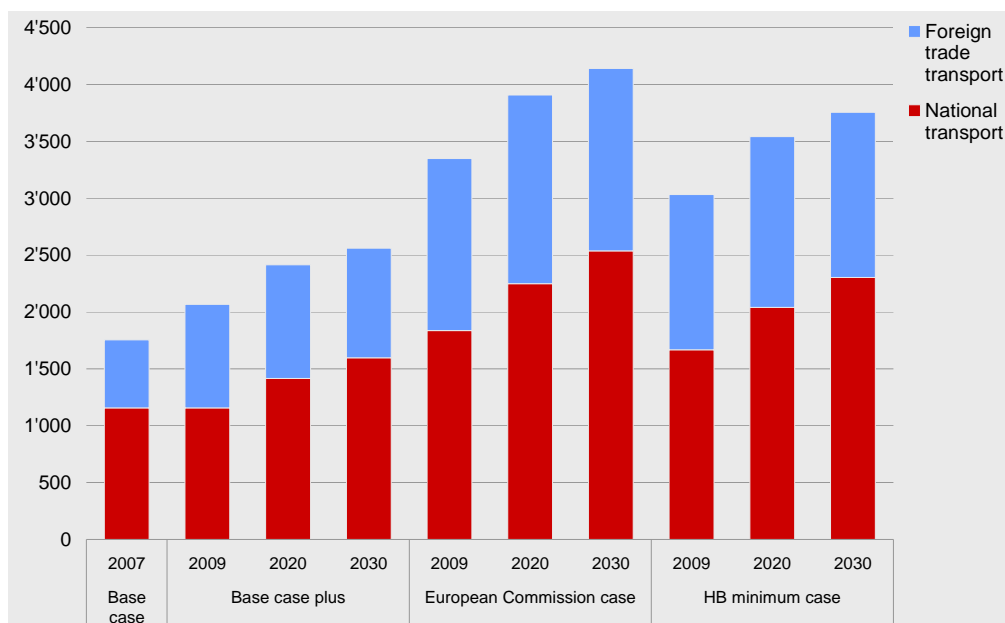
Annex I - Figure 76: Comparison of road user charge surpluses or deficits for France with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



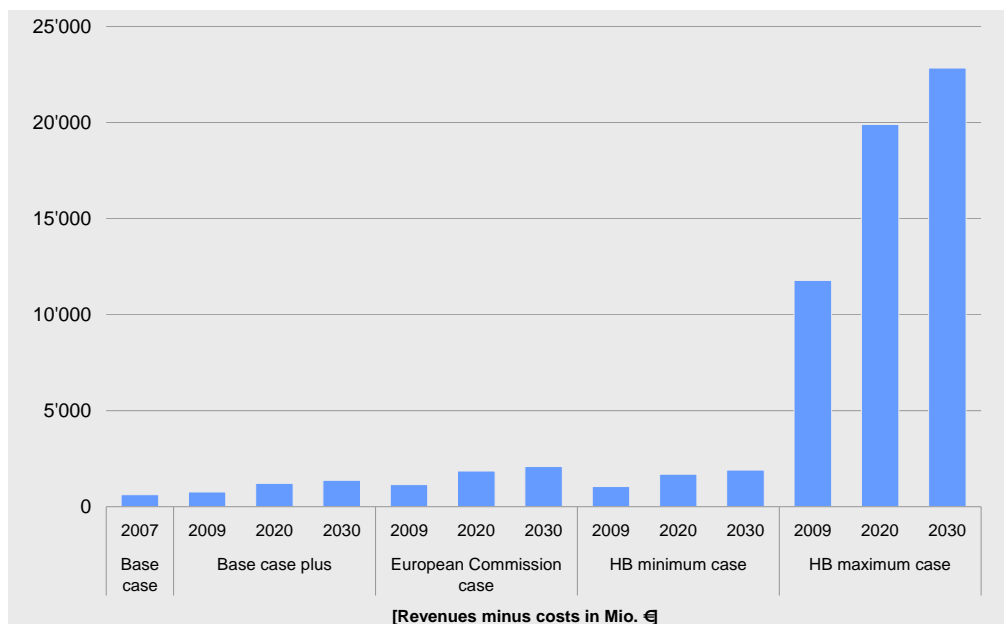
Annex I - Figure 77: Comparison of road user charge costs for the French economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



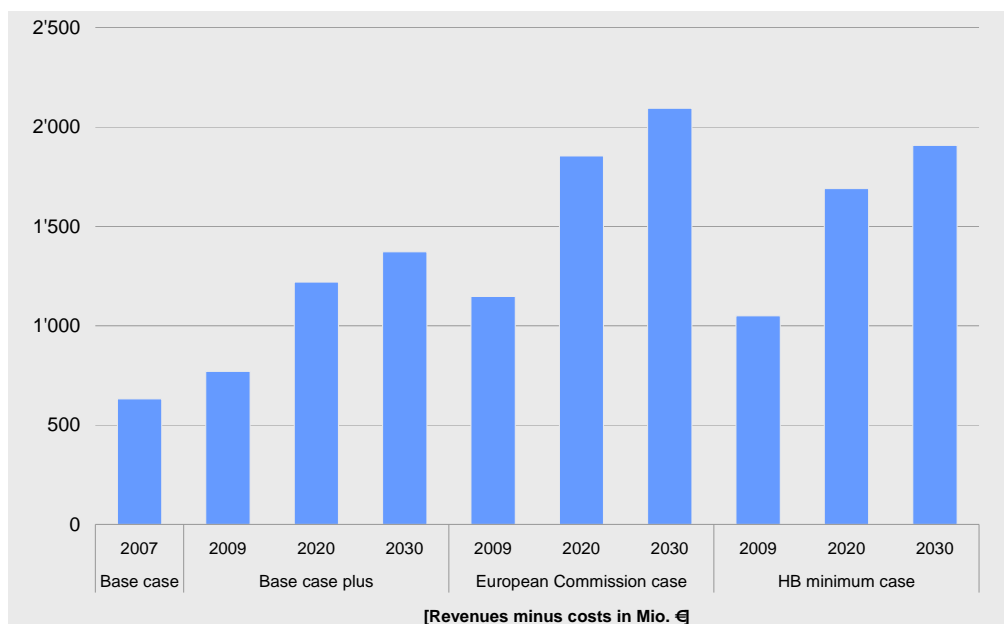
Annex I - Figure 78: Comparison of road user charge costs for the French economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 79: Comparison of road user charge surpluses or deficits for France with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 80: Comparison of road user charge surpluses or deficits for France with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

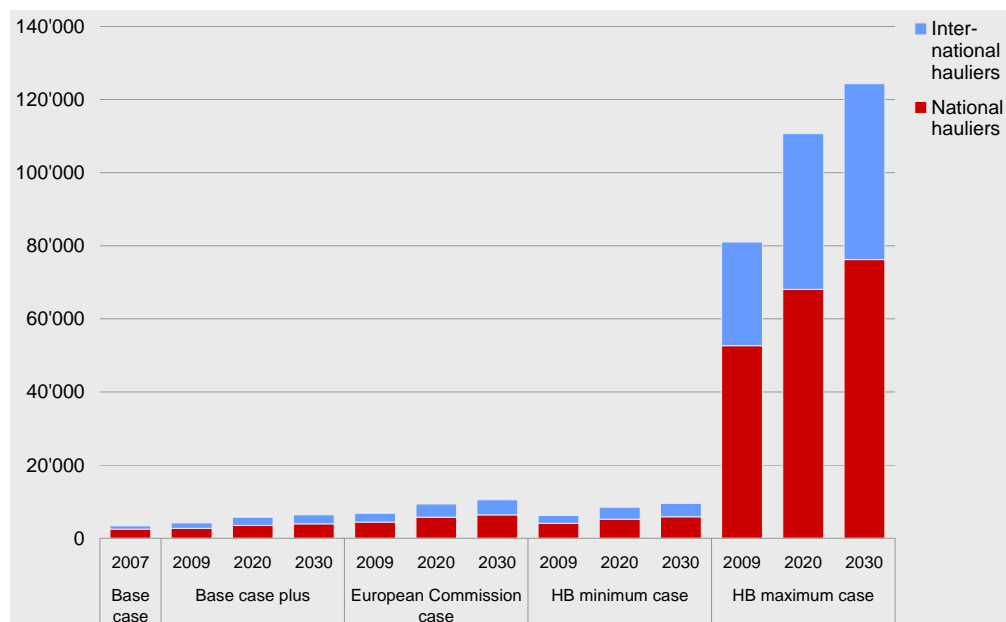


Germany

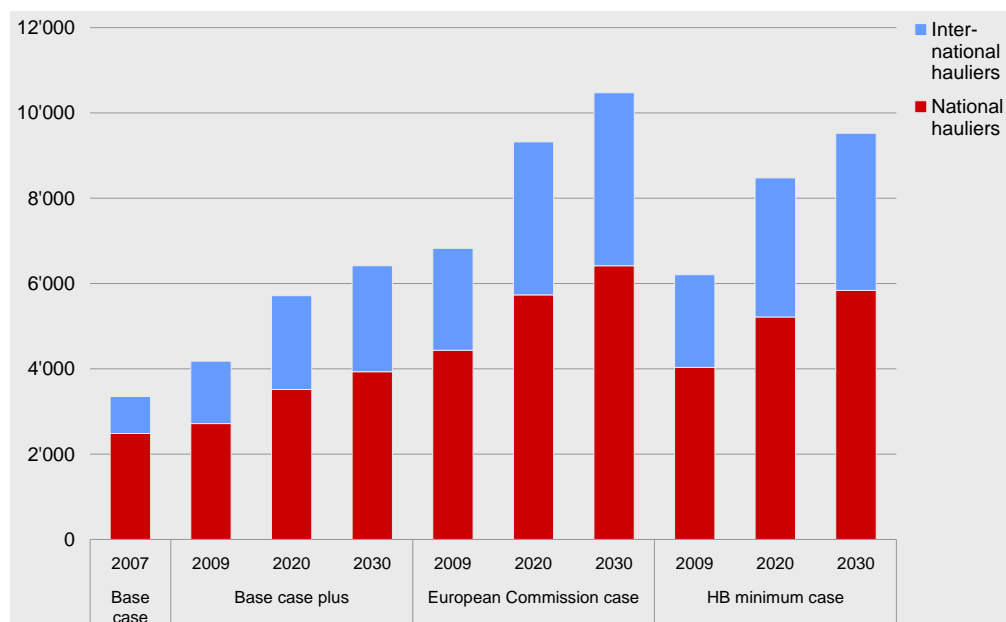
Annex I - Table 9: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits DE		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by DE from	national hauliers	2'486	2'718	3'514	3'934	4'435	5'733	6'418	4'034	5'213	5'837	52'656	68'060	76'203
	international hauliers	865	1'465	2'201	2'485	2'390	3'590	4'054	2'174	3'265	3'687	28'374	42'628	48'127
	Total	3'351	4'183	5'714	6'419	6'825	9'323	10'472	6'207	8'479	9'524	81'030	110'687	124'330
Road user charges paid by trucks registered in DE for	inland transport	2'486	2'718	3'514	3'934	4'435	5'733	6'418	4'034	5'213	5'837	52'656	68'060	76'203
	transport abroad	325	414	585	674	722	1'018	1'162	648	915	1'050	9'371	12'930	14'163
	Total	2'811	3'132	4'099	4'608	5'157	6'750	7'580	4'681	6'129	6'887	62'027	80'990	90'366
Road user charge surpluses/deficits for DE with regard to the road hauliers	in Mio. EUR	540	1'051	1'615	1'811	1'668	2'573	2'892	1'526	2'350	2'636	19'003	29'697	33'964
	in %	19	34	39	39	32	38	38	33	38	38	31	37	38
Total charge costs of economy in DE for	national transport	2'150	2'150	2'711	3'002	3'508	4'423	4'899	3'191	4'022	4'455	41'654	52'509	58'157
	foreign trade transport	944	1'271	1'780	2'177	2'159	3'029	3'701	1'949	2'736	3'348	27'098	37'778	45'596
	Total	3'095	3'421	4'491	5'180	5'668	7'452	8'599	5'140	6'759	7'803	68'751	90'287	103'753
Road user charge surpluses/deficits for DE with regard to the national economy	in Mio. EUR	256	762	1'224	1'239	1'157	1'871	1'873	1'067	1'720	1'721	12'278	20'400	20'577
	in %	8	22	27	24	20	25	22	21	25	22	18	23	20

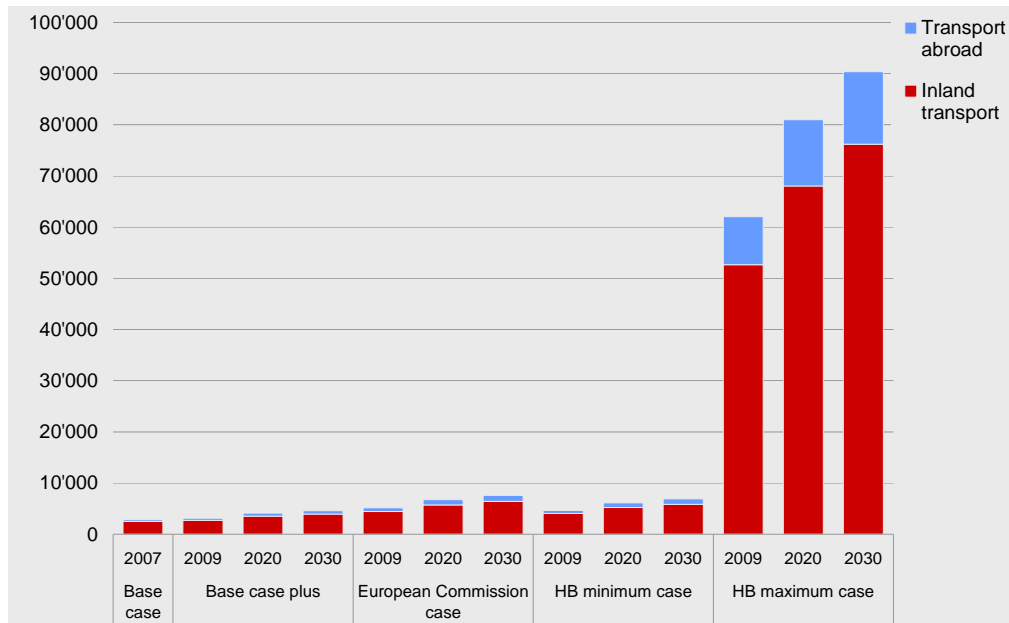
Annex I - Figure 81: Comparison of road user charge revenues for Germany from national and international road hauliers by scenarios and years (in Mil. EUR)



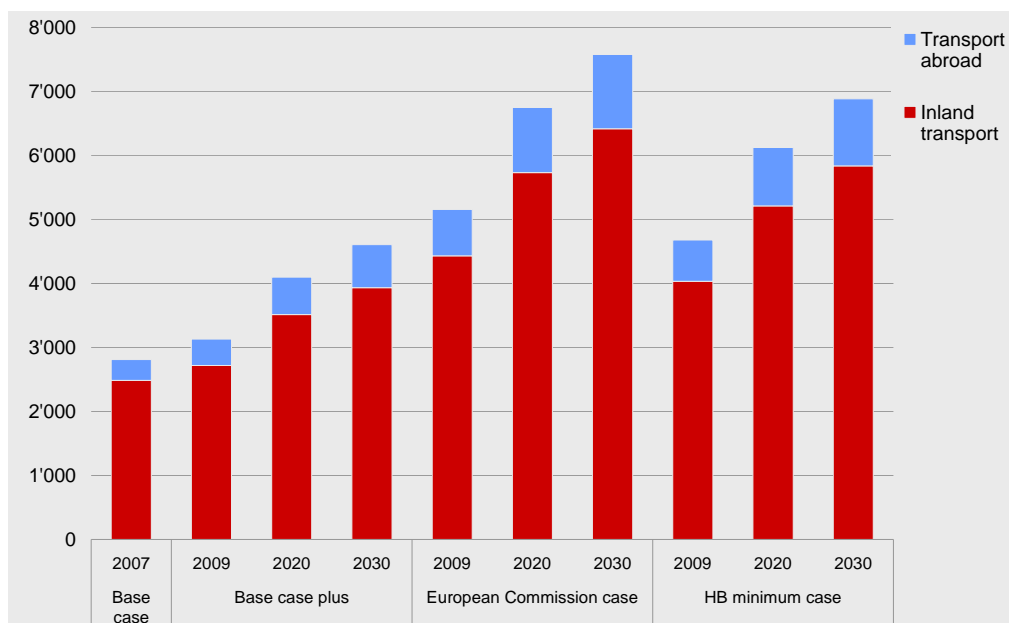
Annex I - Figure 82: Comparison of road user charge revenues for Germany from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



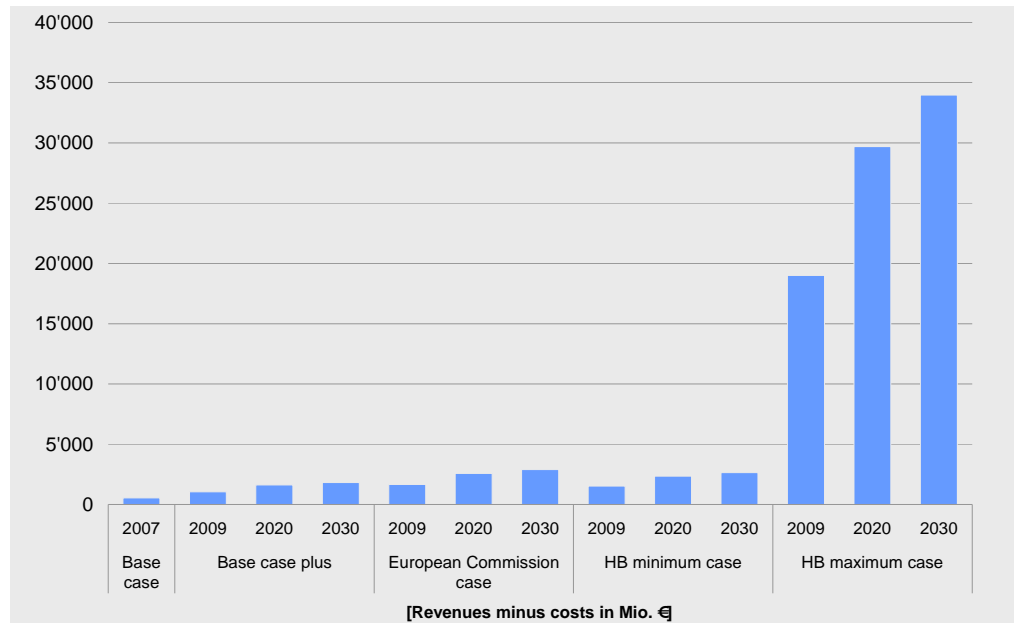
Annex I - Figure 83: Comparison of road user charges paid by German road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



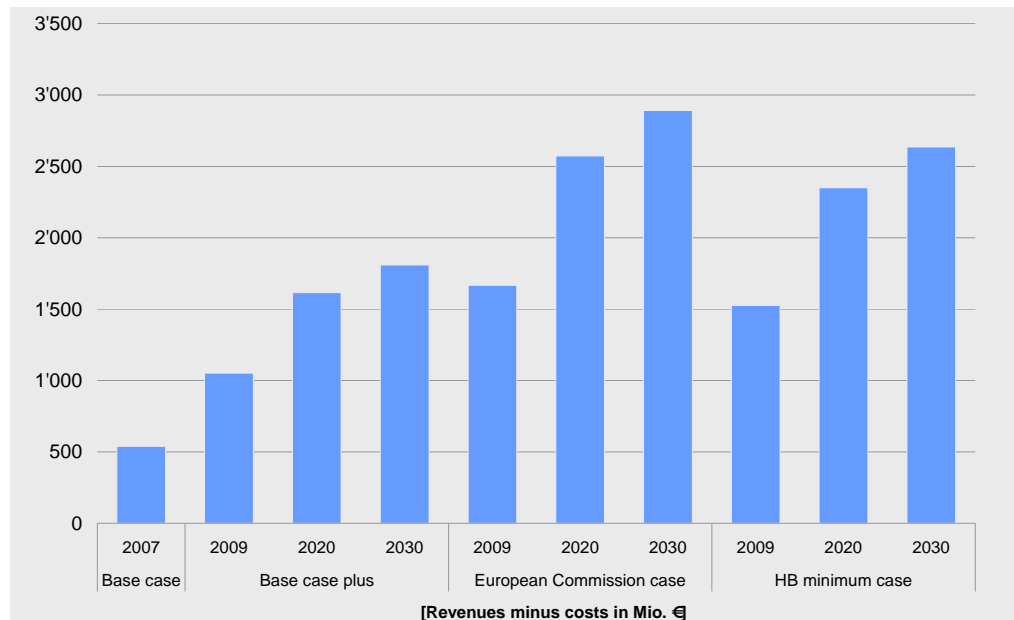
Annex I - Figure 84: Comparison of road user charges paid by German road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



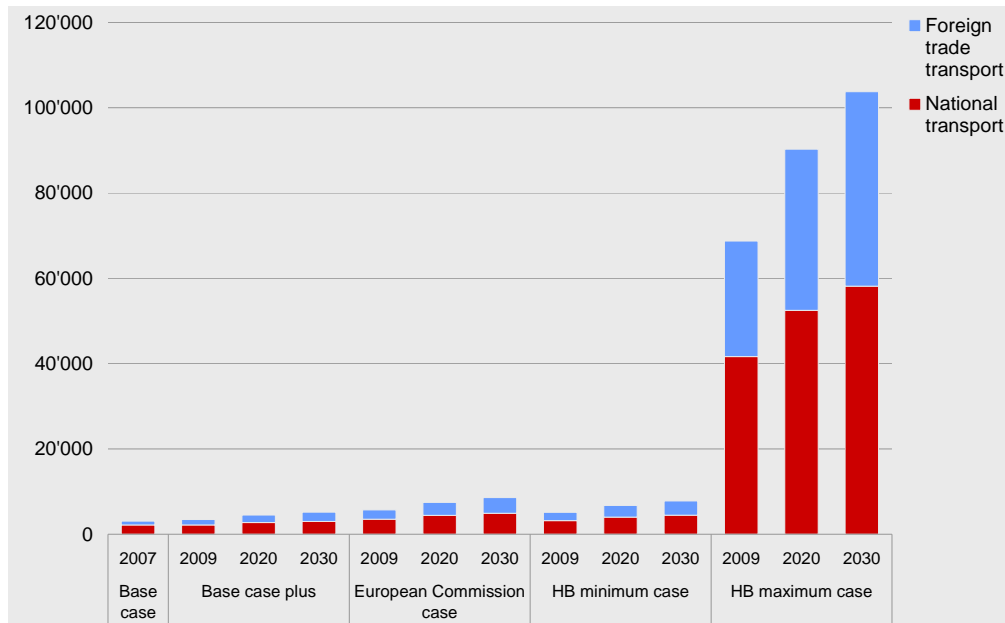
Annex I - Figure 85: Comparison of road user charge surpluses or deficits for Germany with regard to the road hauliers by scenarios and years (in Mil. EUR)



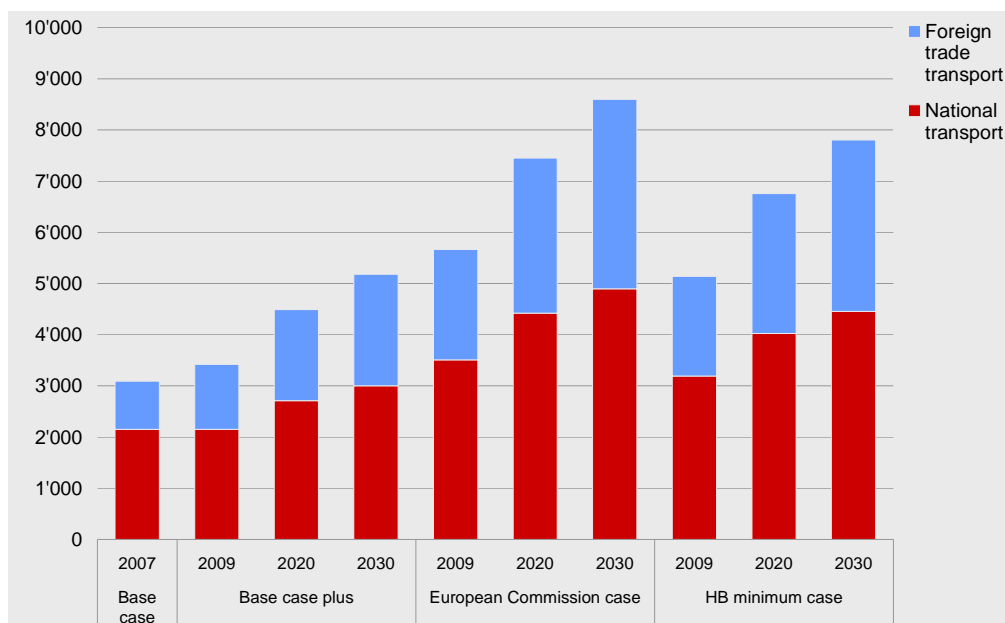
Annex I - Figure 86: Comparison of road user charge surpluses or deficits for Germany with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



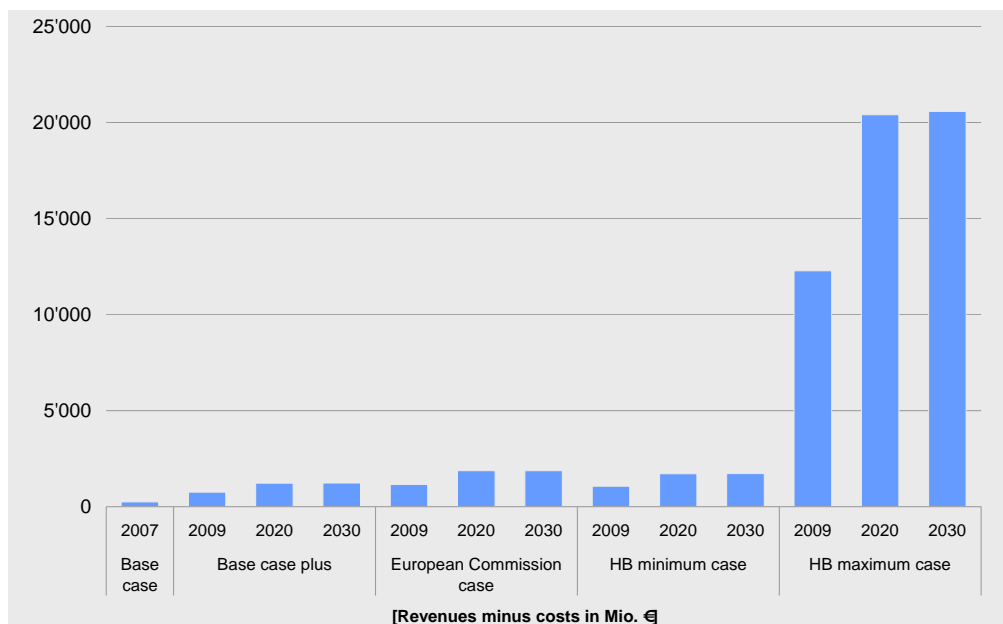
Annex I - Figure 87: Comparison of road user charge costs for the German economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



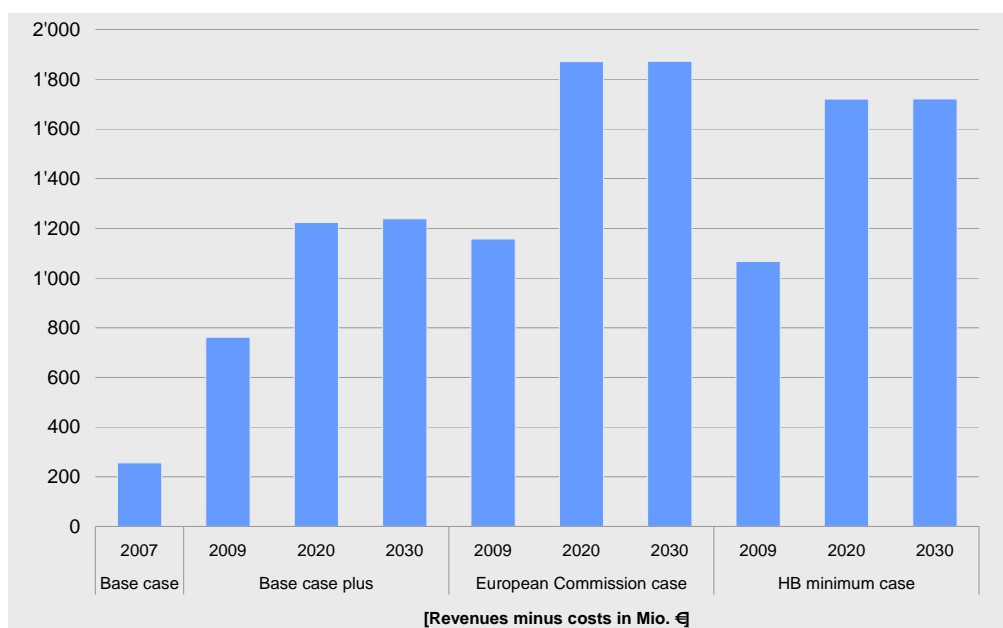
Annex I - Figure 88: Comparison of road user charge costs for the German economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 89: Comparison of road user charge surpluses or deficits for Germany with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 90: Comparison of road user charge surpluses or deficits for Germany with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

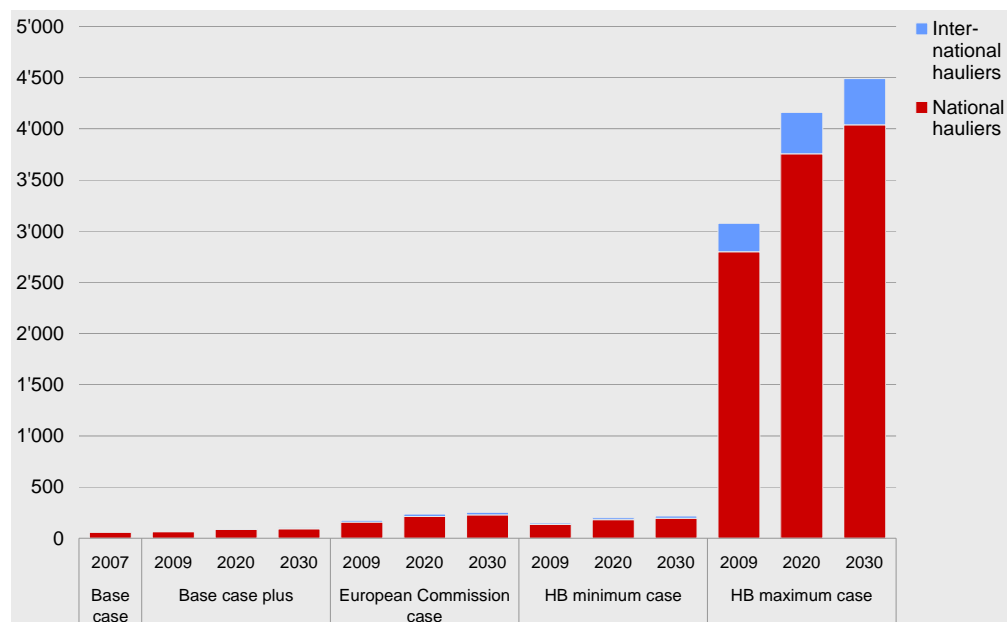


Greece

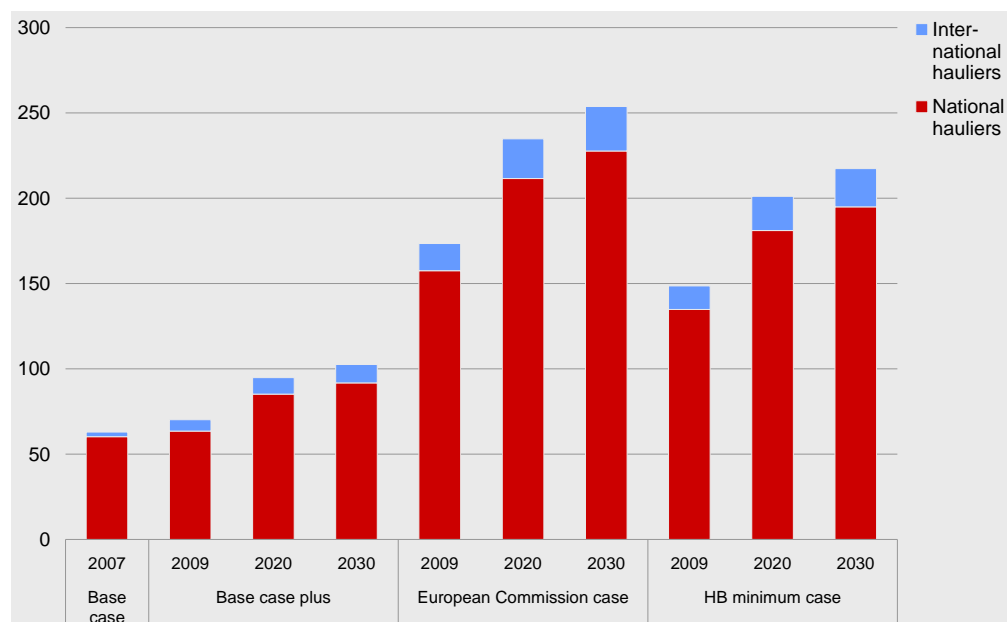
Annex I - Table 10: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits GR		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by GR from	national hauliers	60	63	85	92	157	212	228	135	181	195	2'799	3'756	4'039
	international hauliers	3	7	10	11	16	23	26	14	20	22	279	404	451
	Total	63	70	95	103	174	235	254	149	201	217	3'078	4'160	4'490
Road user charges paid by trucks registered in GR for	inland transport	60	63	85	92	157	212	228	135	181	195	2'799	3'756	4'039
	transport abroad	22	28	37	42	50	65	74	45	59	67	651	826	921
	Total	82	92	123	134	207	277	302	180	240	262	3'450	4'582	4'959
Road user charge surpluses/deficits for GR with regard to the road hauliers	in Mio. EUR	-19	-22	-28	-32	-34	-42	-48	-31	-39	-45	-372	-423	-470
	in %	-23	-24	-23	-24	-16	-15	-16	-17	-16	-17	-11	-9	-9
Total charge costs of economy in GR for	national transport	58	58	77	83	144	193	207	123	165	177	2'564	3'447	3'693
	foreign trade transport	15	23	31	35	44	60	68	39	53	61	651	863	970
	Total	73	80	108	118	188	253	275	162	218	238	3'215	4'310	4'663
Road user charge surpluses/deficits for GR with regard to the national economy	in Mio. EUR	-10	-10	-13	-15	-15	-18	-22	-14	-17	-20	-137	-150	-173
	in %	-14	-13	-12	-13	-8	-7	-8	-8	-8	-9	-4	-3	-4

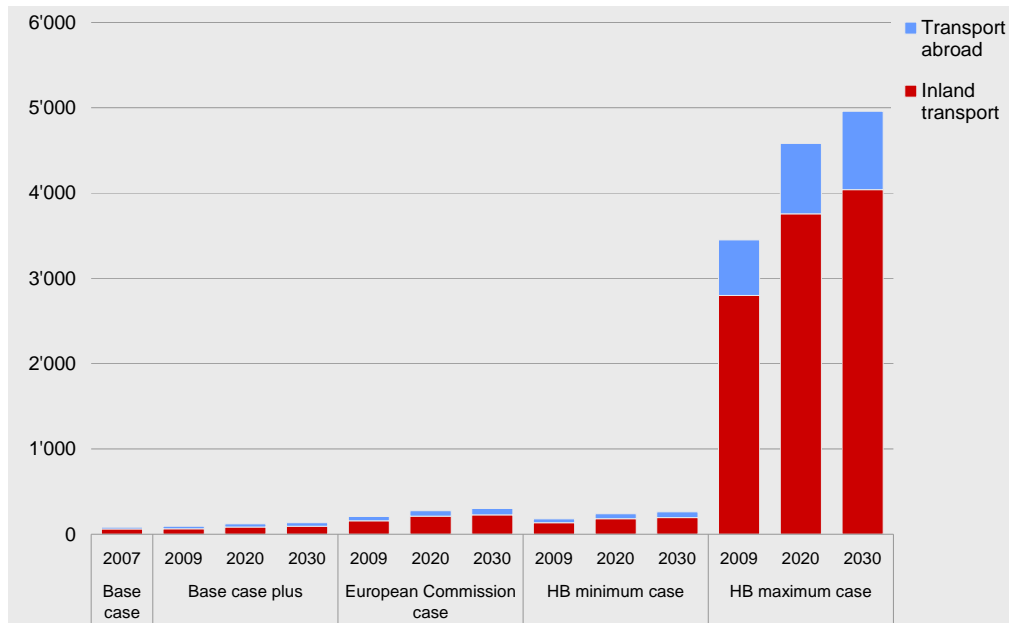
Annex I - Figure 91: Comparison of road user charge revenues for Greece from national and international road hauliers by scenarios and years (in Mil. EUR)



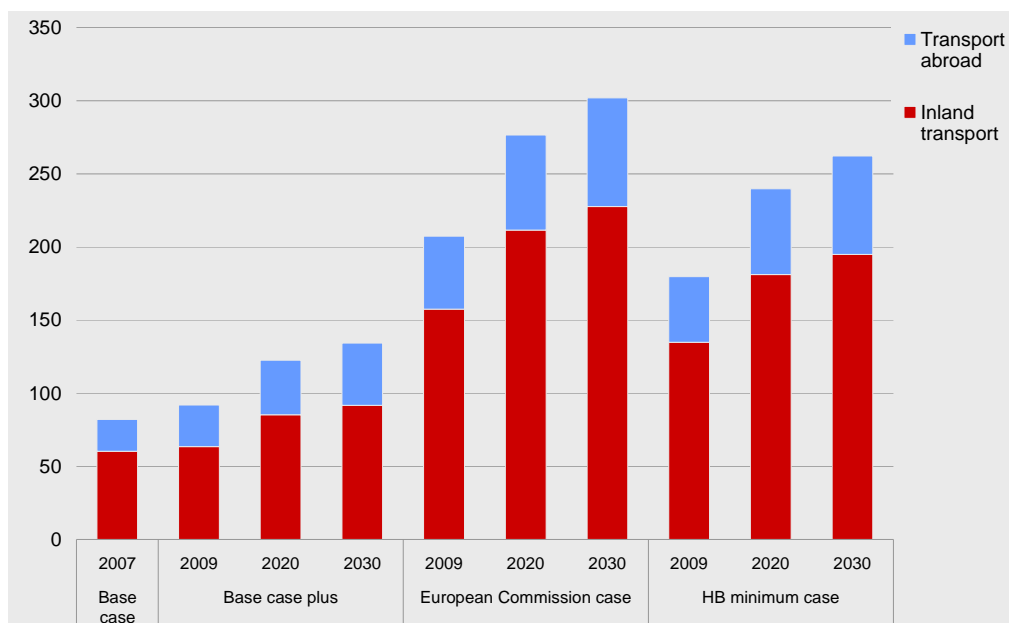
Annex I - Figure 92: Comparison of road user charge revenues for Greece from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



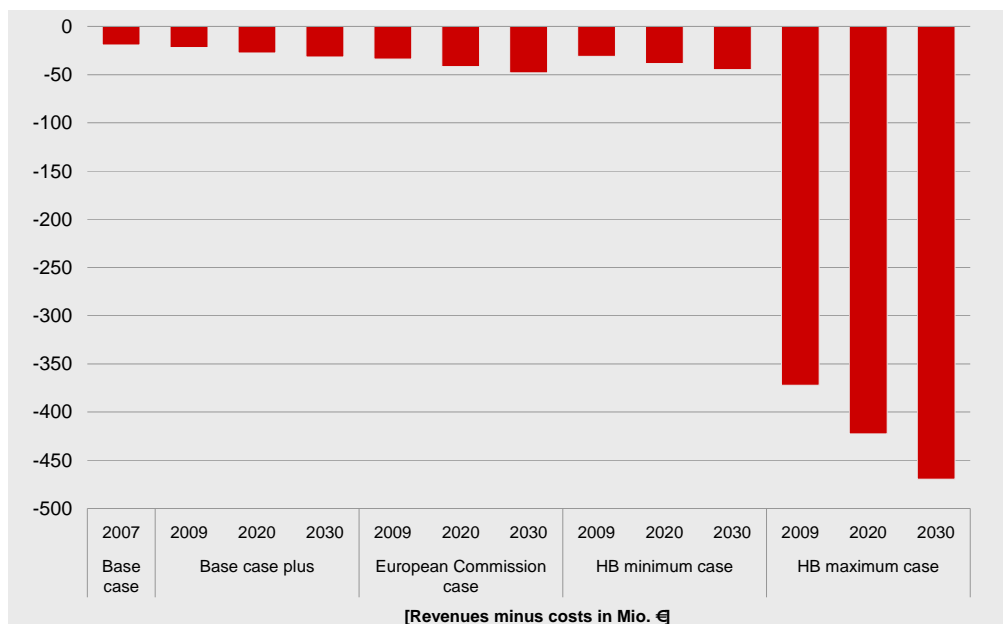
Annex I - Figure 93: Comparison of road user charges paid by Greek road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



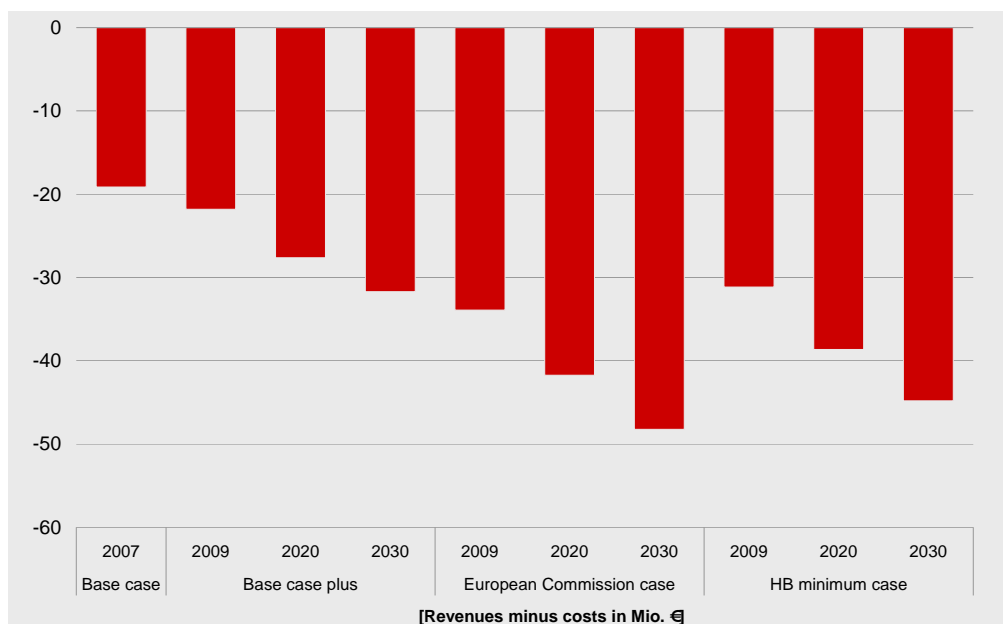
Annex I - Figure 94: Comparison of road user charges paid by Greek road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



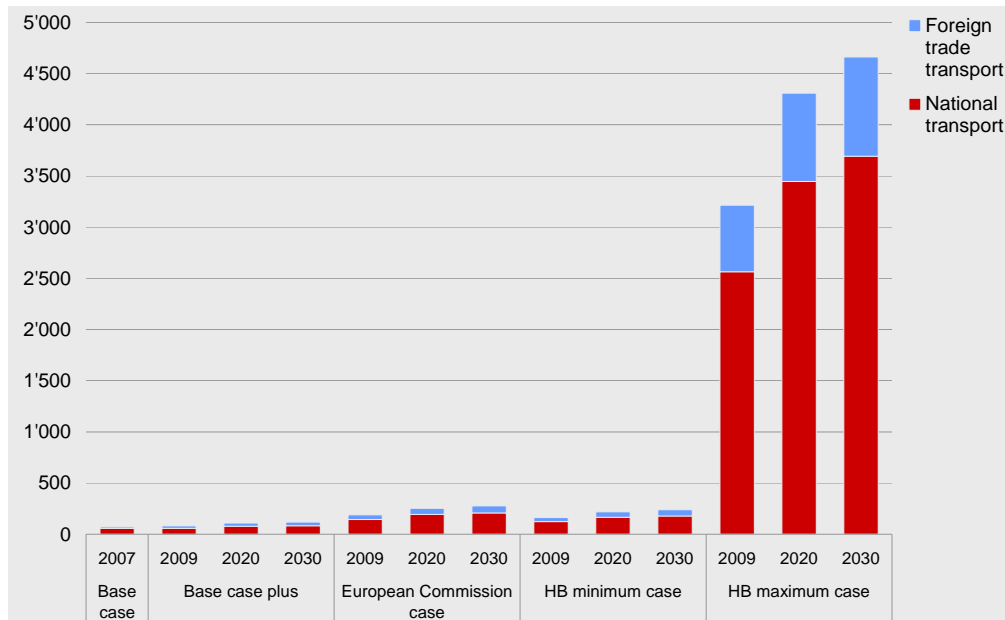
Annex I - Figure 95: Comparison of road user charge surpluses or deficits for Greece with regard to the road hauliers by scenarios and years (in Mil. EUR)



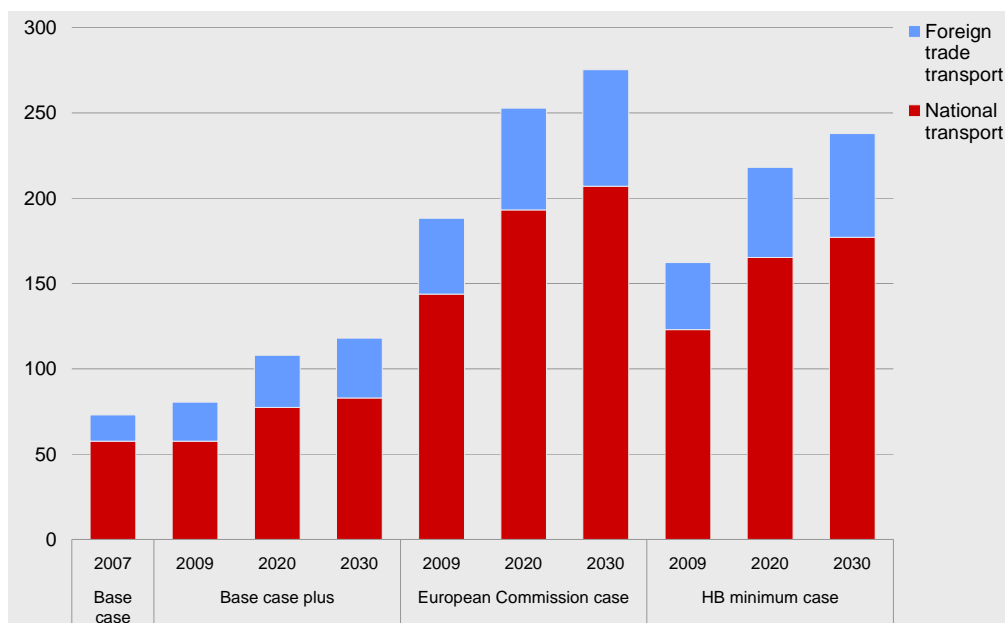
Annex I - Figure 96: Comparison of road user charge surpluses or deficits for Greece with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



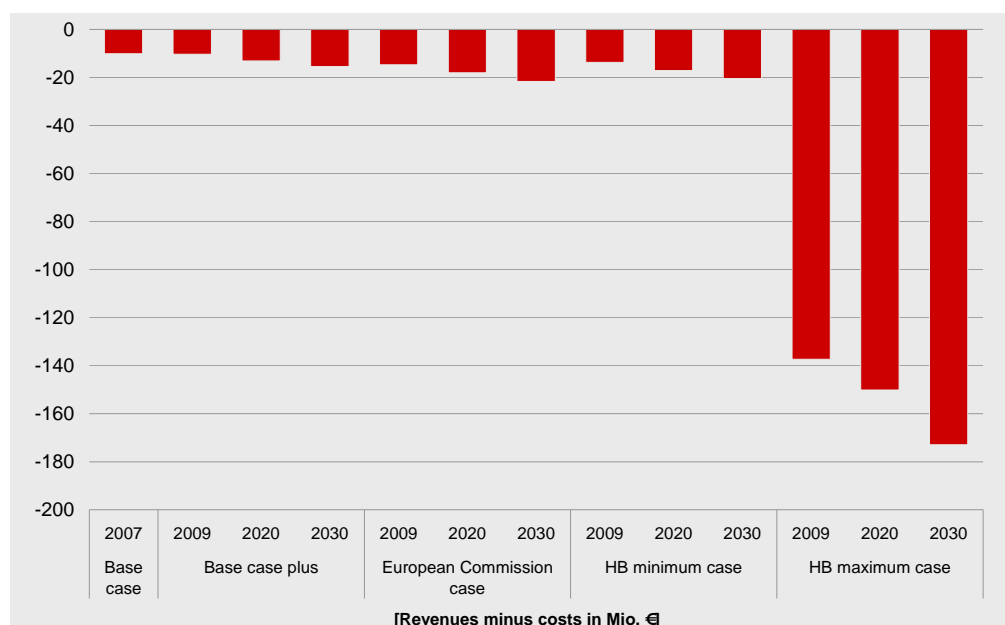
Annex I - Figure 97: Comparison of road user charge costs for the Greek economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



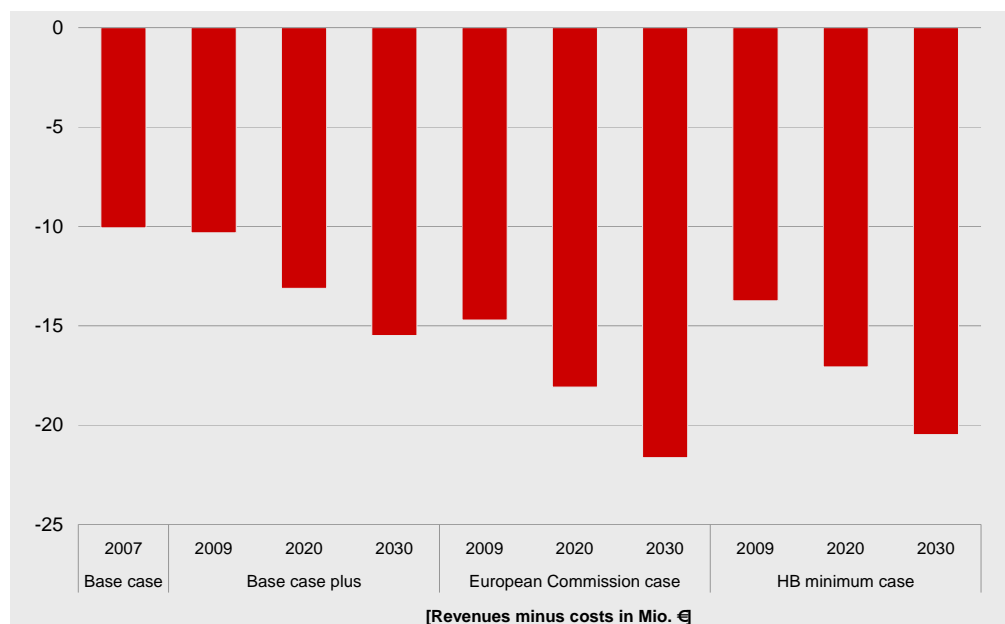
Annex I - Figure 98: Comparison of road user charge costs for the Greek economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 99: Comparison of road user charge surpluses or deficits for Greece with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 100: Comparison of road user charge surpluses or deficits for Greece with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

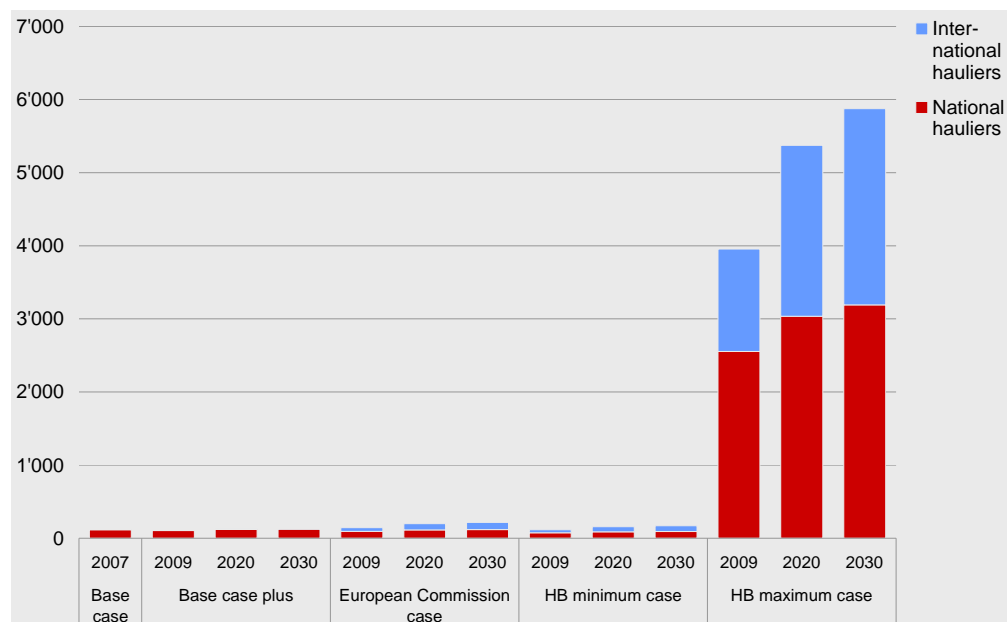


Hungary

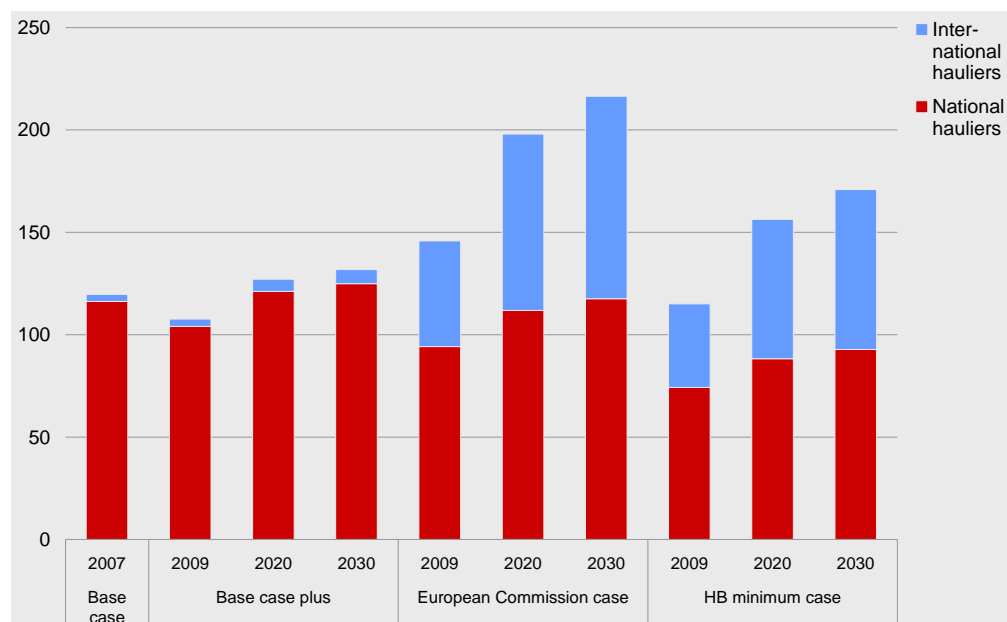
Annex I - Table 11: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits HU		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by HU from	national hauliers	116	104	121	125	94	112	118	74	88	93	2'555	3'035	3'191
	international hauliers	3	4	6	7	52	86	99	41	68	78	1'400	2'339	2'683
	Total	120	108	127	132	146	198	216	115	156	171	3'955	5'374	5'874
Road user charges paid by trucks registered in HU for	inland transport	116	104	121	125	94	112	118	74	88	93	2'555	3'035	3'191
	transport abroad	130	163	211	239	277	356	403	250	322	365	3'473	4'395	4'885
	Total	246	267	332	364	371	468	520	324	411	458	6'028	7'429	8'076
Road user charge surpluses/deficits for HU with regard to the road hauliers	in Mio. EUR	-126	-159	-205	-232	-225	-270	-304	-209	-254	-287	-2'073	-2'055	-2'202
	in %	-51	-60	-62	-64	-61	-58	-58	-65	-62	-63	-34	-28	-27
Total charge costs of economy in HU for	national transport	114	102	119	122	64	75	77	51	59	61	1'748	2'032	2'094
	foreign trade transport	60	70	79	82	142	165	172	126	145	151	2'172	2'553	2'672
	Total	174	172	198	204	207	240	249	176	204	212	3'920	4'585	4'766
Road user charge surpluses/deficits for HU with regard to the national economy	in Mio. EUR	-55	-64	-71	-73	-61	-42	-33	-61	-48	-41	35	789	1'108
	in %	-31	-37	-36	-36	-30	-17	-13	-35	-23	-20	1	17	23

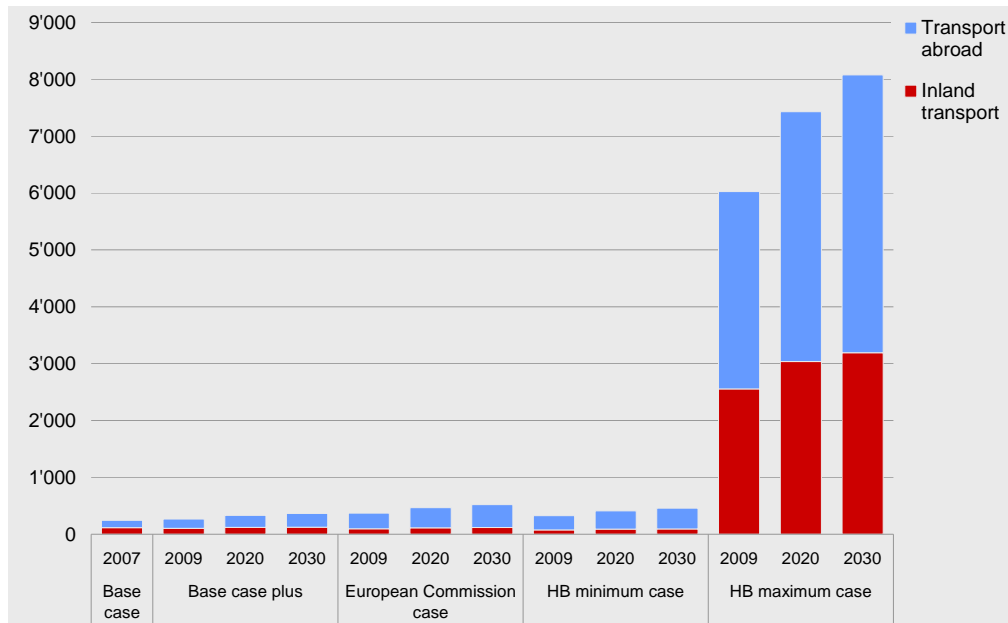
Annex I - Figure 101: Comparison of road user charge revenues for Hungary from national and international road hauliers by scenarios and years (in Mil. EUR)



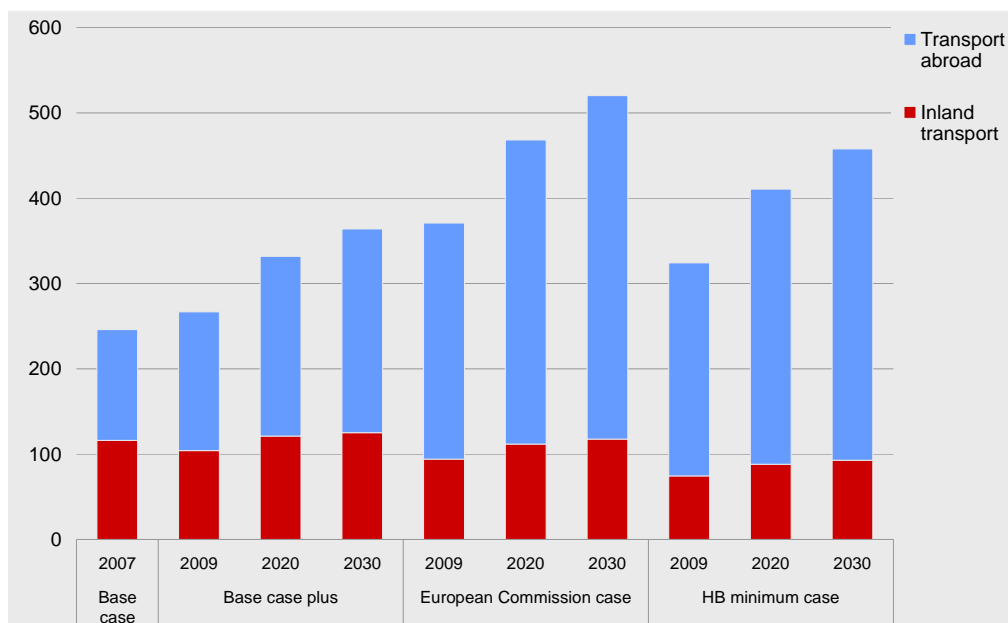
Annex I - Figure 102: Comparison of road user charge revenues for Hungary from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



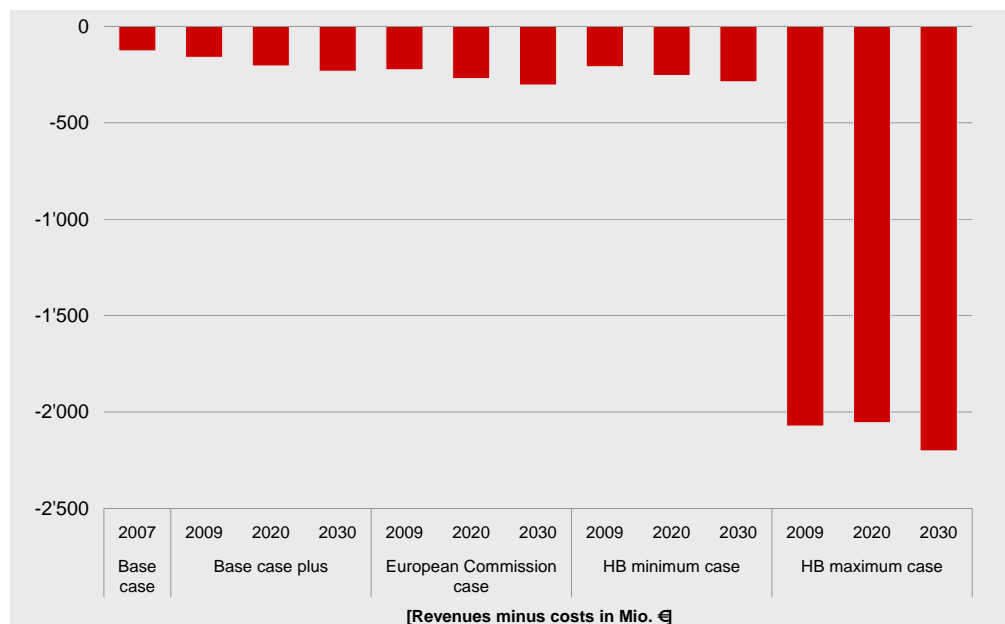
Annex I - Figure 103: Comparison of road user charges paid by Hungarian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



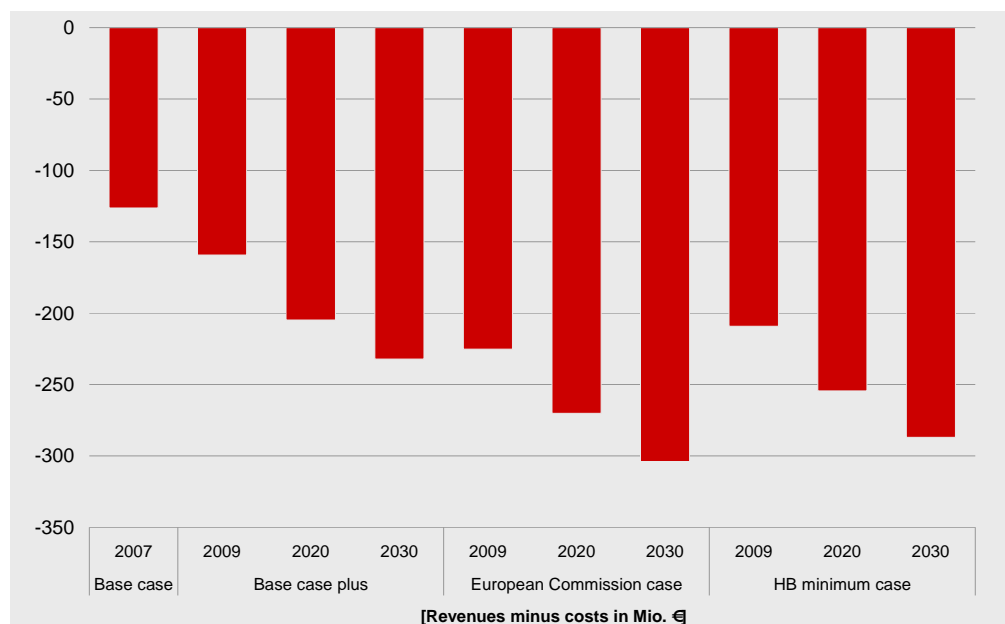
Annex I - Figure 104: Comparison of road user charges paid by Hungarian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



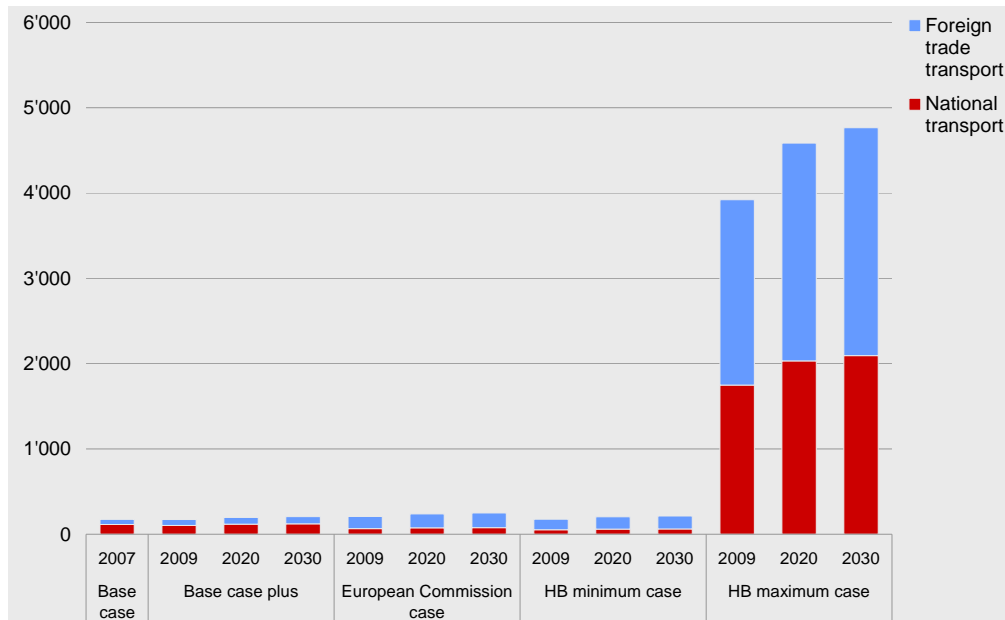
Annex I - Figure 105: Comparison of road user charge surpluses or deficits for Hungary with regard to the road hauliers by scenarios and years (in Mil. EUR)



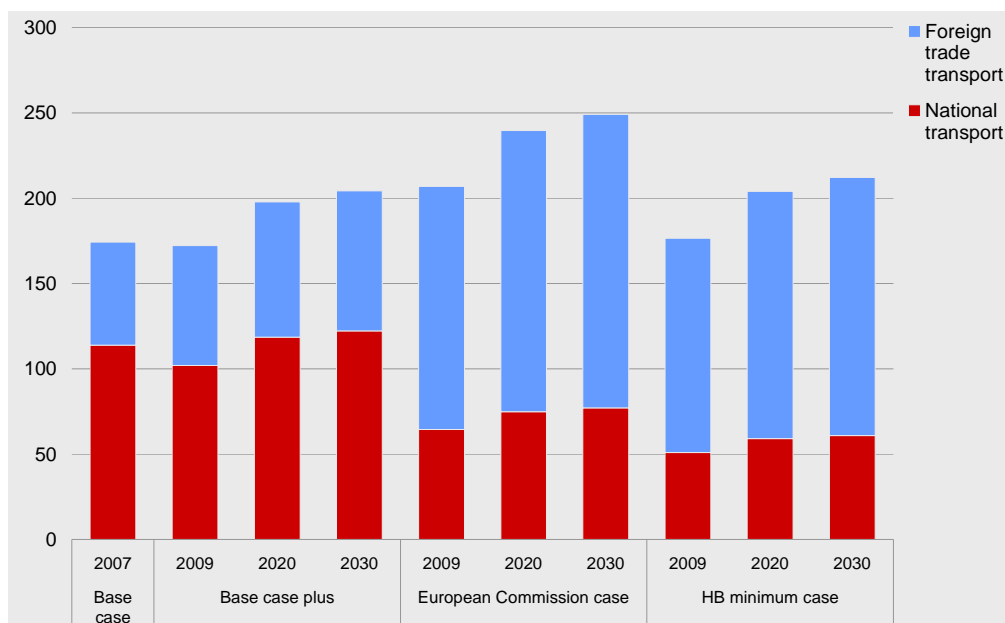
Annex I - Figure 106: Comparison of road user charge surpluses or deficits for Hungary with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



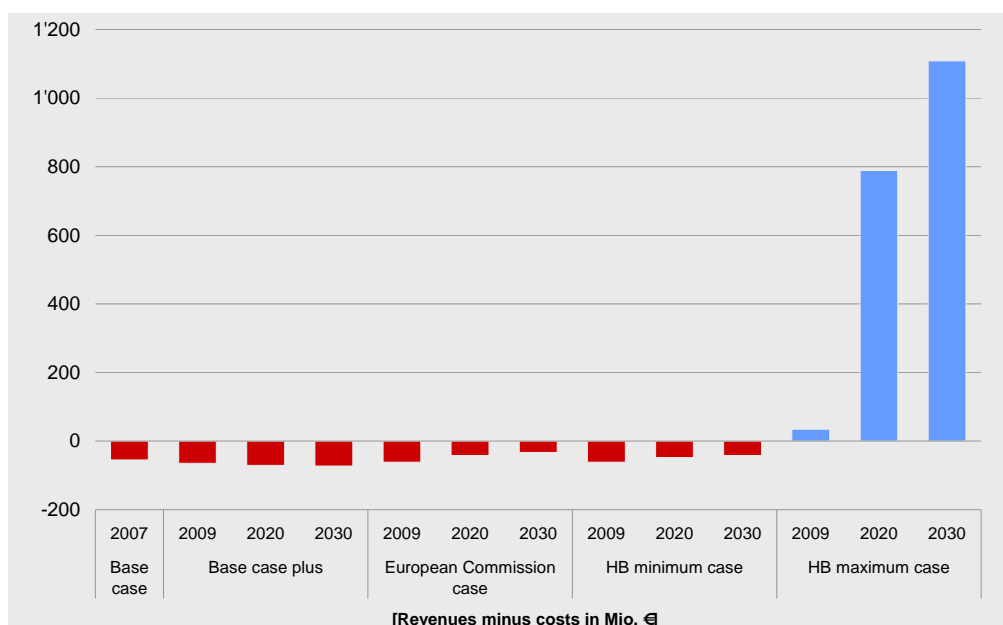
Annex I - Figure 107: Comparison of road user charge costs for the Hungarian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



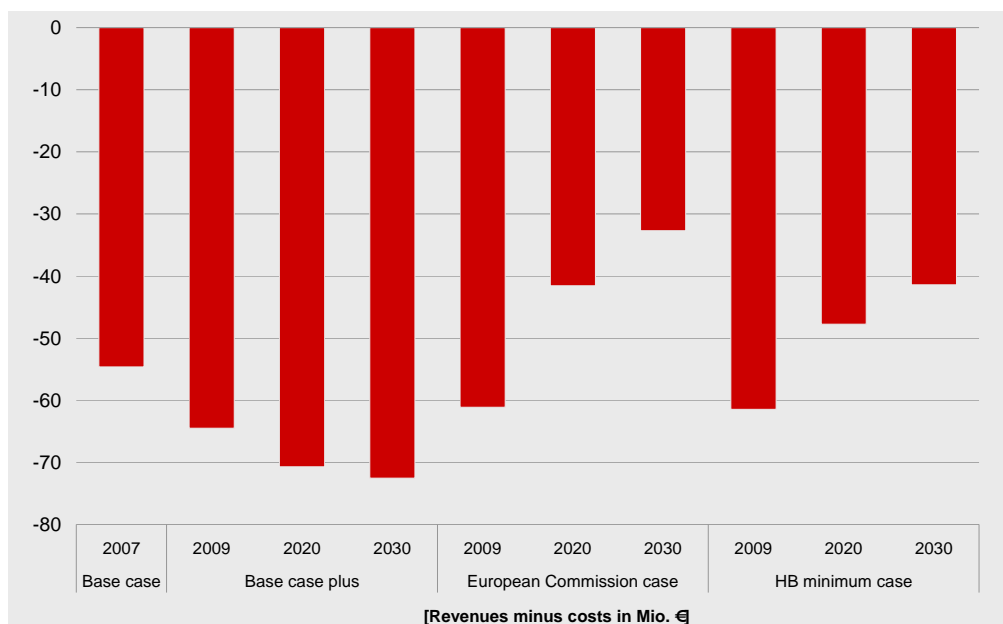
Annex I - Figure 108: Comparison of road user charge costs for the Hungarian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 109: Comparison of road user charge surpluses or deficits for Hungary with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 110: Comparison of road user charge surpluses or deficits for Hungary with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

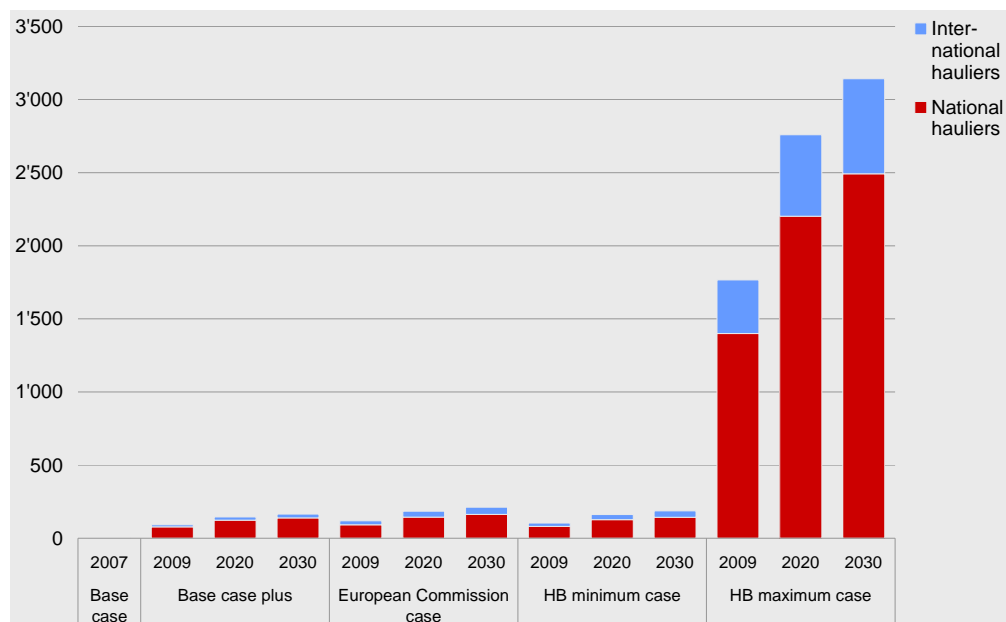


Ireland

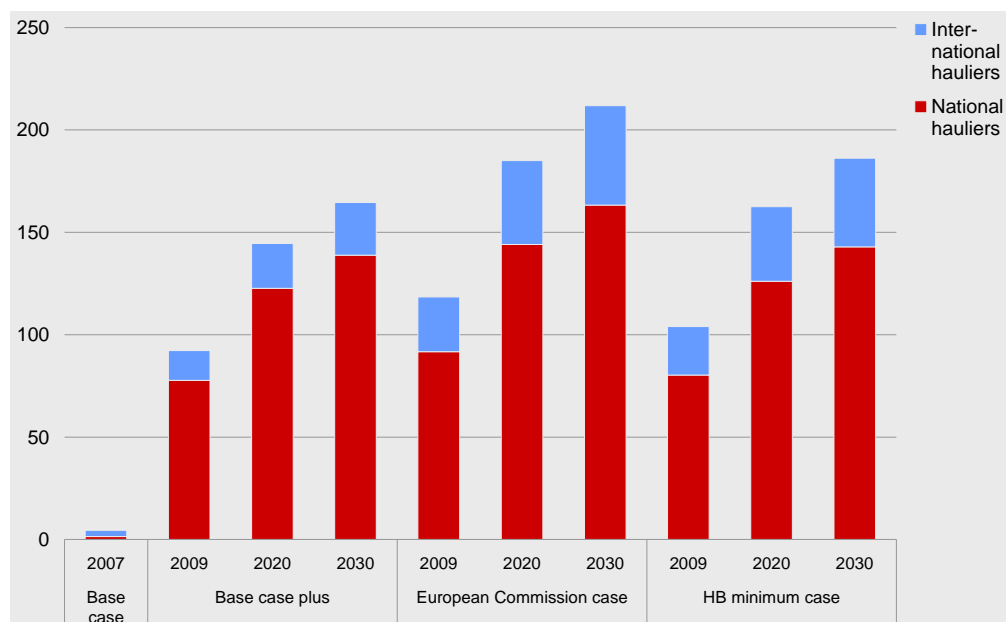
Annex I - Table 12: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits IE		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by IE from	national hauliers	1	78	123	139	92	144	163	80	126	143	1'401	2'202	2'492
	international hauliers	3	15	22	26	27	41	49	24	36	43	366	557	649
	Total	4	92	145	165	118	185	212	104	163	186	1'767	2'759	3'142
Road user charges paid by trucks registered in IE for	inland transport	1	78	123	139	92	144	163	80	126	143	1'401	2'202	2'492
	transport abroad	11	36	67	84	67	124	158	60	111	142	944	1'701	2'171
	Total	12	114	189	223	159	268	321	140	237	285	2'345	3'903	4'663
Road user charge surpluses/deficits for IE with regard to the road hauliers	in Mio. EUR	-8	-21	-45	-59	-40	-83	-110	-36	-75	-98	-578	-1'144	-1'521
	in %	-64	-19	-24	-26	-25	-31	-34	-26	-31	-35	-25	-29	-33
Total charge costs of economy in IE for	national transport	0	73	116	132	83	133	151	73	116	131	1'286	2'056	2'329
	foreign trade transport	7	51	89	105	97	171	202	86	152	180	1'391	2'437	2'857
	Total	7	123	206	237	180	304	353	159	269	312	2'677	4'493	5'186
Road user charge surpluses/deficits for IE with regard to the national economy	in Mio. EUR	-2	-31	-61	-72	-61	-119	-141	-55	-106	-125	-911	-1'734	-2'044
	in %	-35	-25	-30	-30	-34	-39	-40	-34	-39	-40	-34	-39	-39

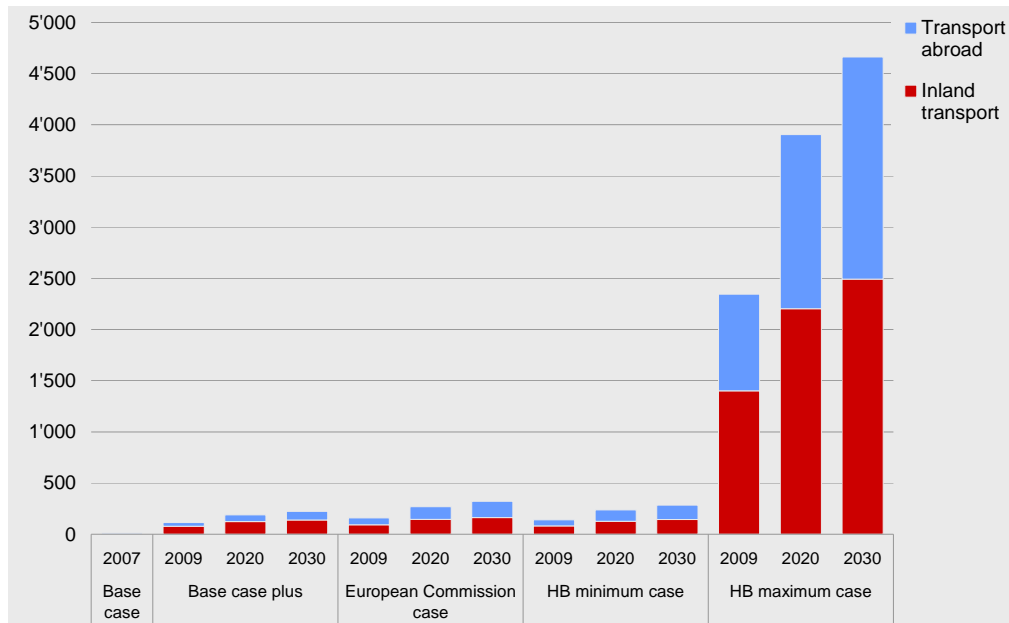
Annex I - Figure 111: Comparison of road user charge revenues for Ireland from national and international road hauliers by scenarios and years (in Mil. EUR)



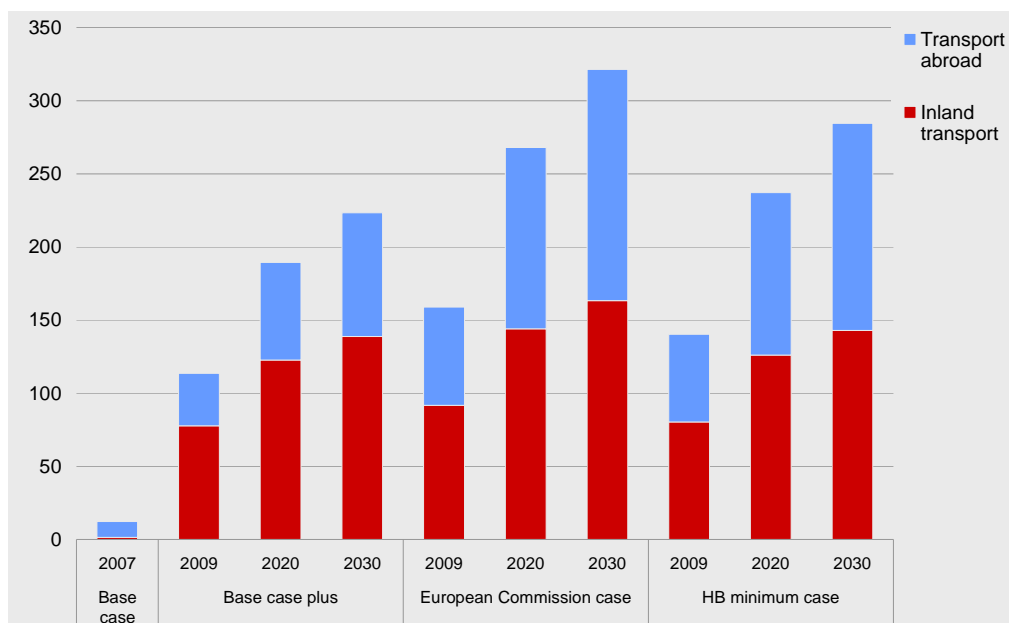
Annex I - Figure 112: Comparison of road user charge revenues for Ireland from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



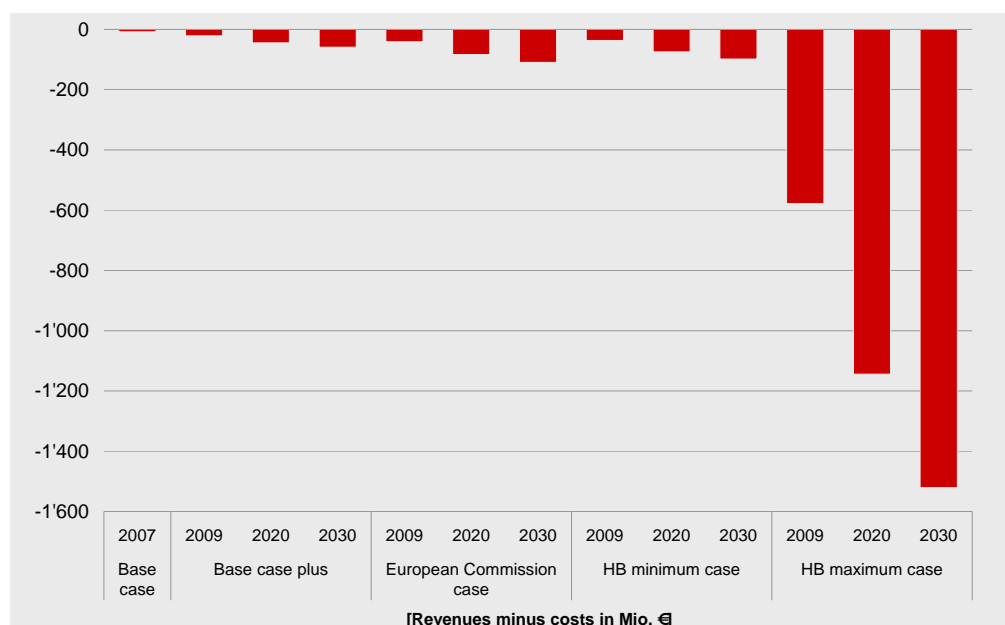
Annex I - Figure 113: Comparison of road user charges paid by Irish road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



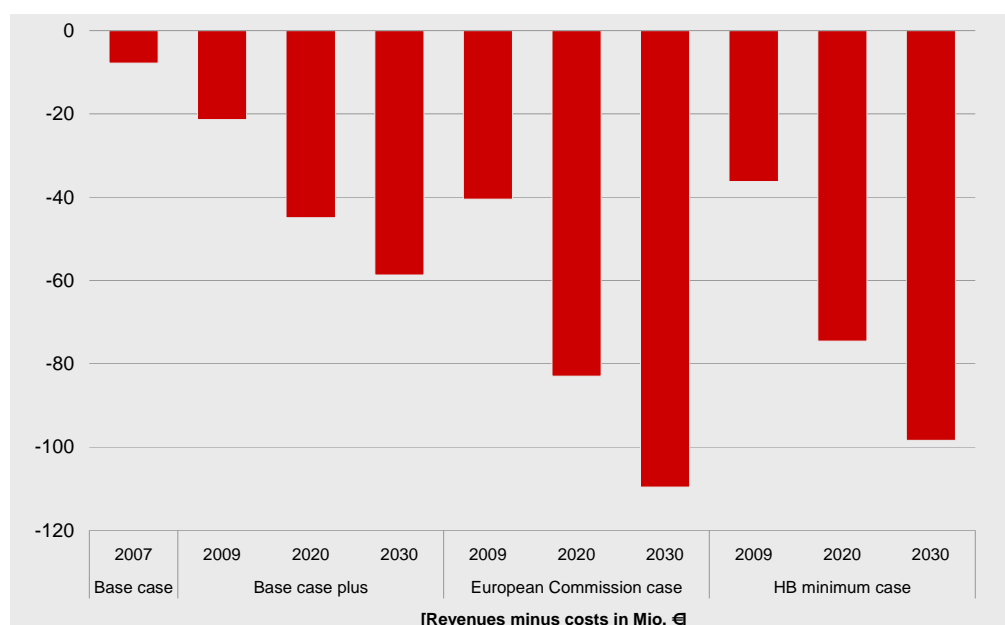
Annex I - Figure 114: Comparison of road user charges paid by Irish road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



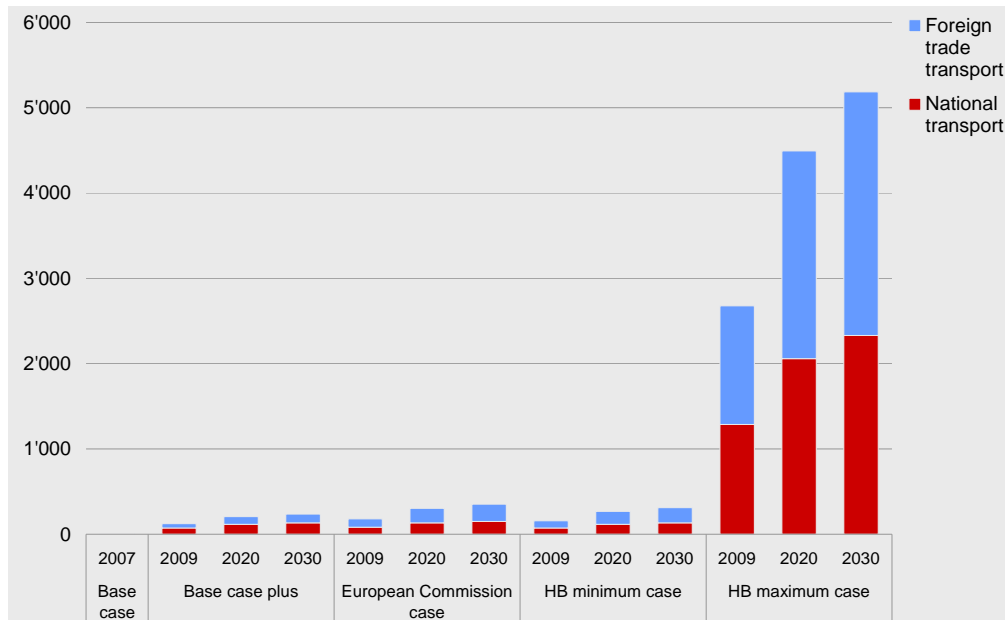
Annex I - Figure 115: Comparison of road user charge surpluses or deficits for Ireland with regard to the road hauliers by scenarios and years (in Mil. EUR)



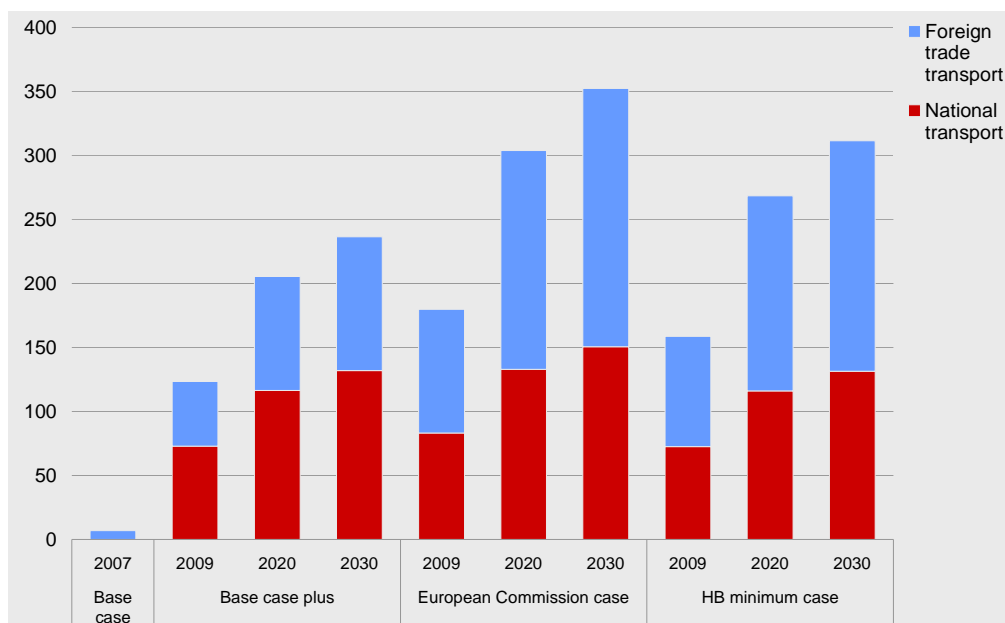
Annex I - Figure 116: Comparison of road user charge surpluses or deficits for Ireland with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



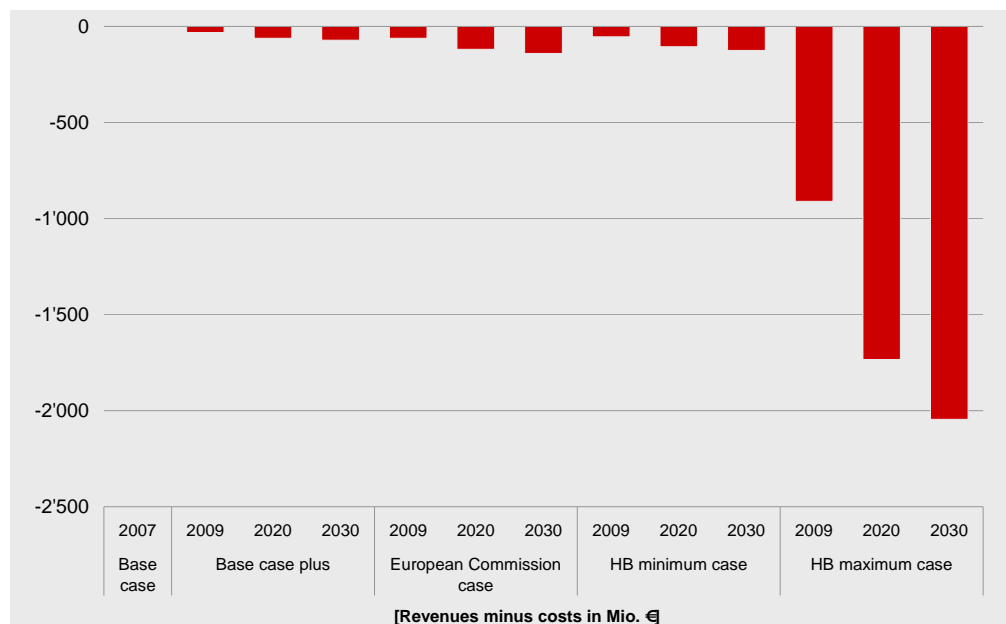
Annex I - Figure 117: Comparison of road user charge costs for the Irish economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



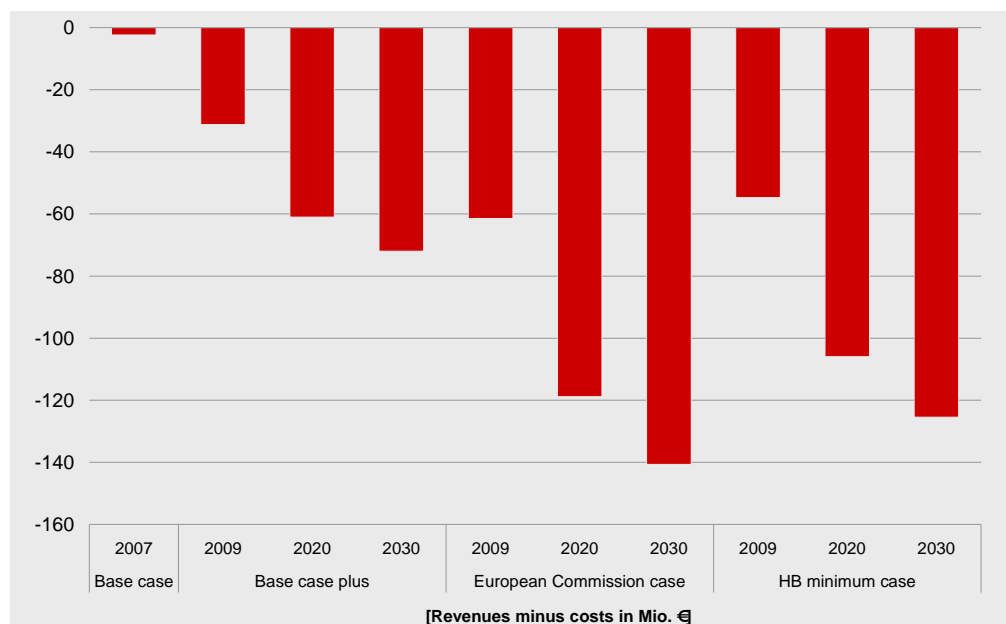
Annex I - Figure 118: Comparison of road user charge costs for the Irish economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 119: Comparison of road user charge surpluses or deficits for Ireland with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 120: Comparison of road user charge surpluses or deficits for Ireland with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

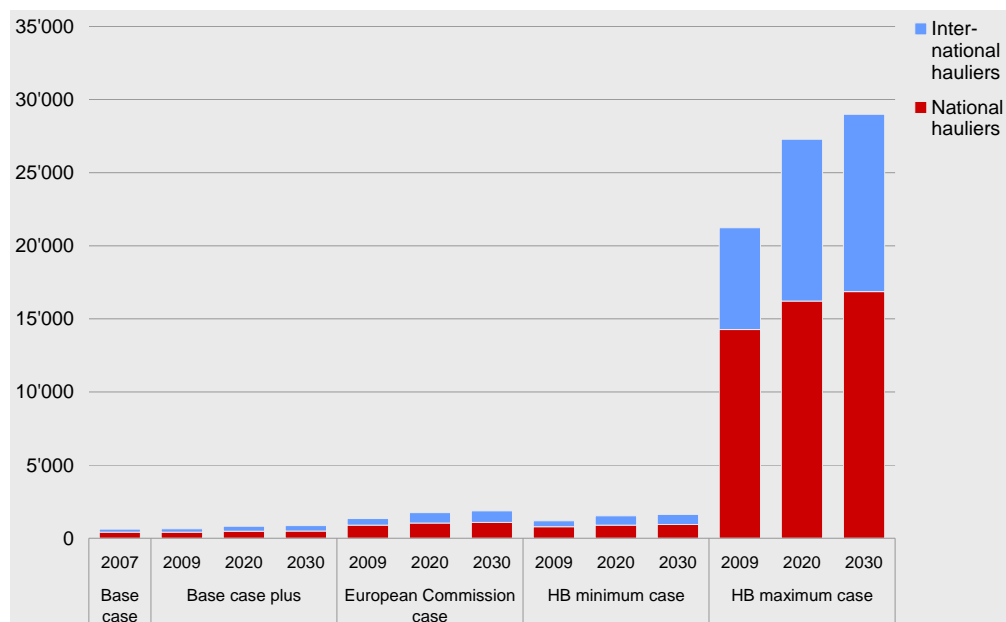


Italy

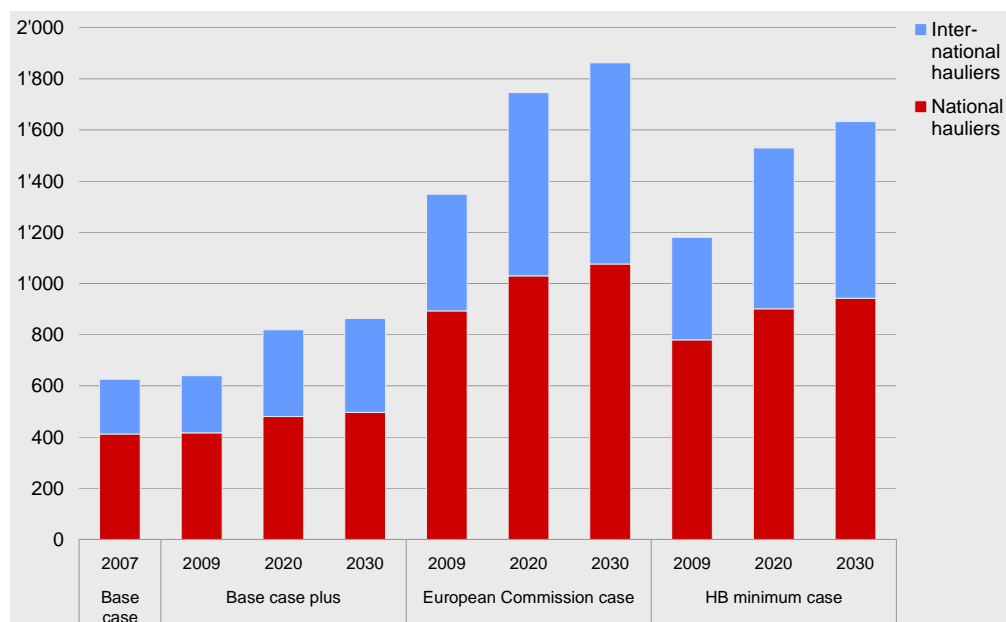
Annex I - Table 13: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits IT		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by IT from	national hauliers	413	416	480	496	893	1'030	1'076	780	902	942	14'268	16'224	16'868
	international hauliers	213	224	339	367	456	716	786	401	628	690	6'959	11'061	12'124
	Total	626	639	819	864	1'349	1'746	1'863	1'181	1'530	1'633	21'227	27'285	28'992
Road user charges paid by trucks registered in IT for	inland transport	413	416	480	496	893	1'030	1'076	780	902	942	14'268	16'224	16'868
	transport abroad	306	382	597	672	544	857	972	505	796	905	5'070	7'871	8'779
	Total	718	797	1'077	1'169	1'437	1'887	2'048	1'284	1'698	1'847	19'337	24'095	25'647
Road user charge surpluses/deficits for IT with regard to the road hauliers	in Mio. EUR	-93	-158	-258	-305	-88	-141	-185	-104	-168	-214	1'889	3'190	3'345
	in %	-13	-20	-24	-26	-6	-7	-9	-8	-10	-12	10	13	13
Total charge costs of economy in IT for	national transport	288	288	296	300	666	687	695	576	594	601	11'300	11'644	11'788
	foreign trade transport	544	633	983	1'089	1'007	1'590	1'776	918	1'450	1'623	11'462	18'039	19'823
	Total	831	920	1'279	1'389	1'673	2'277	2'471	1'494	2'044	2'224	22'762	29'682	31'611
Road user charge surpluses/deficits for IT with regard to the national economy	in Mio. EUR	-206	-281	-460	-525	-324	-531	-609	-313	-514	-591	-1'535	-2'397	-2'619
	in %	-25	-31	-36	-38	-19	-23	-25	-21	-25	-27	-7	-8	-8

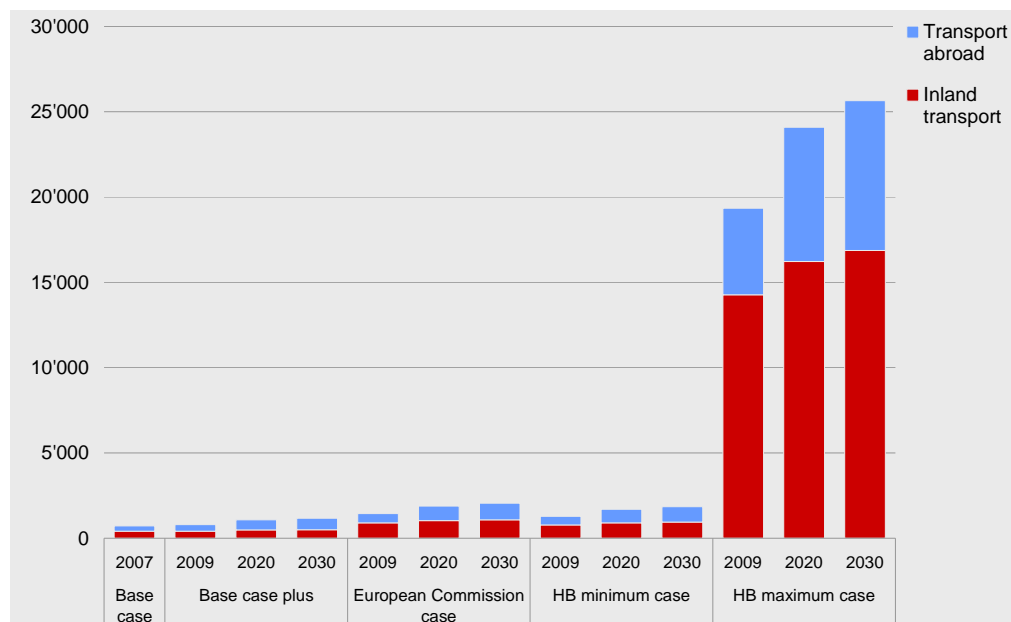
Annex I - Figure 121: Comparison of road user charge revenues for Italy from national and international road hauliers by scenarios and years (in Mil. EUR)



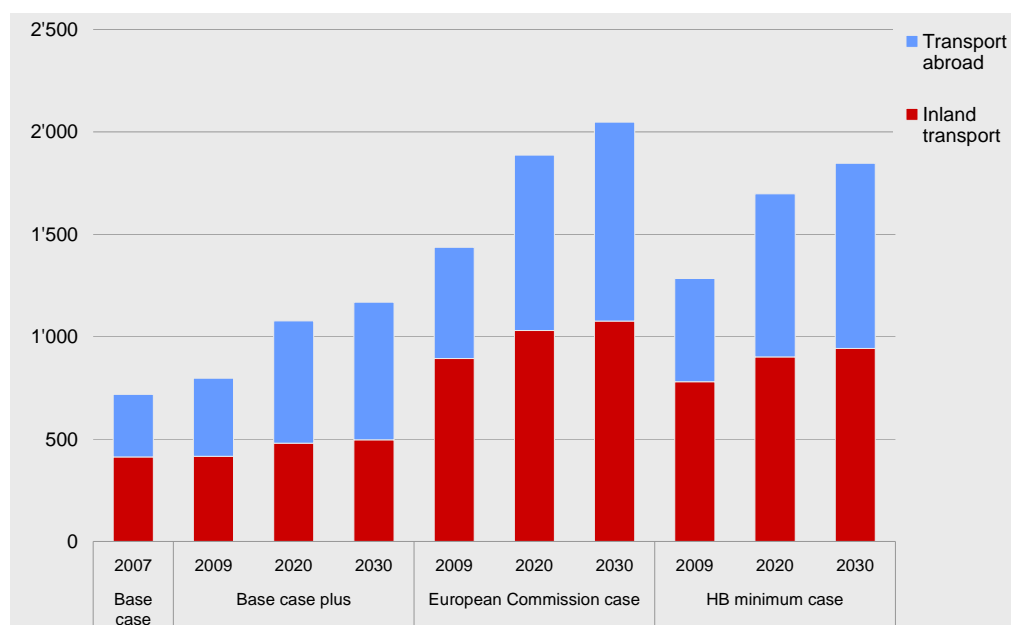
Annex I - Figure 122: Comparison of road user charge revenues for Italy from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



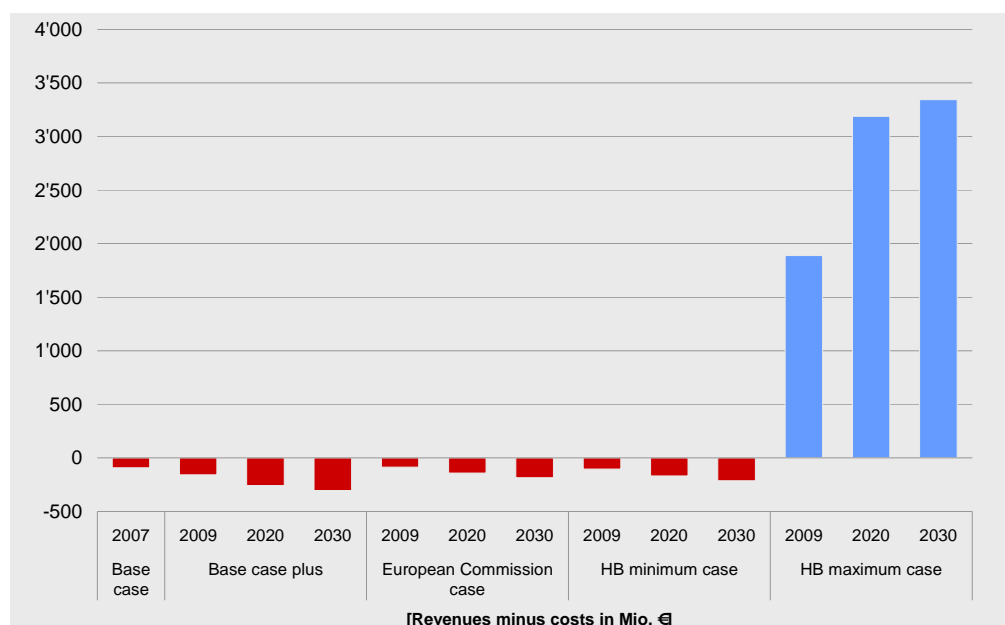
Annex I - Figure 123: Comparison of road user charges paid by Italian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



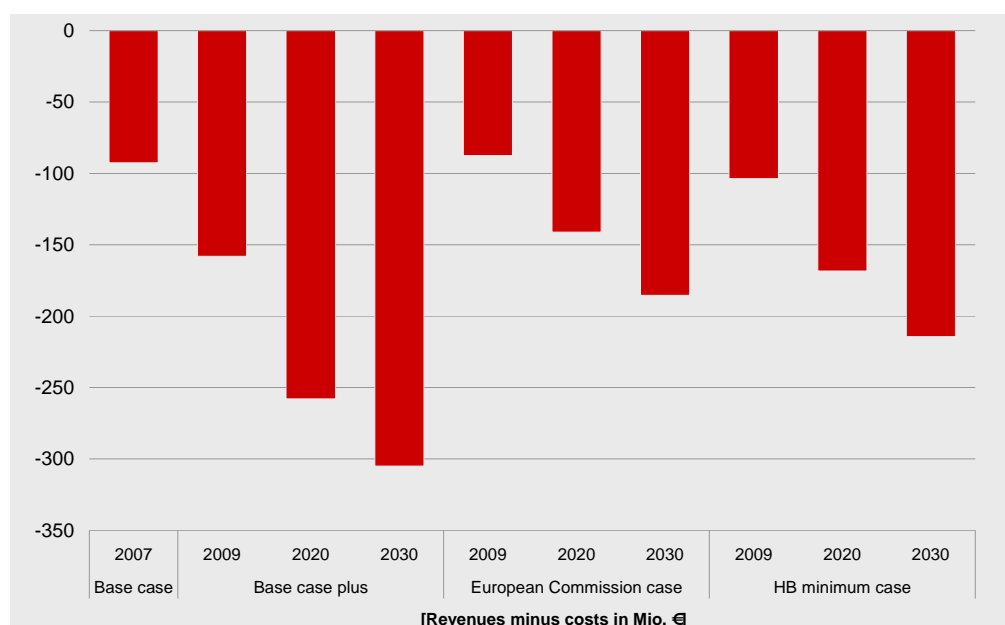
Annex I - Figure 124: Comparison of road user charges paid by Italian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



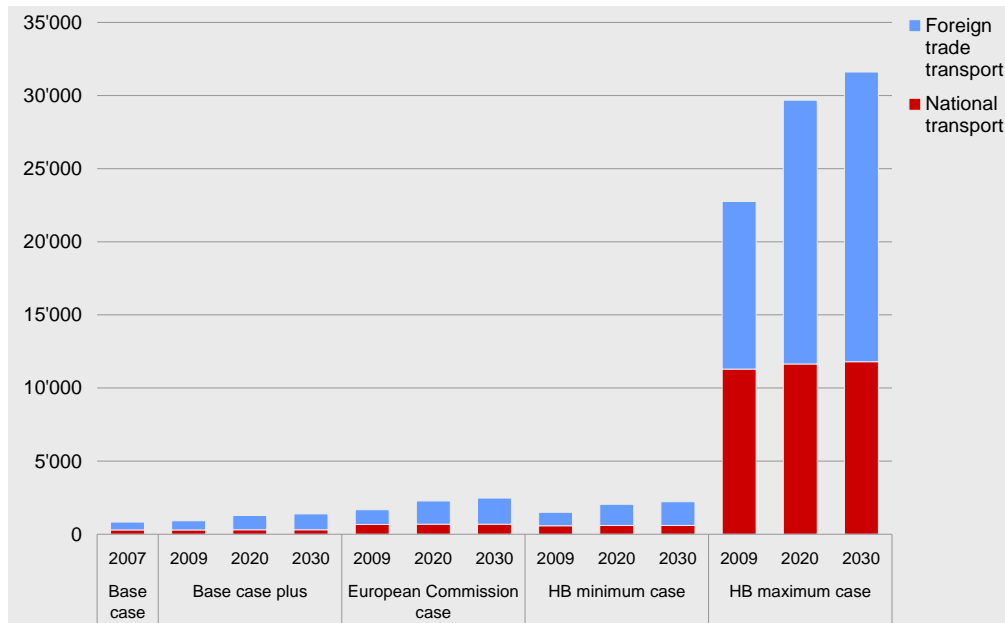
Annex I - Figure 125: Comparison of road user charge surpluses or deficits for Italy with regard to the road hauliers by scenarios and years (in Mil. EUR)



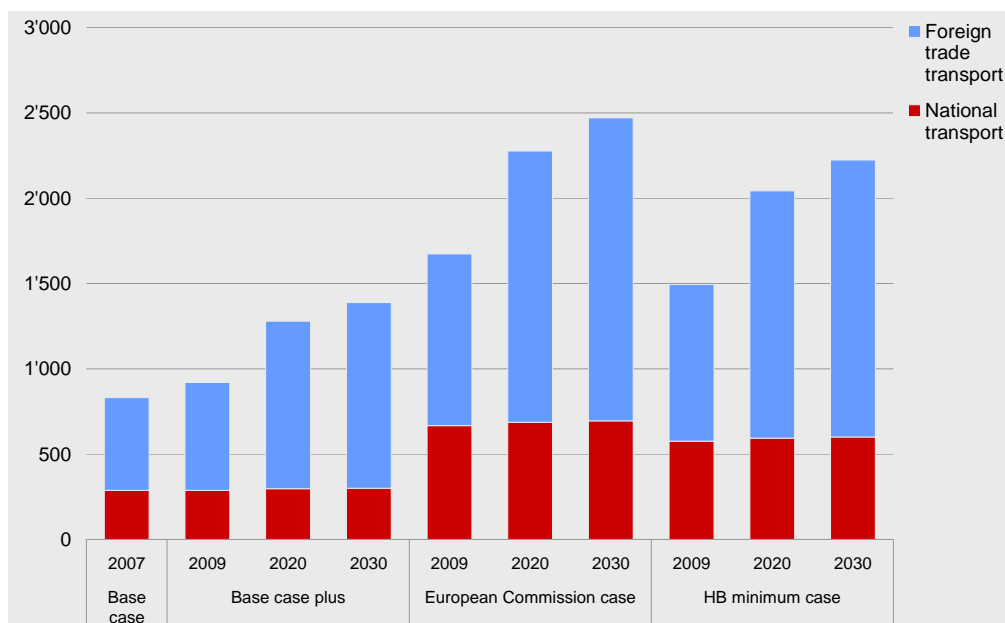
Annex I - Figure 126: Comparison of road user charge surpluses or deficits for Italy with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



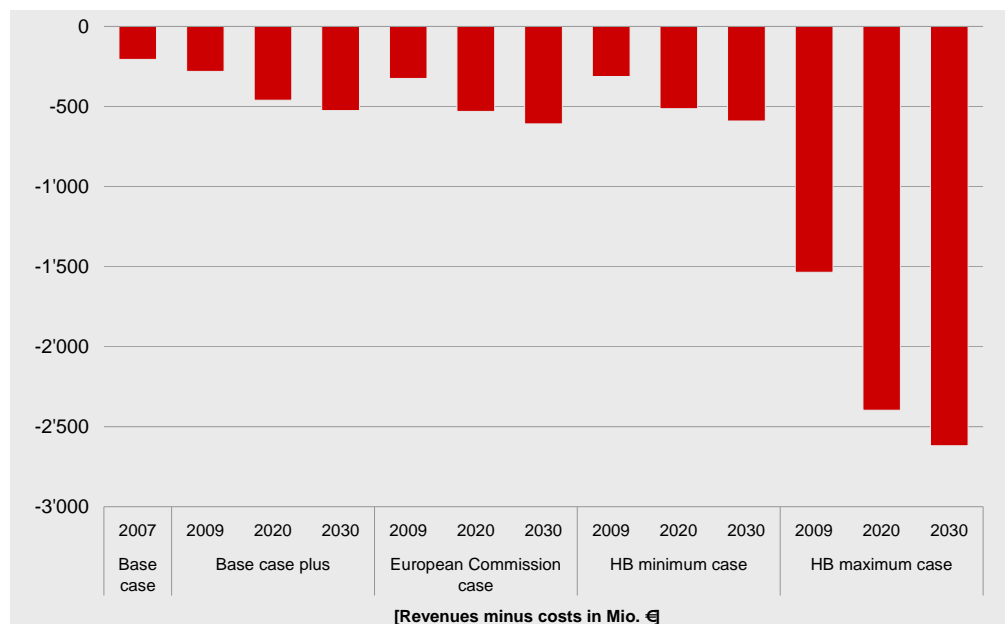
Annex I - Figure 127: Comparison of road user charge costs for the Italian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



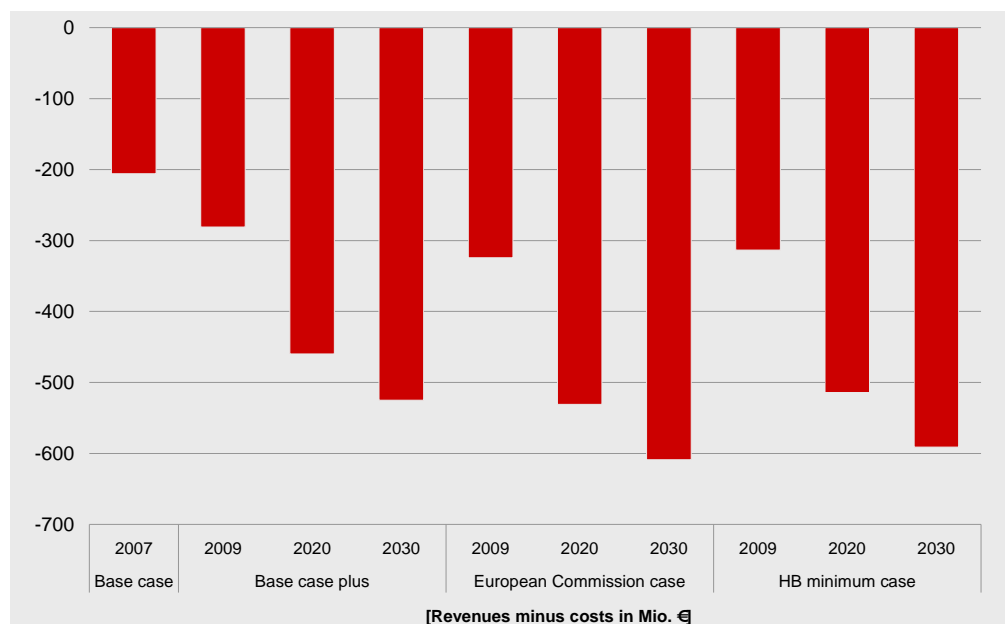
Annex I - Figure 128: Comparison of road user charge costs for the Italian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 129: Comparison of road user charge surpluses or deficits for Italy with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 130: Comparison of road user charge surpluses or deficits for Italy with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

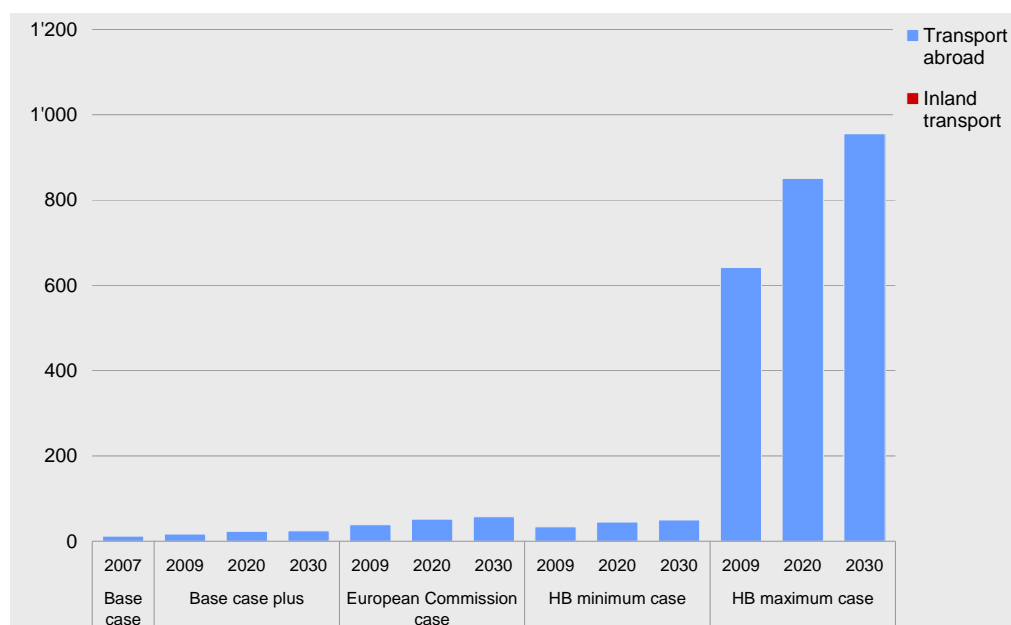


Latvia

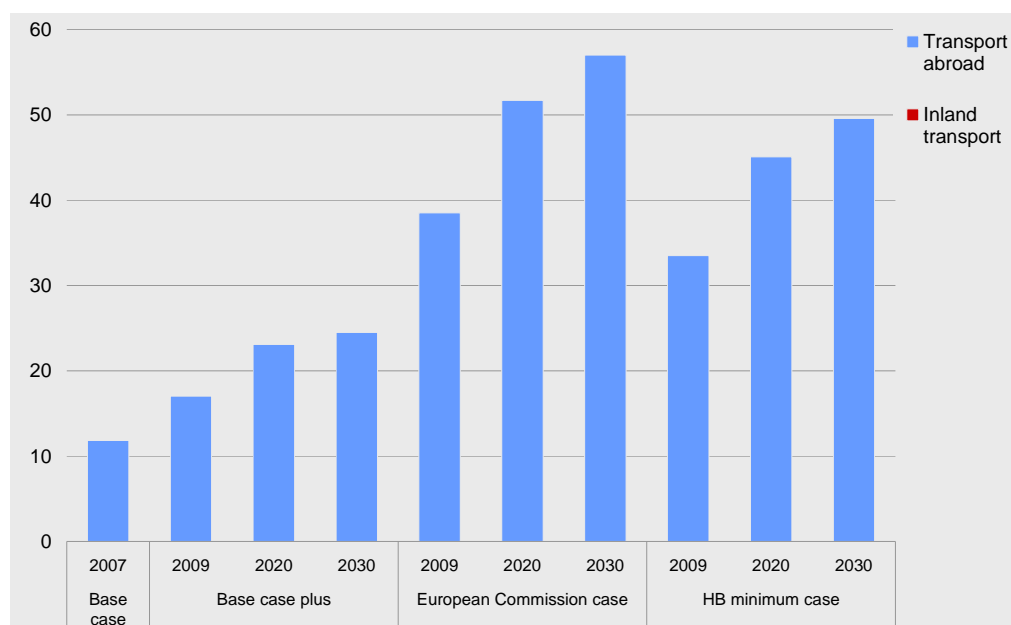
Annex I - Table 14: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits LV		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by LV from	national hauliers	0	0	0	0	0	0	0	0	0	0	0	0	0
	international hauliers	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Road user charges paid by trucks registered in LV for	inland transport	0	0	0	0	0	0	0	0	0	0	0	0	0
	transport abroad	12	17	23	24	39	52	57	34	45	50	642	850	956
	Total	12	17	23	24	39	52	57	34	45	50	642	850	956
Road user charge surpluses/deficits for LV with regard to the road hauliers	in Mio. EUR	-12	-17	-23	-24	-39	-52	-57	-34	-45	-50	-642	-850	-956
	in %	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100
Total charge costs of economy in LV for	national transport	0	0	0	0	0	0	0	0	0	0	0	0	0
	foreign trade transport	9	10	14	16	24	35	41	21	31	35	418	623	736
	Total	9	10	14	16	24	35	41	21	31	35	418	623	736
Road user charge surpluses/deficits for LV with regard to the national economy	in Mio. EUR	-9	-10	-14	-16	-24	-35	-41	-21	-31	-35	-418	-623	-736
	in %	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100

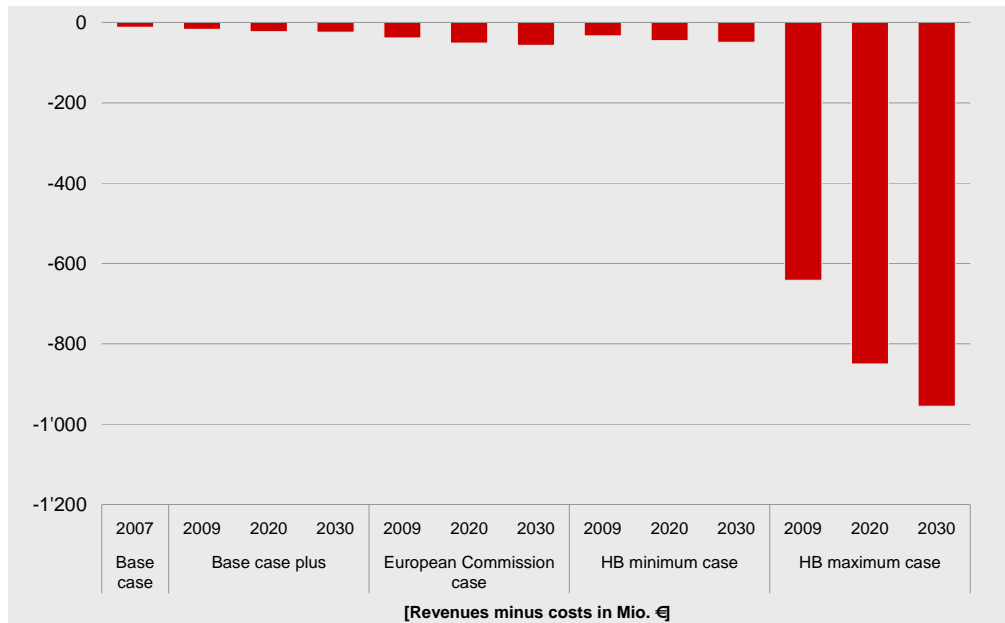
Annex I - Figure 131: Comparison of road user charges paid by Latvian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



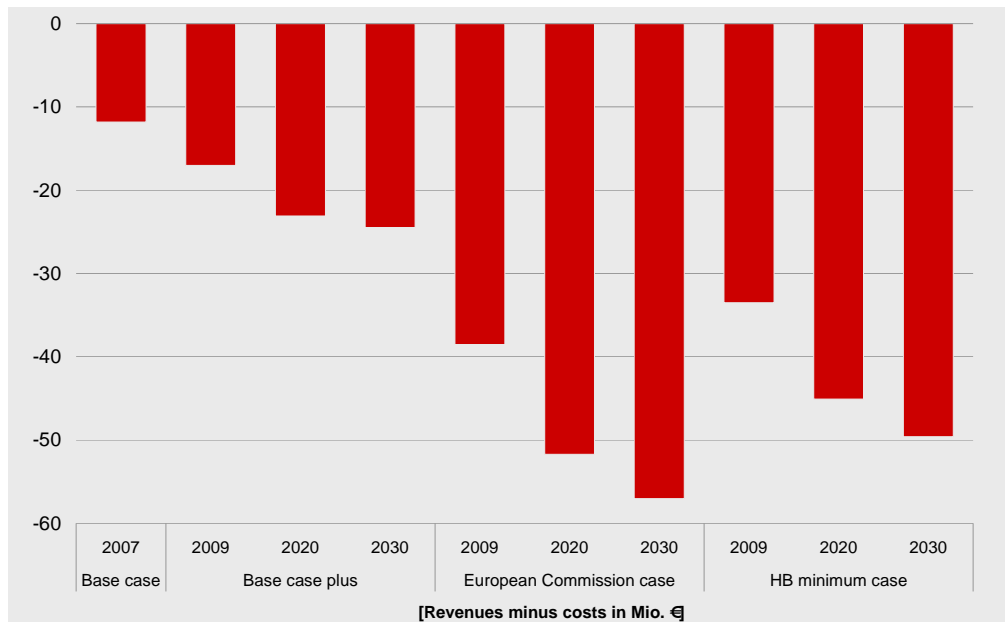
Annex I - Figure 132: Comparison of road user charges paid by Latvian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



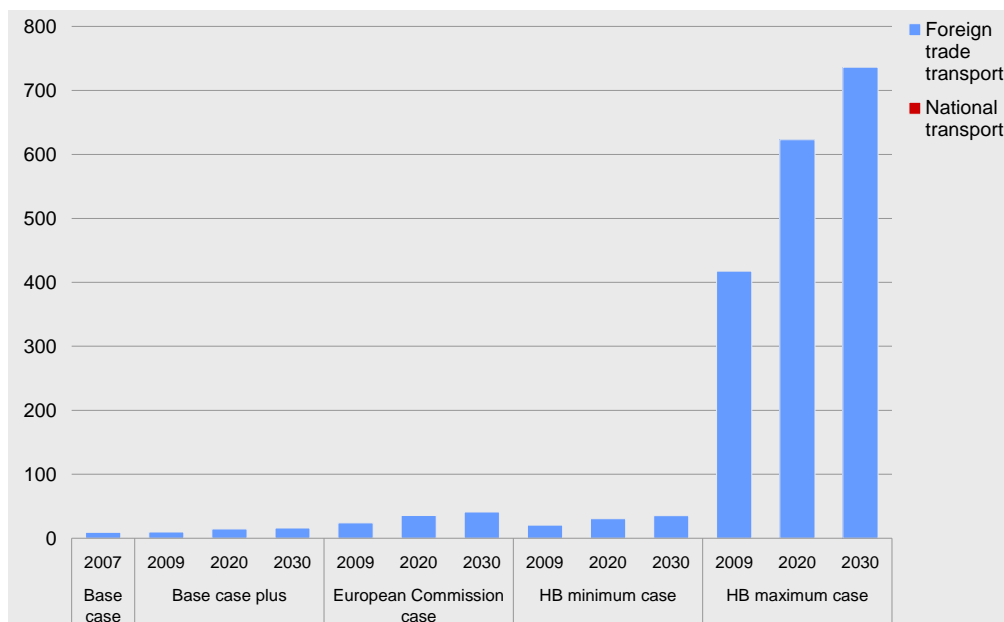
Annex I - Figure 133: Comparison of road user charge surpluses or deficits for Latvia with regard to the road hauliers by scenarios and years (in Mil. EUR)



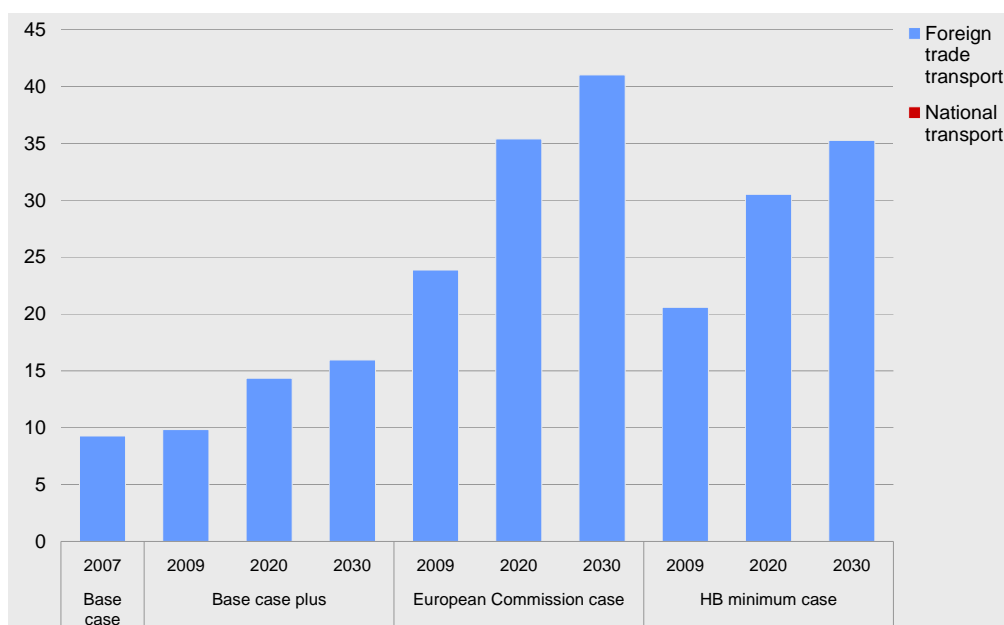
Annex I - Figure 134: Comparison of road user charge surpluses or deficits for Latvia with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



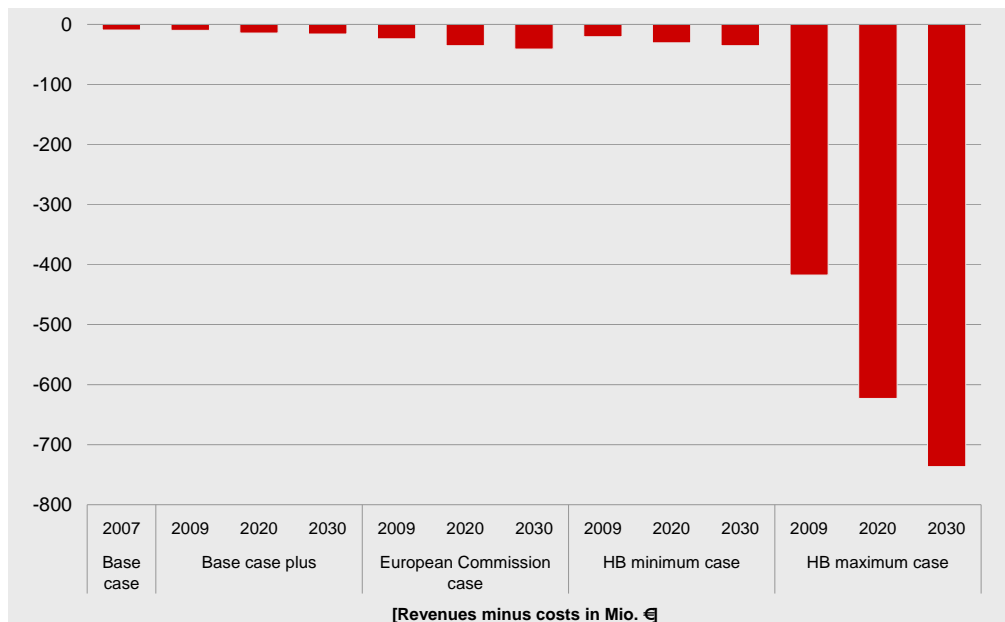
Annex I - Figure 135: Comparison of road user charge costs for the Latvian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



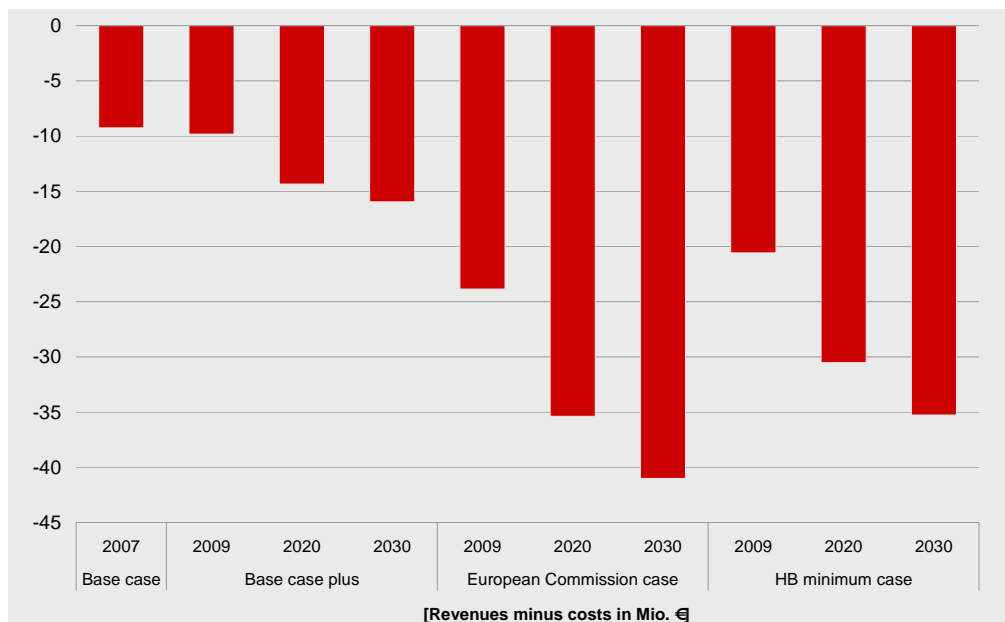
Annex I - Figure 136: Comparison of road user charge costs for the Latvian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 137: Comparison of road user charge surpluses or deficits for Latvia with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 138: Comparison of road user charge surpluses or deficits for Latvia with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

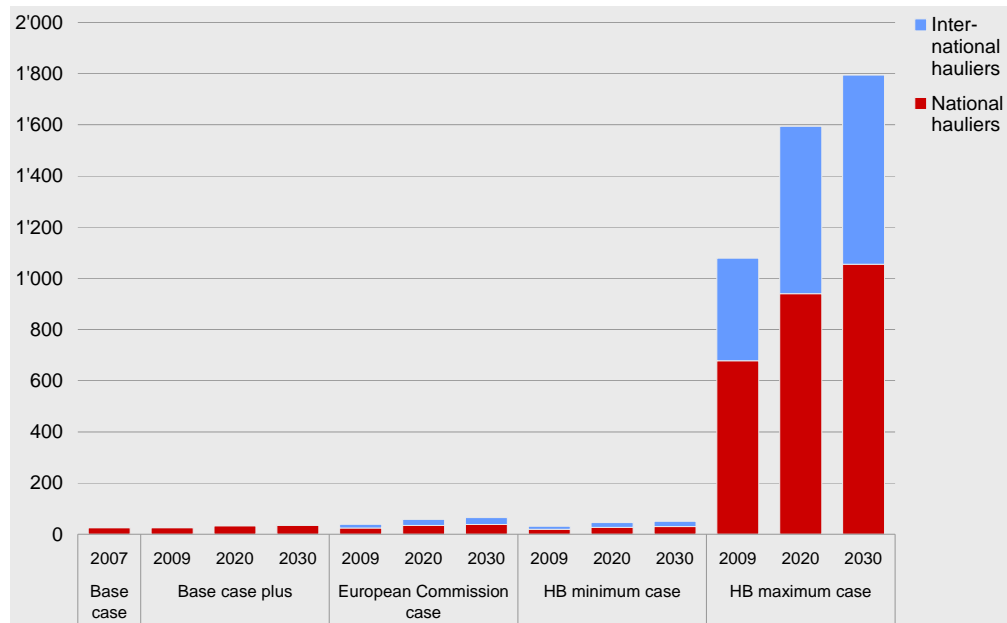


Lithuania

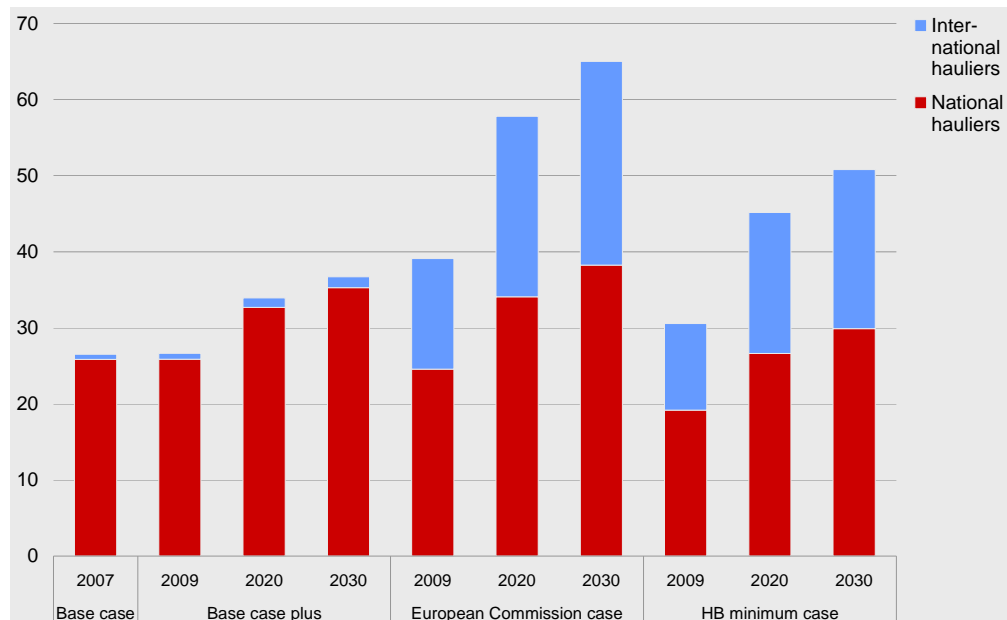
Annex I - Table 15: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits LT		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by LT from	national hauliers	26	26	33	35	25	34	38	19	27	30	678	940	1'055
	international hauliers	1	1	1	1	15	24	27	11	19	21	401	654	739
	Total	27	27	34	37	39	58	65	31	45	51	1'079	1'595	1'794
Road user charges paid by trucks registered in LT for	inland transport	26	26	33	35	25	34	38	19	27	30	678	940	1'055
	transport abroad	43	62	98	102	115	182	189	103	162	169	1'614	2'526	2'608
	Total	69	88	130	137	140	216	227	122	189	198	2'292	3'466	3'663
Road user charge surpluses/deficits for LT with regard to the road hauliers	in Mio. EUR	-42	-61	-96	-100	-101	-158	-162	-91	-143	-148	-1'213	-1'872	-1'869
	in %	-61	-70	-74	-73	-72	-73	-71	-75	-76	-74	-53	-54	-51
Total charge costs of economy in LT for	national transport	25	25	32	34	16	20	21	12	15	17	435	547	589
	foreign trade transport	12	19	33	34	44	75	79	38	65	68	749	1'255	1'332
	Total	37	44	65	68	60	95	100	50	81	85	1'185	1'802	1'921
Road user charge surpluses/deficits for LT with regard to the national economy	in Mio. EUR	-11	-18	-31	-31	-21	-37	-35	-20	-35	-34	-106	-207	-127
	in %	-29	-40	-47	-46	-35	-39	-35	-39	-44	-40	-9	-11	-7

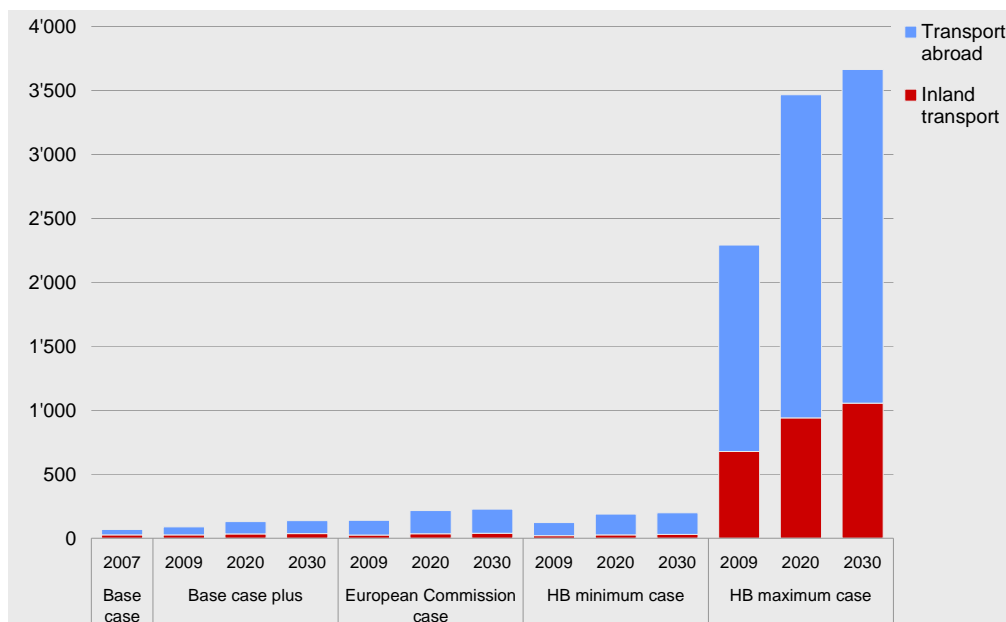
Annex I - Figure 139: Comparison of road user charge revenues for Lithuania from national and international road hauliers by scenarios and years (in Mil. EUR)



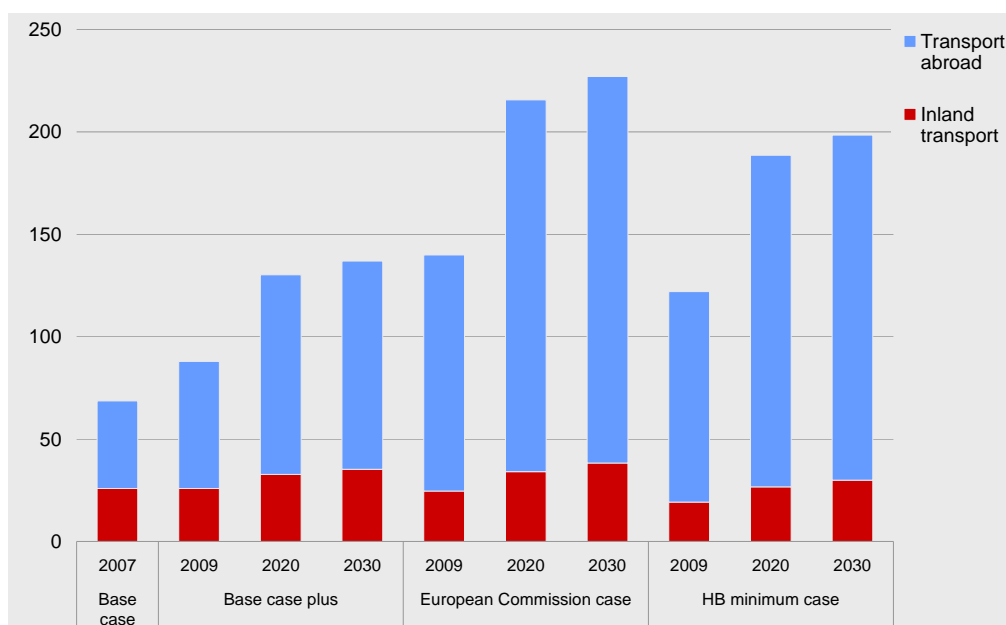
Annex I - Figure 140: Comparison of road user charge revenues for Lithuania from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



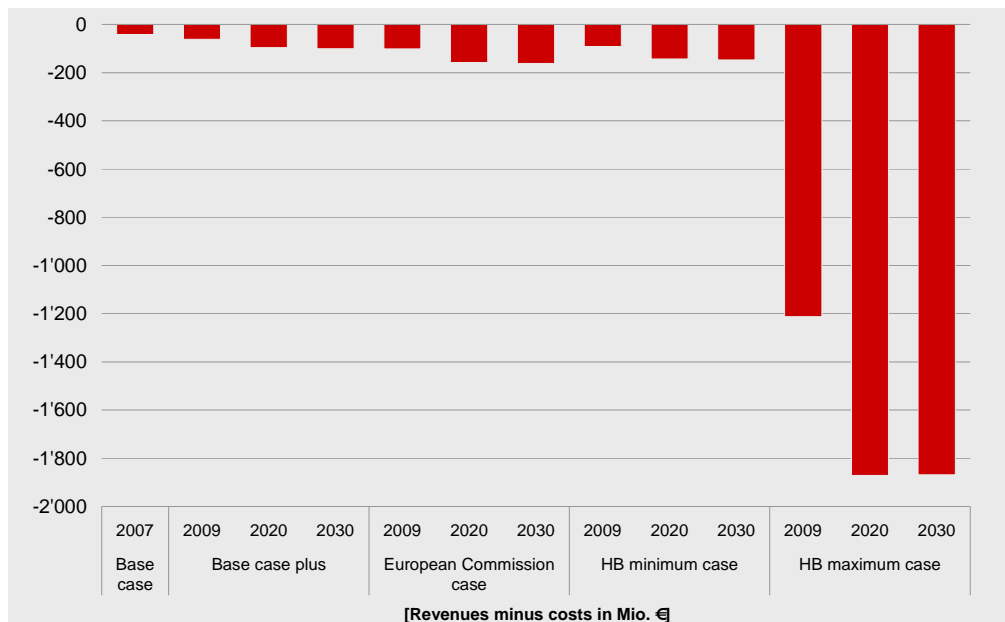
Annex I - Figure 141: Comparison of road user charges paid by Lithuanian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



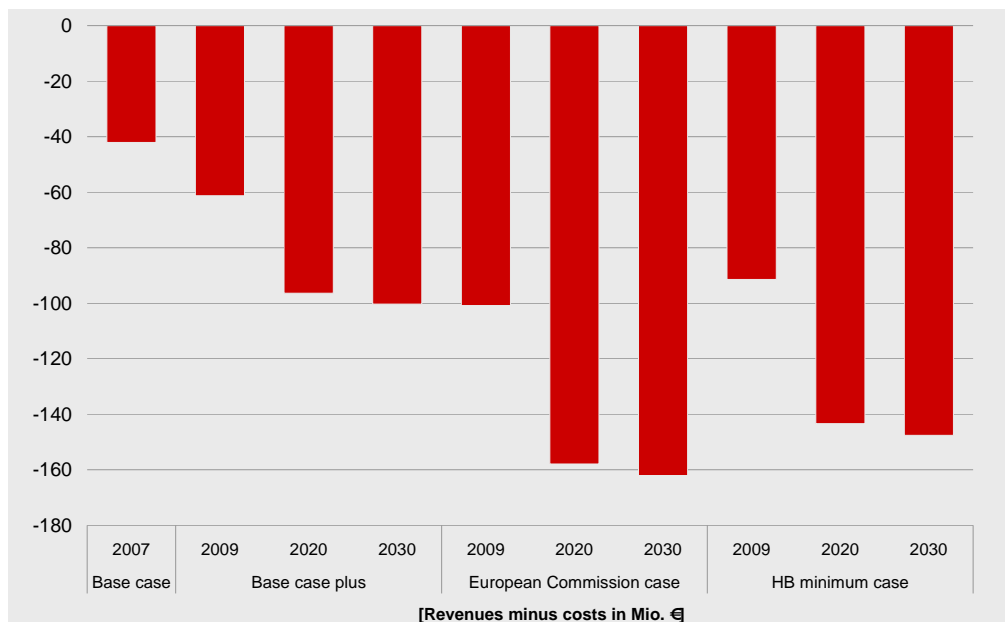
Annex I - Figure 142: Comparison of road user charges paid by Lithuanian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



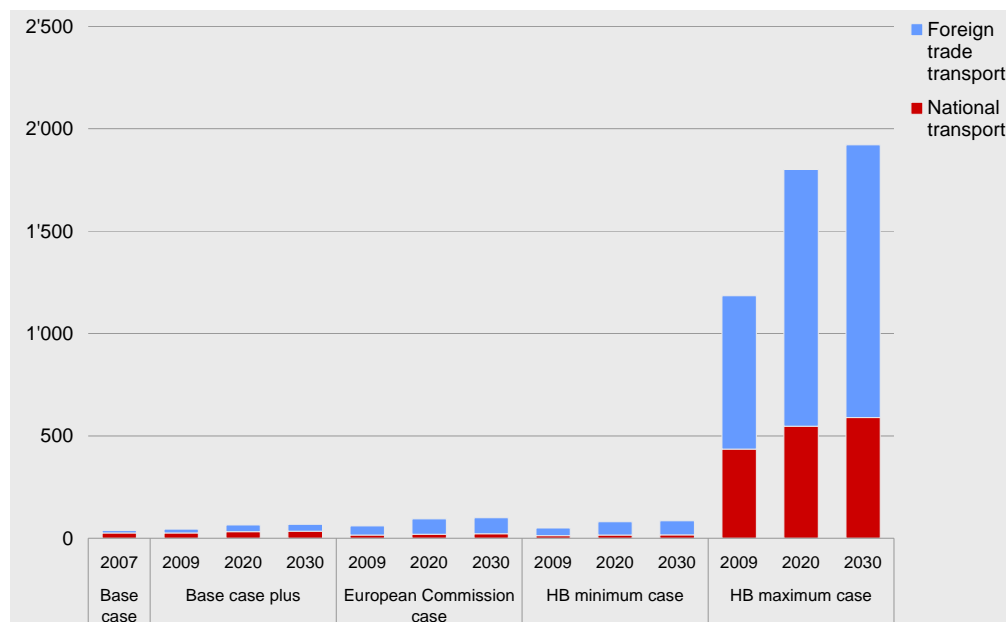
Annex I - Figure 143: Comparison of road user charge surpluses or deficits for Lithuania with regard to the road hauliers by scenarios and years (in Mil. EUR)



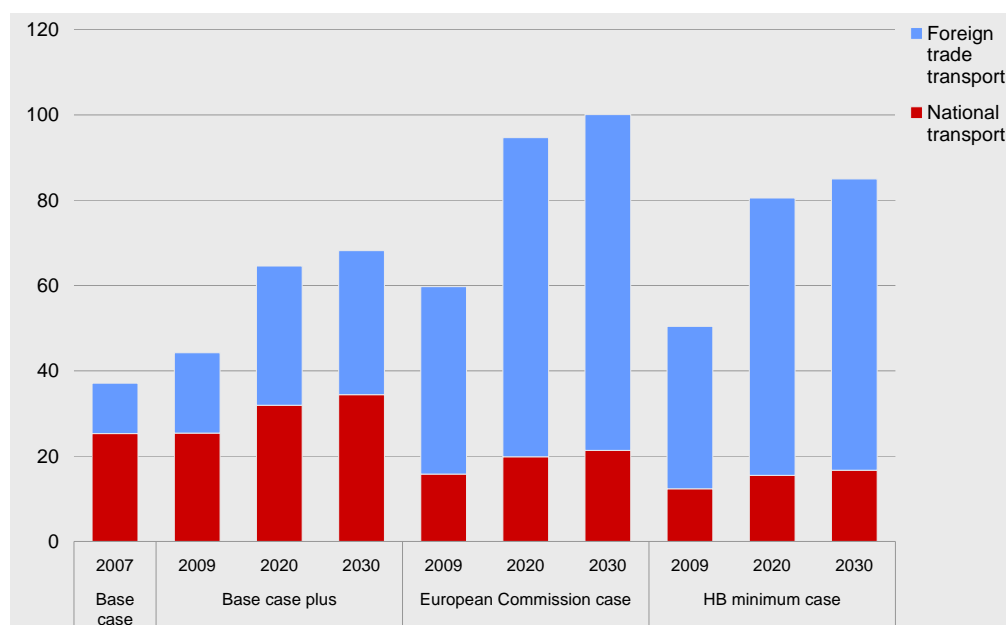
Annex I - Figure 144: Comparison of road user charge surpluses or deficits for Lithuania with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



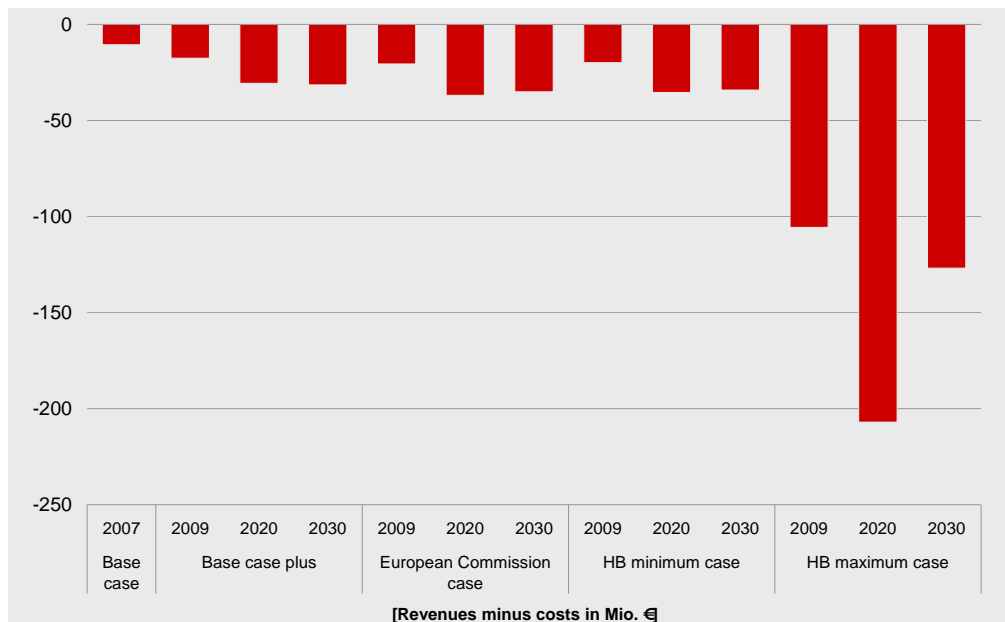
Annex I - Figure 145: Comparison of road user charge costs for the Lithuanian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



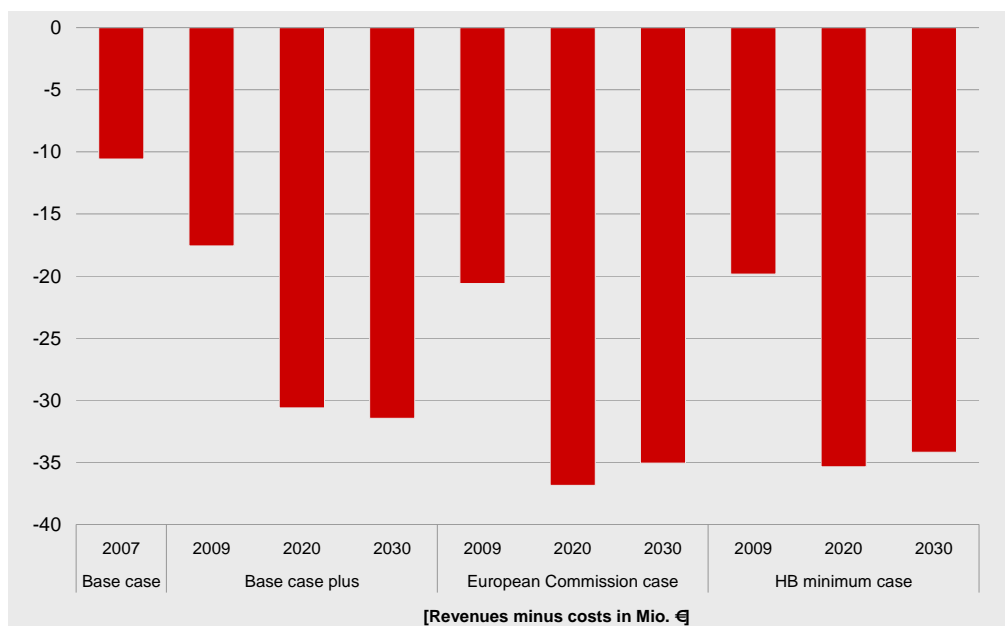
Annex I - Figure 146: Comparison of road user charge costs for the Lithuanian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 147: Comparison of road user charge surpluses or deficits for Lithuania with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 148: Comparison of road user charge surpluses or deficits for Lithuania with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

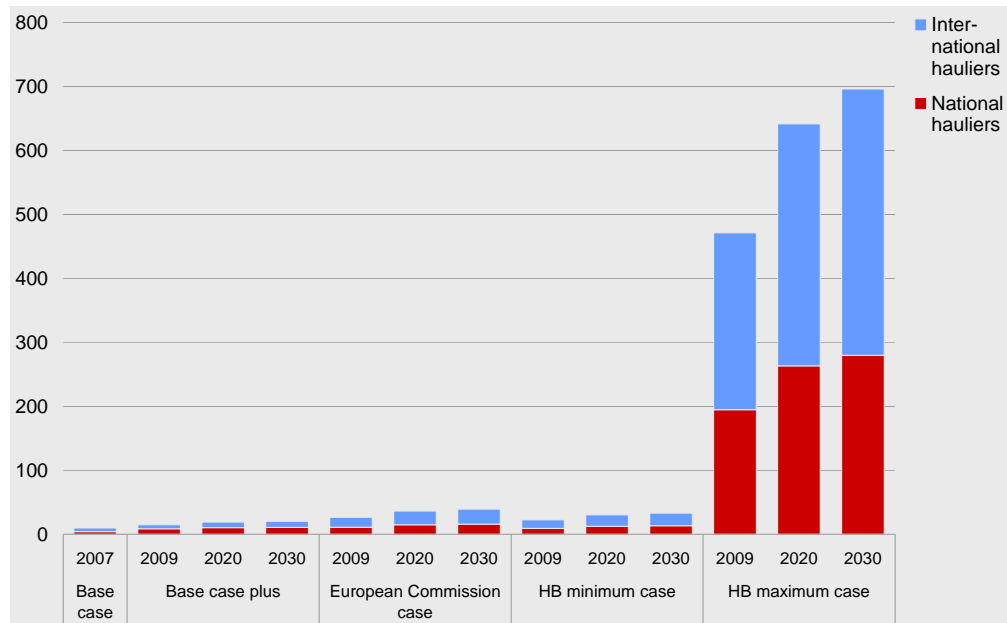


Luxembourg

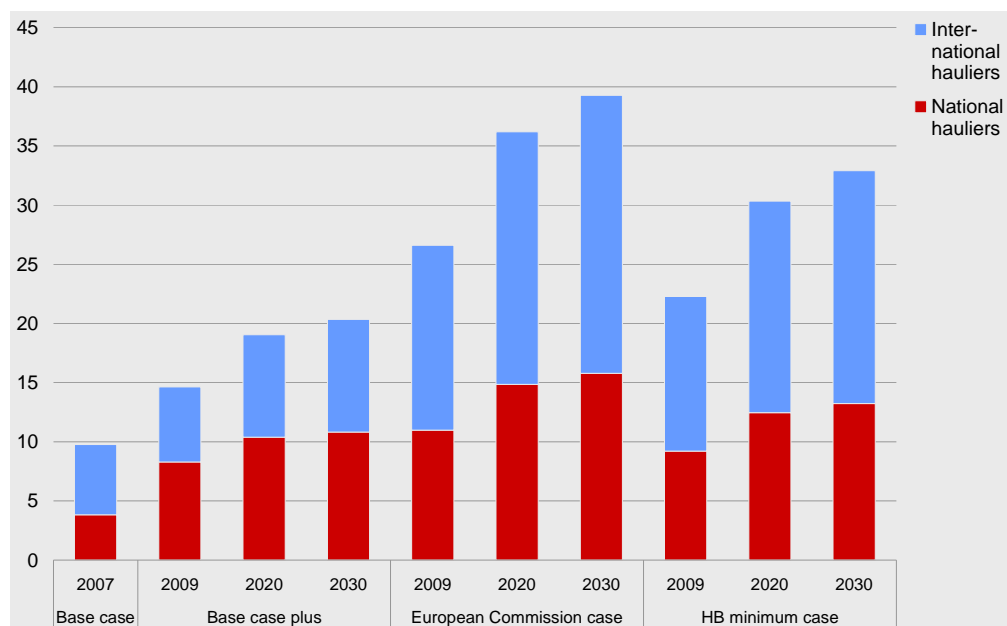
Annex I - Table 16: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits LU		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by LU from	national hauliers	4	8	10	11	11	15	16	9	12	13	195	263	279
	international hauliers	6	6	9	10	16	21	24	13	18	20	276	378	416
	Total	10	15	19	20	27	36	39	22	30	33	471	641	696
Road user charges paid by trucks registered in LU for	inland transport	4	8	10	11	11	15	16	9	12	13	195	263	279
	transport abroad	69	99	141	158	171	244	274	153	219	246	2'178	3'139	3'488
	Total	72	107	151	169	182	259	290	163	232	259	2'373	3'402	3'768
Road user charge surpluses/deficits for LU with regard to the road hauliers	in Mio. EUR	-63	-93	-132	-148	-155	-223	-250	-140	-201	-226	-1'902	-2'761	-3'072
	in %	-86	-86	-87	-88	-85	-86	-86	-86	-87	-87	-80	-81	-82
Total charge costs of economy in LU for	national transport	2	7	8	8	7	8	8	6	7	7	127	144	146
	foreign trade transport	31	47	84	95	82	148	167	73	132	150	1'061	1'942	2'188
	Total	33	53	91	103	89	156	176	79	139	157	1'188	2'087	2'334
Road user charge surpluses/deficits for LU with regard to the national economy	in Mio. EUR	-23	-39	-72	-83	-62	-120	-136	-57	-109	-124	-717	-1'445	-1'639
	in %	-70	-73	-79	-80	-70	-77	-78	-72	-78	-79	-60	-69	-70

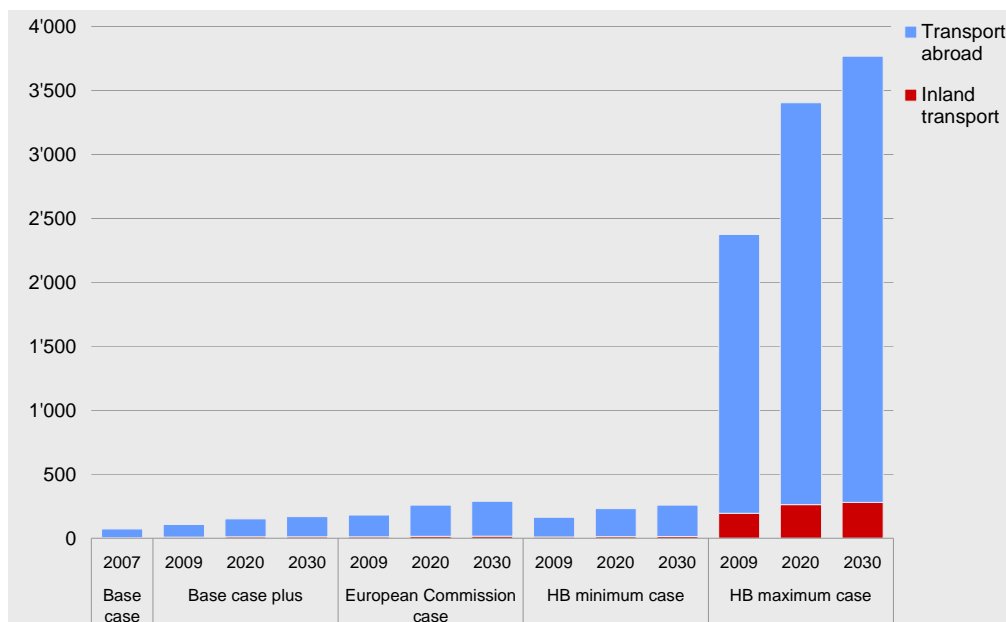
Annex I - Figure 149: Comparison of road user charge revenues for Luxembourg from national and international road hauliers by scenarios and years (in Mil. EUR)



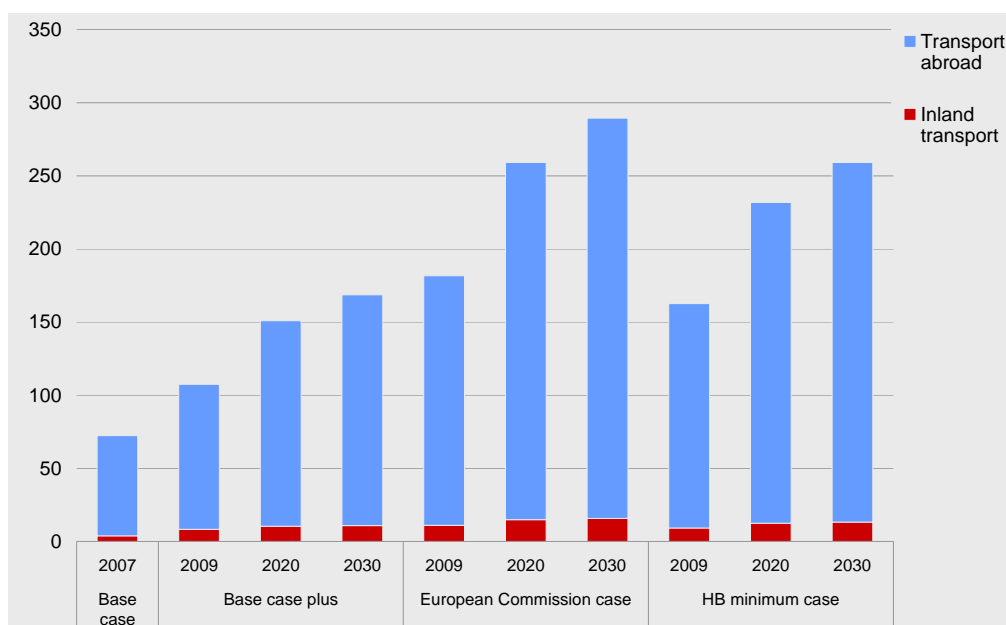
Annex I - Figure 150: Comparison of road user charge revenues for Luxembourg from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



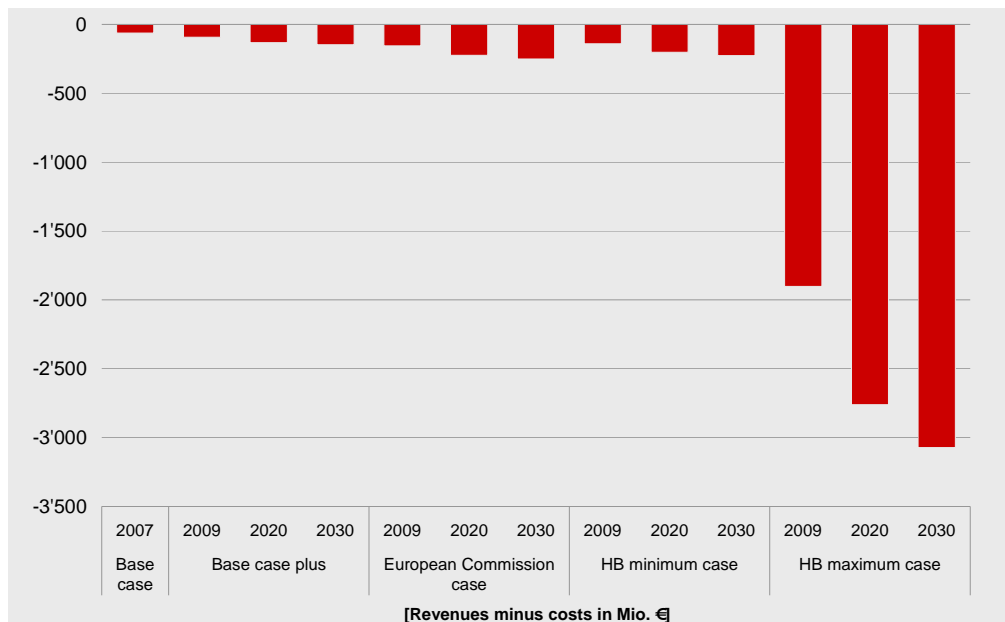
Annex I - Figure 151: Comparison of road user charges paid by Luxembourgian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



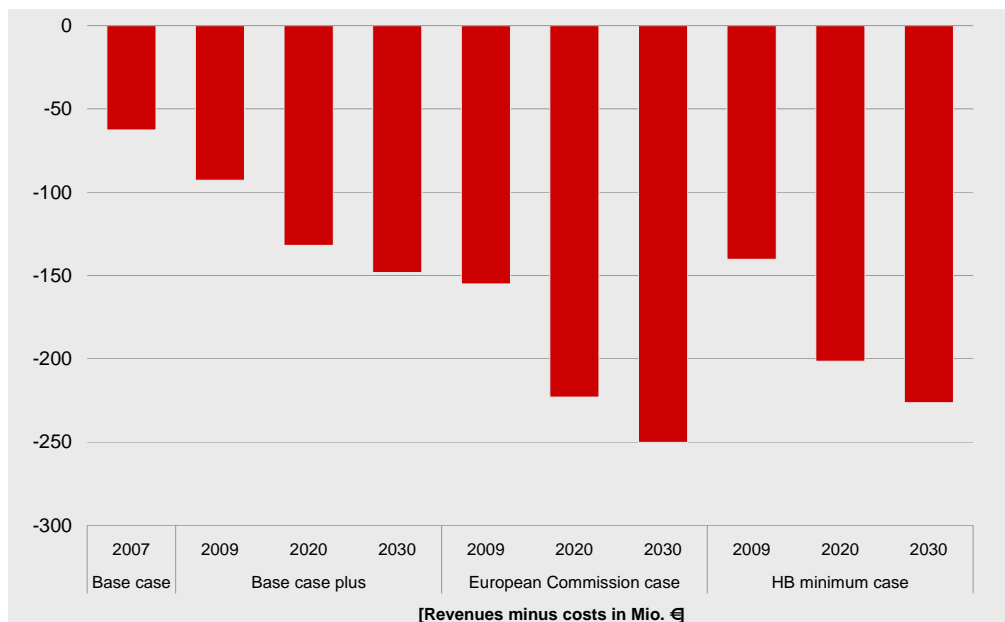
Annex I - Figure 152: Comparison of road user charges paid by Luxembourgian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



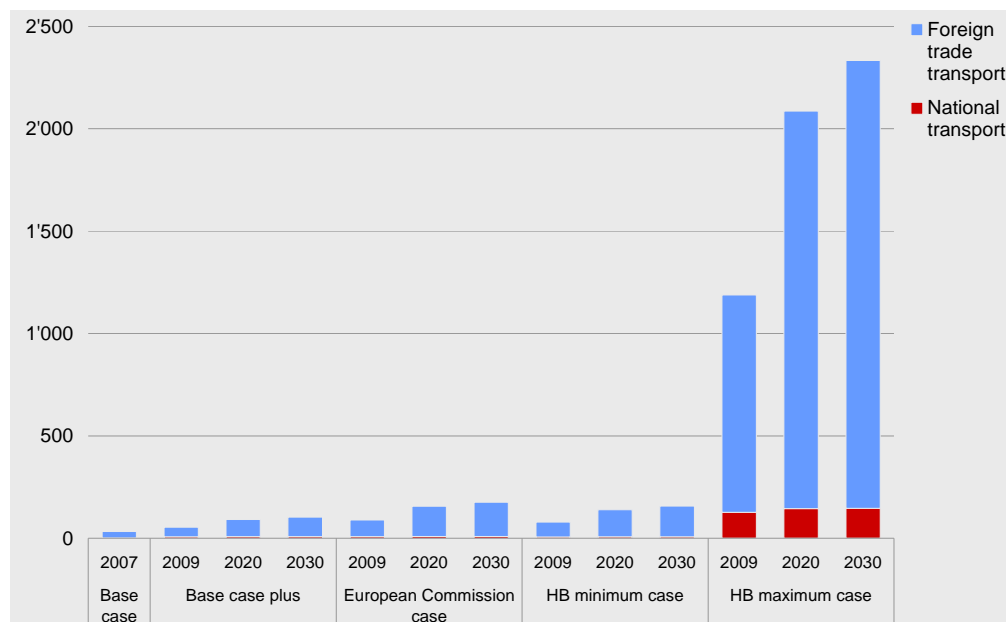
Annex I - Figure 153: Comparison of road user charge surpluses or deficits for Luxembourg with regard to the road hauliers by scenarios and years (in Mil. EUR)



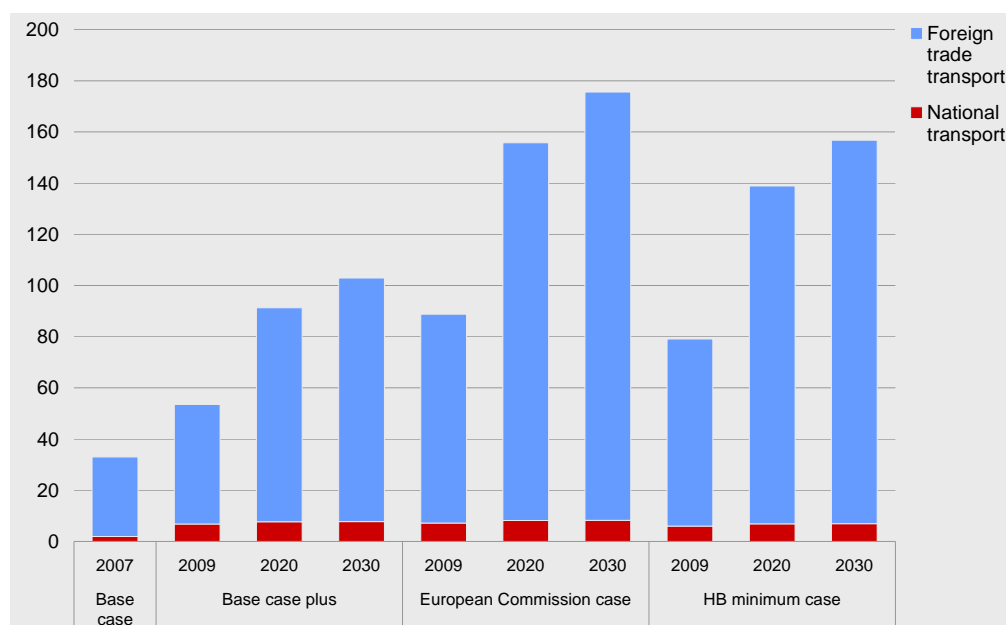
Annex I - Figure 154: Comparison of road user charge surpluses or deficits for Luxembourg with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



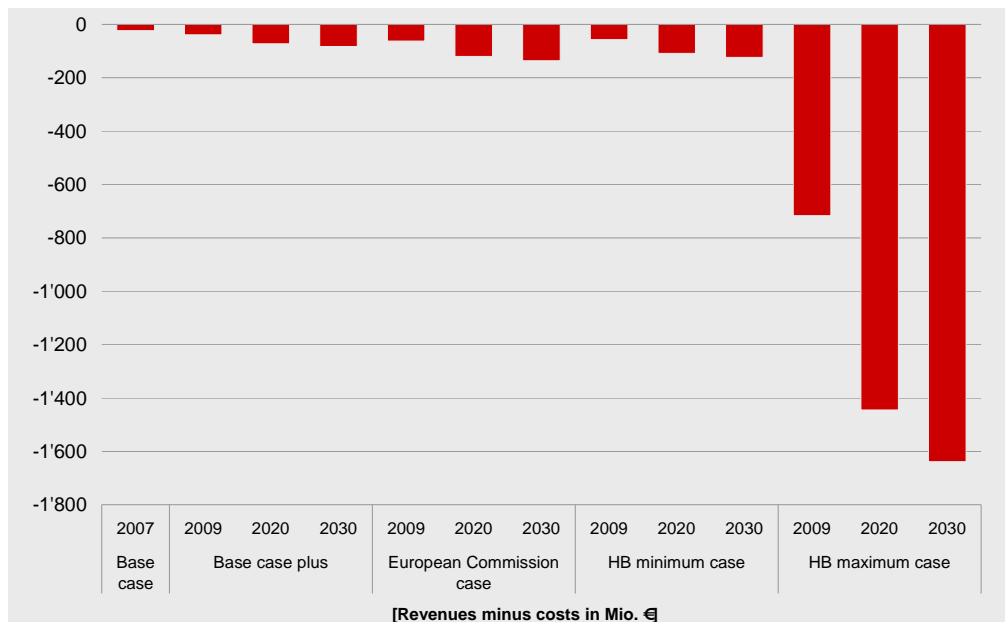
Annex I - Figure 155: Comparison of road user charge costs for the Luxembourgian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



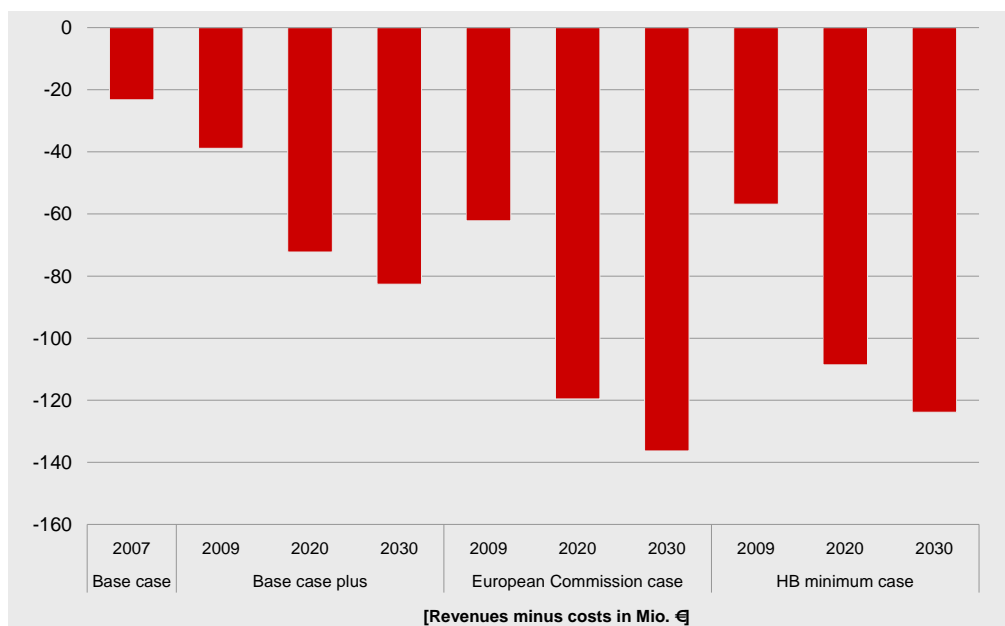
Annex I - Figure 156: Comparison of road user charge costs for the Luxembourgian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 157: Comparison of road user charge surpluses or deficits for Luxembourg with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 158: Comparison of road user charge surpluses or deficits for Luxembourg with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

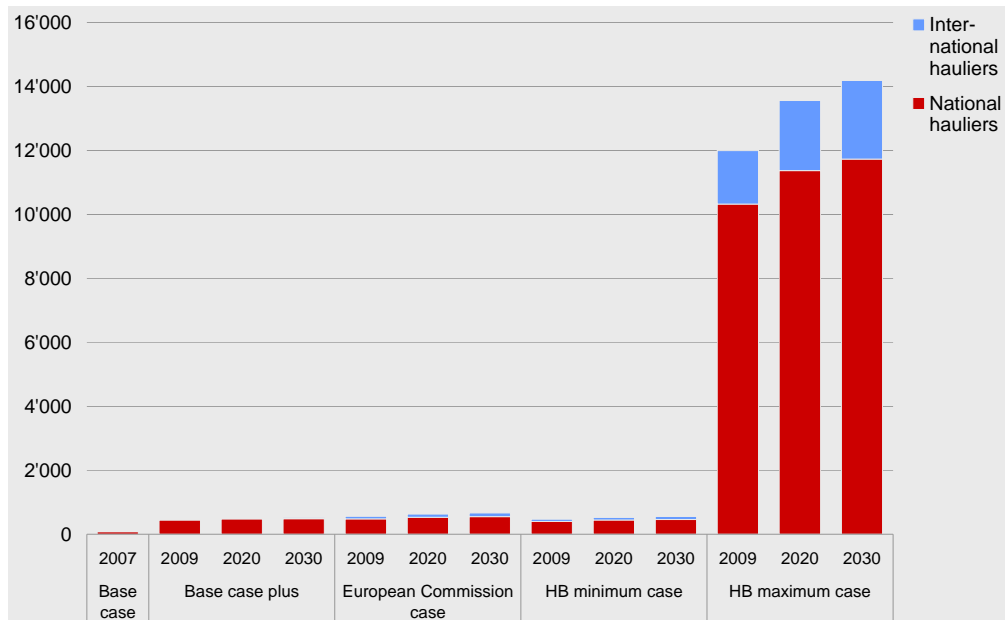


Netherlands

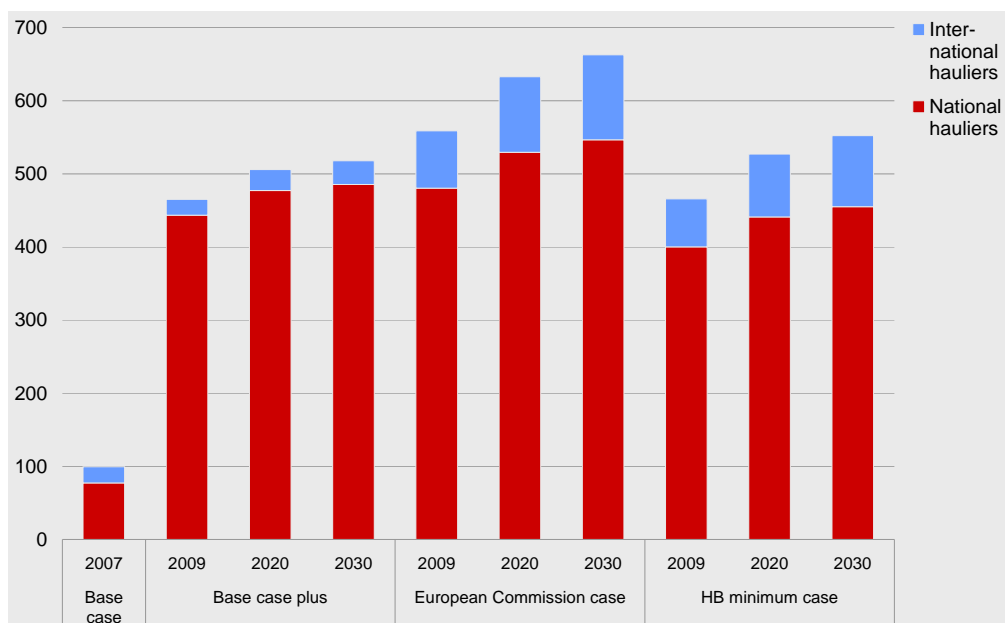
Annex I - Table 17: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits NL		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by NL from	national hauliers	77	443	477	486	480	530	546	400	441	455	10'317	11'367	11'727
	international hauliers	22	22	29	32	79	103	116	66	86	97	1'677	2'191	2'460
	Total	100	465	506	518	559	633	663	466	527	552	11'994	13'558	14'187
Road user charges paid by trucks registered in NL for	inland transport	77	443	477	486	480	530	546	400	441	455	10'317	11'367	11'727
	transport abroad	266	439	610	704	790	1'098	1'257	706	982	1'127	10'661	14'743	16'505
	Total	344	882	1'087	1'189	1'270	1'628	1'803	1'106	1'423	1'582	20'978	26'109	28'233
Road user charge surpluses/deficits for NL with regard to the road hauliers	in Mio. EUR	-244	-417	-581	-671	-711	-995	-1'140	-640	-896	-1'030	-8'983	-12'551	-14'045
	in %	-71	-47	-53	-56	-56	-61	-63	-58	-63	-65	-43	-48	-50
Total charge costs of economy in NL for	national transport	42	408	434	440	352	375	379	293	312	316	7'583	8'080	8'176
	foreign trade transport	263	369	449	474	700	848	893	622	754	795	10'000	12'005	12'468
	Total	306	777	883	914	1'052	1'223	1'272	915	1'067	1'111	17'583	20'085	20'644
Road user charge surpluses/deficits for NL with regard to the national economy	in Mio. EUR	-206	-312	-377	-396	-493	-591	-610	-449	-539	-559	-5'589	-6'527	-6'457
	in %	-67	-40	-43	-43	-47	-48	-48	-49	-51	-50	-32	-32	-31

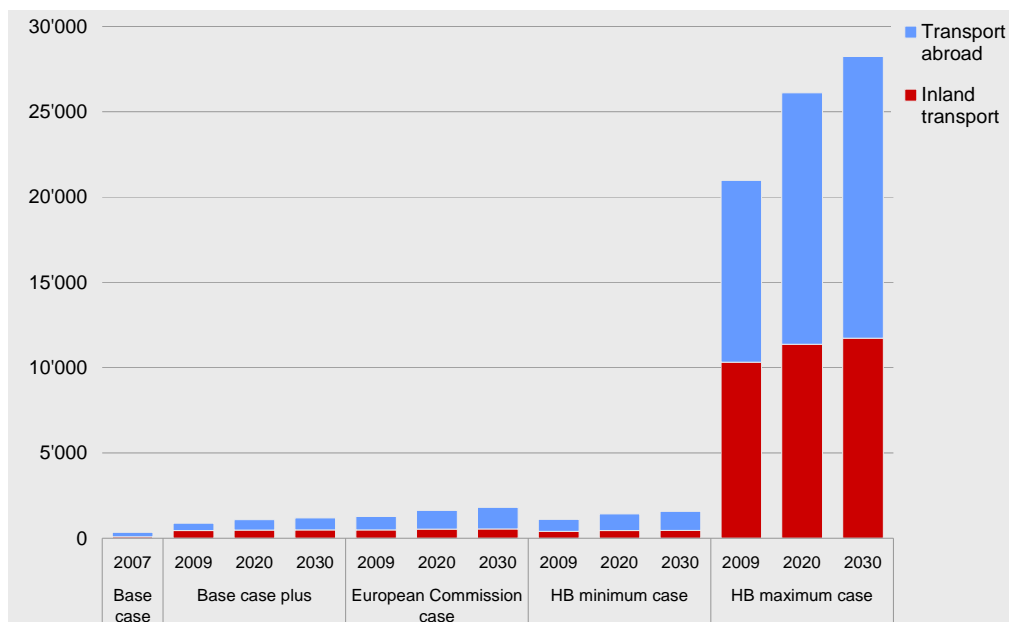
Annex I - Figure 159: Comparison of road user charge revenues for Netherlands from national and international road hauliers by scenarios and years (in Mil. EUR)



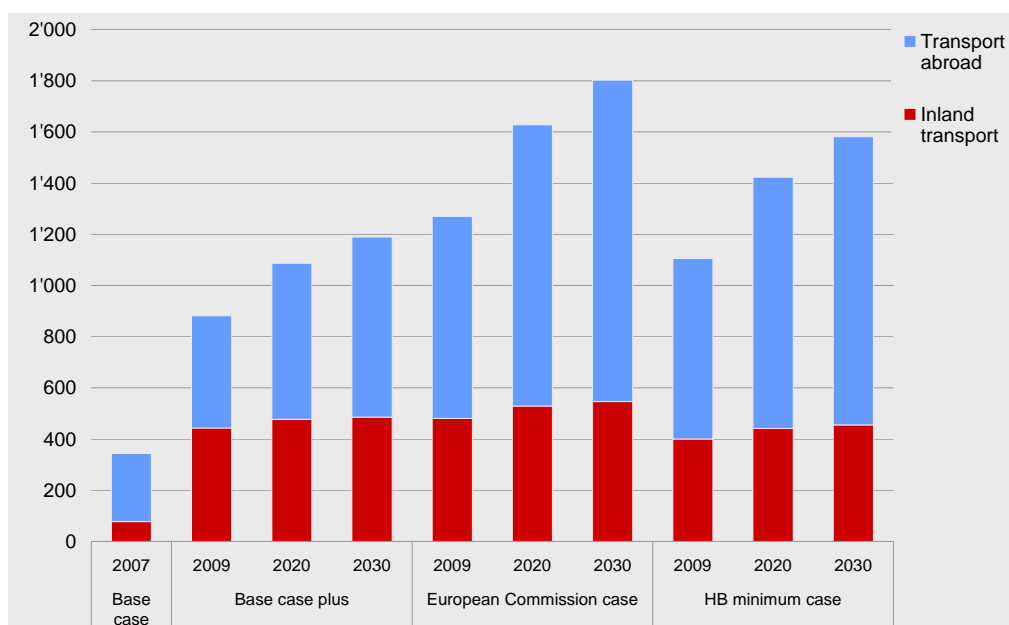
Annex I - Figure 160: Comparison of road user charge revenues for Netherlands from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



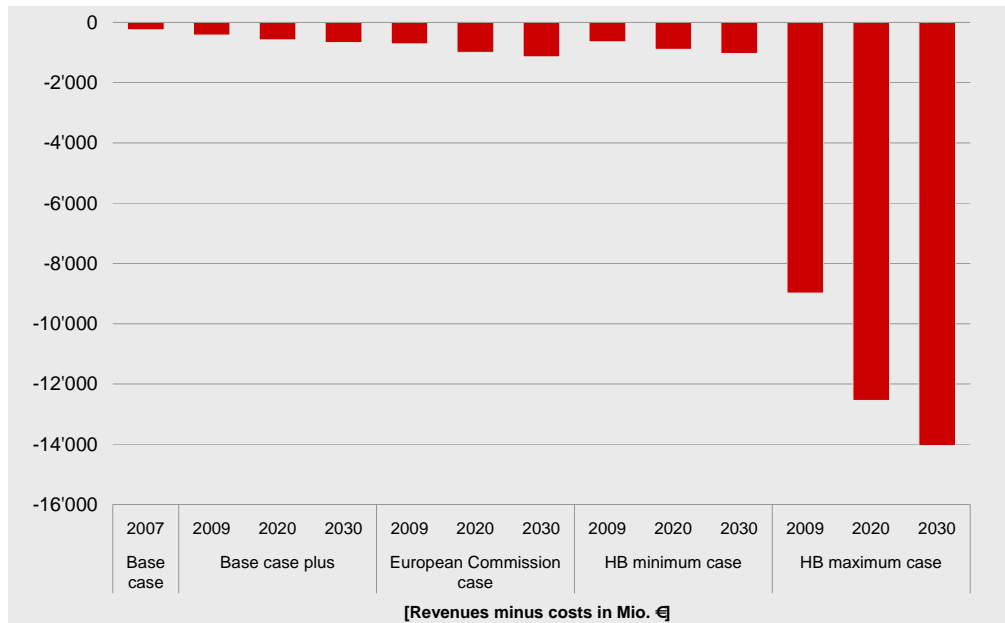
Annex I - Figure 161: Comparison of road user charges paid by Dutch road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



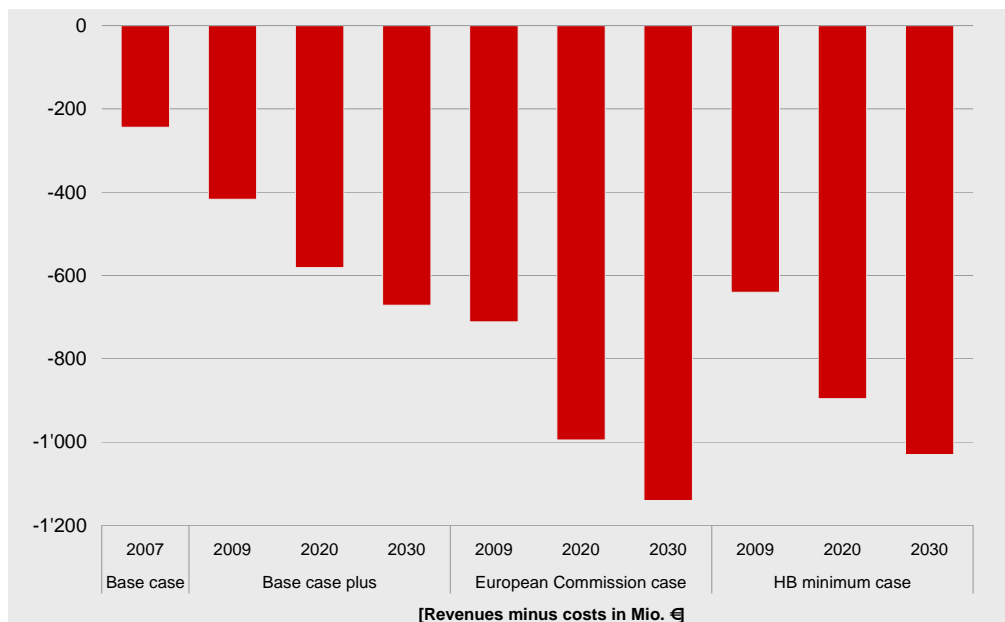
Annex I - Figure 162: Comparison of road user charges paid by Dutch road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



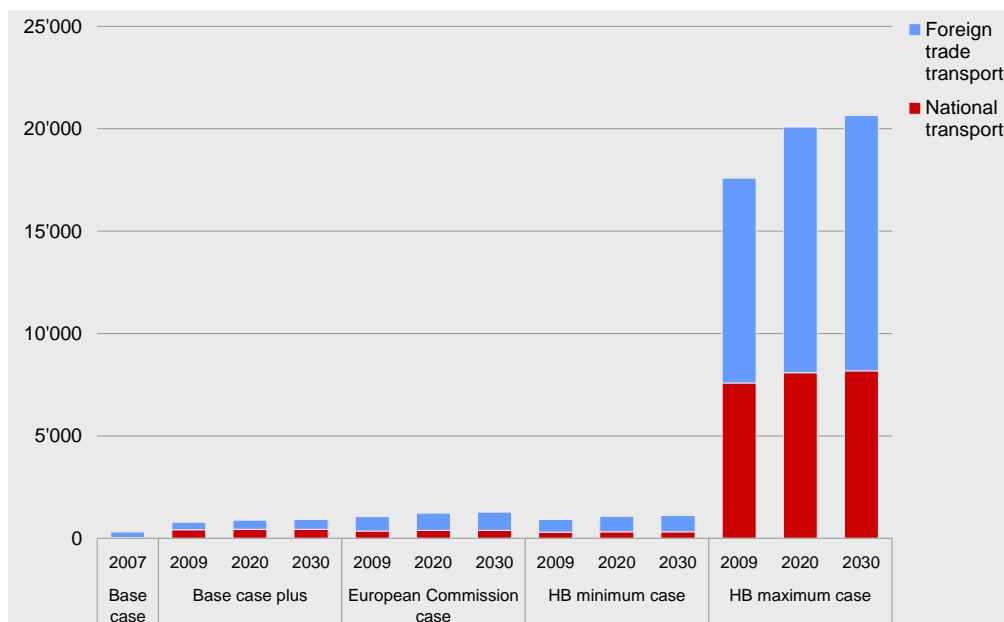
Annex I - Figure 163: Comparison of road user charge surpluses or deficits for Netherlands with regard to the road hauliers by scenarios and years (in Mil. EUR)



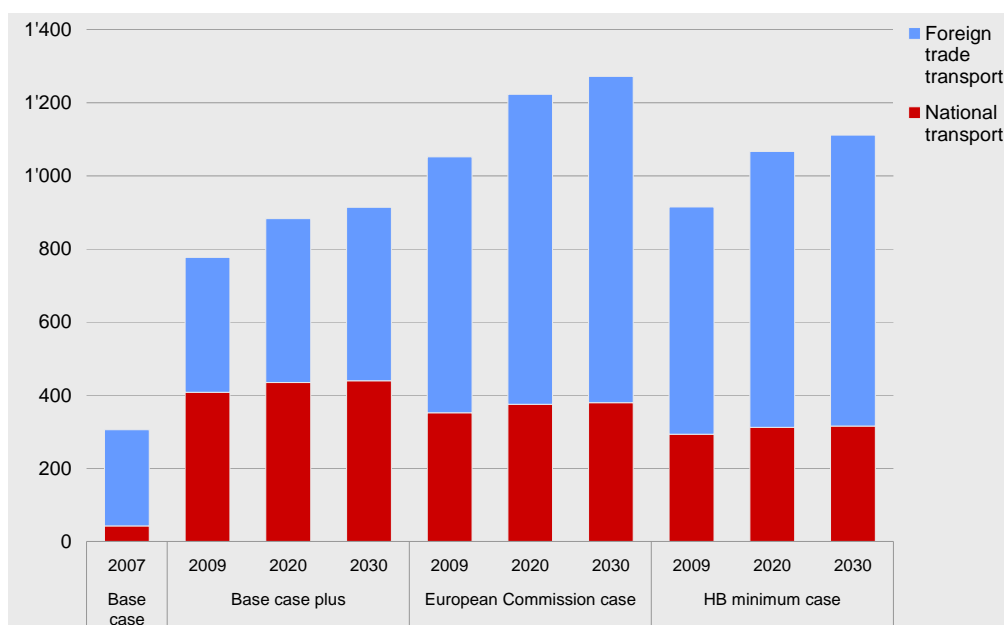
Annex I - Figure 164: Comparison of road user charge surpluses or deficits for Netherlands with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



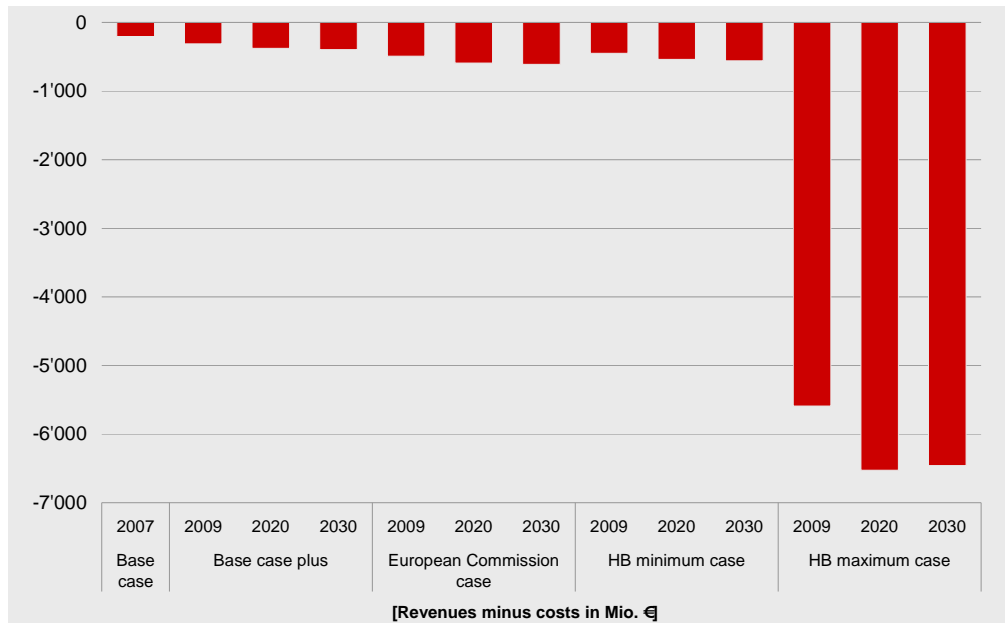
Annex I - Figure 165: Comparison of road user charge costs for the Dutch economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



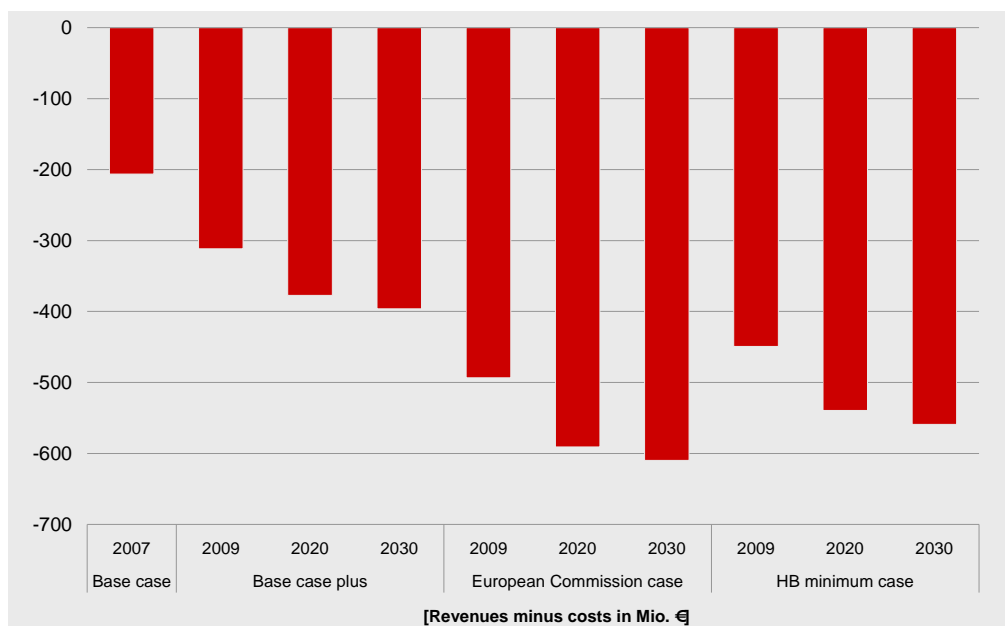
Annex I - Figure 166: Comparison of road user charge costs for the Dutch economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 167: Comparison of road user charge surpluses or deficits for Netherlands with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 168: Comparison of road user charge surpluses or deficits for Netherlands with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

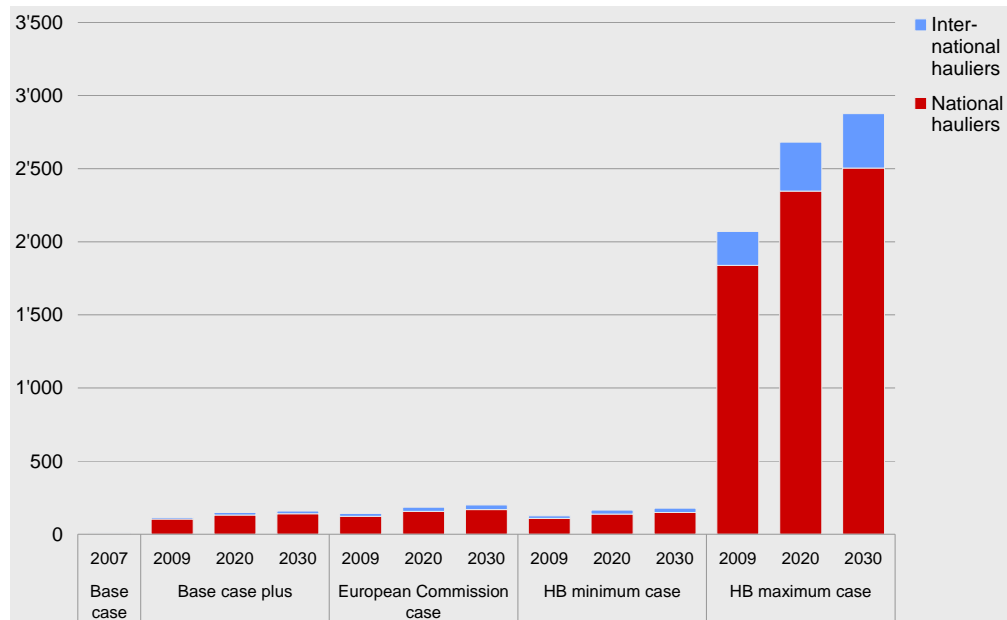


Norway

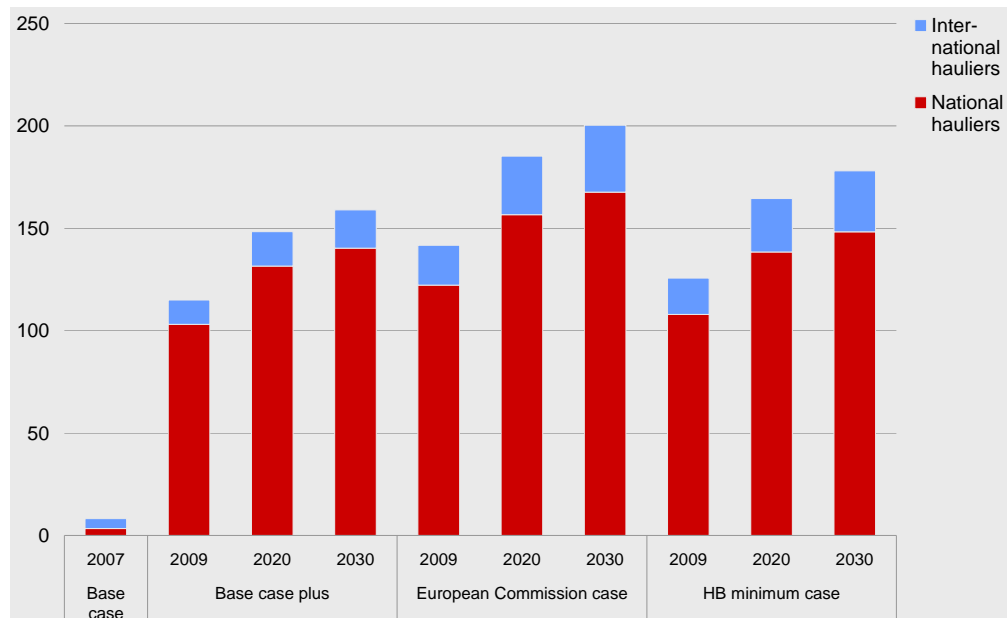
Annex I - Table 18: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits NO		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by NO from	national hauliers	3	103	132	140	122	157	168	108	138	148	1'838	2'347	2'503
	international hauliers	5	12	17	19	20	29	33	18	26	30	233	335	373
	Total	8	115	148	159	142	185	200	126	164	178	2'071	2'682	2'876
Road user charges paid by trucks registered in NO for	inland transport	3	103	132	140	122	157	168	108	138	148	1'838	2'347	2'503
	transport abroad	13	13	16	18	26	34	37	23	30	34	386	482	499
	Total	16	116	148	158	148	190	205	131	168	182	2'225	2'829	3'002
Road user charge surpluses/deficits for NO with regard to the road hauliers	in Mio. EUR	-8	-1	0	1	-6	-5	-5	-5	-4	-4	-153	-147	-126
	in %	-50	-1	0	0	-4	-3	-2	-4	-2	-2	-7	-5	-4
Total charge costs of economy in NO for	national transport	0	94	120	128	108	137	146	95	121	128	1'664	2'119	2'258
	foreign trade transport	16	27	41	45	51	77	87	46	69	79	720	1'012	1'082
	Total	16	121	161	173	159	214	233	140	190	207	2'385	3'131	3'340
Road user charge surpluses/deficits for NO with regard to the national economy	in Mio. EUR	-7	-6	-12	-14	-17	-29	-32	-15	-25	-29	-313	-449	-464
	in %	-47	-5	-8	-8	-11	-13	-14	-10	-13	-14	-13	-14	-14

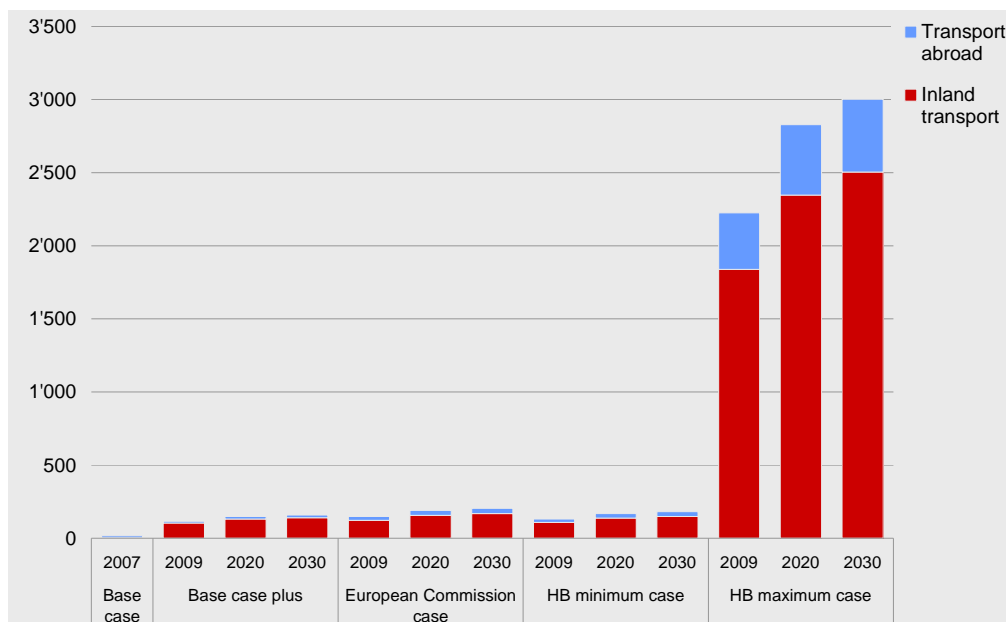
Annex I - Figure 169: Comparison of road user charge revenues for Norway from national and international road hauliers by scenarios and years (in Mil. EUR)



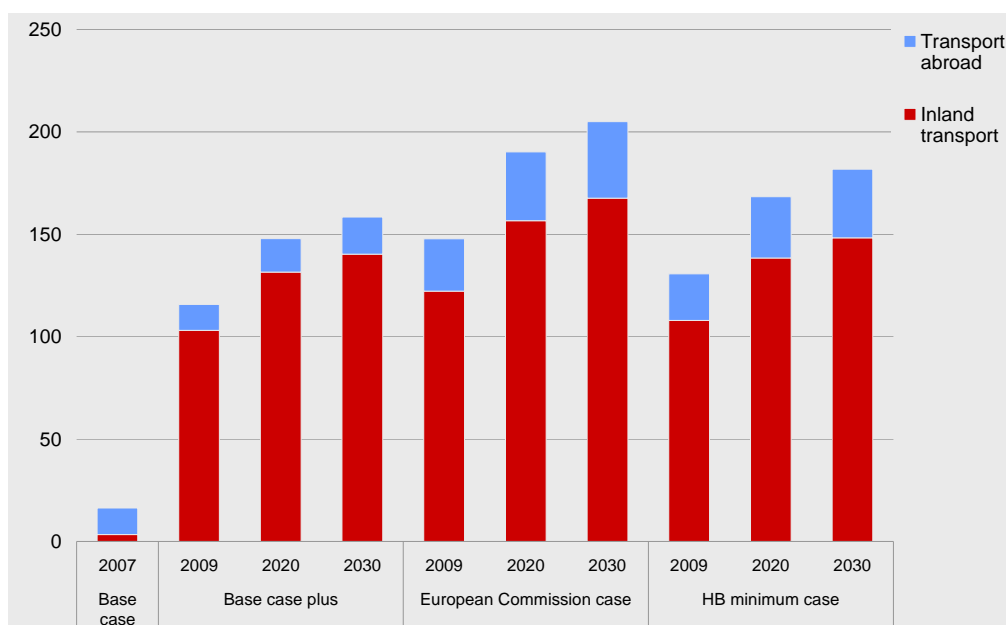
Annex I - Figure 170: Comparison of road user charge revenues for Norway from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



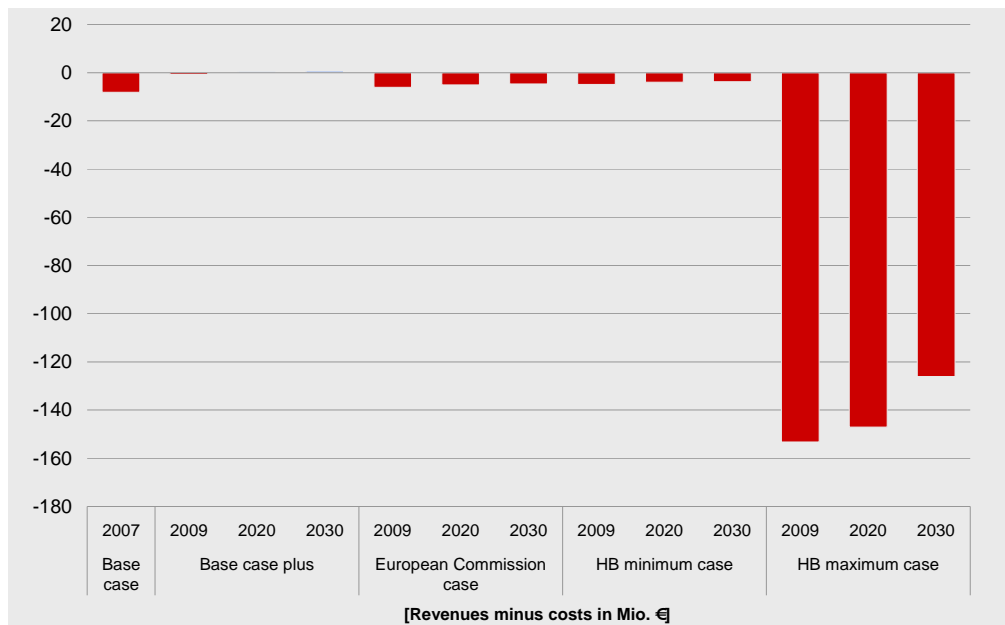
Annex I - Figure 171: Comparison of road user charges paid by Norwegian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



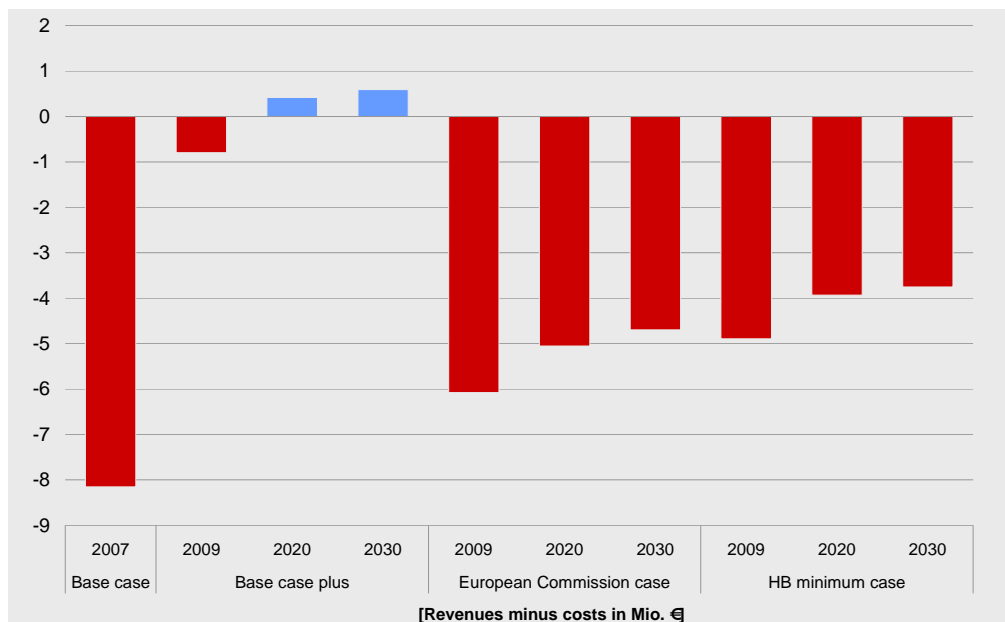
Annex I - Figure 172: Comparison of road user charges paid by Norwegian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



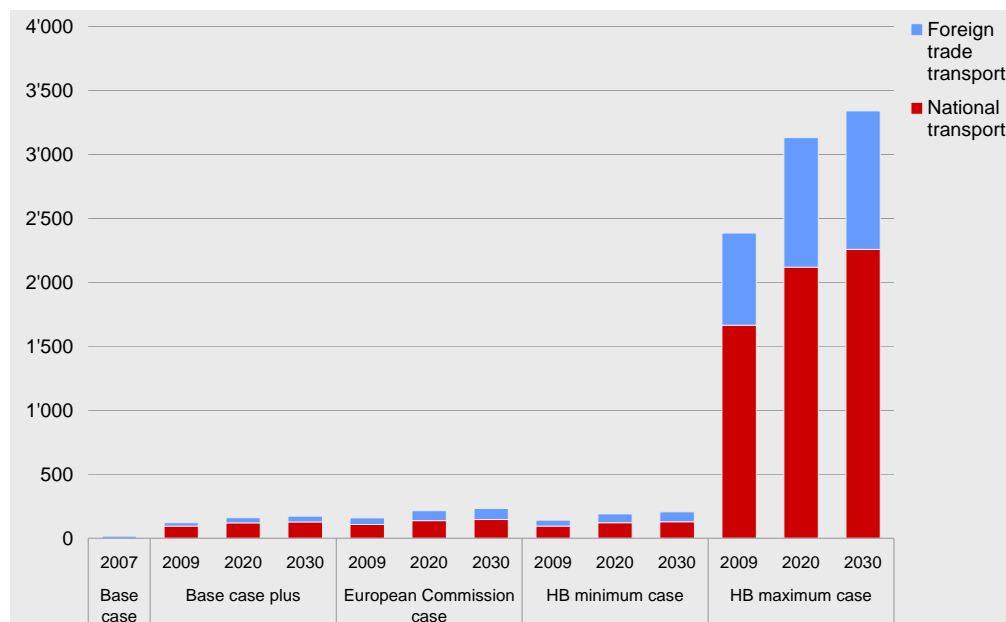
Annex I - Figure 173: Comparison of road user charge surpluses or deficits for Norway with regard to the road hauliers by scenarios and years (in Mil. EUR)



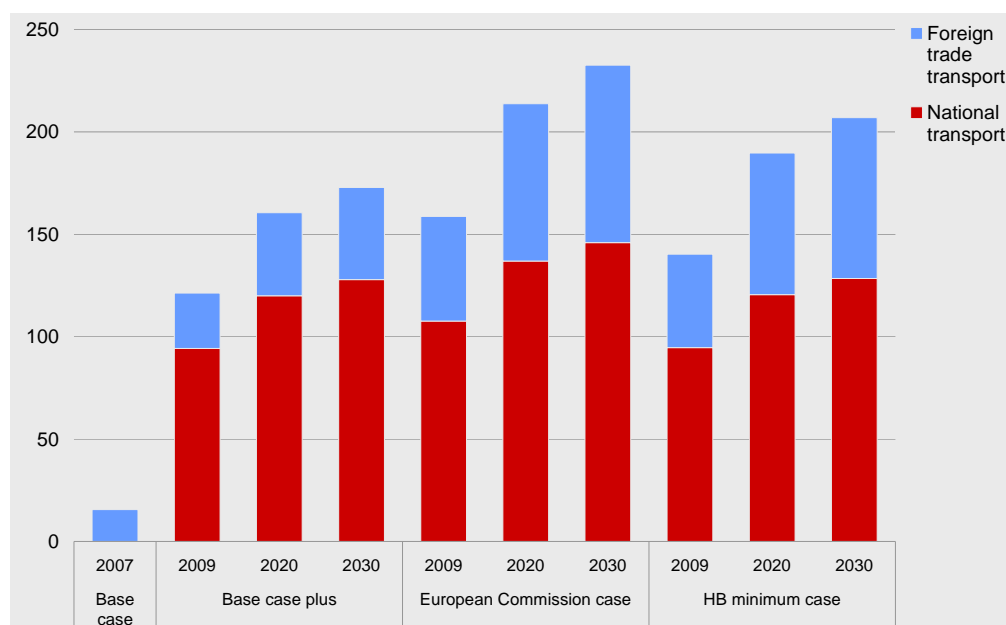
Annex I - Figure 174: Comparison of road user charge surpluses or deficits for Norway with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



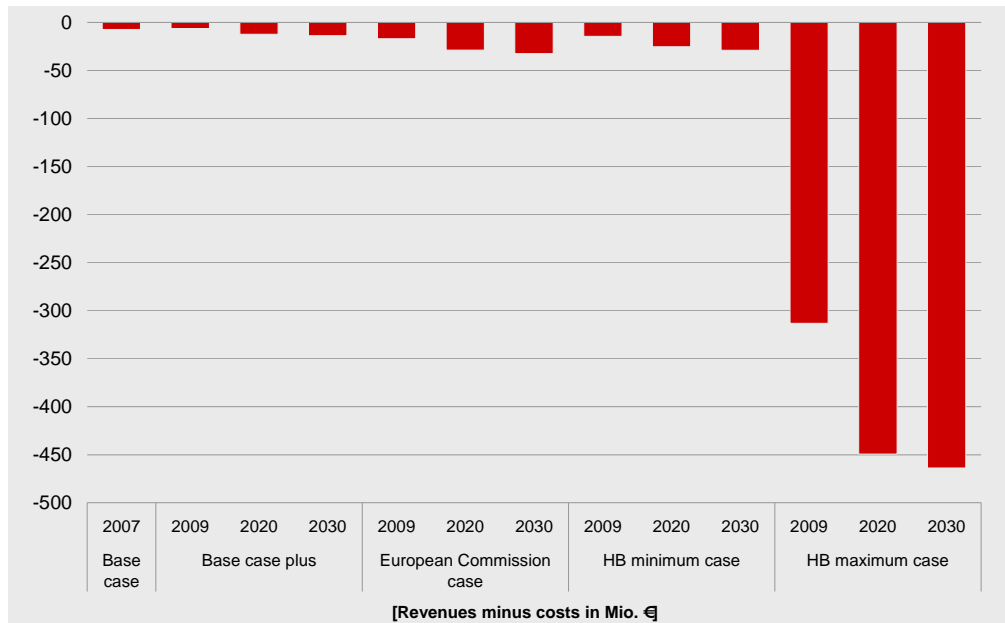
Annex I - Figure 175: Comparison of road user charge costs for the Norwegian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



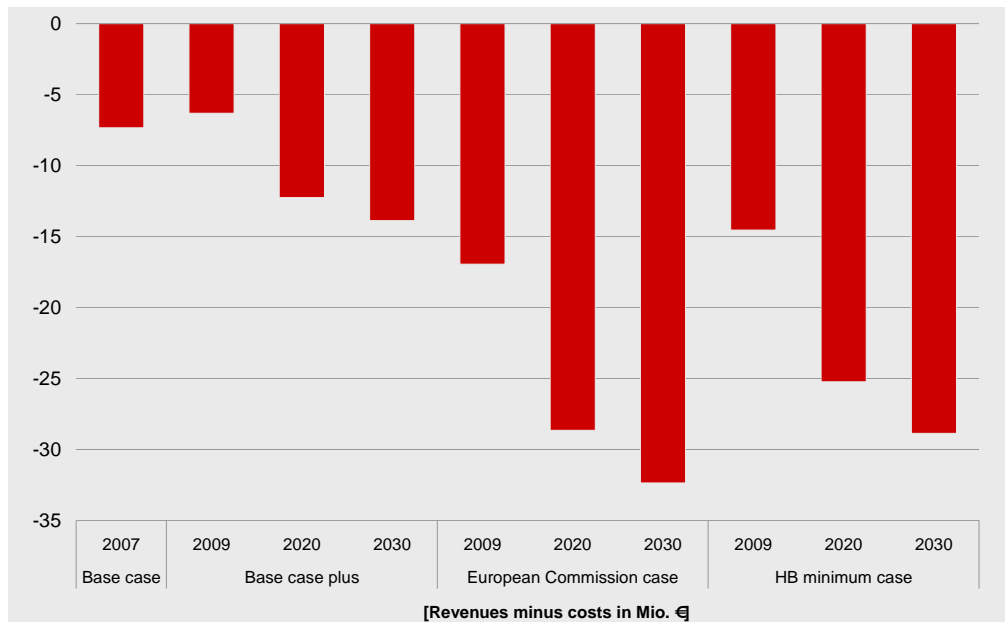
Annex I - Figure 176: Comparison of road user charge costs for the Norwegian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 177: Comparison of road user charge surpluses or deficits for Norway with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 178: Comparison of road user charge surpluses or deficits for Norway with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

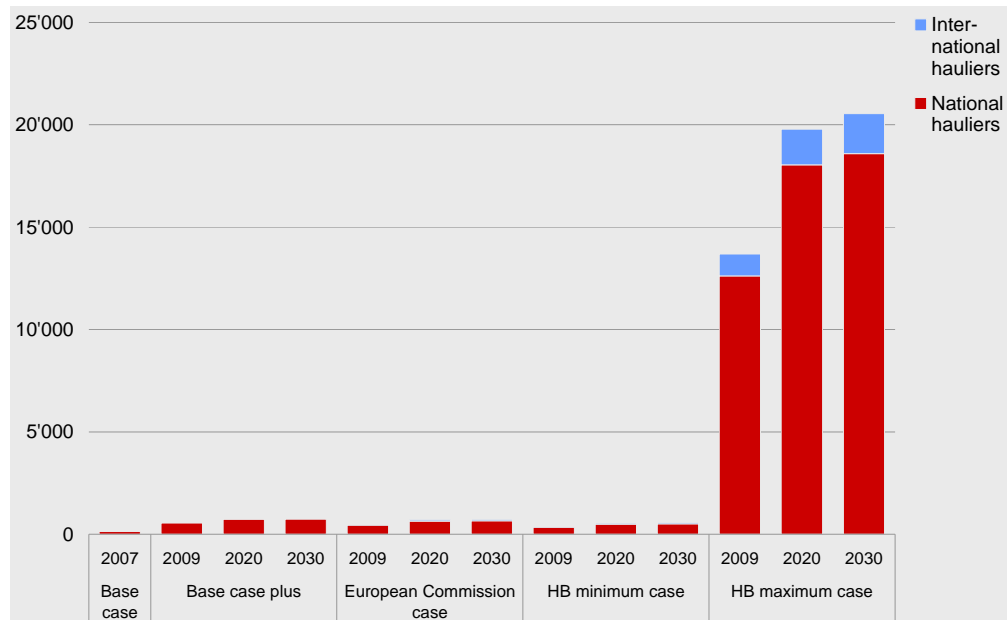


Poland

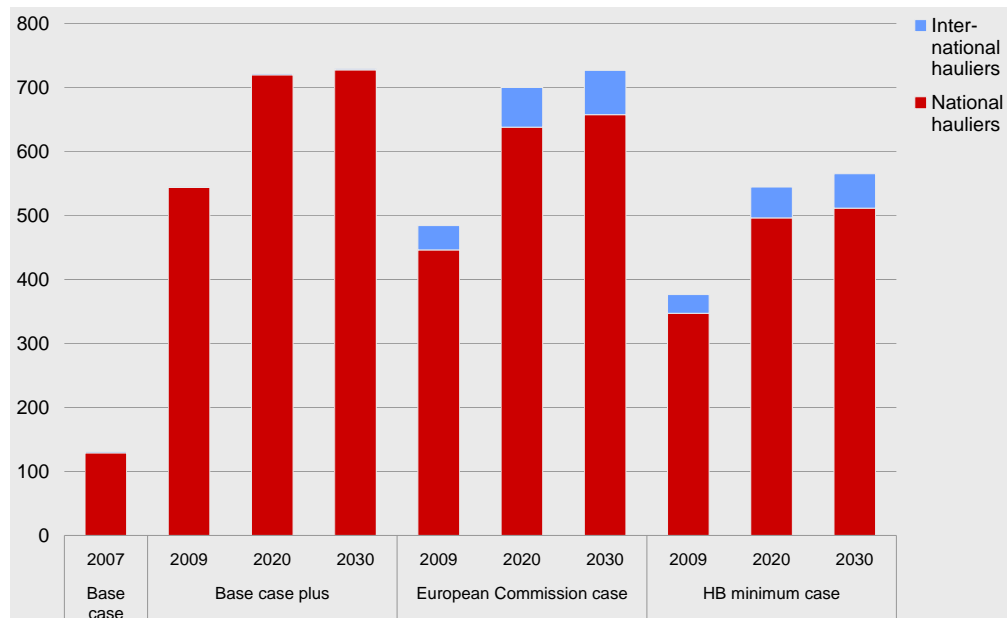
Annex I - Table 19: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits PL		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by PL from	national hauliers	129	544	720	728	446	638	658	347	496	511	12'614	18'039	18'586
	international hauliers	2	1	2	2	38	62	69	30	48	54	1'075	1'753	1'960
	Total	131	545	722	730	484	700	727	377	545	565	13'689	19'792	20'546
Road user charges paid by trucks registered in PL for	inland transport	129	544	720	728	446	638	658	347	496	511	12'614	18'039	18'586
	transport abroad	430	643	1'007	1'067	1'093	1'720	1'820	987	1'552	1'645	13'719	21'617	22'702
	Total	559	1'187	1'727	1'794	1'540	2'358	2'478	1'334	2'049	2'156	26'333	39'656	41'288
Road user charge surpluses/deficits for PL with regard to the road hauliers	in Mio. EUR	-428	-642	-1'005	-1'065	-1'055	-1'658	-1'751	-957	-1'504	-1'591	-12'644	-19'864	-20'742
	in %	-77	-54	-58	-59	-69	-70	-71	-72	-73	-74	-48	-50	-50
Total charge costs of economy in PL for	national transport	122	540	714	721	327	432	437	254	336	340	9'249	12'222	12'342
	foreign trade transport	168	263	490	515	512	948	999	454	841	886	7'498	13'759	14'470
	Total	290	804	1'204	1'236	839	1'380	1'435	709	1'177	1'226	16'748	25'981	26'812
Road user charge surpluses/deficits for PL with regard to the national economy	in Mio. EUR	-159	-259	-482	-506	-355	-680	-708	-332	-633	-661	-3'059	-6'189	-6'265
	in %	-55	-32	-40	-41	-42	-49	-49	-47	-54	-54	-18	-24	-23

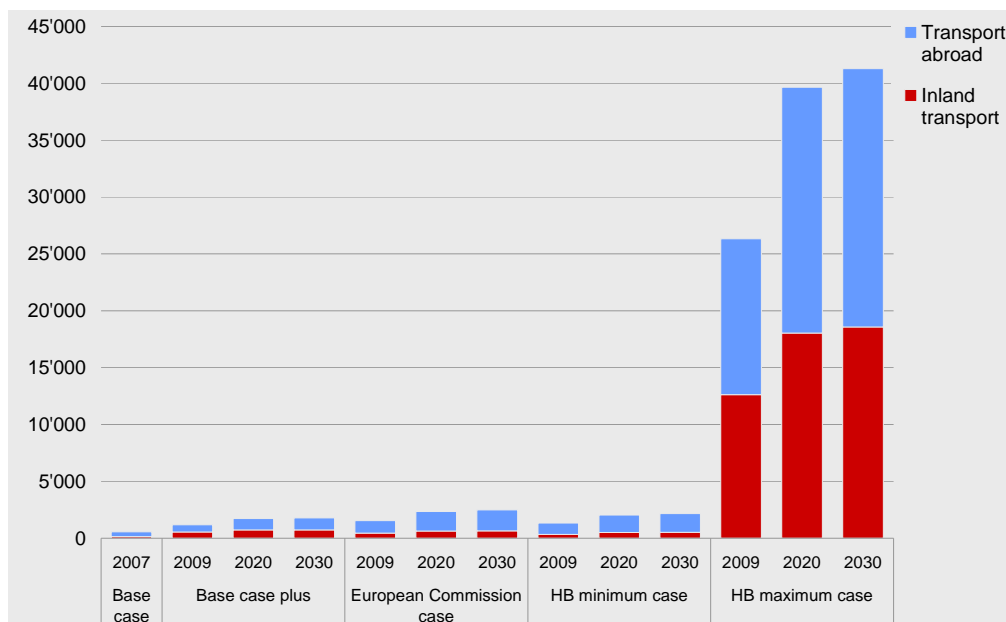
Annex I - Figure 179: Comparison of road user charge revenues for Poland from national and international road hauliers by scenarios and years (in Mil. EUR)



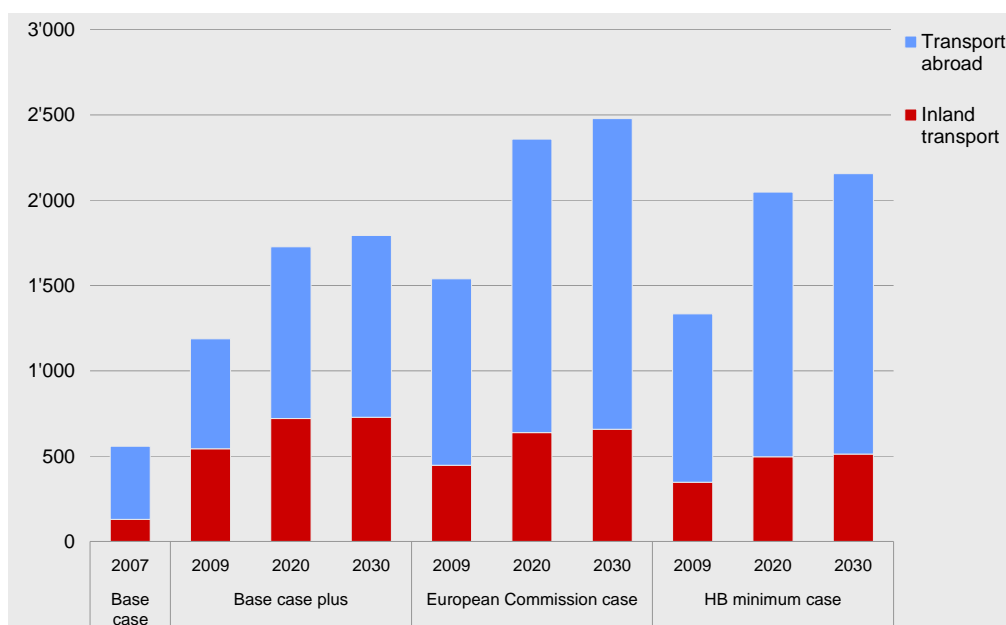
Annex I - Figure 180: Comparison of road user charge revenues for Poland from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



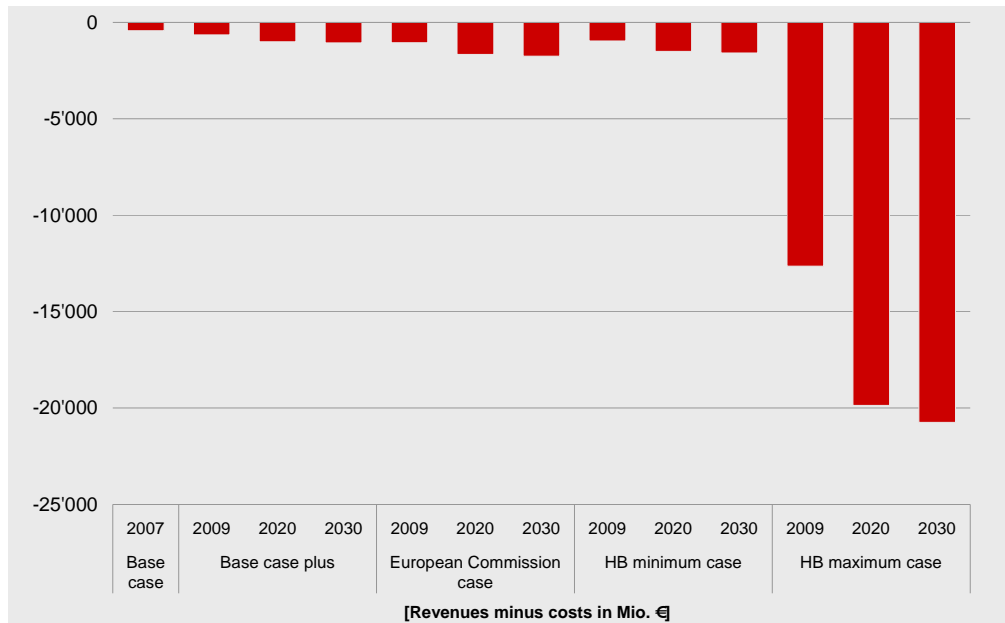
Annex I - Figure 181: Comparison of road user charges paid by Polish road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



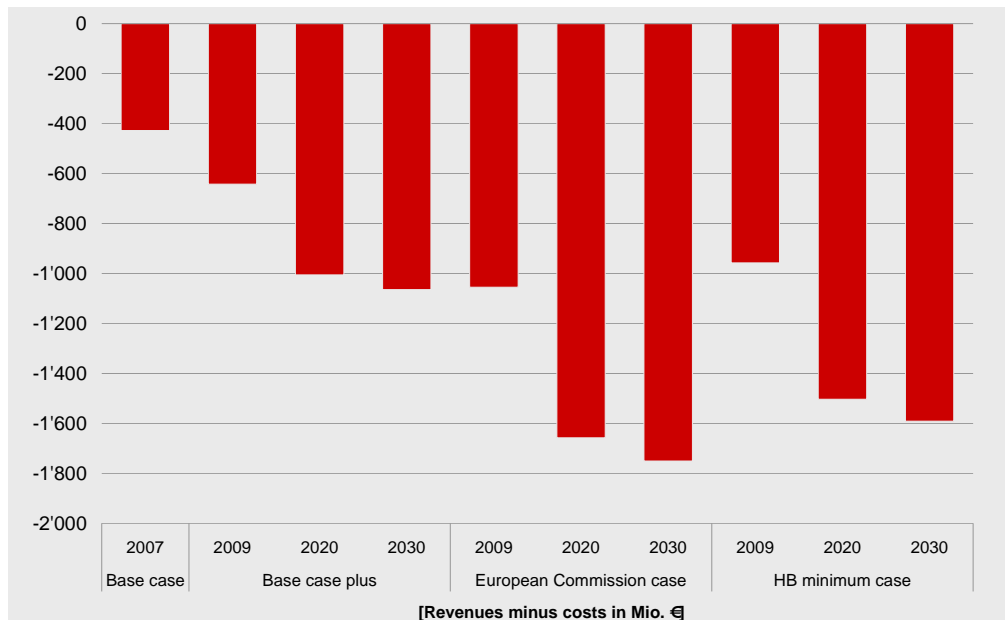
Annex I - Figure 182: Comparison of road user charges paid by Polish road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



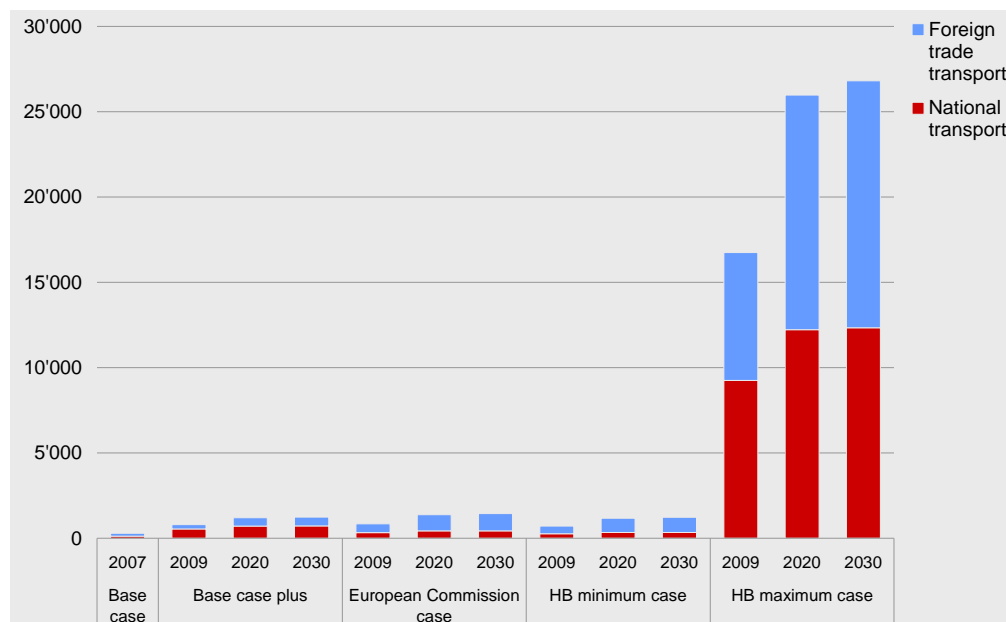
Annex I - Figure 183: Comparison of road user charge surpluses or deficits for Poland with regard to the road hauliers by scenarios and years (in Mil. EUR)



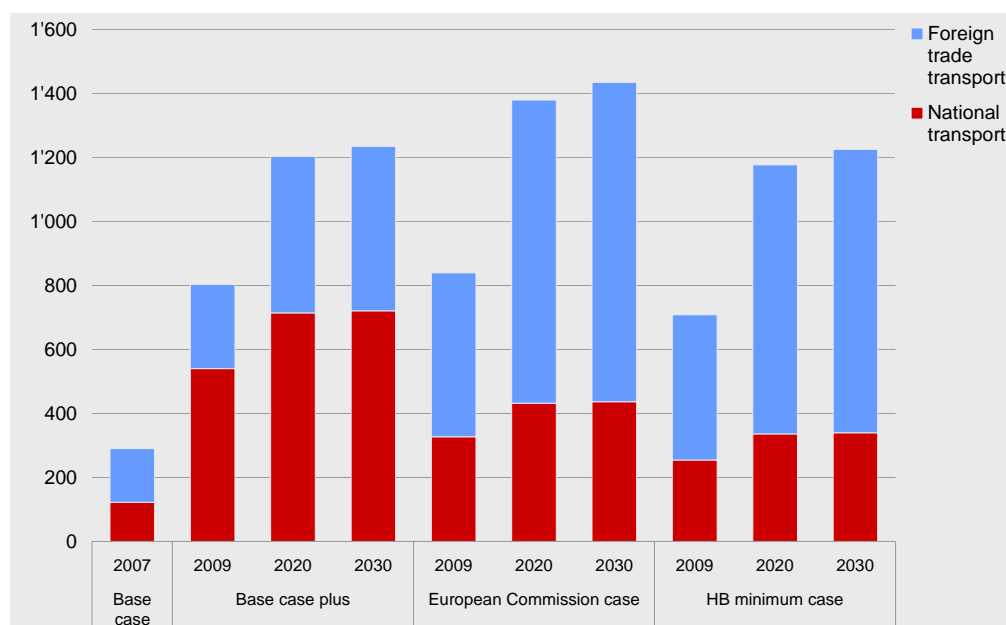
Annex I - Figure 184: Comparison of road user charge surpluses or deficits for Poland with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



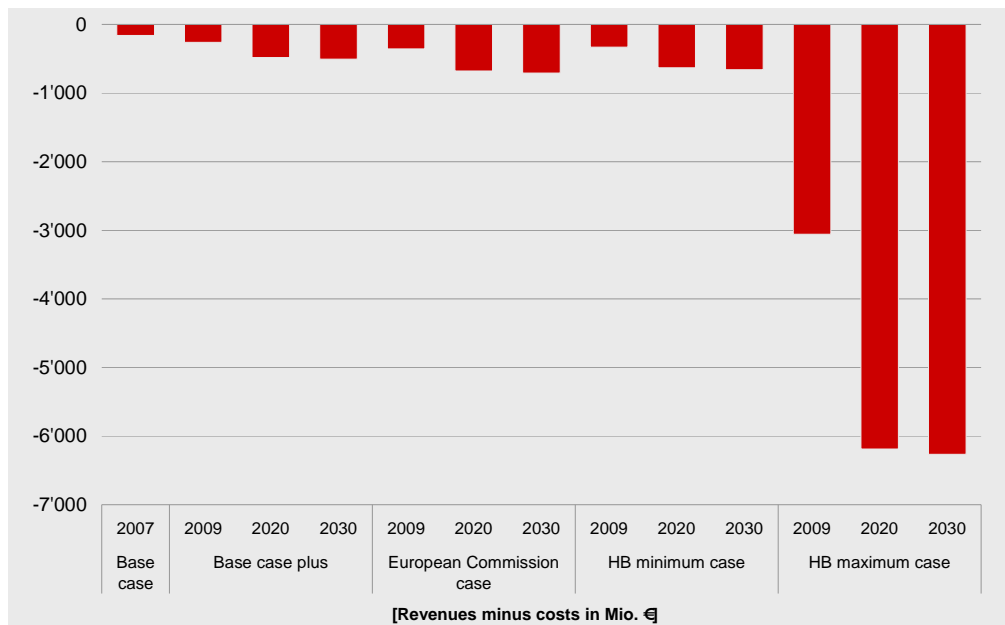
Annex I - Figure 185: Comparison of road user charge costs for the Polish economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



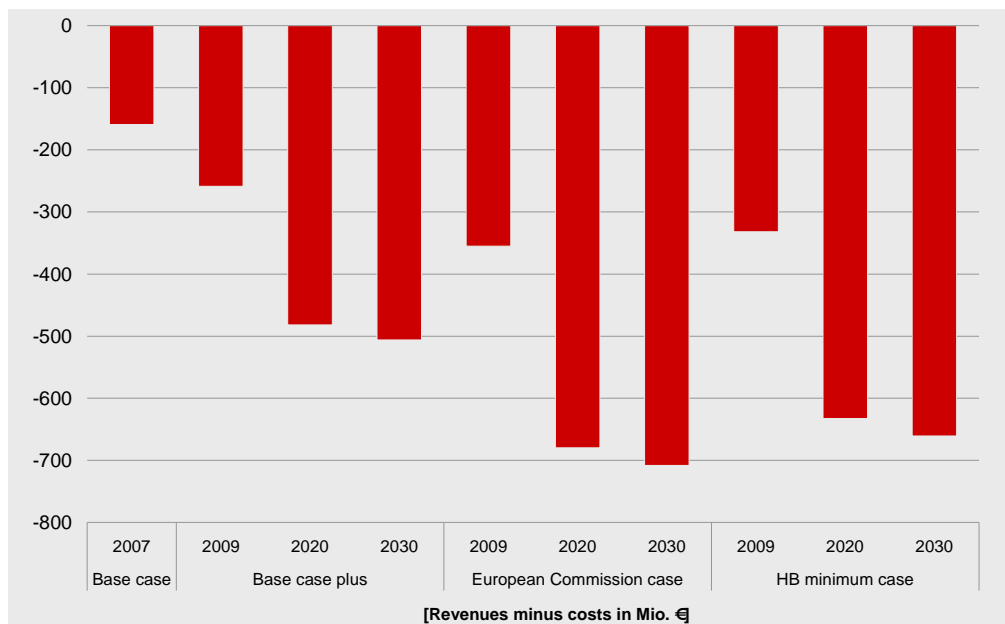
Annex I - Figure 186: Comparison of road user charge costs for the Polish economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 187: Comparison of road user charge surpluses or deficits for Poland with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 188: Comparison of road user charge surpluses or deficits for Poland with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

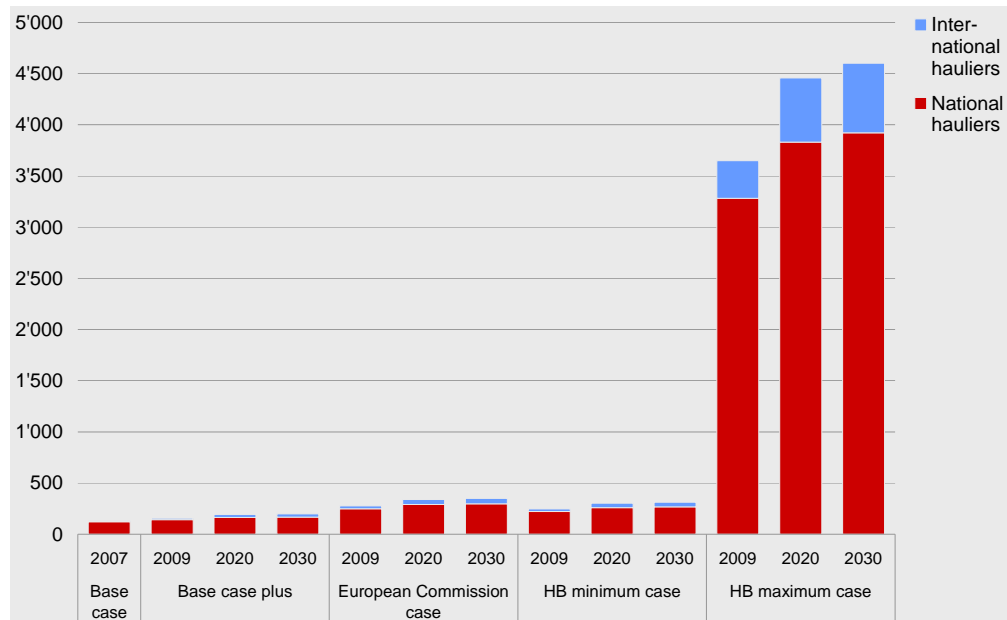


Portugal

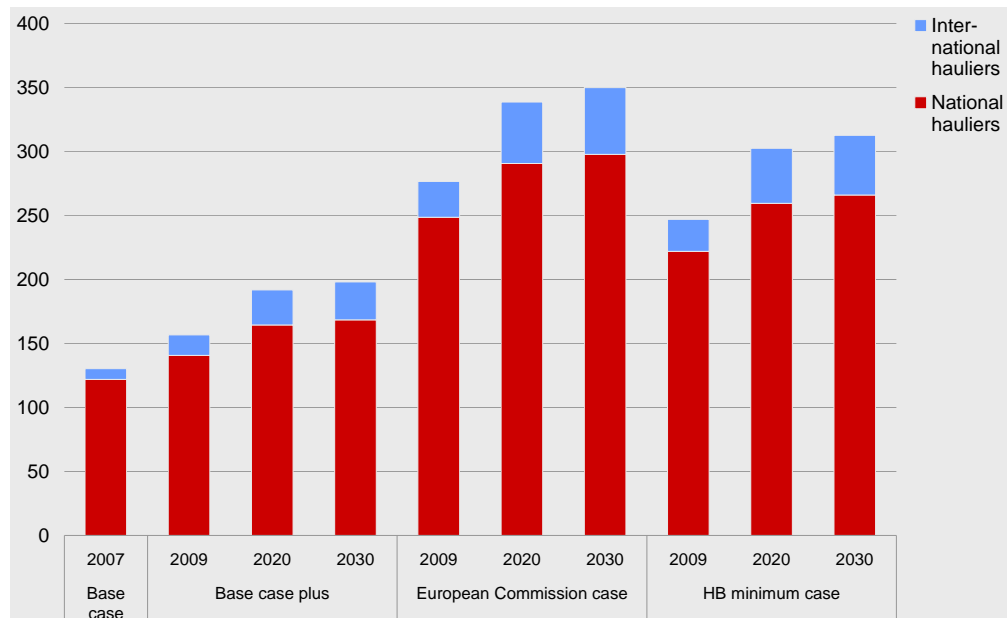
Annex I - Table 20: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits PT		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by PT from	national hauliers	122	141	165	168	249	291	298	222	260	266	3'283	3'831	3'922
	international hauliers	8	16	27	30	28	48	52	25	43	47	366	627	680
	Total	130	157	192	198	277	339	350	247	303	313	3'649	4'458	4'602
Road user charges paid by trucks registered in PT for	inland transport	122	141	165	168	249	291	298	222	260	266	3'283	3'831	3'922
	transport abroad	117	257	361	386	454	640	685	406	572	613	5'975	8'484	9'080
	Total	239	398	525	555	703	931	983	628	832	879	9'258	12'315	13'002
Road user charge surpluses/deficits for PT with regard to the road hauliers	in Mio. EUR	-108	-241	-333	-357	-426	-592	-633	-381	-529	-566	-5'609	-7'857	-8'399
	in %	-45	-61	-63	-64	-61	-64	-64	-61	-64	-64	-61	-64	-65
Total charge costs of economy in PT for	national transport	101	101	100	99	178	178	176	159	159	157	2'361	2'354	2'333
	foreign trade transport	71	171	271	289	304	484	517	272	432	462	4'057	6'457	6'901
	Total	172	271	371	389	482	661	693	431	591	619	6'418	8'812	9'234
Road user charge surpluses/deficits for PT with regard to the national economy	in Mio. EUR	-42	-115	-179	-190	-206	-323	-343	-184	-288	-306	-2'769	-4'354	-4'631
	in %	-24	-42	-48	-49	-43	-49	-49	-43	-49	-49	-43	-49	-50

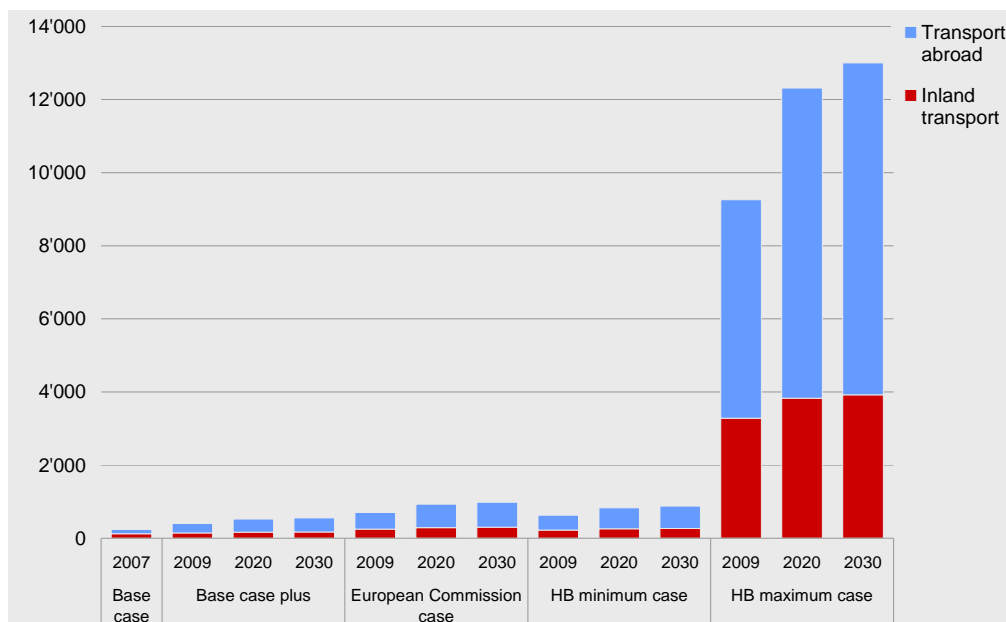
Annex I - Figure 189: Comparison of road user charge revenues for Portugal from national and international road hauliers by scenarios and years (in Mil. EUR)



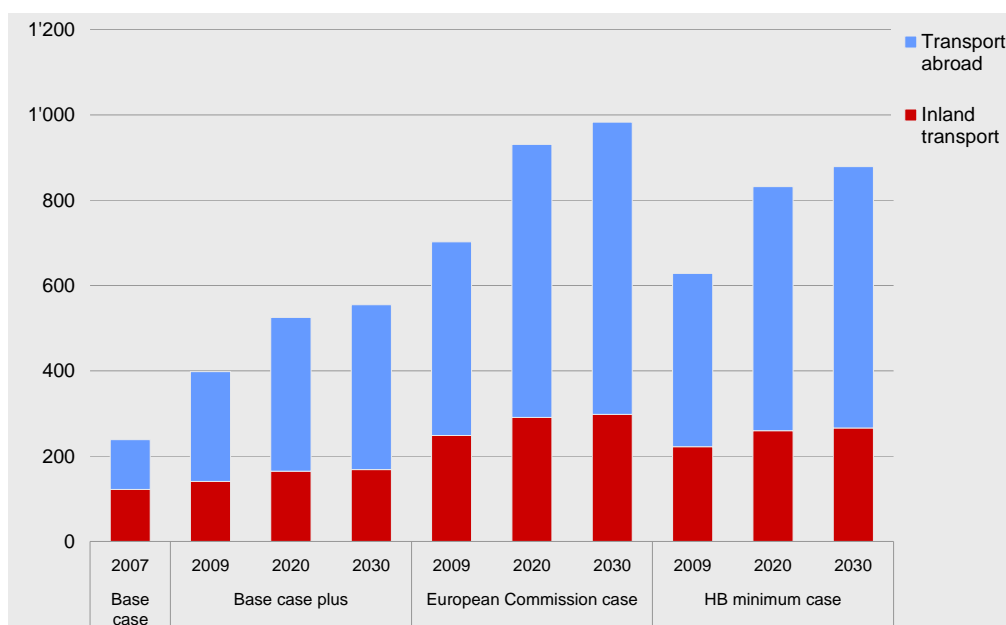
Annex I - Figure 190: Comparison of road user charge revenues for Portugal from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



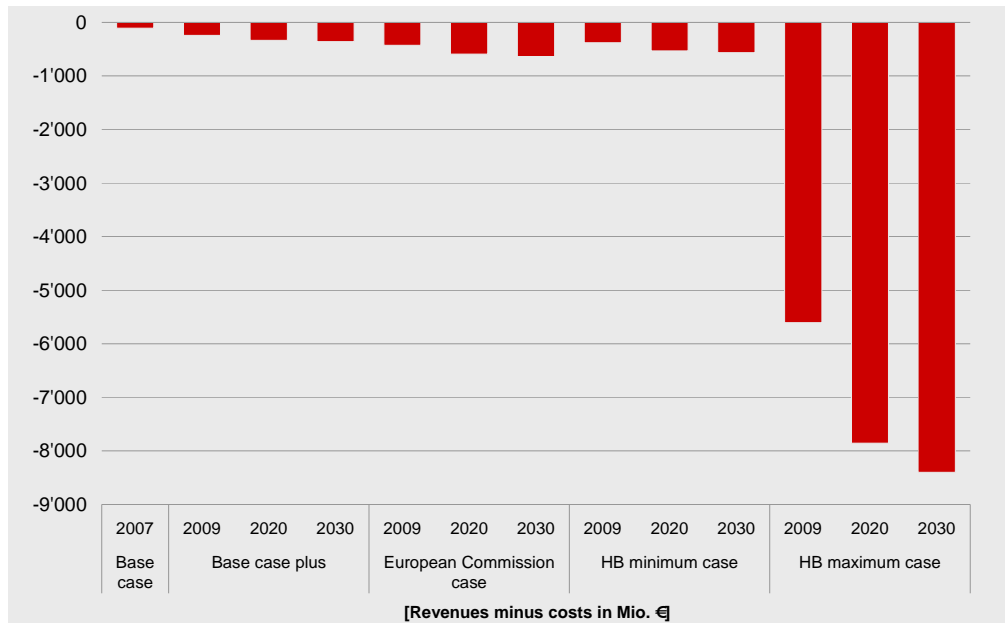
Annex I - Figure 191: Comparison of road user charges paid by Portuguese road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



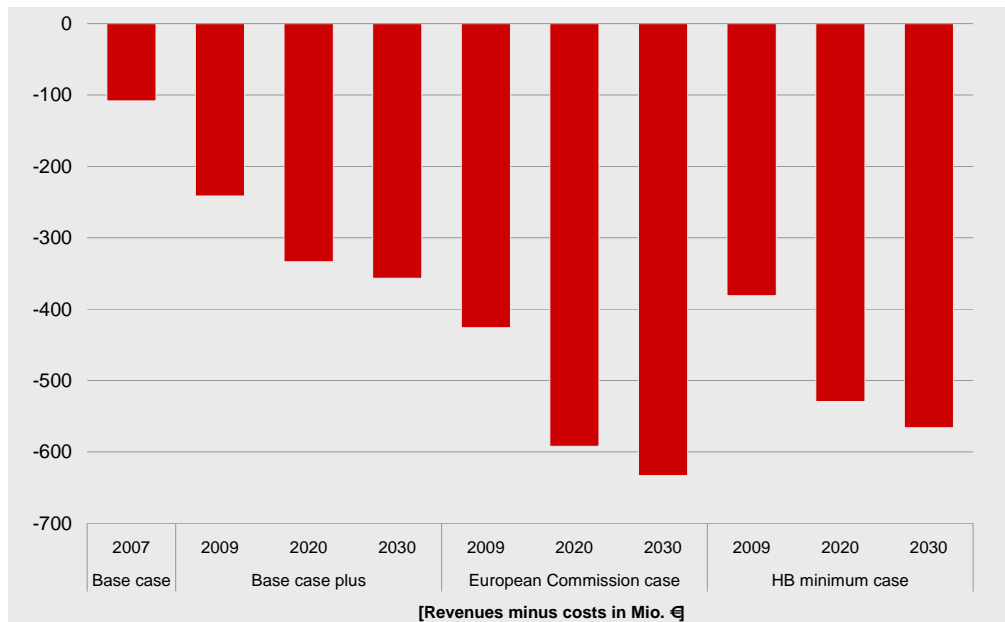
Annex I - Figure 192: Comparison of road user charges paid by Portuguese road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



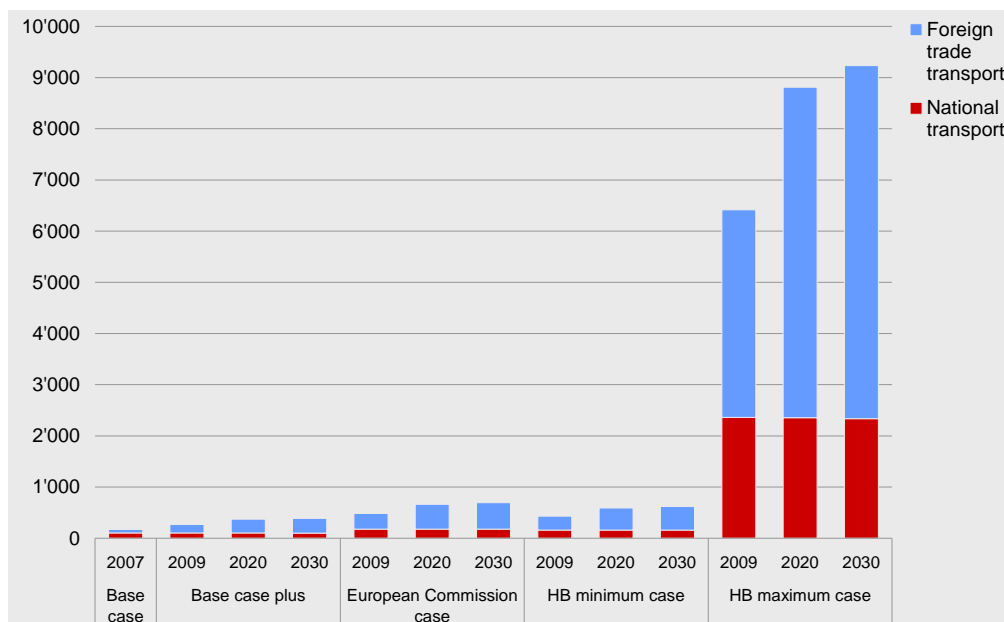
Annex I - Figure 193: Comparison of road user charge surpluses or deficits for Portugal with regard to the road hauliers by scenarios and years (in Mil. EUR)



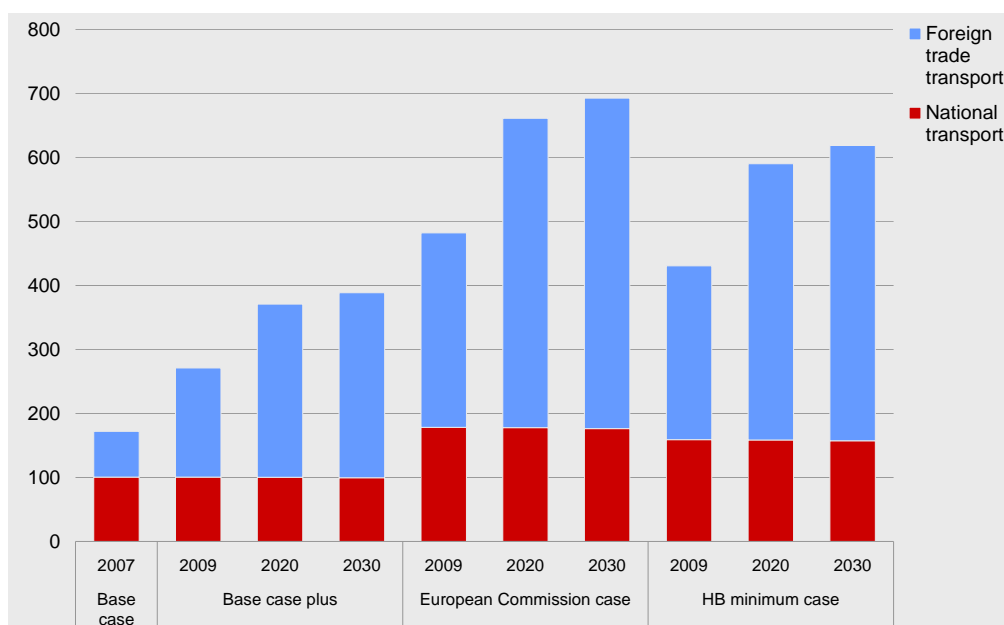
Annex I - Figure 194: Comparison of road user charge surpluses or deficits for Portugal with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



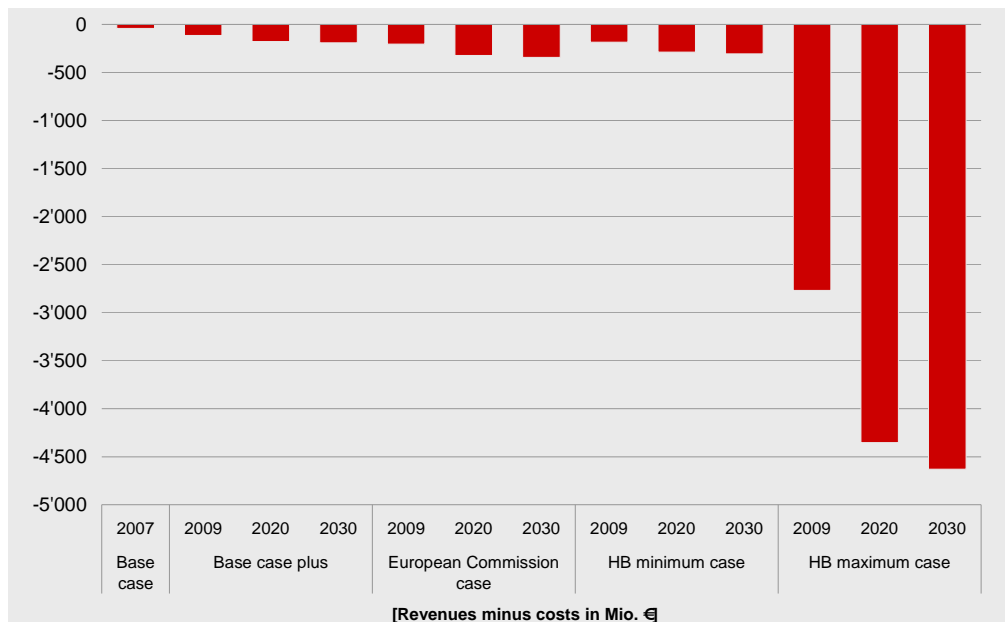
Annex I - Figure 195: Comparison of road user charge costs for the Portuguese economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



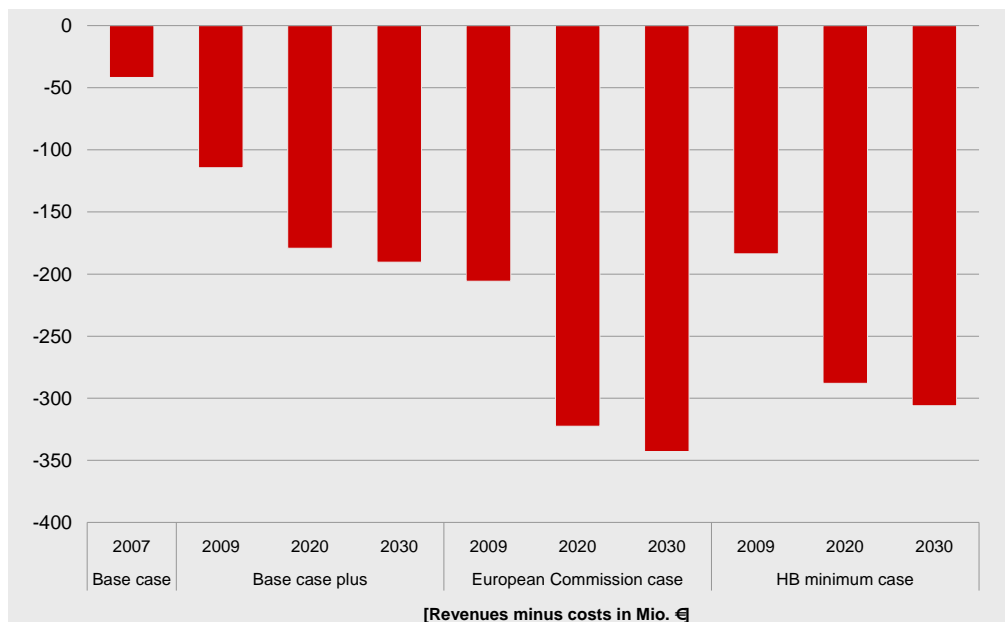
Annex I - Figure 196: Comparison of road user charge costs for the Portuguese economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 197: Comparison of road user charge surpluses or deficits for Portugal with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 198: Comparison of road user charge surpluses or deficits for Portugal with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

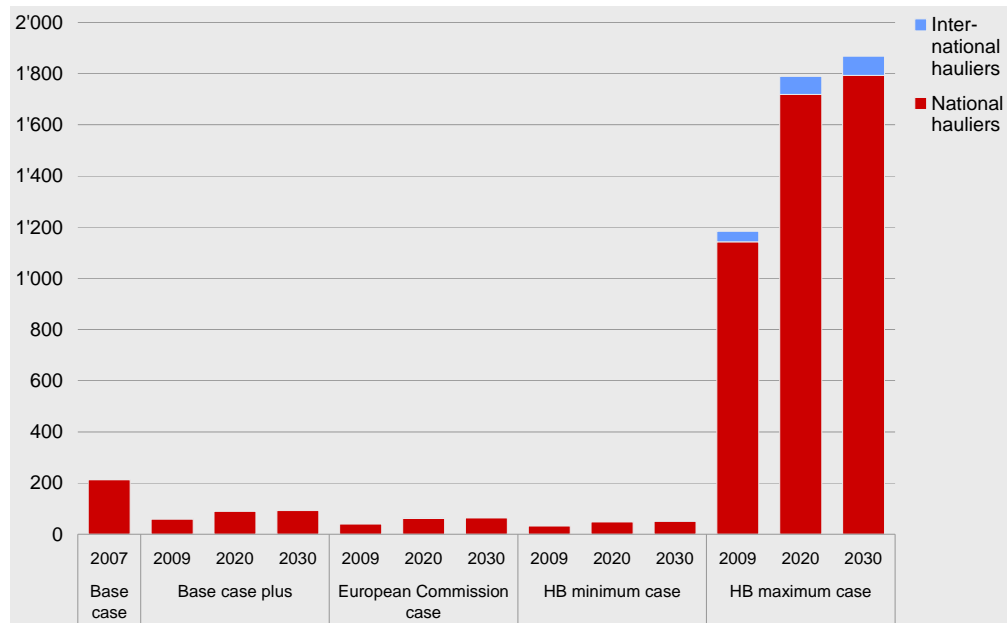


Romania

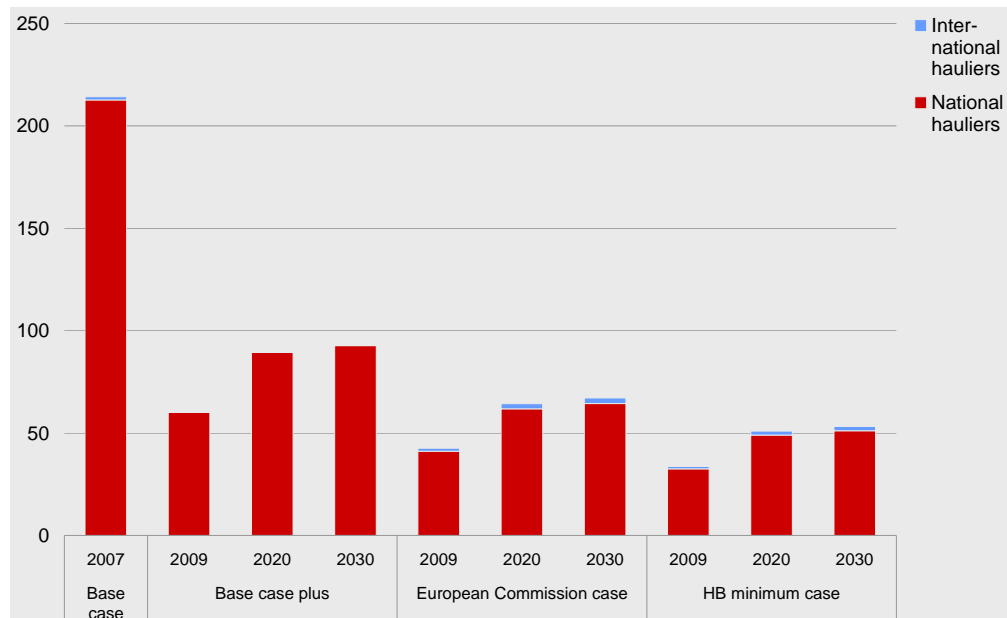
Annex I - Table 21: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits RO		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by RO from	national hauliers	213	60	90	93	41	62	64	33	49	51	1'142	1'718	1'793
	international hauliers	2	0	0	0	1	3	3	1	2	2	41	71	75
	Total	214	60	90	93	43	64	67	34	51	53	1'184	1'790	1'868
Road user charges paid by trucks registered in RO for	inland transport	213	60	90	93	41	62	64	33	49	51	1'142	1'718	1'793
	transport abroad	79	101	178	198	191	330	370	170	294	330	2'720	4'577	5'165
	Total	292	161	267	291	232	391	434	203	343	381	3'863	6'296	6'958
Road user charge surpluses/deficits for RO with regard to the road hauliers	in Mio. EUR	-78	-101	-178	-198	-190	-327	-367	-169	-292	-328	-2'679	-4'506	-5'090
	in %	-27	-63	-66	-68	-82	-84	-85	-83	-85	-86	-69	-72	-73
Total charge costs of economy in RO for	national transport	211	60	89	92	37	55	57	29	44	45	1'027	1'527	1'581
	foreign trade transport	50	54	96	107	107	187	210	95	166	186	1'593	2'726	3'069
	Total	260	114	185	200	144	242	266	124	209	231	2'620	4'253	4'650
Road user charge surpluses/deficits for RO with regard to the national economy	in Mio. EUR	-46	-54	-96	-107	-101	-177	-199	-90	-158	-178	-1'436	-2'463	-2'782
	in %	-18	-47	-52	-54	-70	-73	-75	-73	-76	-77	-55	-58	-60

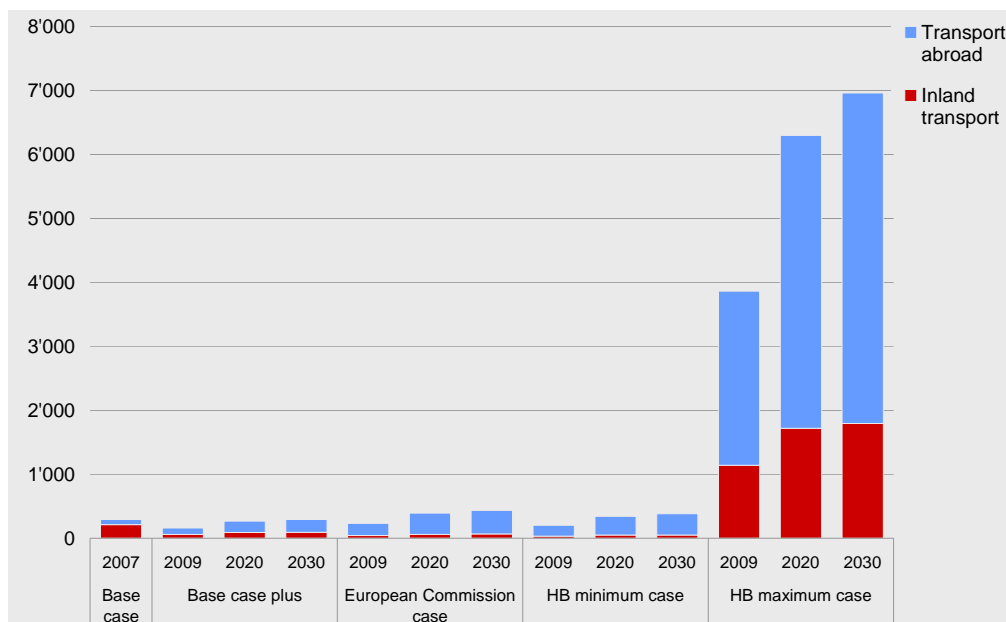
Annex I - Figure 199: Comparison of road user charge revenues for Romania from national and international road hauliers by scenarios and years (in Mil. EUR)



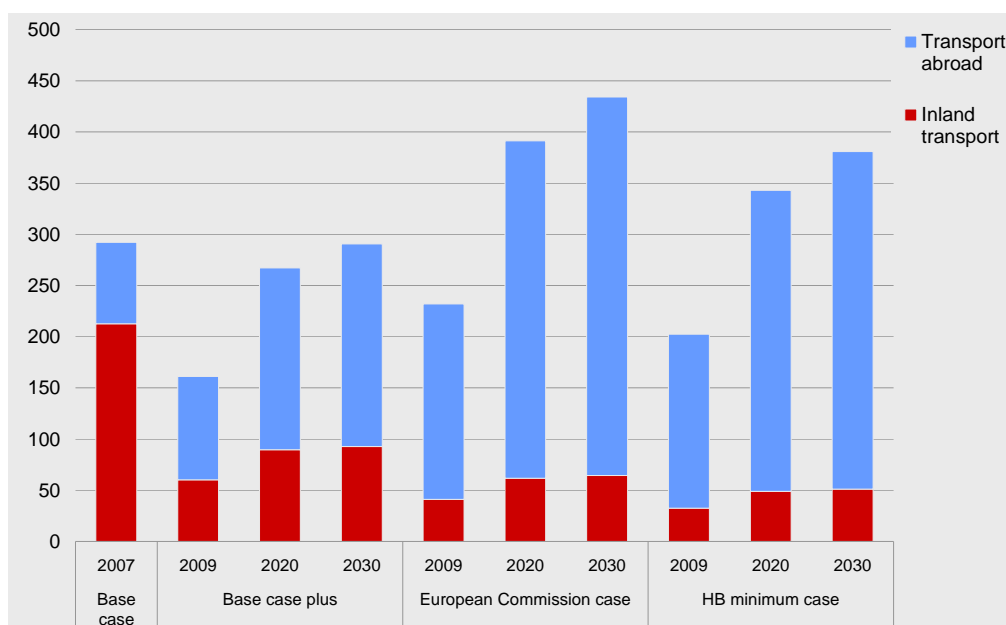
Annex I - Figure 200: Comparison of road user charge revenues for Romania from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



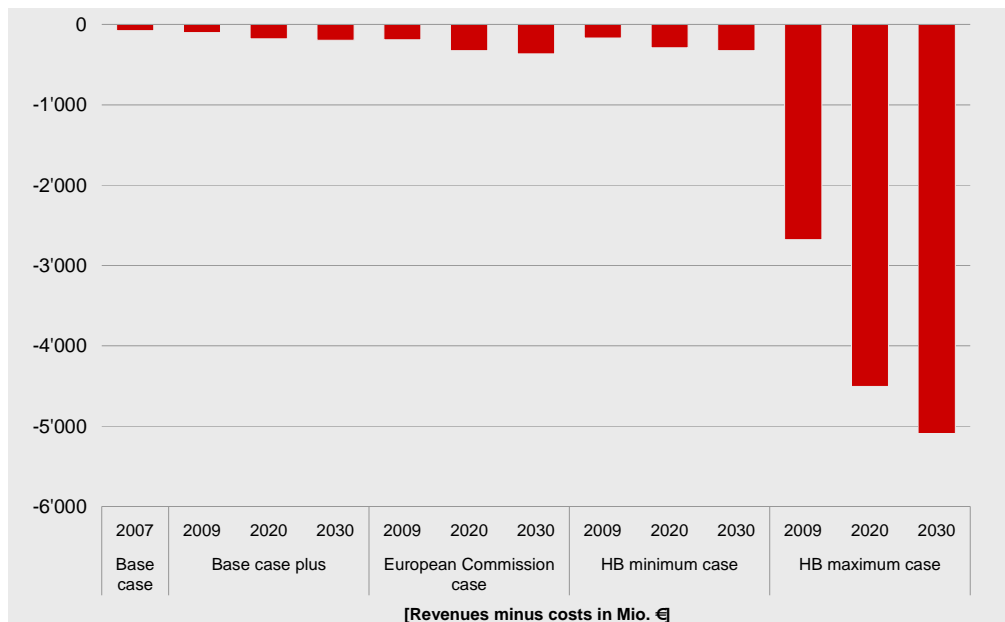
Annex I - Figure 201: Comparison of road user charges paid by Romanian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



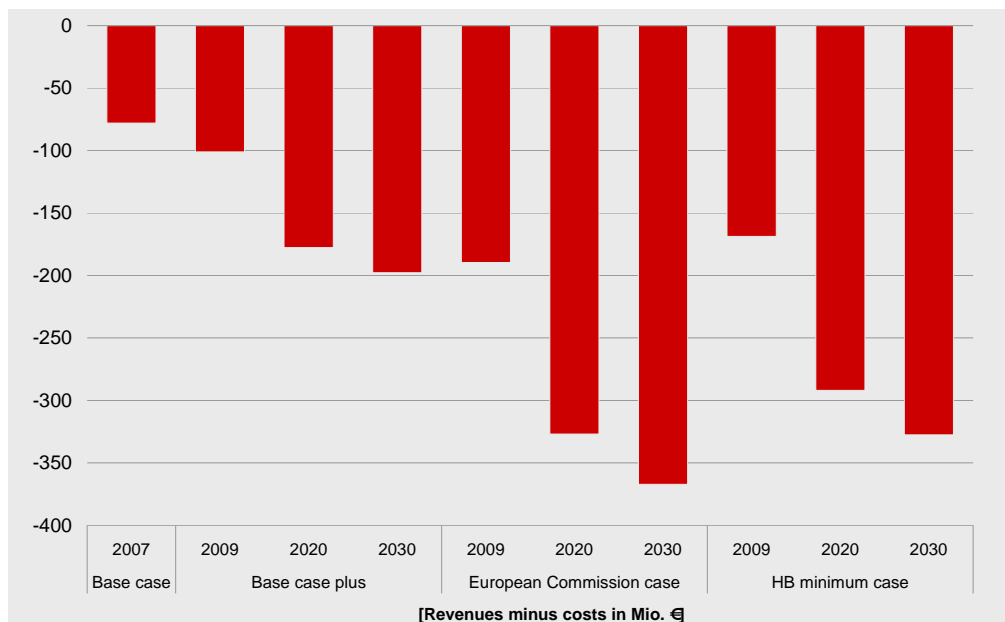
Annex I - Figure 202: Comparison of road user charges paid by Romanian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



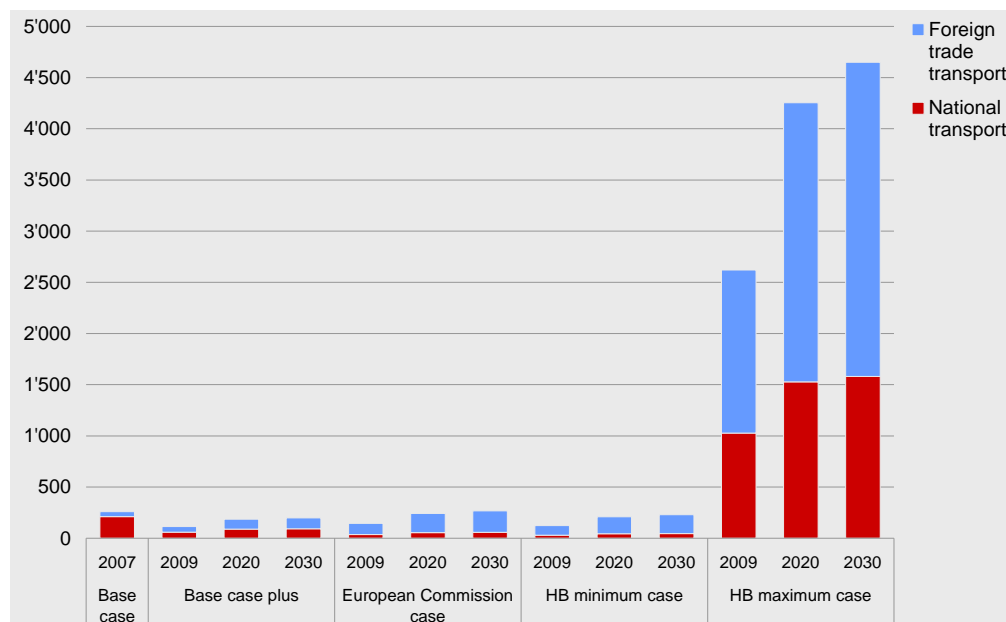
Annex I - Figure 203: Comparison of road user charge surpluses or deficits for Romania with regard to the road hauliers by scenarios and years (in Mil. EUR)



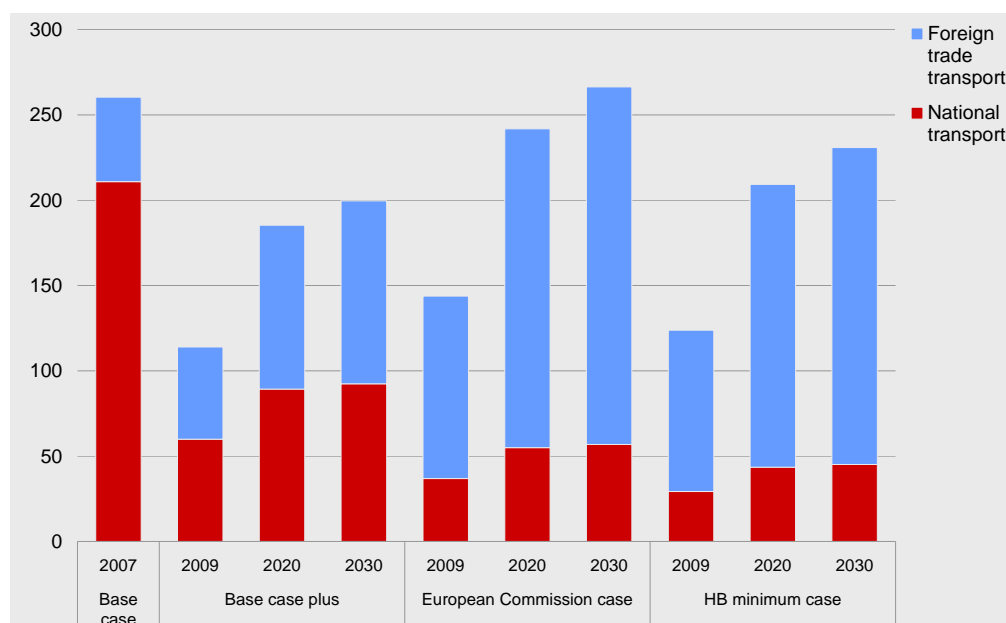
Annex I - Figure 204: Comparison of road user charge surpluses or deficits for Romania with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



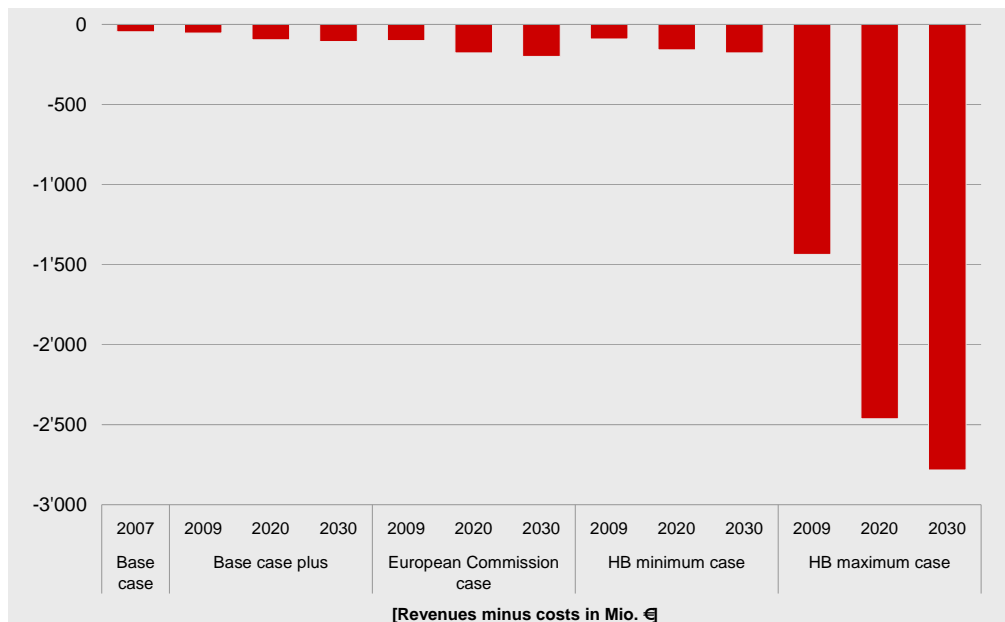
Annex I - Figure 205: Comparison of road user charge costs for the Romanian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



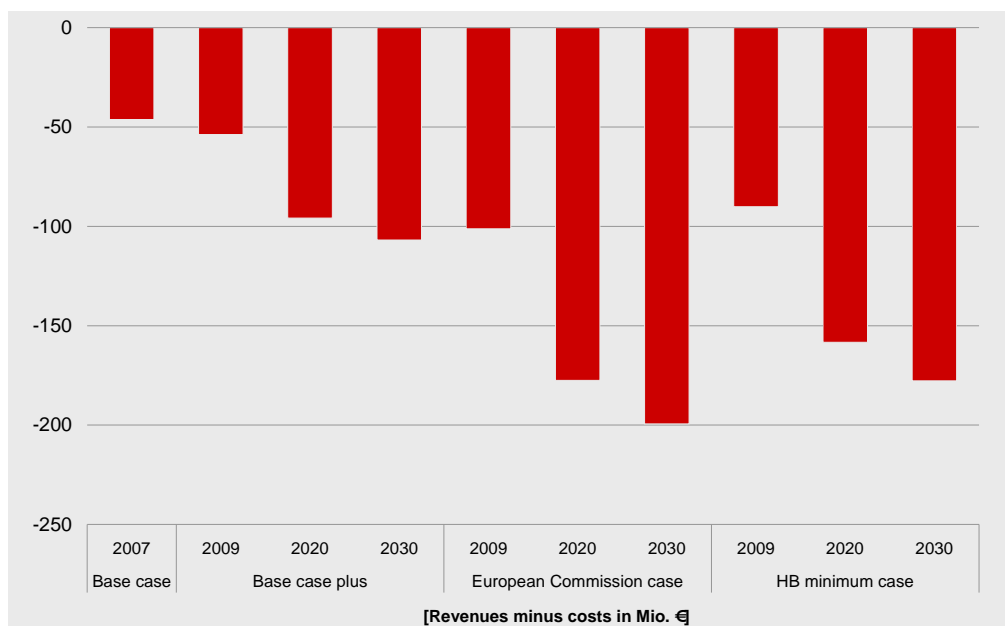
Annex I - Figure 206: Comparison of road user charge costs for the Romanian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 207: Comparison of road user charge surpluses or deficits for Romania with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 208: Comparison of road user charge surpluses or deficits for Romania with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

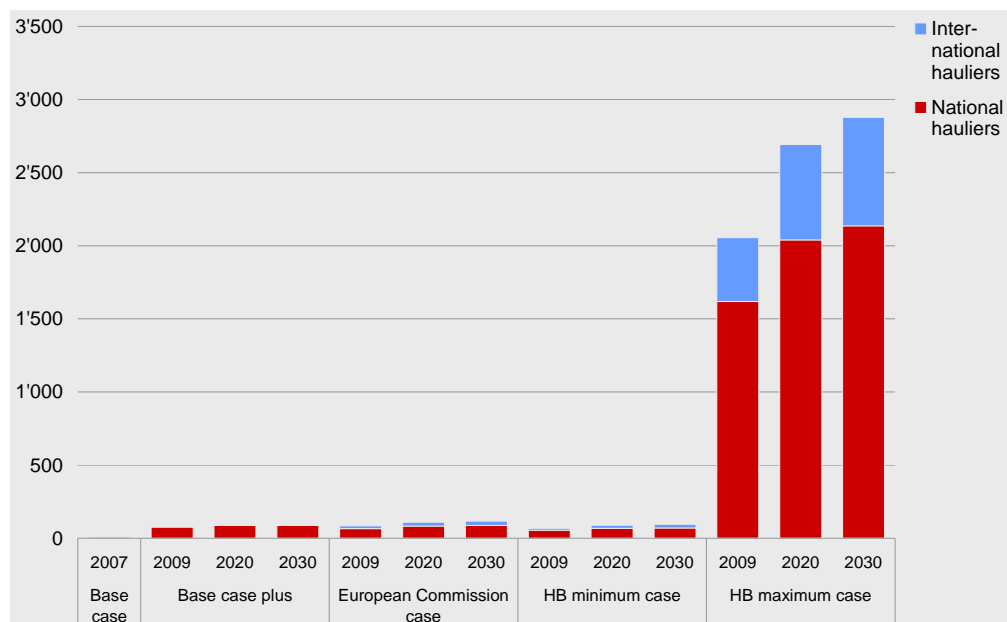


Slovakia

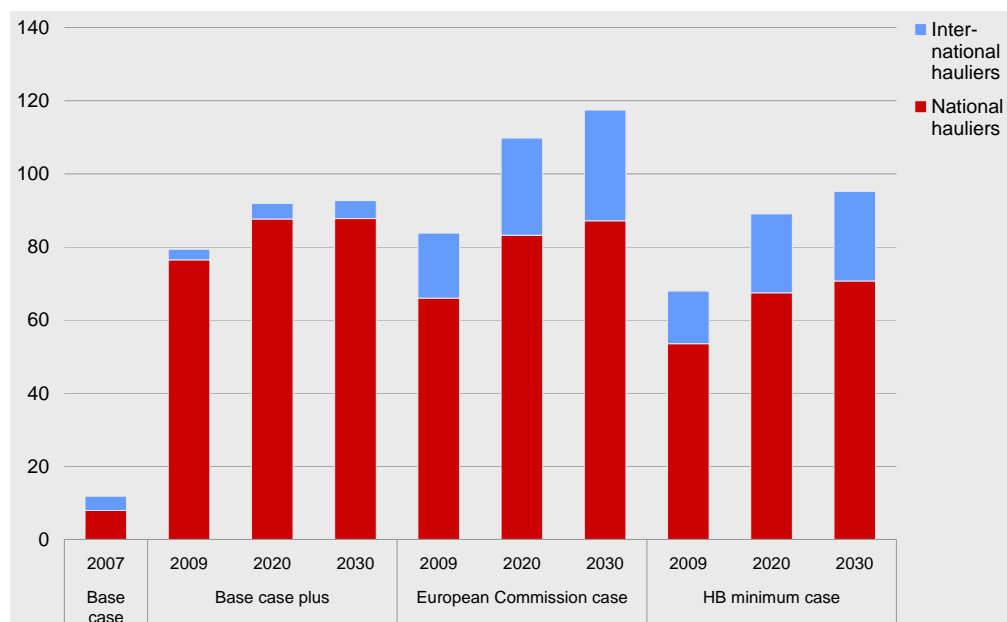
Annex I - Table 22: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits SK		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by SK from	national hauliers	8	77	88	88	66	83	87	54	67	71	1'619	2'040	2'137
	international hauliers	4	3	4	5	18	27	30	14	22	25	436	653	742
	Total	12	79	92	93	84	110	117	68	89	95	2'054	2'693	2'879
Road user charges paid by trucks registered in SK for	inland transport	8	77	88	88	66	83	87	54	67	71	1'619	2'040	2'137
	transport abroad	128	159	259	301	278	459	533	250	412	479	3'622	6'055	6'989
	Total	136	235	347	389	344	543	620	303	480	549	5'241	8'095	9'126
Road user charge surpluses/deficits for SK with regard to the road hauliers	in Mio. EUR	-124	-156	-255	-296	-260	-433	-503	-236	-391	-454	-3'186	-5'402	-6'247
	in %	-91	-66	-74	-76	-76	-80	-81	-78	-81	-83	-61	-67	-68
Total charge costs of economy in SK for	national transport	5	74	84	83	52	59	58	42	48	47	1'278	1'440	1'430
	foreign trade transport	58	63	128	152	121	245	289	108	218	257	1'763	3'516	4'122
	Total	63	137	212	235	173	304	347	150	265	304	3'040	4'956	5'552
Road user charge surpluses/deficits for SK with regard to the national economy	in Mio. EUR	-52	-58	-120	-142	-90	-194	-229	-82	-176	-209	-986	-2'263	-2'673
	in %	-81	-42	-57	-61	-52	-64	-66	-55	-66	-69	-32	-46	-48

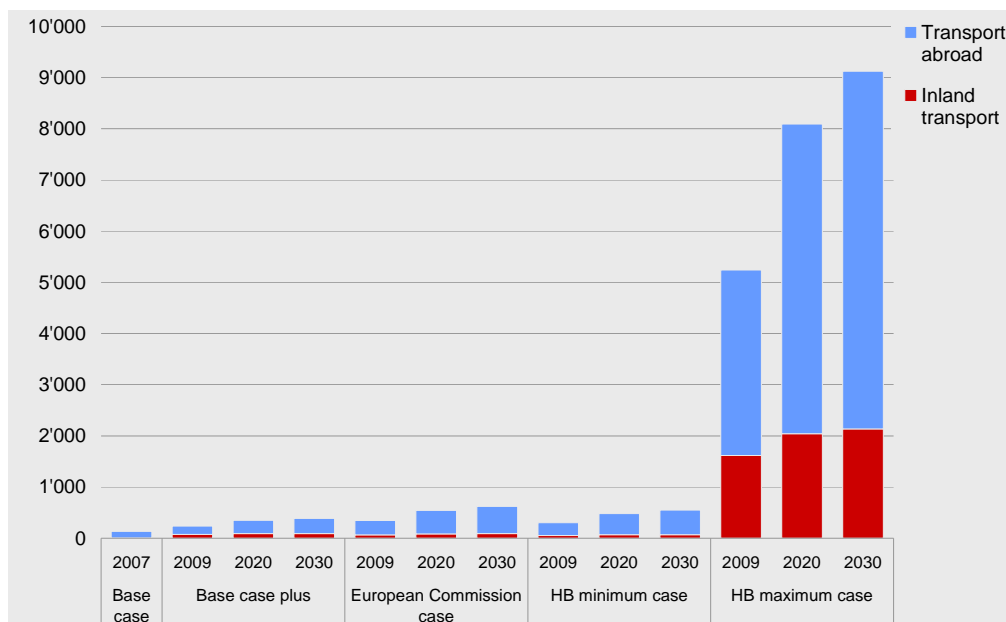
Annex I - Figure 209: Comparison of road user charge revenues for Slovakia from national and international road hauliers by scenarios and years (in Mil. EUR)



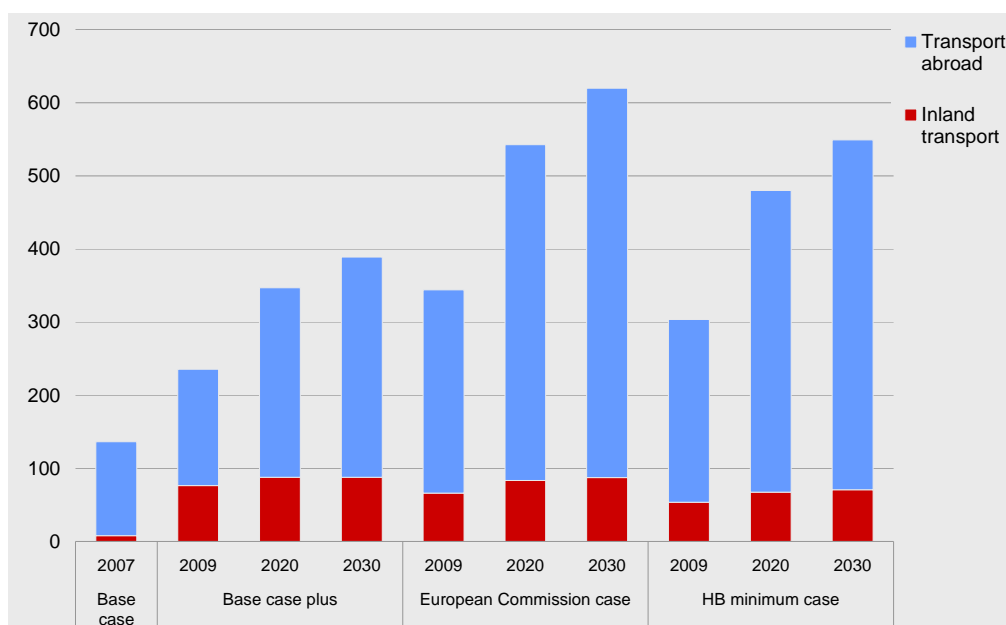
Annex I - Figure 210: Comparison of road user charge revenues for Slovakia from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



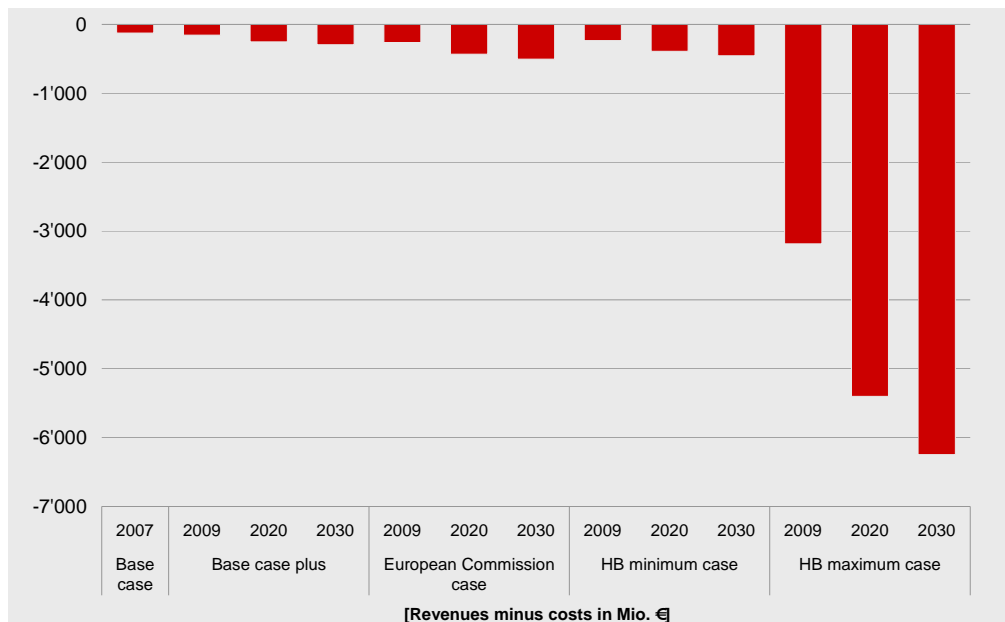
Annex I - Figure 211: Comparison of road user charges paid by Slovakian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



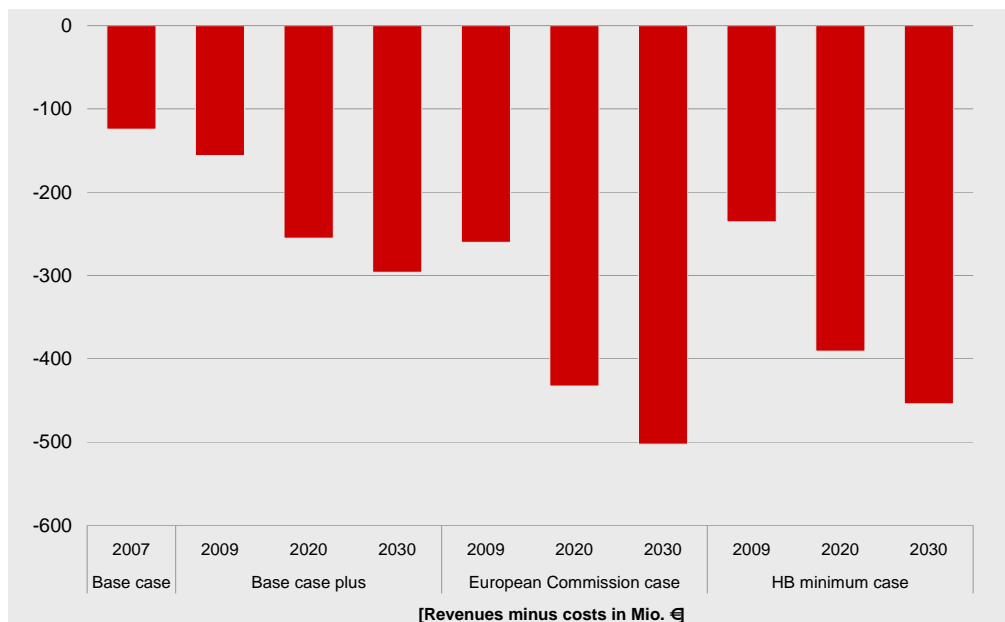
Annex I - Figure 212: Comparison of road user charges paid by Slovakian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



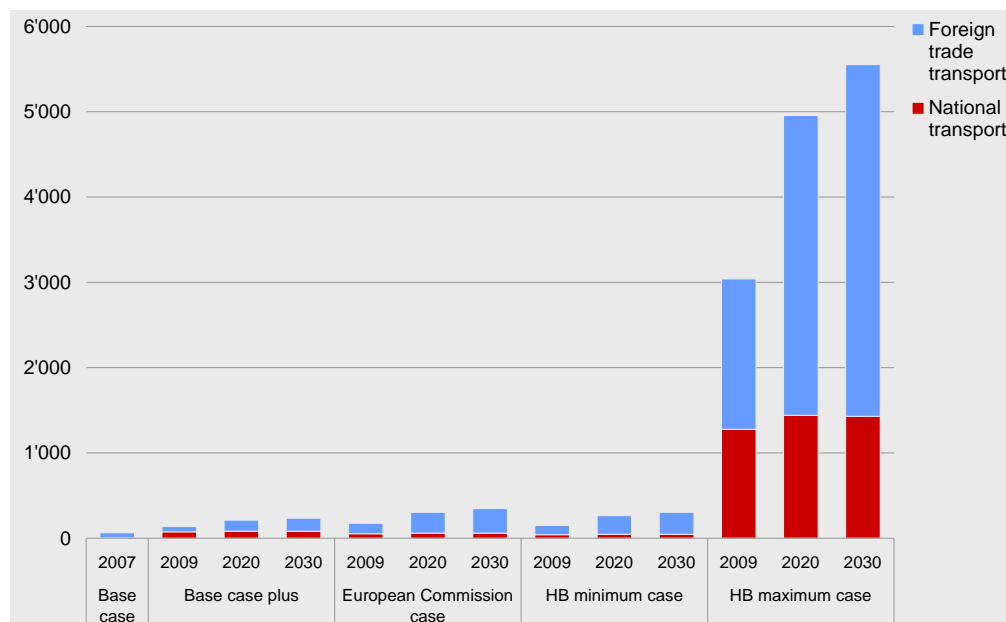
Annex I - Figure 213: Comparison of road user charge surpluses or deficits for Slovakia with regard to the road hauliers by scenarios and years (in Mil. EUR)



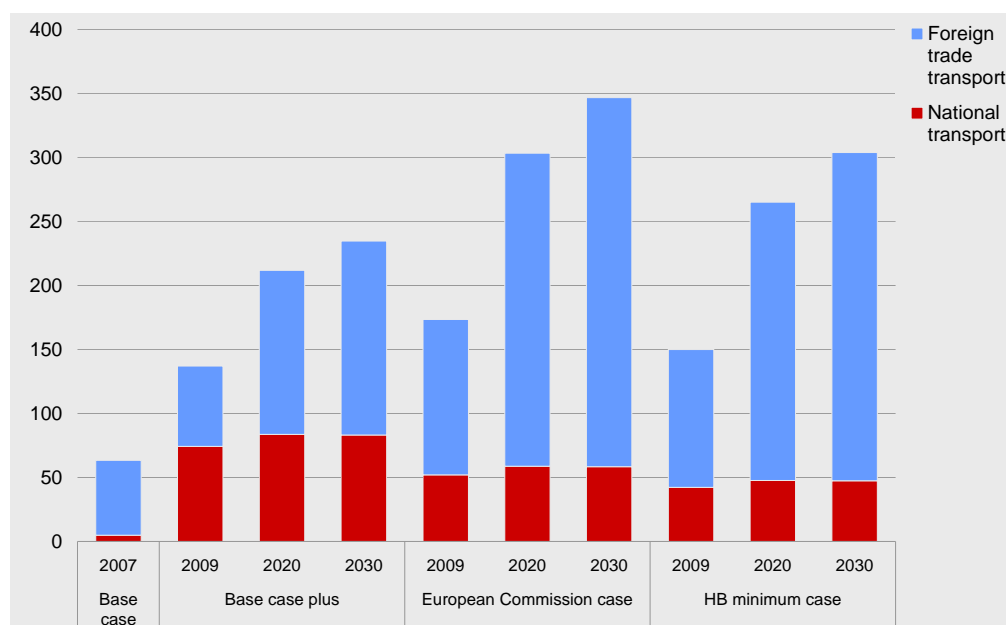
Annex I - Figure 214: Comparison of road user charge surpluses or deficits for Slovakia with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



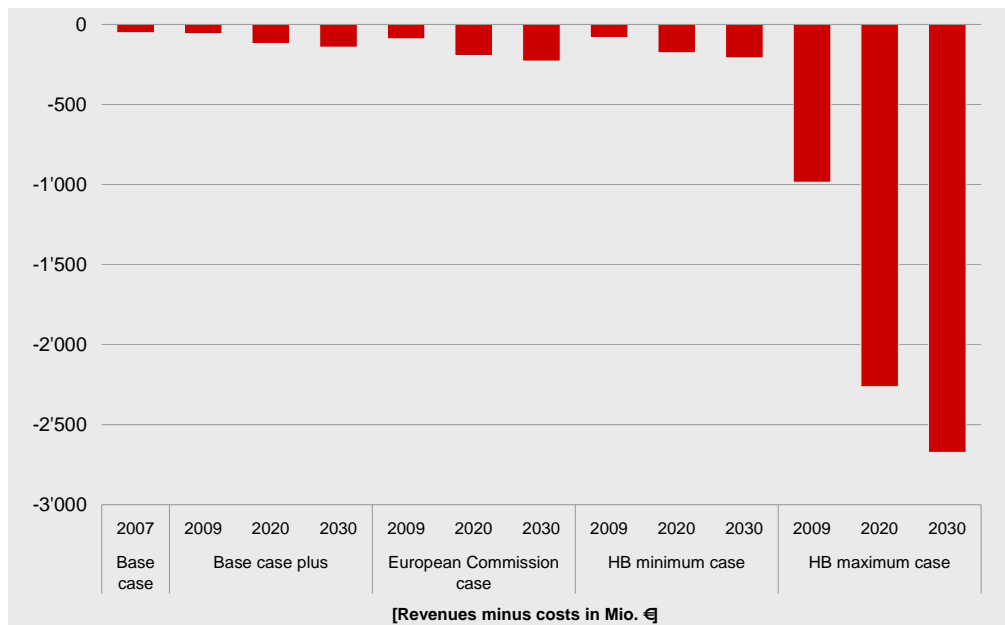
Annex I - Figure 215: Comparison of road user charge costs for the Slovakian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



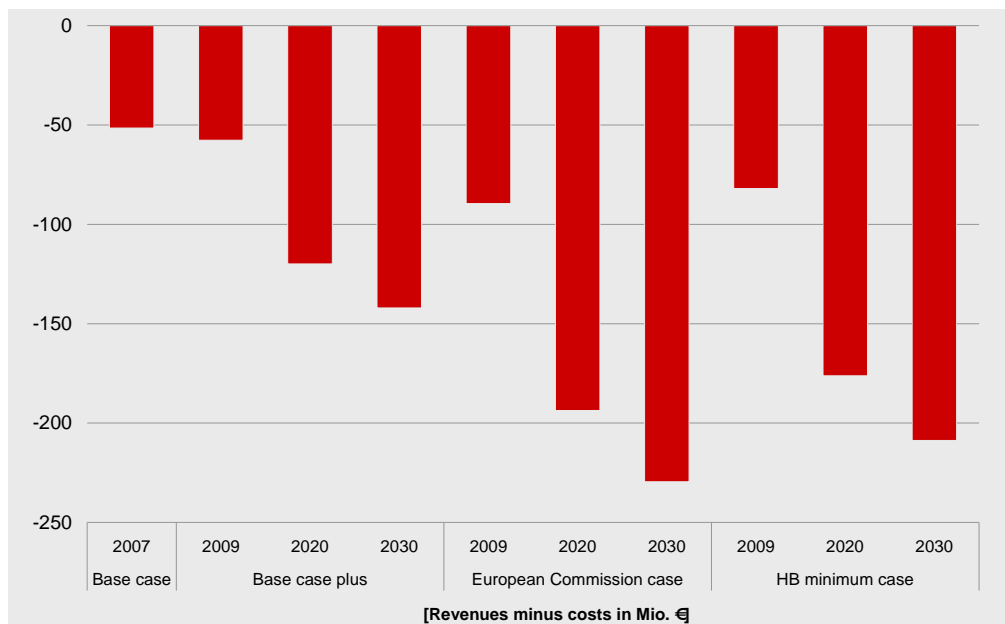
Annex I - Figure 216: Comparison of road user charge costs for the Slovakian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 217: Comparison of road user charge surpluses or deficits for Slovakia with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 218: Comparison of road user charge surpluses or deficits for Slovakia with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

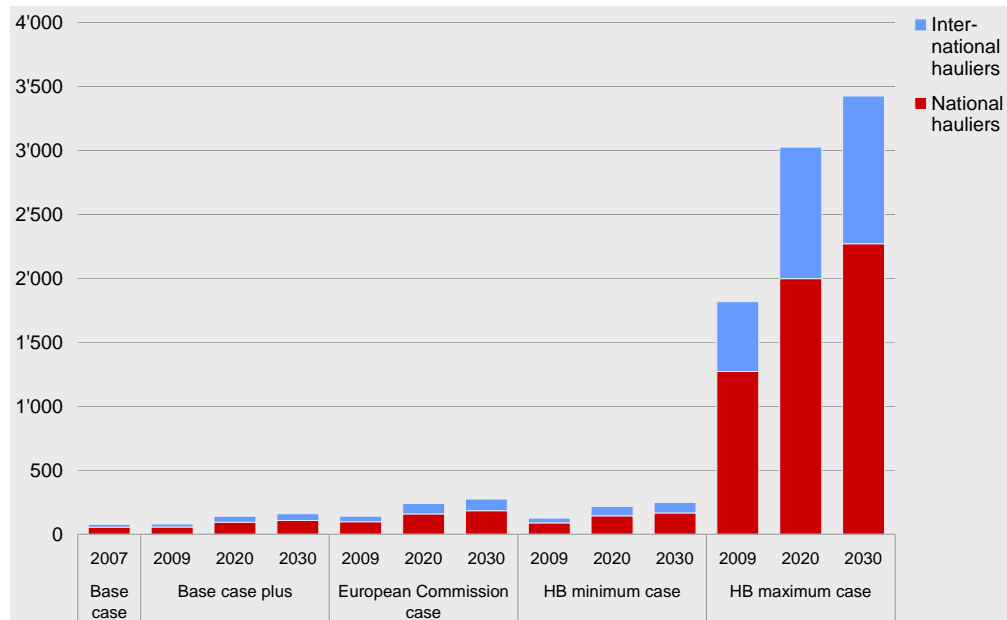


Slovenia

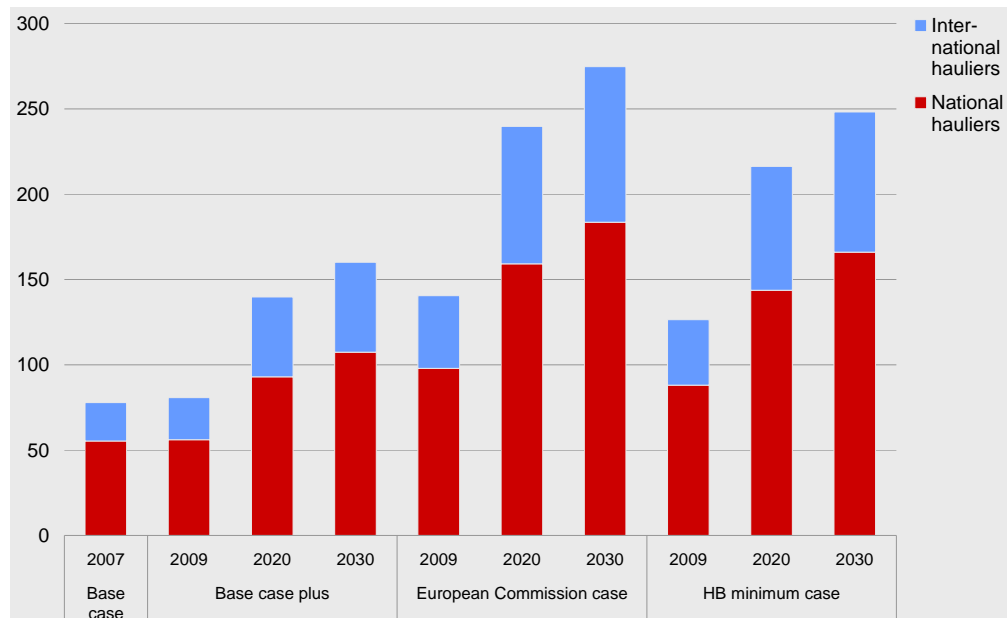
Annex I - Table 23: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits SI		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by SI from	national hauliers	55	56	93	107	98	159	184	88	144	166	1'272	1'998	2'270
	international hauliers	23	25	47	53	43	81	91	38	73	82	546	1'028	1'156
	Total	78	81	140	160	141	240	275	126	216	248	1'818	3'025	3'426
Road user charges paid by trucks registered in SI for	inland transport	55	56	93	107	98	159	184	88	144	166	1'272	1'998	2'270
	transport abroad	85	111	198	247	176	318	399	161	291	366	2'013	3'551	4'317
	Total	141	167	291	355	274	477	583	249	434	532	3'285	5'548	6'588
Road user charge surpluses/deficits for SI with regard to the road hauliers	in Mio. EUR	-63	-86	-151	-195	-134	-238	-308	-123	-218	-284	-1'468	-2'523	-3'162
	in %	-45	-52	-52	-55	-49	-50	-53	-49	-50	-53	-45	-45	-48
Total charge costs of economy in SI for	national transport	46	46	64	70	81	111	122	73	100	110	1'051	1'442	1'585
	foreign trade transport	46	61	141	177	99	229	288	90	209	264	1'161	2'605	3'183
	Total	93	107	205	247	180	340	410	162	309	373	2'212	4'047	4'767
Road user charge surpluses/deficits for SI with regard to the national economy	in Mio. EUR	-15	-26	-65	-87	-39	-101	-136	-36	-93	-125	-395	-1'022	-1'342
	in %	-16	-25	-32	-35	-22	-30	-33	-22	-30	-34	-18	-25	-28

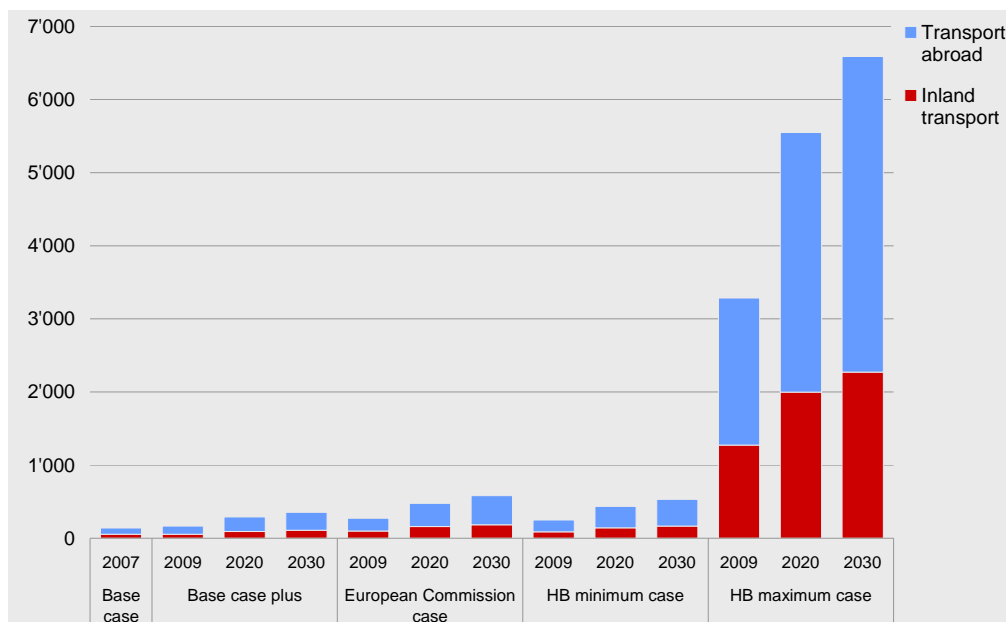
Annex I - Figure 219: Comparison of road user charge revenues for Slovenia from national and international road hauliers by scenarios and years (in Mil. EUR)



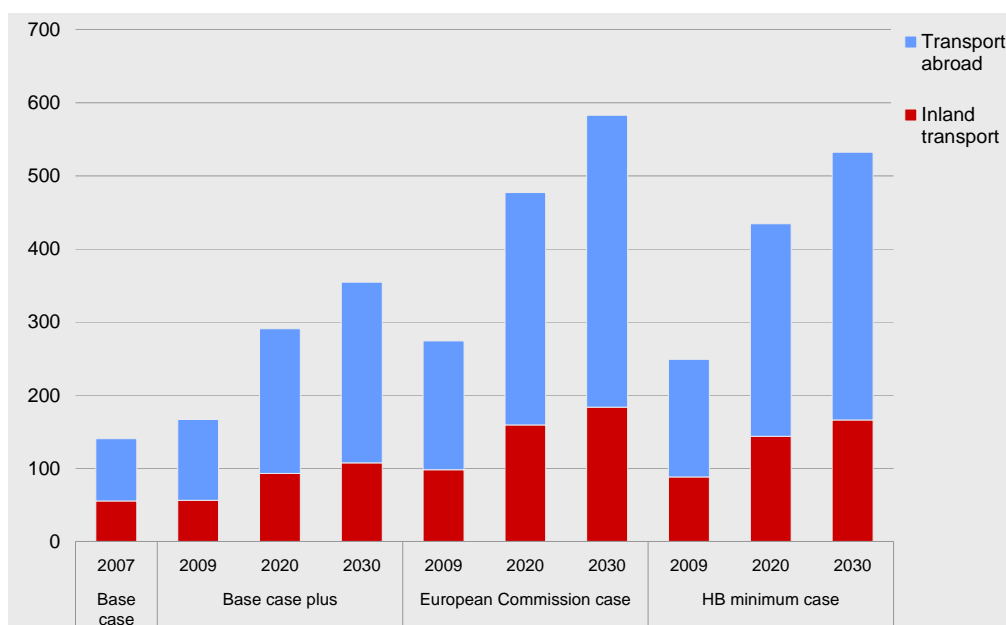
Annex I - Figure 220: Comparison of road user charge revenues for Slovenia from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



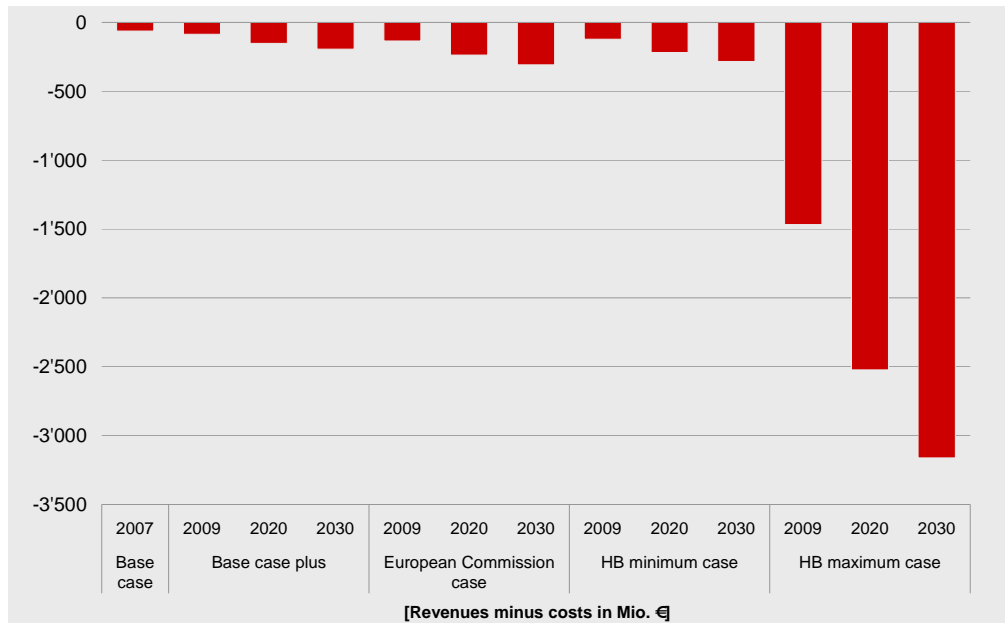
Annex I - Figure 221: Comparison of road user charges paid by Slovenian road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



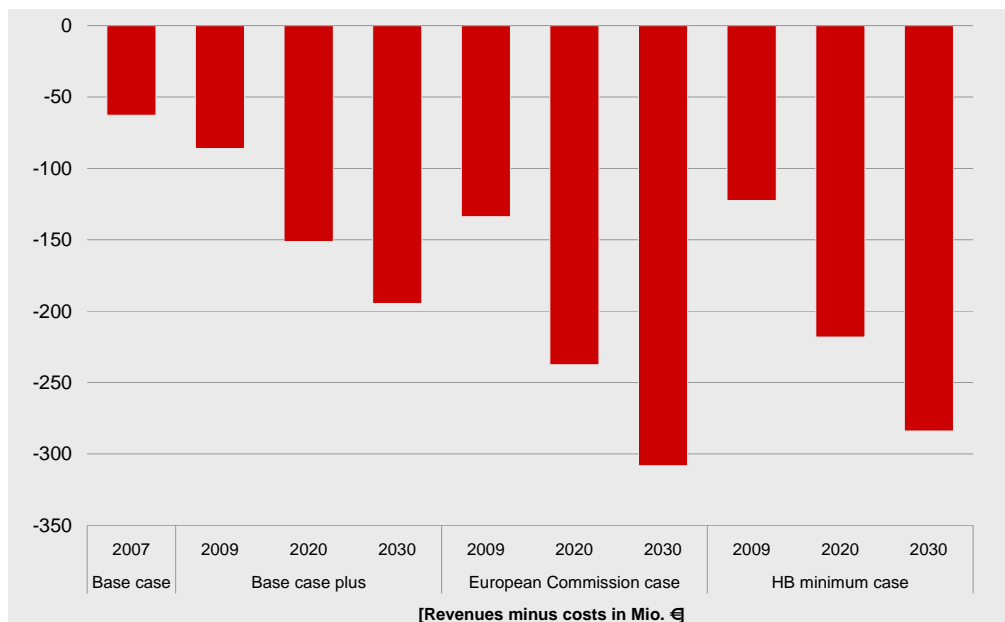
Annex I - Figure 222: Comparison of road user charges paid by Slovenian road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



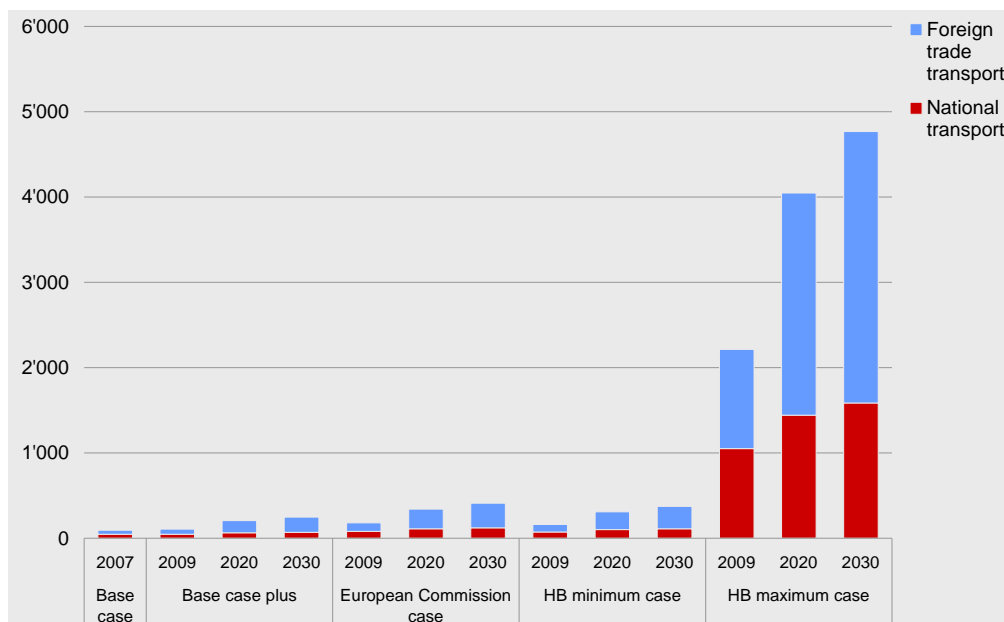
Annex I - Figure 223: Comparison of road user charge surpluses or deficits for Slovenia with regard to the road hauliers by scenarios and years (in Mil. EUR)



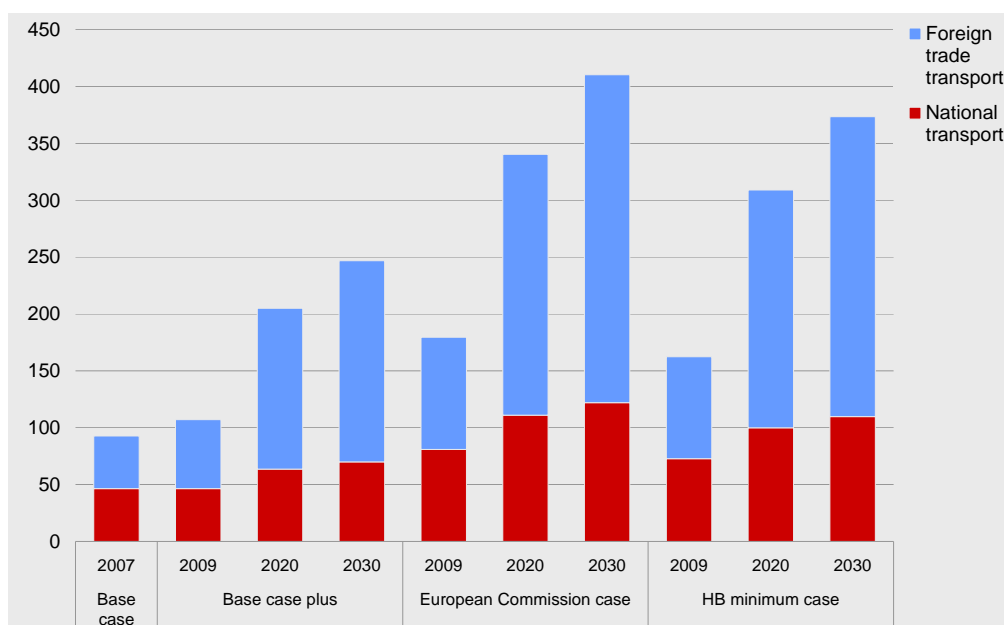
Annex I - Figure 224: Comparison of road user charge surpluses or deficits for Slovenia with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



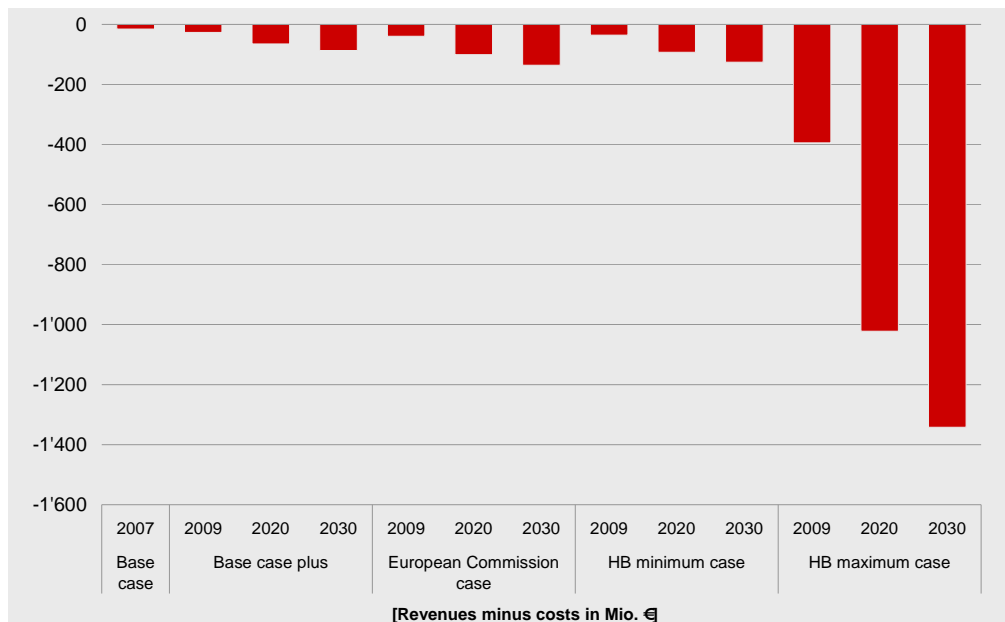
Annex I - Figure 225: Comparison of road user charge costs for the Slovenian economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



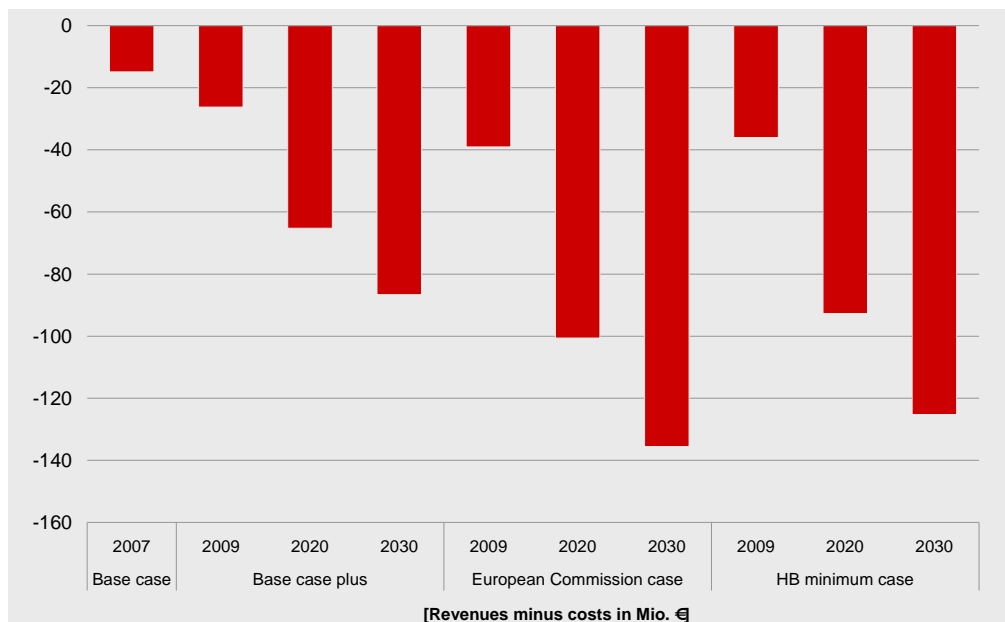
Annex I - Figure 226: Comparison of road user charge costs for the Slovenian economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 227: Comparison of road user charge surpluses or deficits for Slovenia with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 228: Comparison of road user charge surpluses or deficits for Slovenia with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

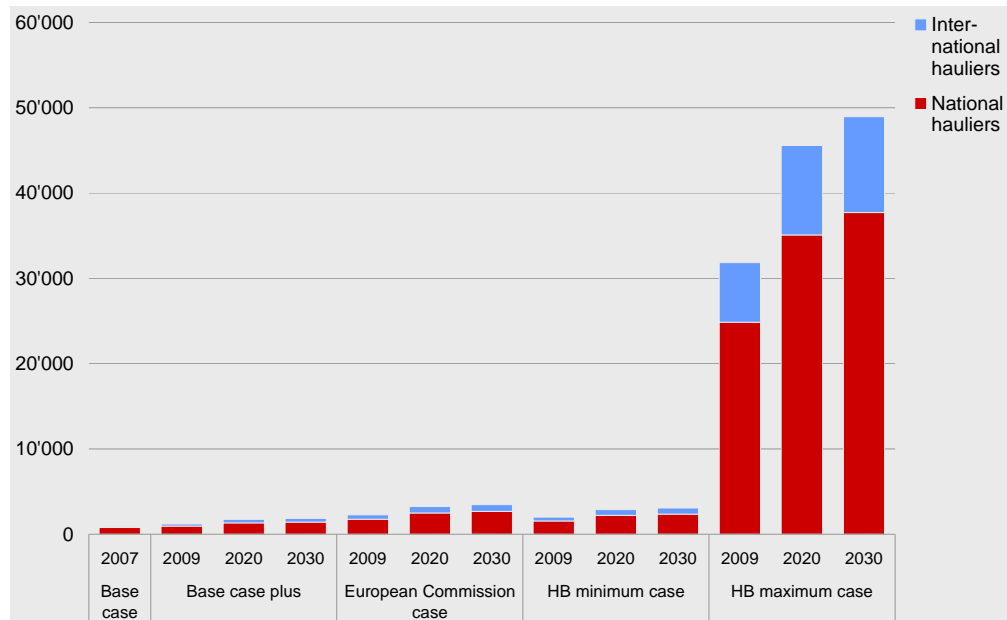


Spain

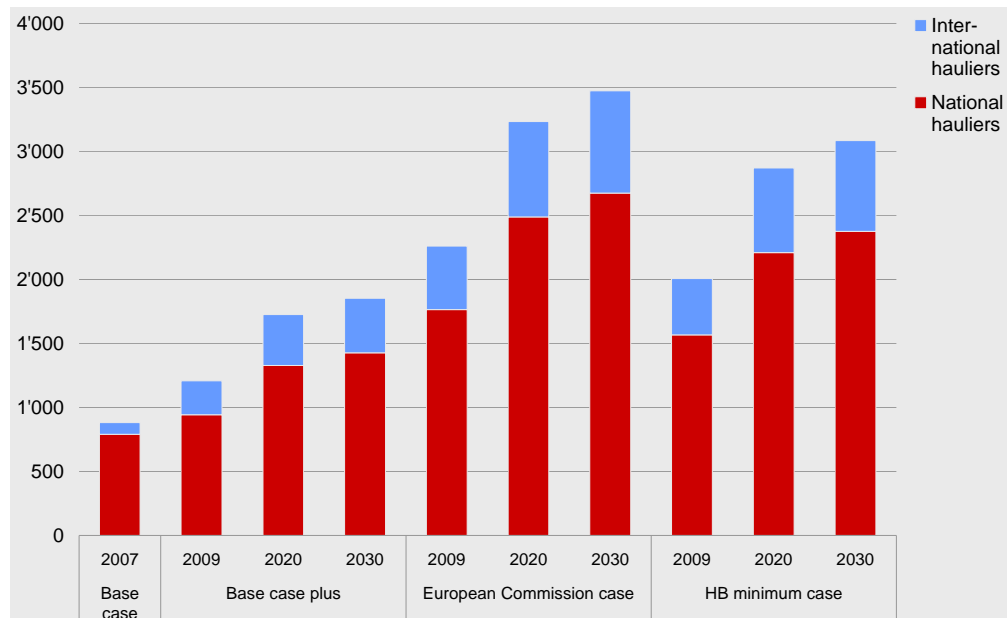
Annex I - Table 24: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits ES		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by ES from	national hauliers	790	943	1'328	1'427	1'765	2'490	2'676	1'567	2'211	2'376	24'850	35'098	37'706
	international hauliers	91	266	398	427	497	745	800	441	661	710	6'988	10'475	11'240
	Total	881	1'208	1'726	1'854	2'261	3'234	3'476	2'008	2'872	3'087	31'838	45'573	48'945
Road user charges paid by trucks registered in ES for	inland transport	790	943	1'328	1'427	1'765	2'490	2'676	1'567	2'211	2'376	24'850	35'098	37'706
	transport abroad	381	544	752	807	888	1'232	1'324	803	1'113	1'197	10'550	14'683	15'802
	Total	1'171	1'487	2'080	2'235	2'653	3'721	4'001	2'370	3'324	3'574	35'401	49'781	53'508
Road user charge surpluses/deficits for ES with regard to the road hauliers	in Mio. EUR	-291	-279	-354	-380	-392	-487	-525	-362	-452	-487	-3'563	-4'208	-4'563
	in %	-25	-19	-17	-17	-15	-13	-13	-15	-14	-14	-10	-8	-9
Total charge costs of economy in ES for	national transport	690	690	982	1'060	1'296	1'845	1'992	1'150	1'638	1'768	18'320	26'081	28'159
	foreign trade transport	437	730	1'060	1'147	1'251	1'826	1'977	1'124	1'639	1'775	15'893	23'291	25'192
	Total	1'127	1'420	2'042	2'208	2'547	3'671	3'969	2'274	3'277	3'543	34'214	49'373	53'351
Road user charge surpluses/deficits for ES with regard to the national economy	in Mio. EUR	-246	-211	-316	-354	-286	-436	-493	-266	-405	-457	-2'376	-3'800	-4'406
	in %	-22	-15	-15	-16	-11	-12	-12	-12	-12	-13	-7	-8	-8

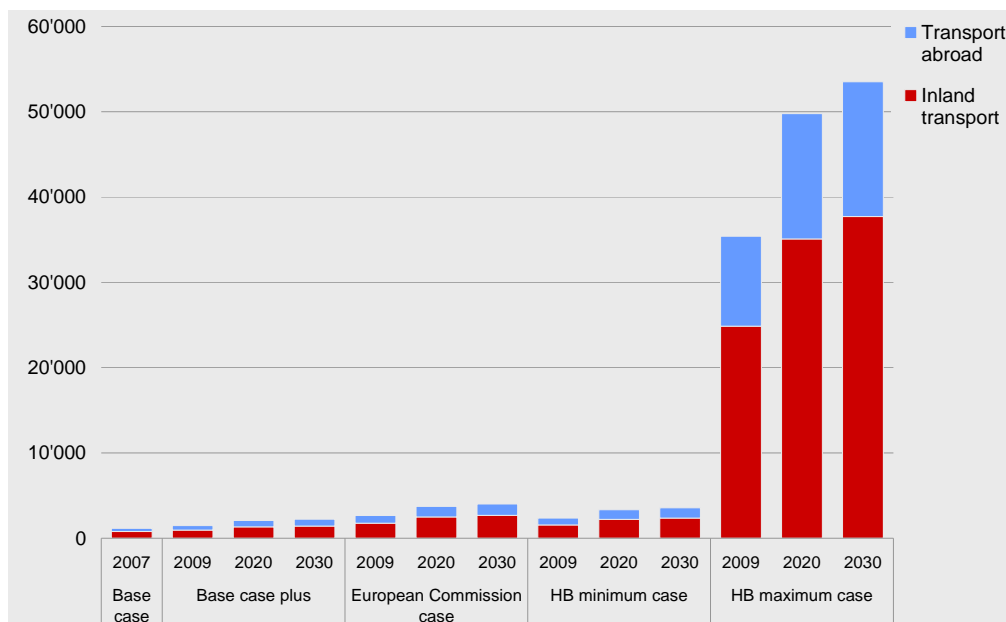
Annex I - Figure 229: Comparison of road user charge revenues for Spain from national and international road hauliers by scenarios and years (in Mil. EUR)



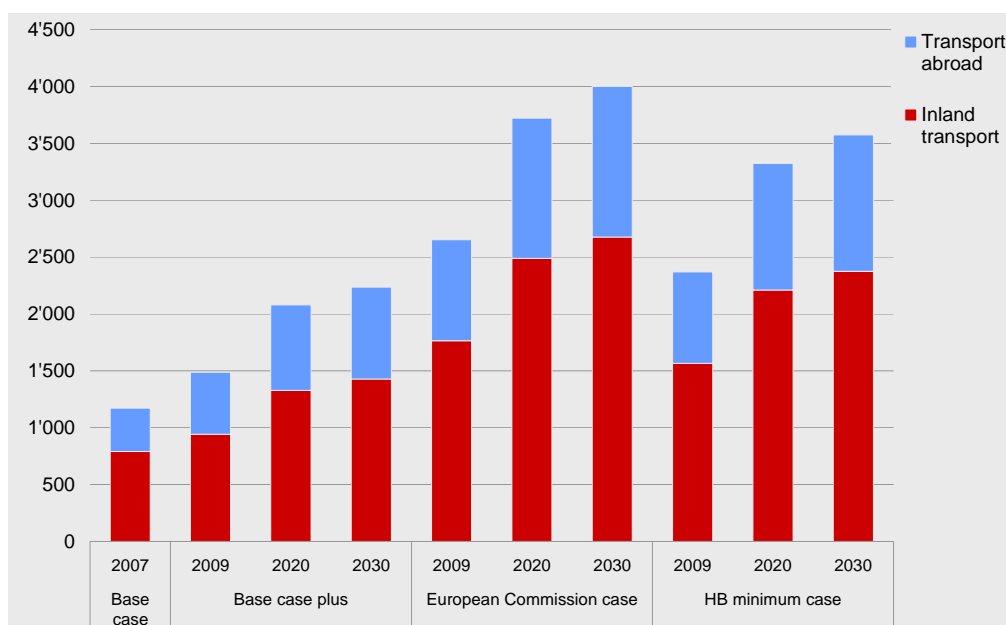
Annex I - Figure 230: Comparison of road user charge revenues for Spain from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



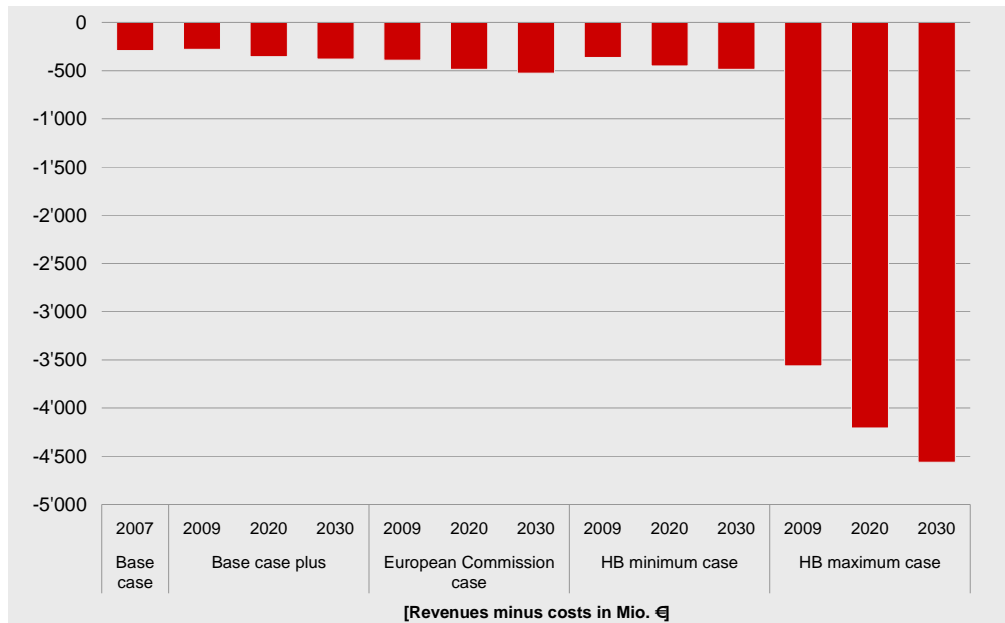
Annex I - Figure 231: Comparison of road user charges paid by Spanish road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



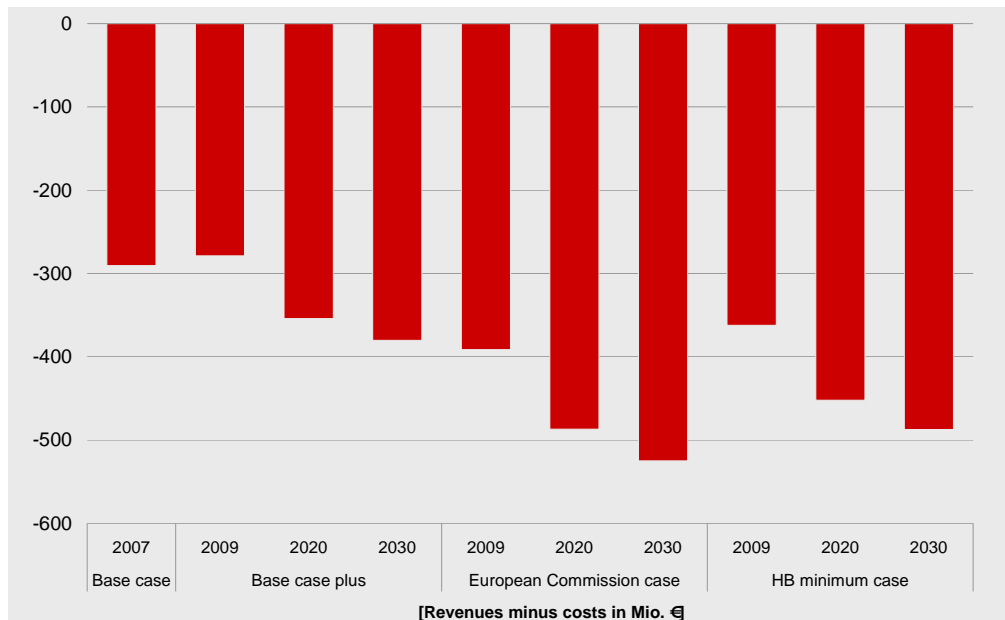
Annex I - Figure 232: Comparison of road user charges paid by Spanish road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



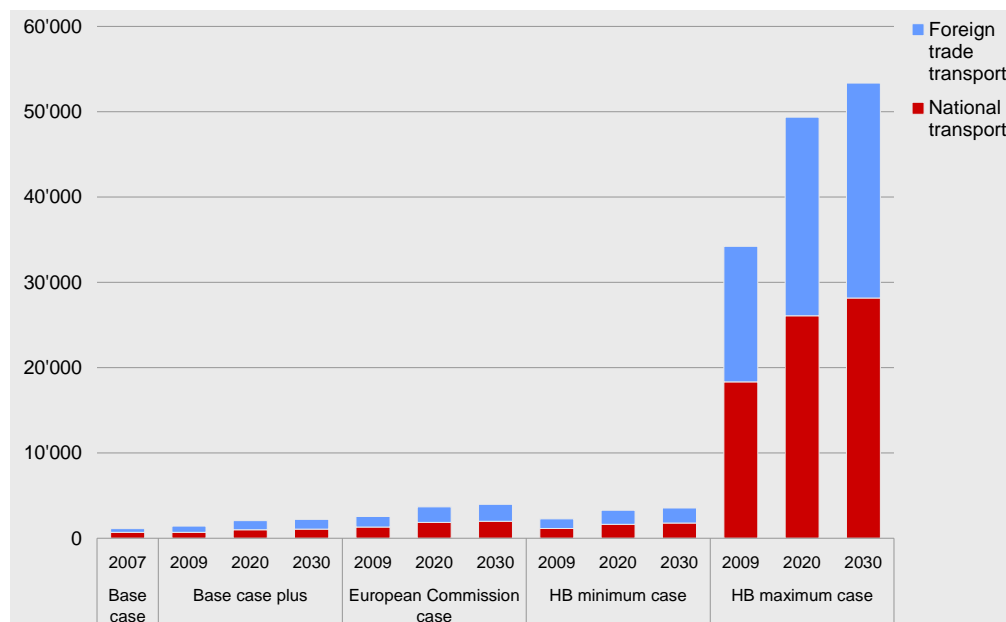
Annex I - Figure 233: Comparison of road user charge surpluses or deficits for Spain with regard to the road hauliers by scenarios and years (in Mil. EUR)



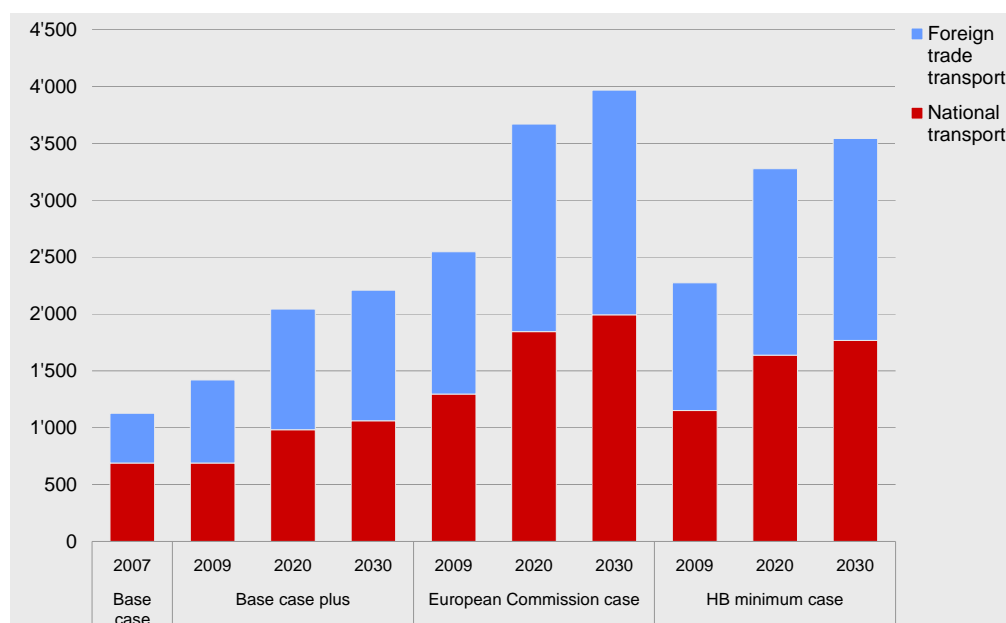
Annex I - Figure 234: Comparison of road user charge surpluses or deficits for Spain with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



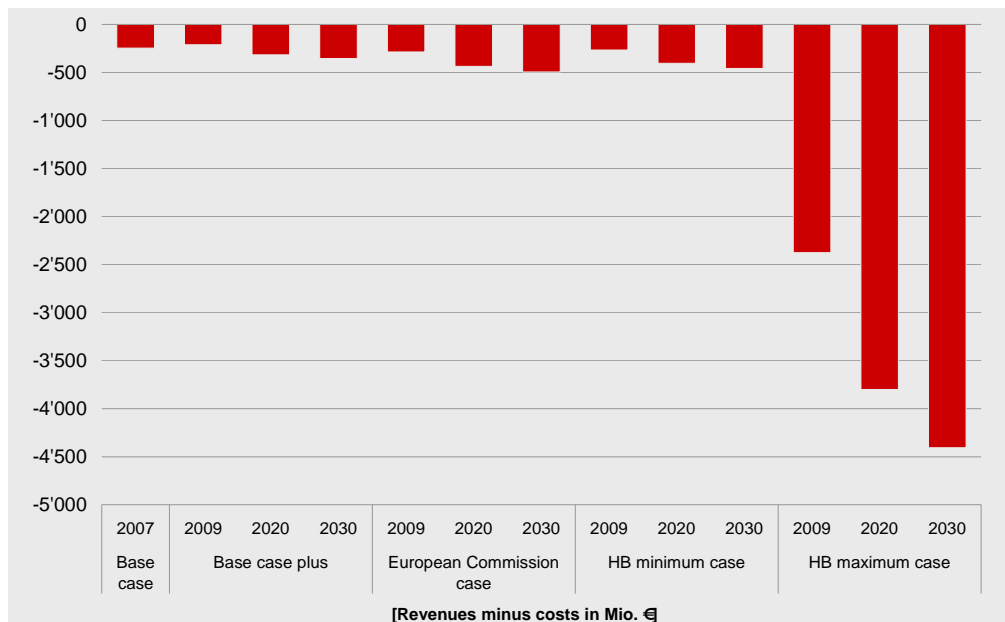
Annex I - Figure 235: Comparison of road user charge costs for the Spanish economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



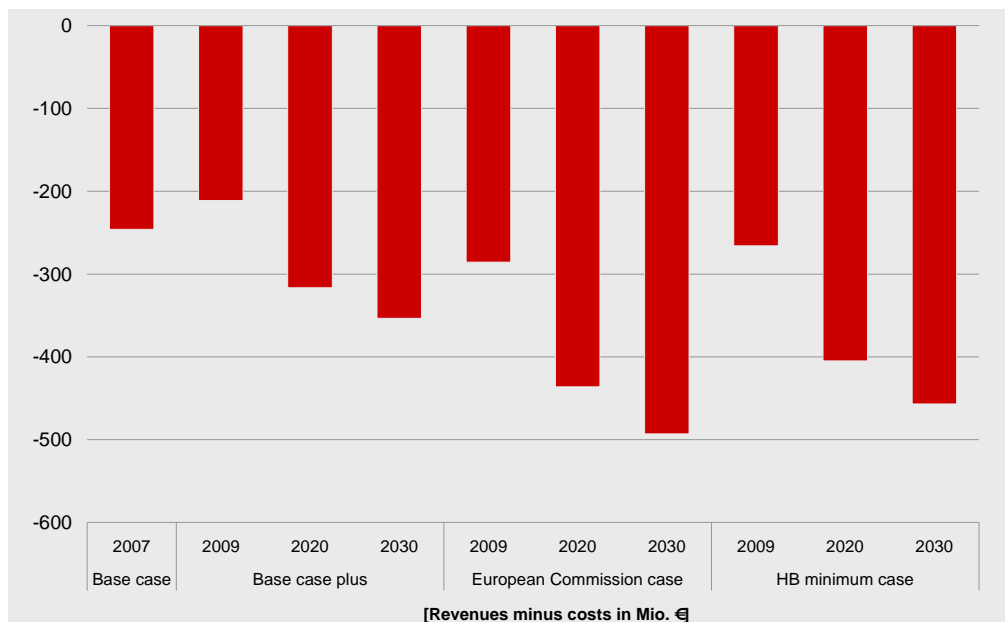
Annex I - Figure 236: Comparison of road user charge costs for the Spanish economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 237: Comparison of road user charge surpluses or deficits for Spain with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 238: Comparison of road user charge surpluses or deficits for Spain with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

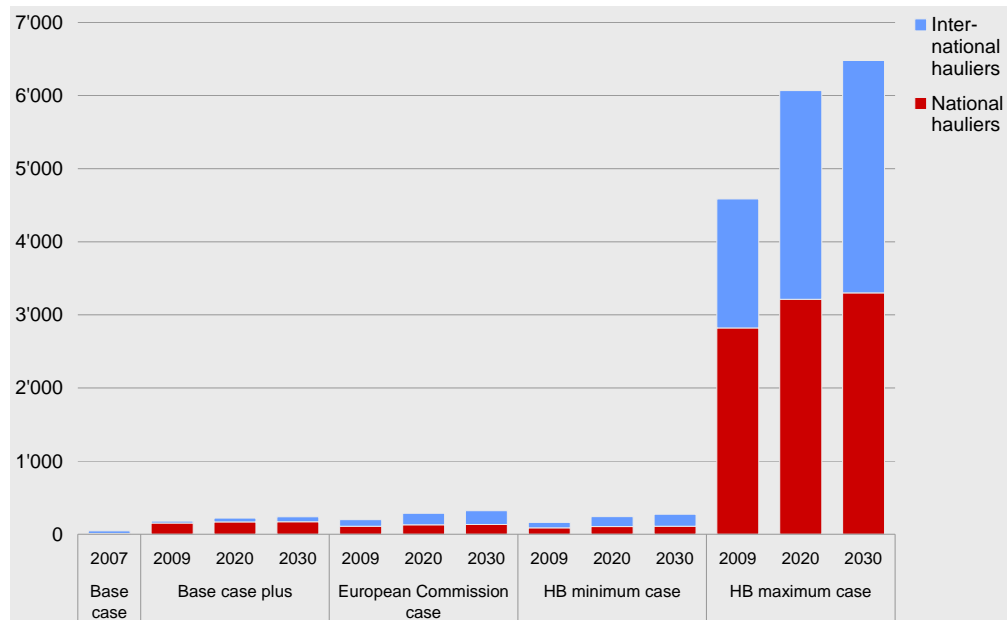


Sweden

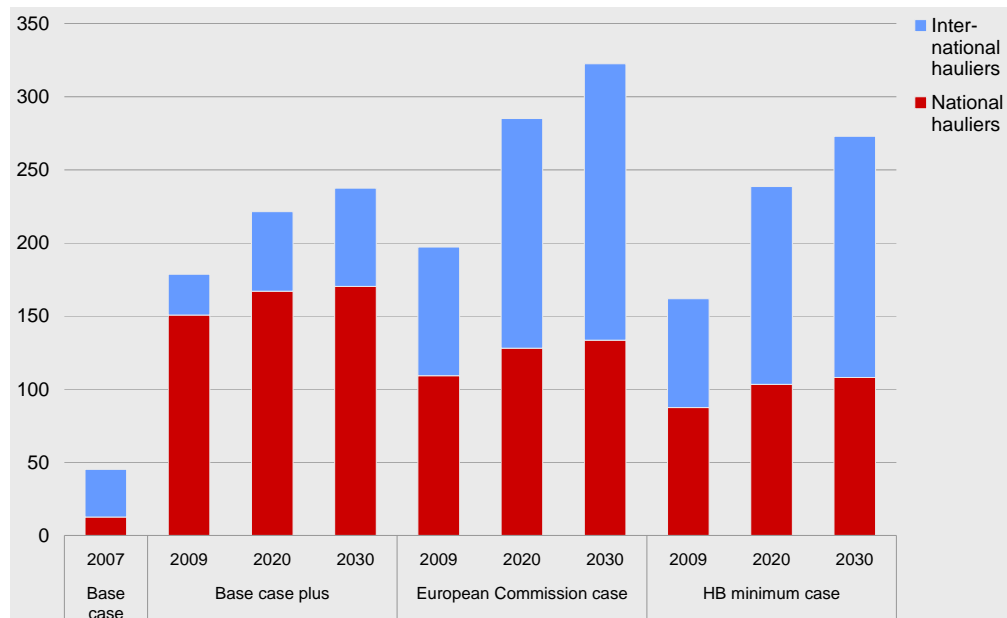
Annex I - Table 25: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits SE		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by SE from	national hauliers	13	151	167	170	109	128	133	87	103	108	2'822	3'212	3'300
	international hauliers	33	28	54	67	88	157	189	74	135	165	1'765	2'856	3'181
	Total	45	179	221	237	197	285	322	162	239	273	4'587	6'068	6'481
Road user charges paid by trucks registered in SE for	inland transport	13	151	167	170	109	128	133	87	103	108	2'822	3'212	3'300
	transport abroad	30	37	58	61	58	92	97	53	85	90	628	960	926
	Total	43	188	225	231	167	220	231	140	188	198	3'450	4'172	4'227
Road user charge surpluses/deficits for SE with regard to the road hauliers	in Mio. EUR	3	-9	-4	6	30	65	92	22	50	74	1'137	1'896	2'254
	in %	6	-5	-2	3	18	29	40	15	27	38	33	45	53
Total charge costs of economy in SE for	national transport	5	144	157	159	91	99	100	72	78	79	2'474	2'684	2'723
	foreign trade transport	66	83	149	173	157	281	324	140	253	295	2'233	3'680	3'878
	Total	70	227	306	332	248	379	424	212	331	374	4'708	6'364	6'601
Road user charge surpluses/deficits for SE with regard to the national economy	in Mio. EUR	-25	-49	-84	-94	-51	-94	-102	-50	-92	-101	-121	-295	-120
	in %	-36	-21	-28	-28	-21	-25	-24	-24	-28	-27	-3	-5	-2

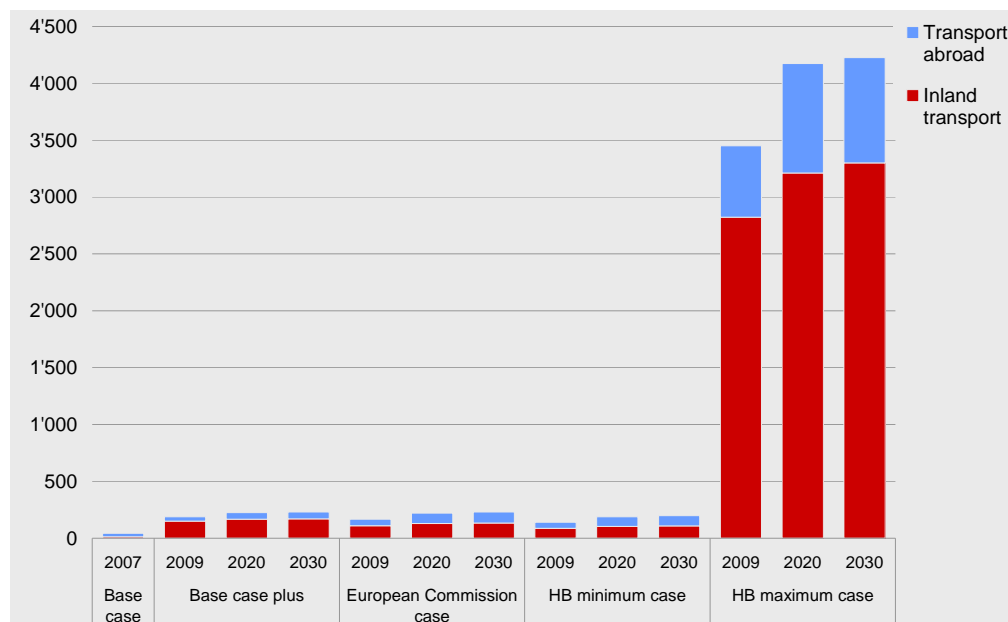
Annex I - Figure 239: Comparison of road user charge revenues for Sweden from national and international road hauliers by scenarios and years (in Mil. EUR)



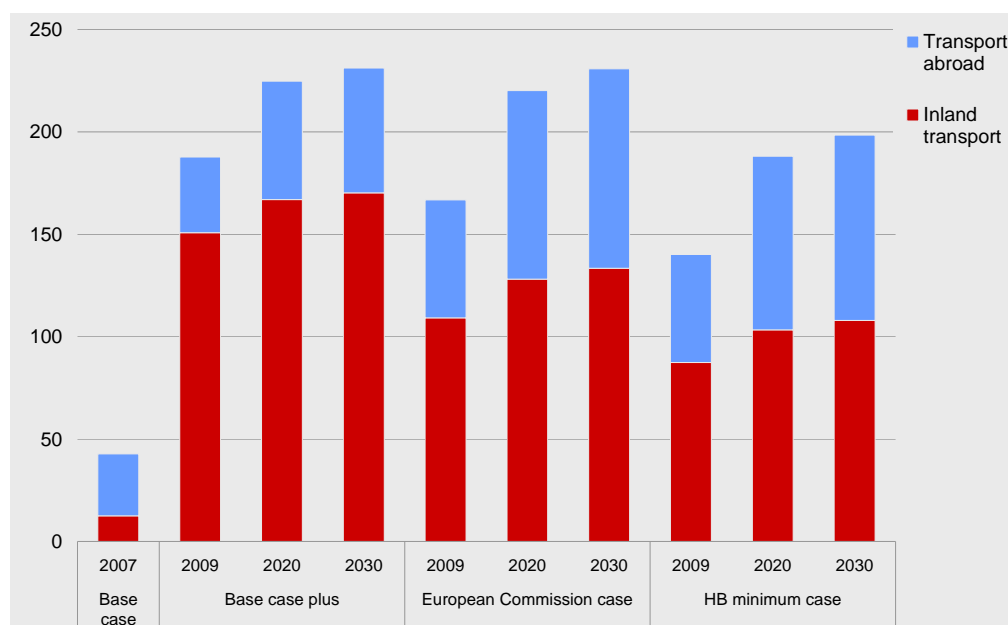
Annex I - Figure 240: Comparison of road user charge revenues for Sweden from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



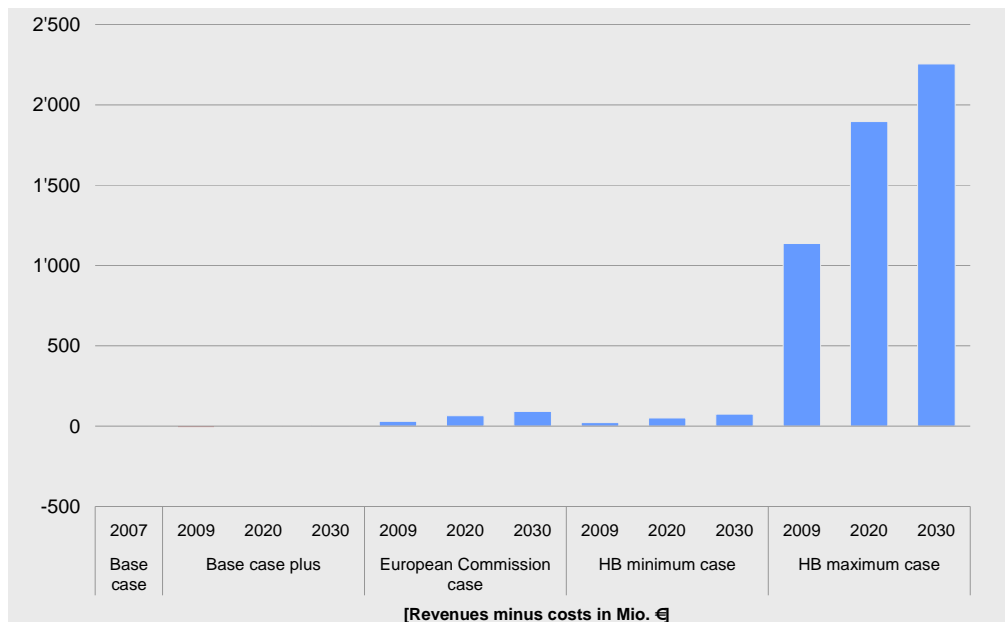
Annex I - Figure 241: Comparison of road user charges paid by Swedish road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



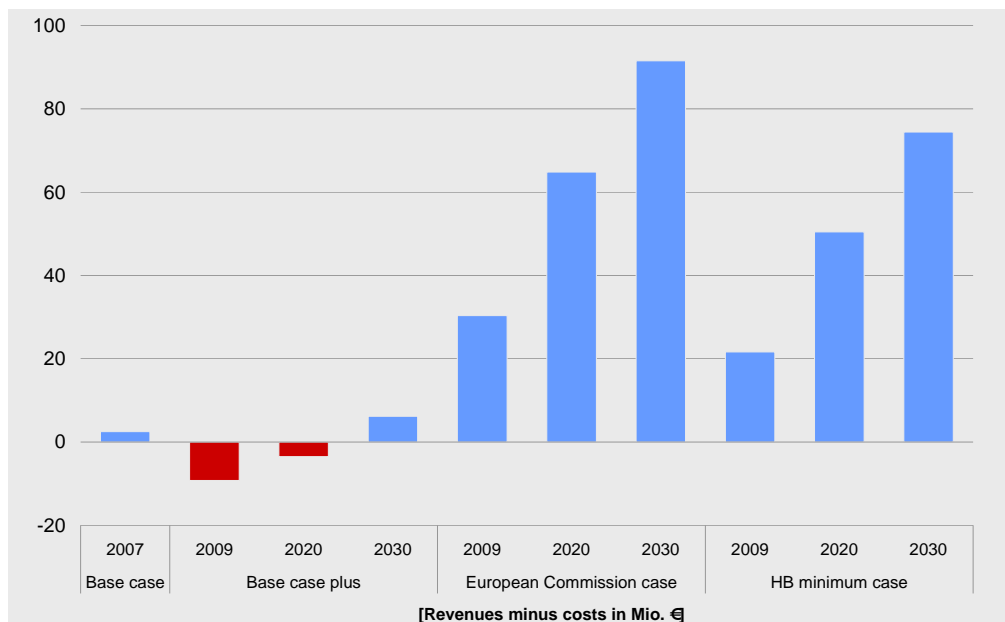
Annex I - Figure 242: Comparison of road user charges paid by Swedish road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



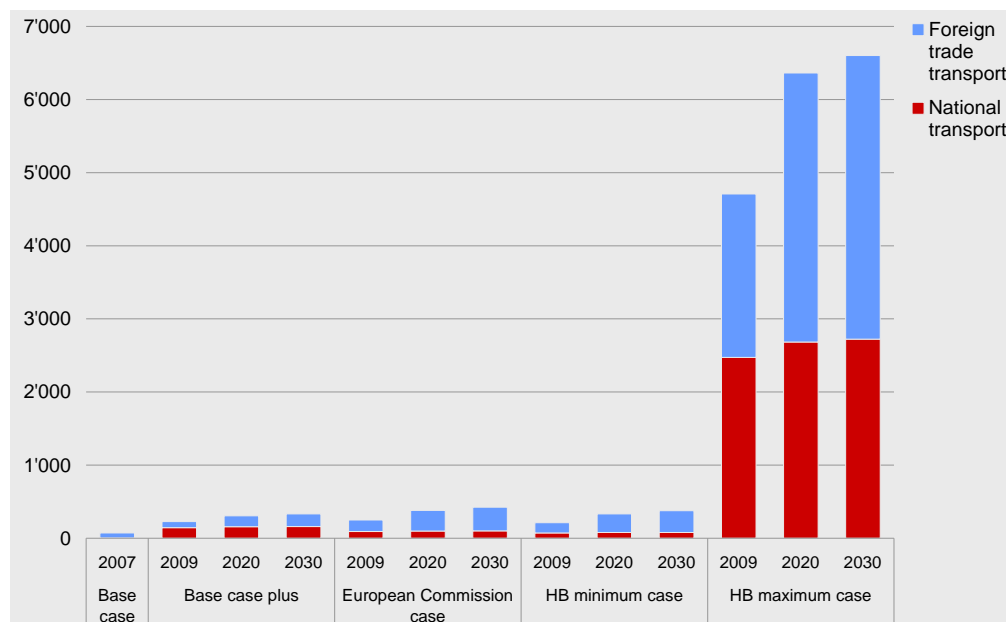
Annex I - Figure 243: Comparison of road user charge surpluses or deficits for Sweden with regard to the road hauliers by scenarios and years (in Mil. EUR)



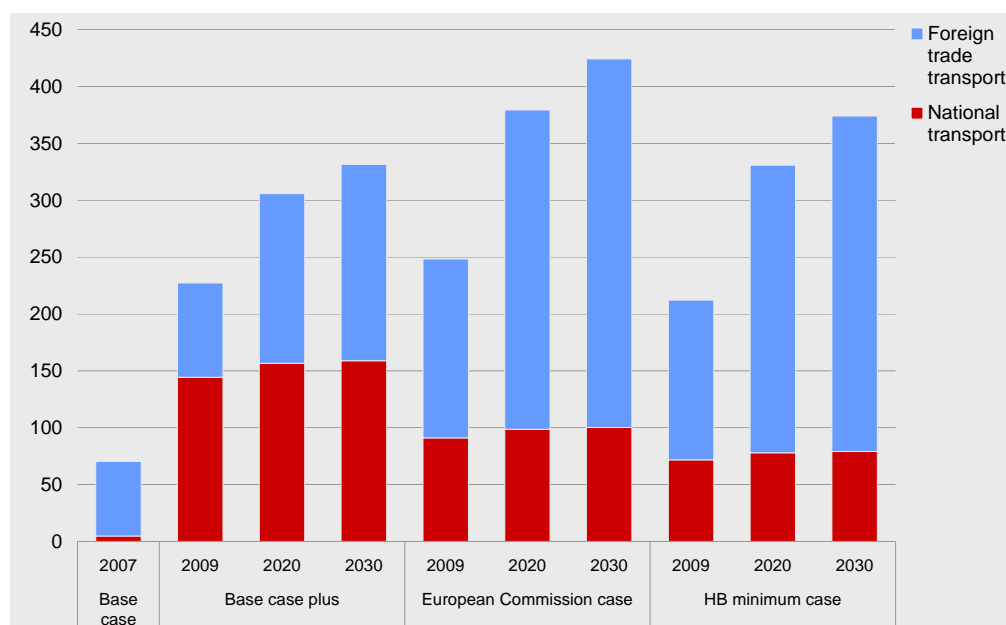
Annex I - Figure 244: Comparison of road user charge surpluses or deficits for Sweden with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



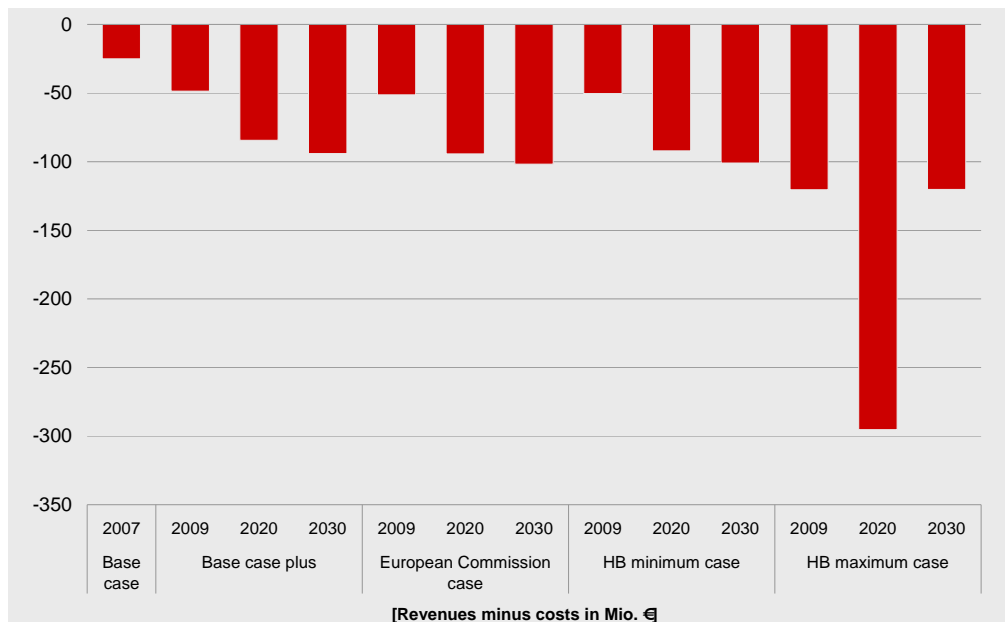
Annex I - Figure 245: Comparison of road user charge costs for the Swedish economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



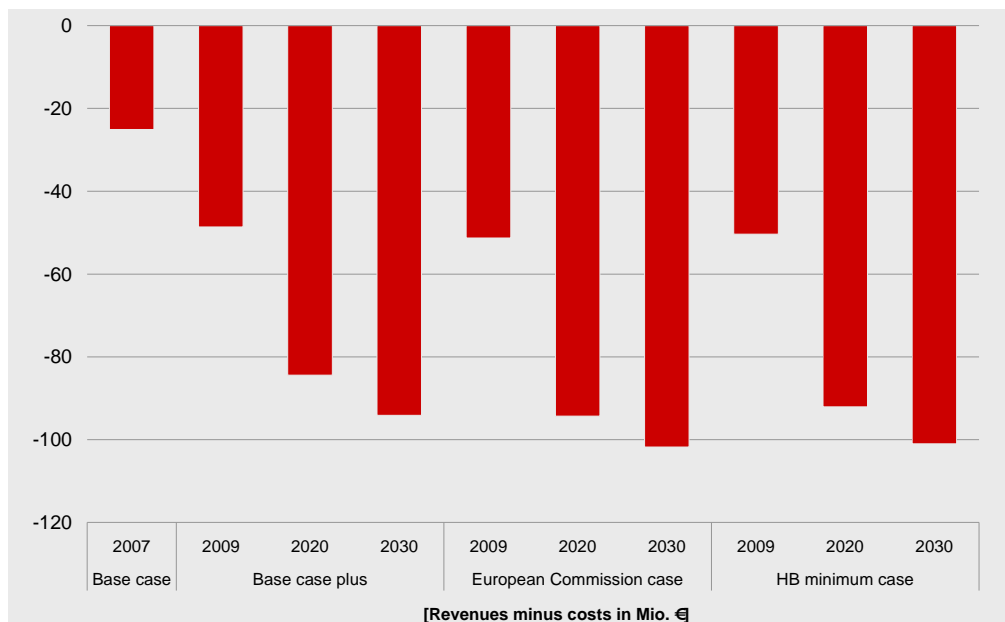
Annex I - Figure 246: Comparison of road user charge costs for the Swedish economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 247: Comparison of road user charge surpluses or deficits for Sweden with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 248: Comparison of road user charge surpluses or deficits for Sweden with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

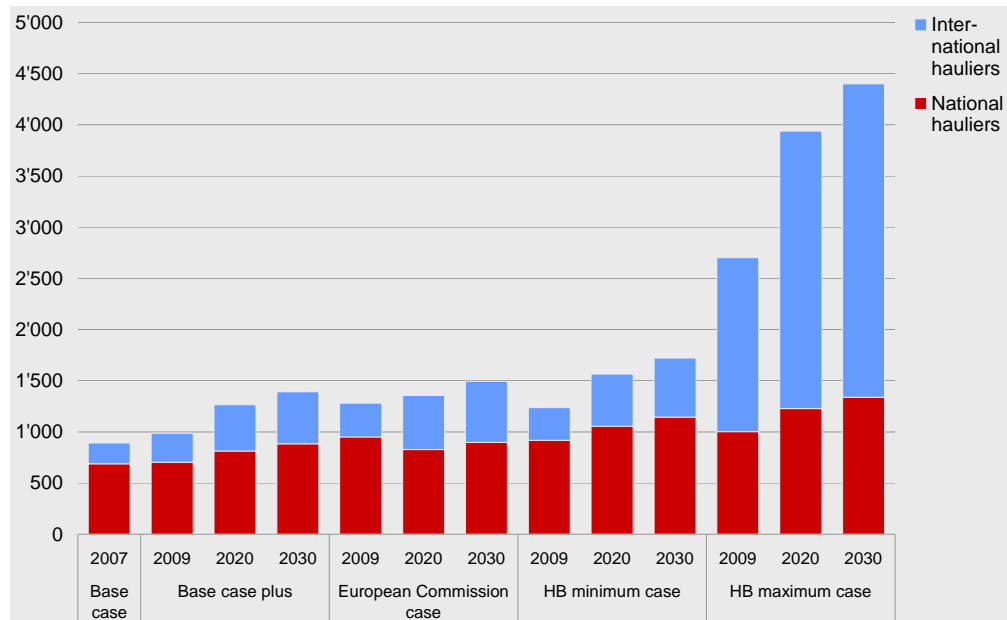


Switzerland

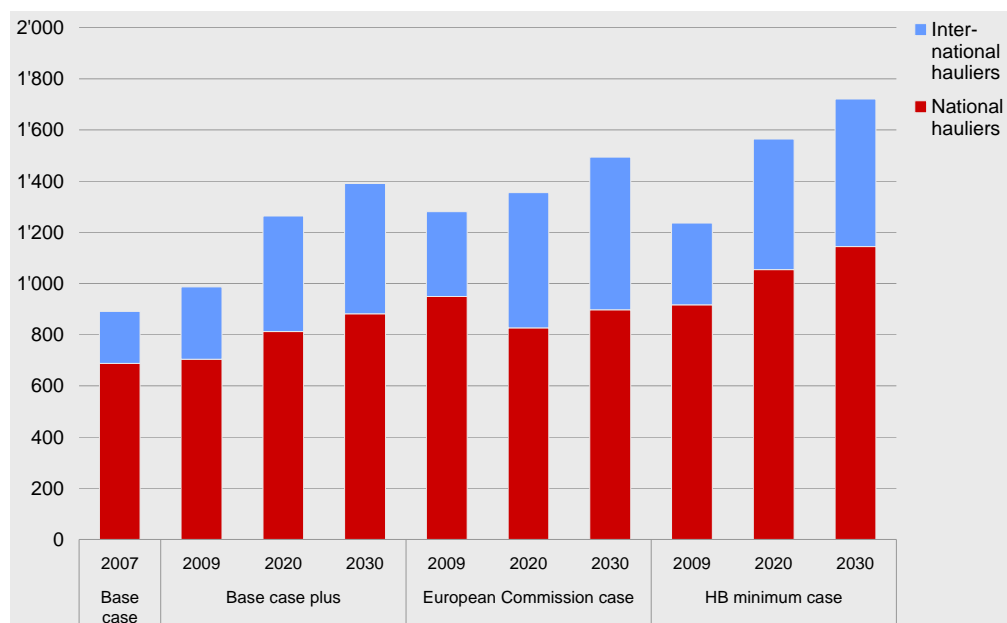
Annex I - Table 26: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits CH		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by CH from	national hauliers	688	704	812	882	949	827	898	916	1'054	1'145	1'003	1'228	1'339
	international hauliers	203	283	451	509	331	529	597	320	510	576	1'699	2'711	3'062
	Total	891	987	1'263	1'391	1'281	1'355	1'495	1'236	1'565	1'721	2'702	3'939	4'400
Road user charges paid by trucks registered in CH for	inland transport	688	704	812	882	949	827	898	916	1'054	1'145	1'003	1'228	1'339
	transport abroad	23	35	47	51	58	79	86	52	71	78	713	974	1'057
	Total	710	739	859	933	1'007	906	984	969	1'126	1'222	1'716	2'202	2'396
Road user charge surpluses/deficits for CH with regard to the road hauliers	in Mio. EUR	181	248	404	458	273	450	511	268	439	499	986	1'737	2'004
	in %	25	34	47	49	27	50	52	28	39	41	57	79	84
Total charge costs of economy in CH for	national transport	645	645	729	791	879	729	791	849	961	1'041	645	729	791
	foreign trade transport	79	181	259	280	256	366	395	238	340	367	2'353	3'347	3'601
	Total	724	826	989	1'071	1'135	1'095	1'185	1'087	1'301	1'409	2'998	4'076	4'392
Road user charge surpluses/deficits for CH with regard to the national economy	in Mio. EUR	167	161	275	321	145	260	309	149	264	312	-296	-137	8
	in %	23	20	28	30	13	24	26	14	20	22	-10	-3	0

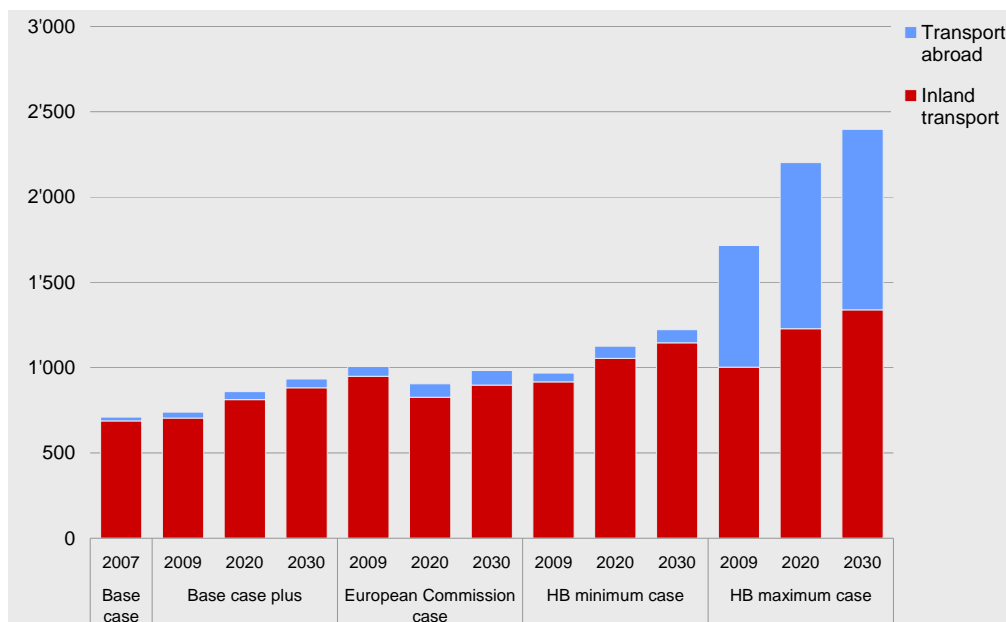
Annex I - Figure 249: Comparison of road user charge revenues for Switzerland from national and international road hauliers by scenarios and years (in Mil. EUR)



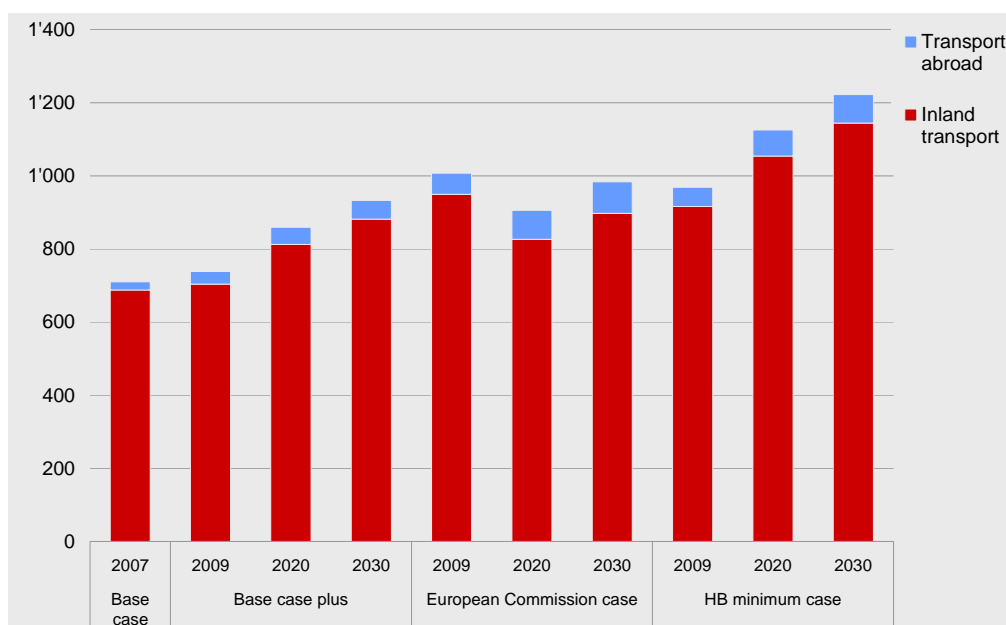
Annex I - Figure 250: Comparison of road user charge revenues for Switzerland from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



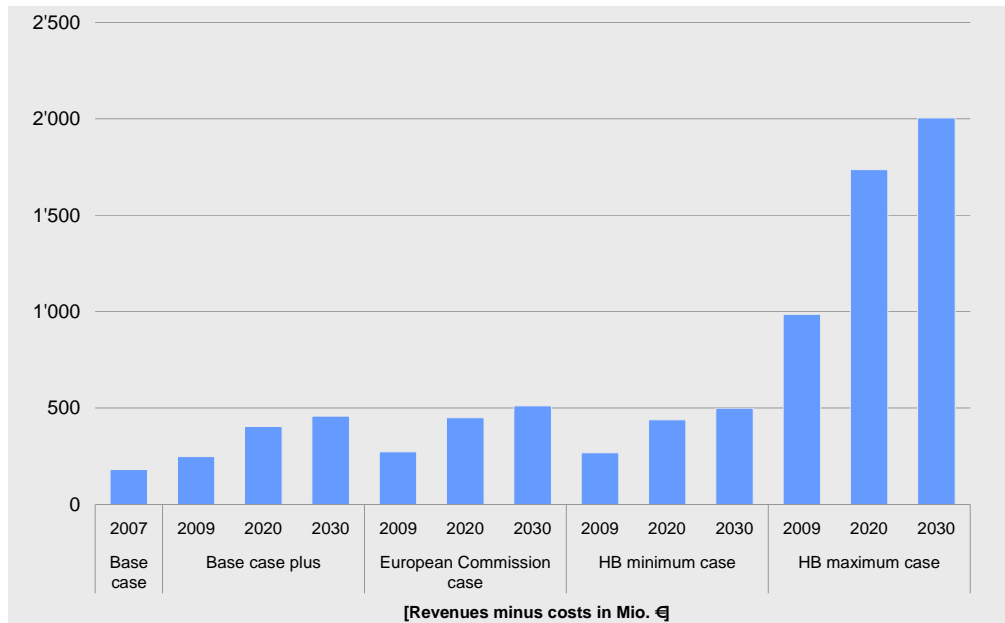
Annex I - Figure 251: Comparison of road user charges paid by Swiss road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



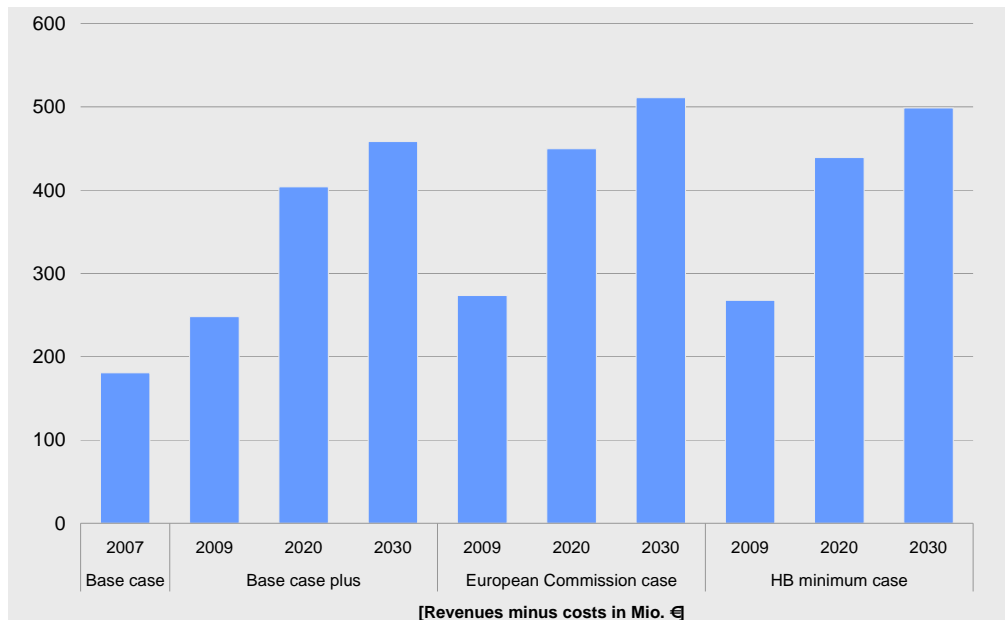
Annex I - Figure 252: Comparison of road user charges paid by Swiss road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



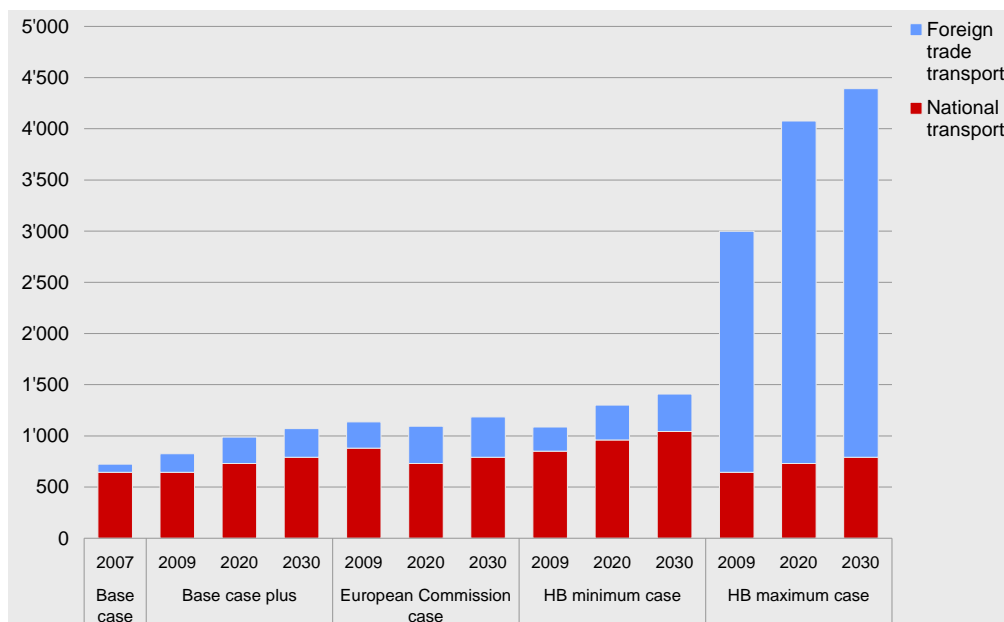
Annex I - Figure 253: Comparison of road user charge surpluses or deficits for Switzerland with regard to the road hauliers by scenarios and years (in Mil. EUR)



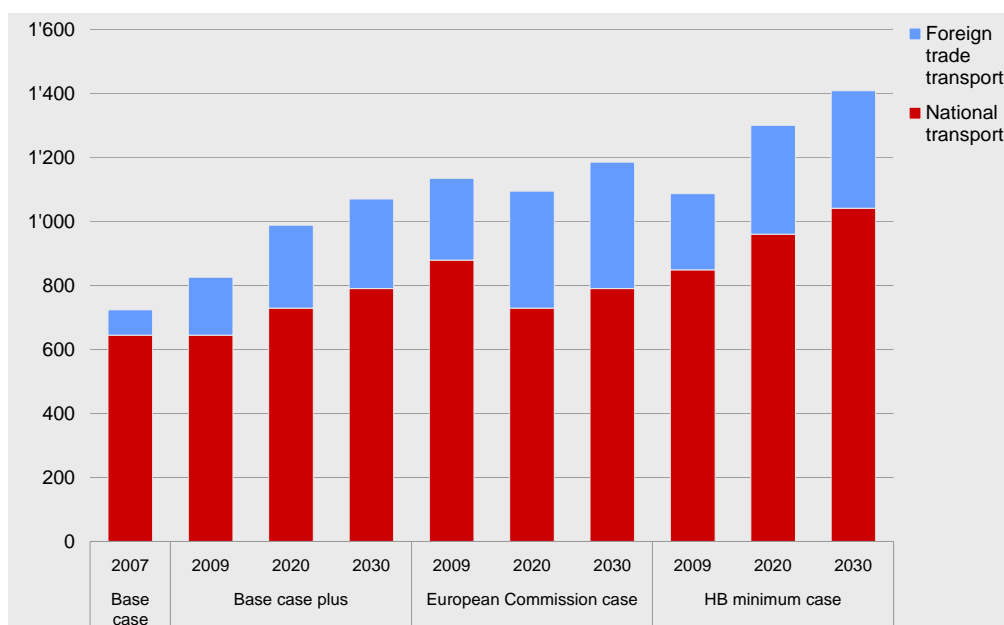
Annex I - Figure 254: Comparison of road user charge surpluses or deficits for Switzerland with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



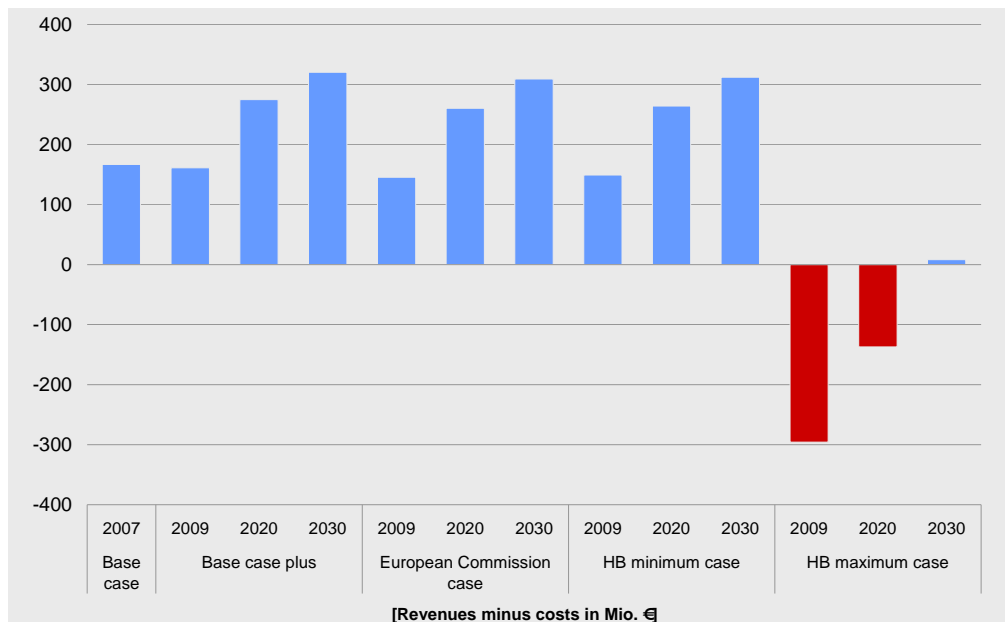
Annex I - Figure 255: Comparison of road user charge costs for the Swiss economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



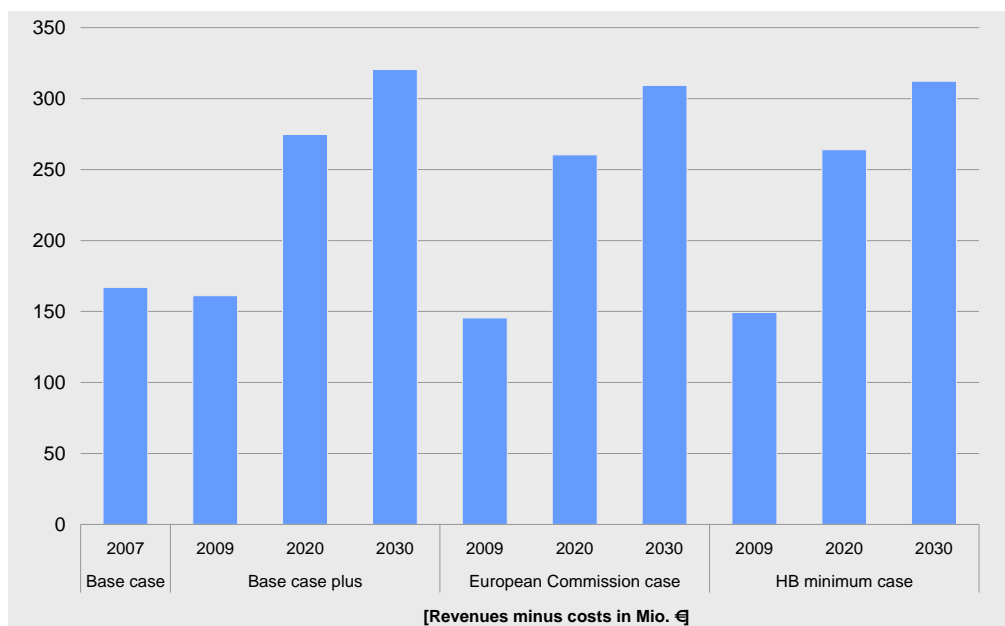
Annex I - Figure 256: Comparison of road user charge costs for the Swiss economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 257: Comparison of road user charge surpluses or deficits for Switzerland with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 258: Comparison of road user charge surpluses or deficits for Switzerland with regard to the national economy by scenarios and years (without HB maximum case; in Mil. EUR)

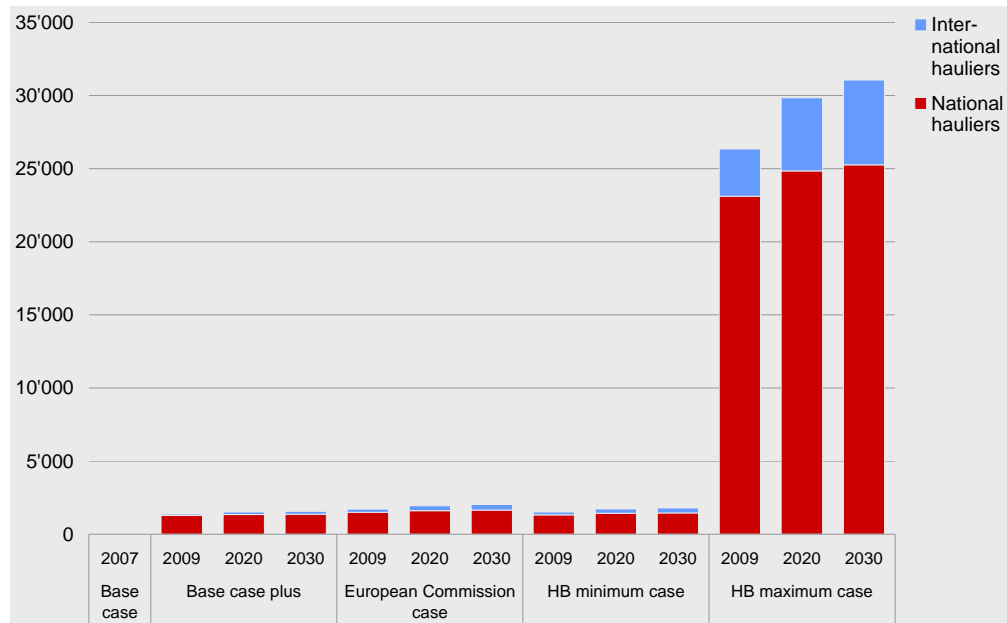


United Kingdom

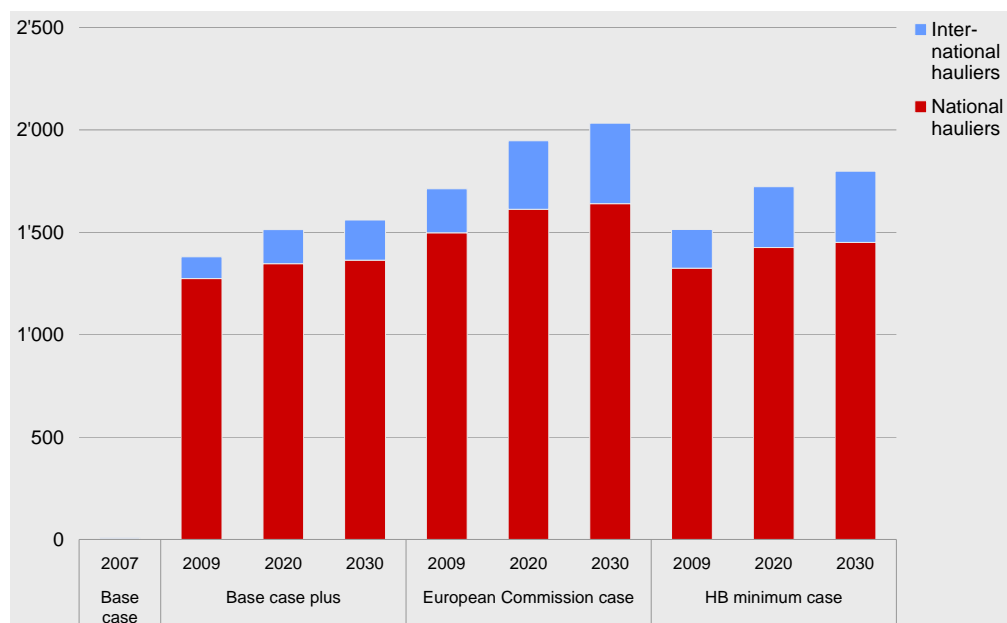
Annex I - Table 27: Comparison of road user charge surpluses or deficits for all scenarios and years

Road user charge surpluses or deficits UK		Base case	Base case plus			European Commission case			Handbook minimum case			Handbook maximum case		
		2007	2009	2020	2030	2009	2020	2030	2009	2020	2030	2009	2020	2030
		Mio. EUR	in Mio. EUR			in Mio. EUR			in Mio. EUR			in Mio. EUR		
Road user charge revenues collected by UK from	national hauliers	3	1'274	1'347	1'365	1'498	1'613	1'641	1'324	1'426	1'451	23'111	24'843	25'254
	international hauliers	6	107	168	196	214	335	392	190	298	349	3'242	5'007	5'809
	Total	8	1'381	1'514	1'560	1'713	1'948	2'033	1'515	1'724	1'799	26'353	29'850	31'063
Road user charges paid by trucks registered in UK for	inland transport	3	1'274	1'347	1'365	1'498	1'613	1'641	1'324	1'426	1'451	23'111	24'843	25'254
	transport abroad	21	40	62	70	67	105	118	60	95	107	830	1'261	1'409
	Total	24	1'314	1'409	1'434	1'565	1'717	1'759	1'385	1'520	1'558	23'940	26'104	26'664
Road user charge surpluses/deficits for UK with regard to the road hauliers	in Mio. EUR	-15	67	105	126	148	231	274	130	203	242	2'412	3'746	4'399
	in %	-64	5	7	9	9	13	16	9	13	16	10	14	16
Total charge costs of economy in UK for	national transport	0	1'222	1'259	1'269	1'395	1'438	1'449	1'233	1'270	1'280	21'569	22'226	22'400
	foreign trade transport	86	252	383	432	449	690	780	402	618	699	5'973	9'238	10'379
	Total	86	1'474	1'642	1'701	1'844	2'127	2'229	1'635	1'888	1'979	27'542	31'464	32'780
Road user charge surpluses/deficits for UK with regard to the national economy	in Mio. EUR	-78	-93	-128	-140	-131	-179	-196	-120	-165	-180	-1'189	-1'614	-1'717
	in %	-90	-6	-8	-8	-7	-8	-9	-7	-9	-9	-4	-5	-5

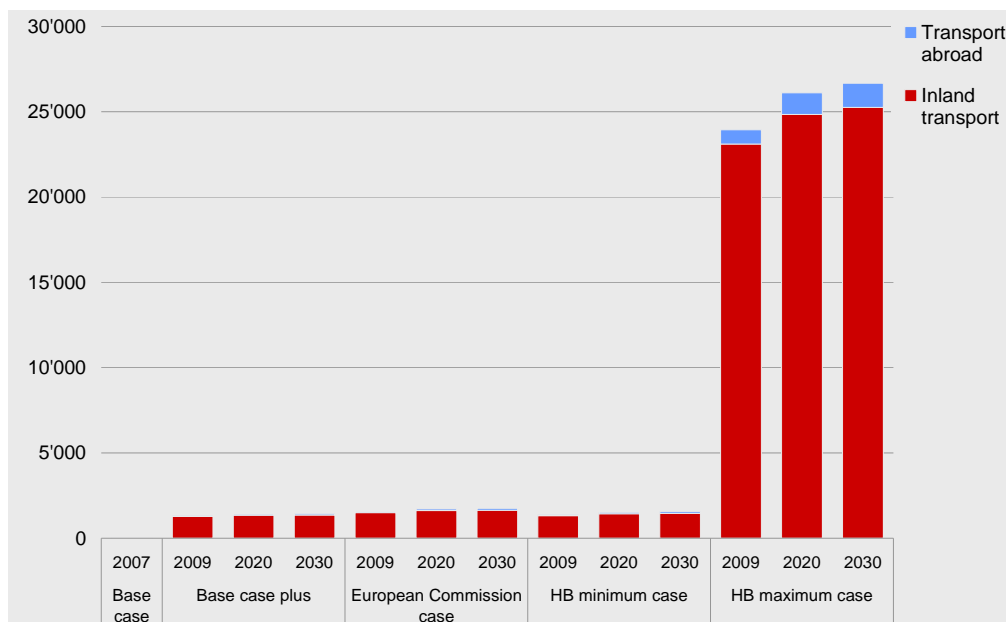
Annex I - Figure 259: Comparison of road user charge revenues for United Kingdom from national and international road hauliers by scenarios and years (in Mil. EUR)



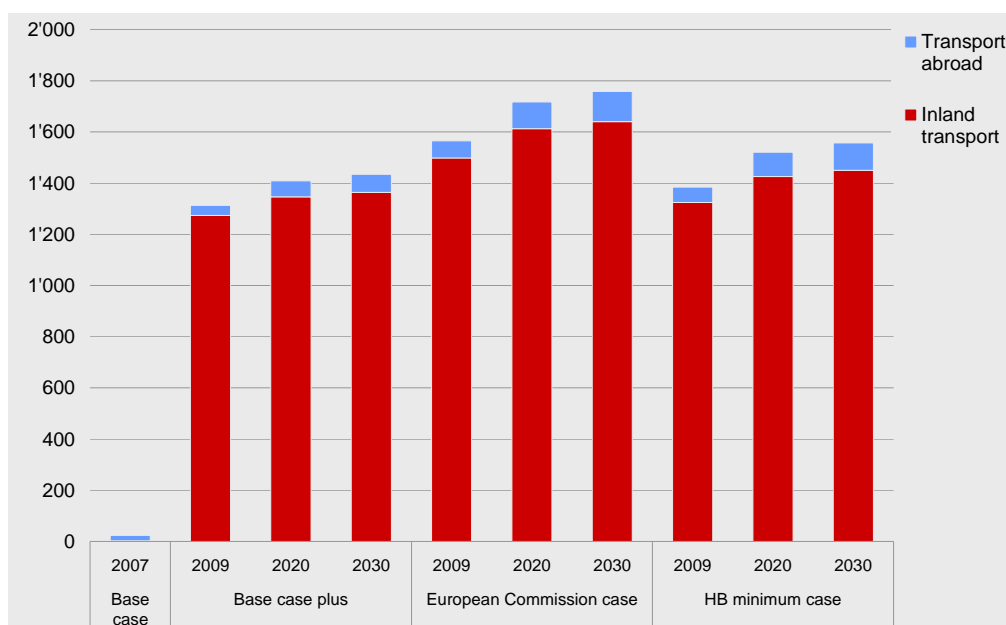
Annex I - Figure 260: Comparison of road user charge revenues for United Kingdom from national and international road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



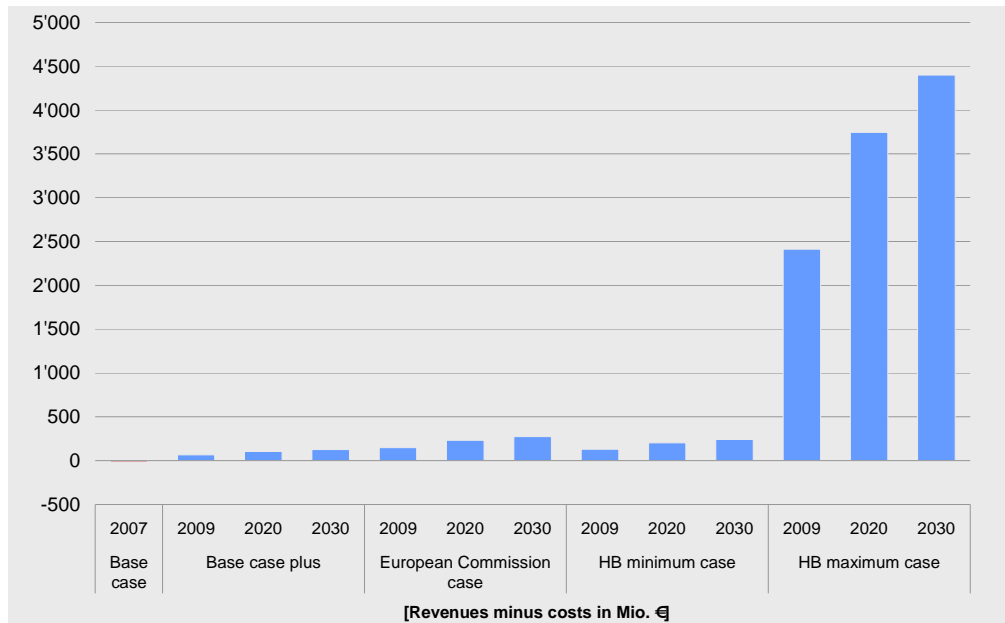
Annex I - Figure 261: Comparison of road user charges paid by British road hauliers in inland transport and transport abroad by scenarios and years (in Mil. EUR)



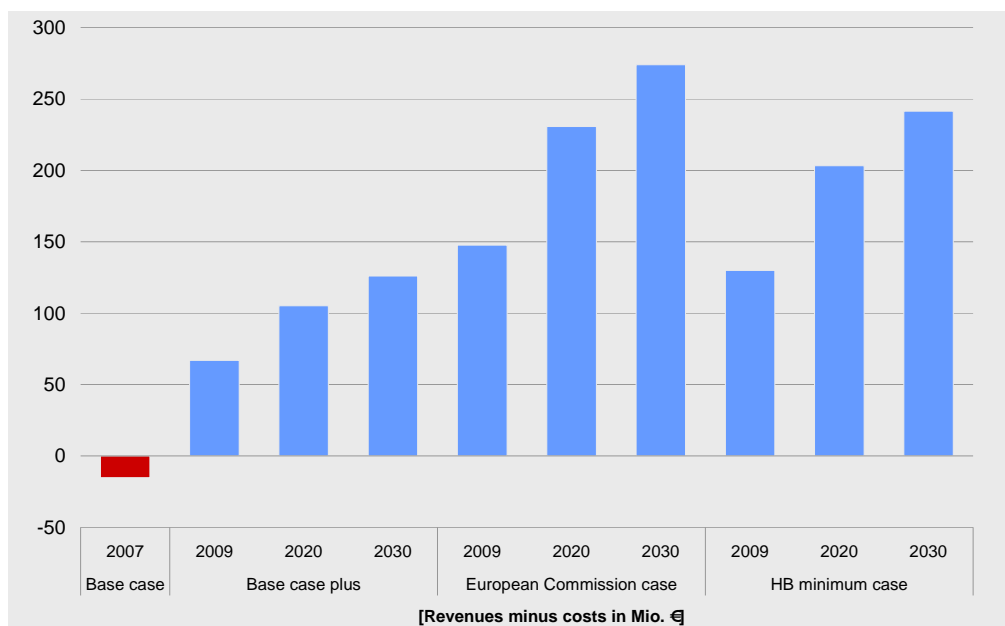
Annex I - Figure 262: Comparison of road user charges paid by British road hauliers in inland transport and transport abroad by scenarios and years (without HB maximum case; in Mil. EUR)



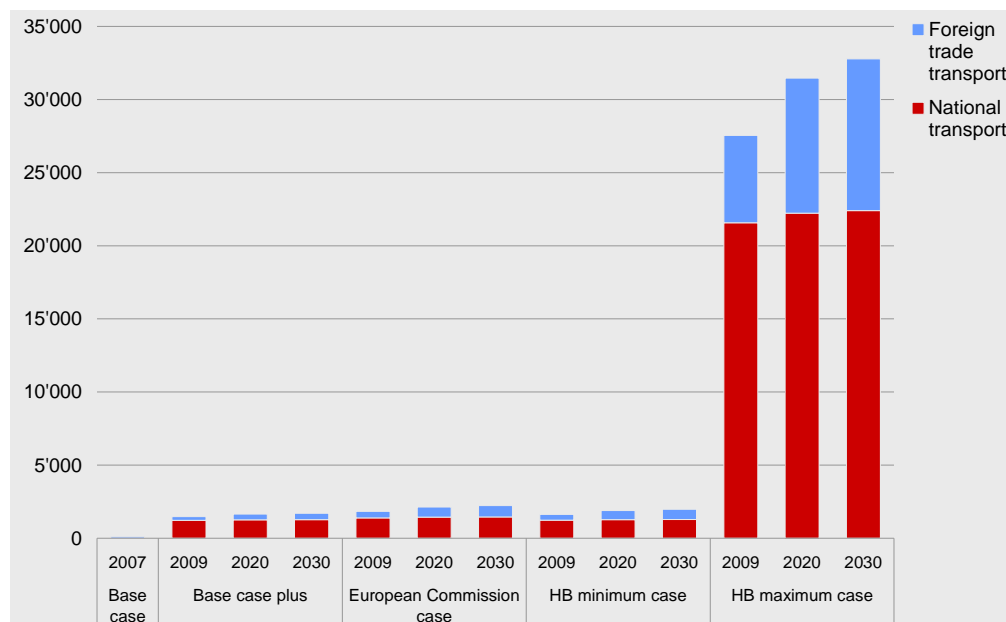
Annex I - Figure 263: Comparison of road user charge surpluses or deficits for United Kingdom with regard to the road hauliers by scenarios and years (in Mil. EUR)



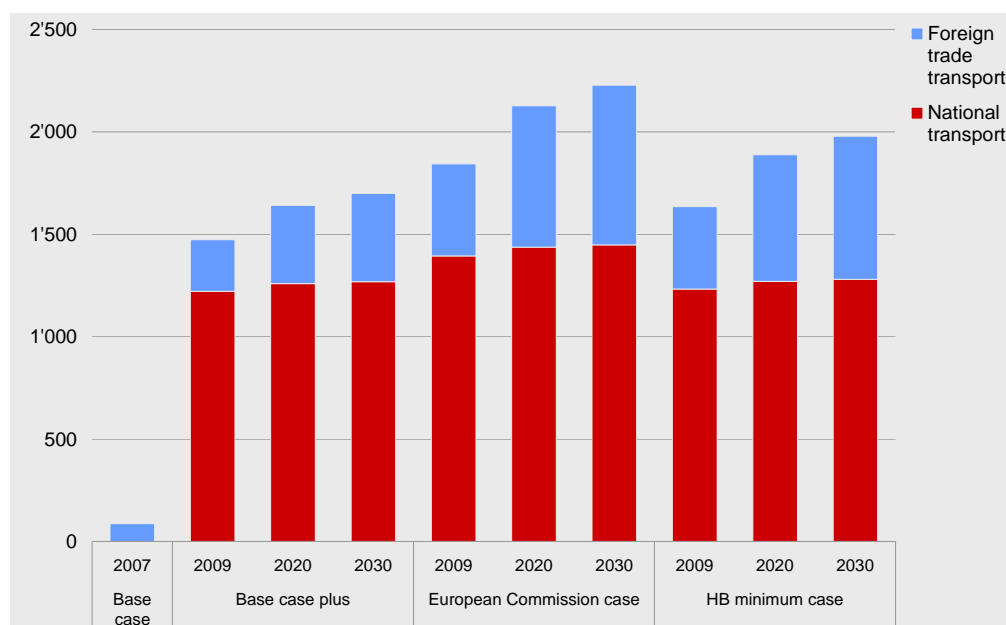
Annex I - Figure 264: Comparison of road user charge surpluses or deficits for United Kingdom with regard to the road hauliers by scenarios and years (without HB maximum case; in Mil. EUR)



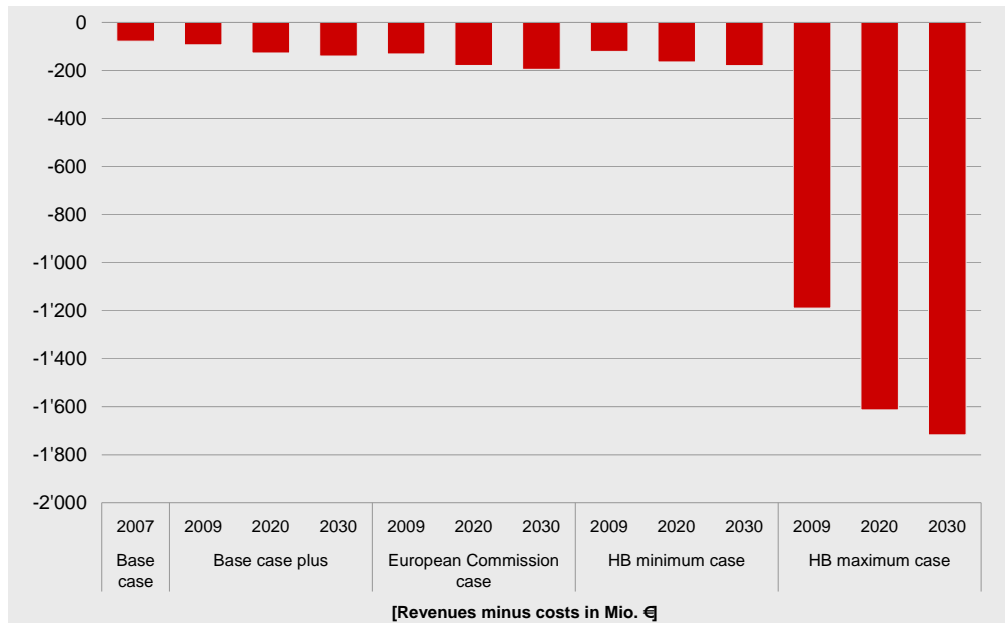
Annex I - Figure 265: Comparison of road user charge costs for the British economy for national and foreign trade transport by scenarios and years (in Mil. EUR)



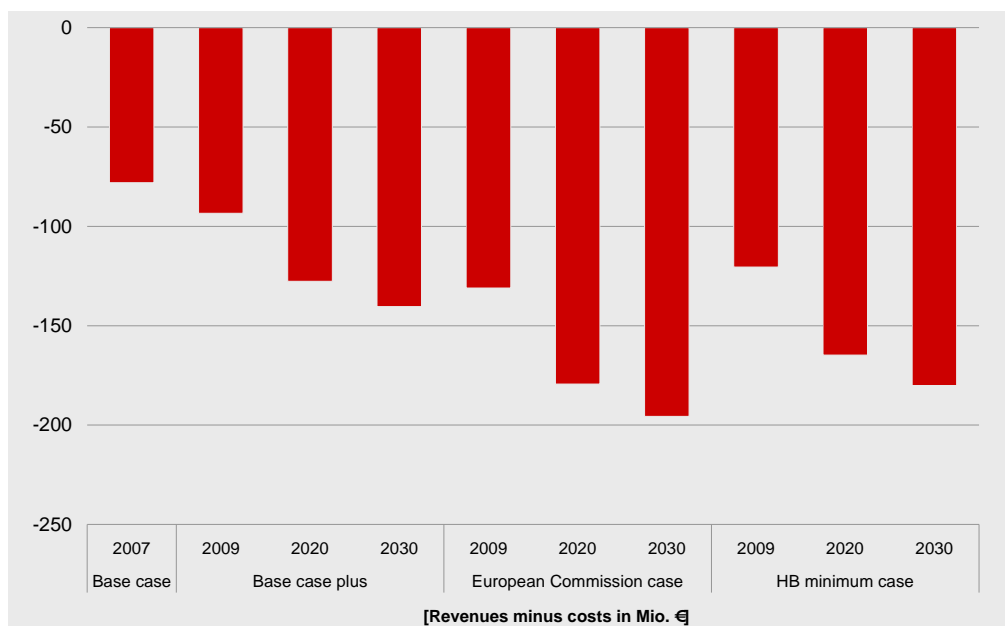
Annex I - Figure 266: Comparison of road user charge costs for the British economy for national and foreign trade transport by scenarios and years (without HB maximum case; in Mil. EUR)



Annex I - Figure 267: Comparison of road user charge surpluses or deficits for United Kingdom with regard to the national economy by scenarios and years (in Mil. EUR)



Annex I - Figure 268: Comparison of road user charge surpluses or deficits for United Kingdom with regard to the national economy 2009, 2020 and 2030 in Mil. EUR (without HB maximum case)



Annex II: Revenues and road haulier costs in national and international transport by country 2007, 2009, 2020 and 2030

(1) The following tables contain the main study results and include two main perspectives:

- The **revenues by country from national and international road hauliers** - disaggregated by nationality of the vehicle fleets which have to pay the charges - are shown in the country specific rows.
- The **charges paid by national road hauliers in inland transport and transport abroad** - disaggregated by the countries where the costs arise - can be seen in the relevant columns.

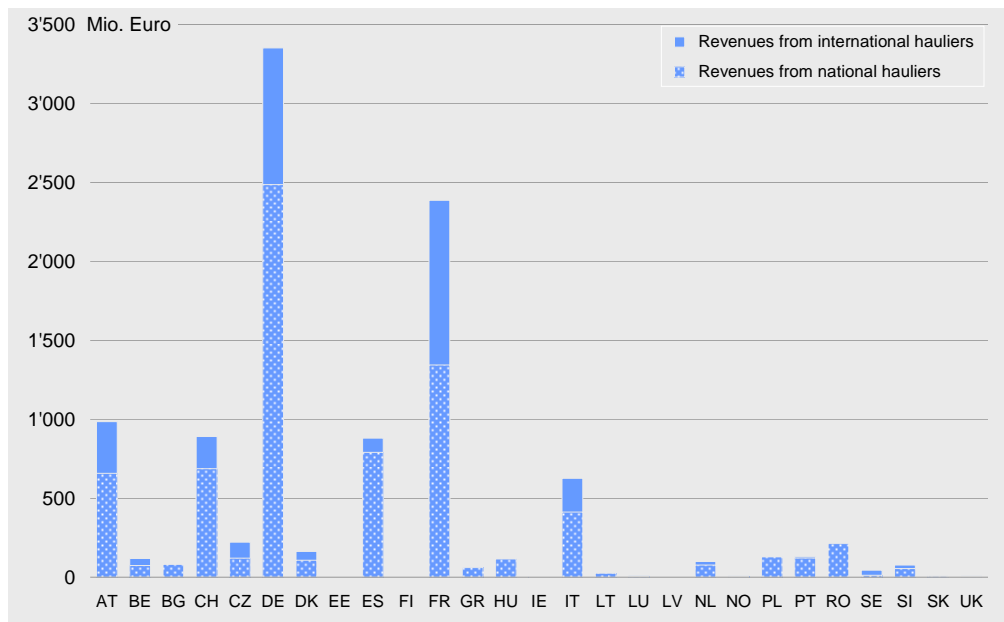
(2) For example in the Base case 2007, the total revenues of the French State amount to 2'387 Mil. EUR. The revenues are composed of e.g. 339 Mil. EUR from Spain and a further 141 Mil. EUR from Germany. 1'344 Mil. EUR are obtained from French road hauliers for inland transport.

(3) The total charges paid by the French hauliers in inland transport and transport abroad amount to 1'456 Mil. EUR. These charges add up to e.g. 48 Mil. EUR paid in Italy, 21 Mil. EUR in Germany, whilst the same 1'344 Mil. EUR as in (2) are paid by French hauliers in France.

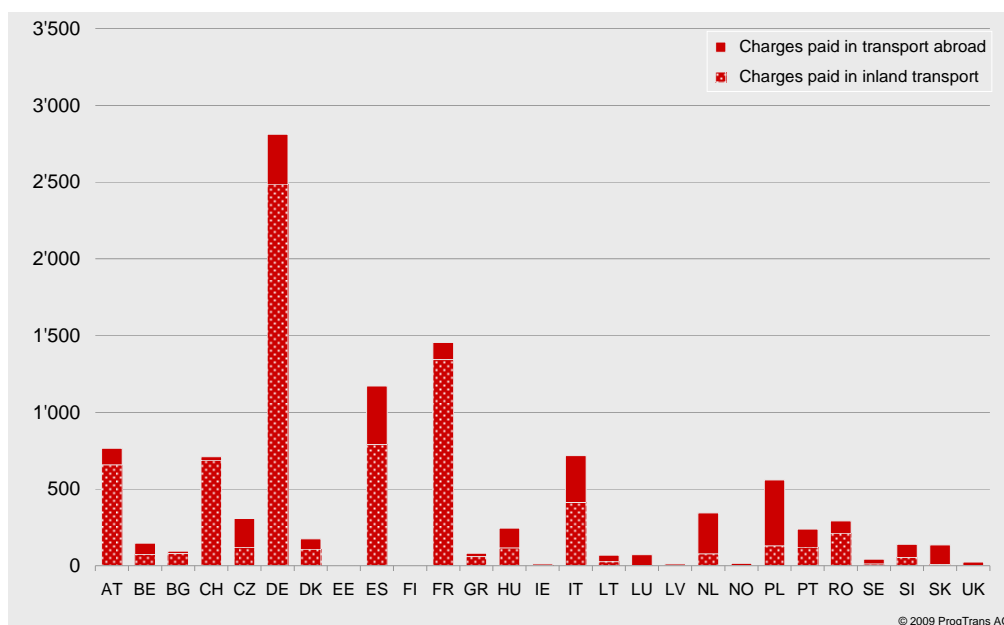
Annex II - Table 1: Base case 2007: Revenues and road haulier costs in national and international transport by country in Mil. EUR

BC 2007	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. Euro]																									Total revenues			
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI		SK	UK	
AT	658	2	3	1	33	64	2	0	0	0	2	7	29	0	66	5	2	2	6	0	24	0	17	1	35	26	2	985	
BE	0	74	0	0	1	8	0	0	2	0	6	0	0	0	1	0	3	0	20	0	3	0	0	0	0	0	0	119	
BG	-	-	81	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	0	-	-	-	-	81	
CH	13	4	0	688	3	47	1	0	1	0	18	0	3	0	82	1	4	0	13	0	7	0	0	0	2	2	0	891	
CZ	5	0	1	0	120	11	0	0	0	-	0	2	19	-	0	1	0	0	0	0	0	21	-	11	0	1	28	0	222
DE	54	18	3	8	96	2'486	39	2	17	2	21	7	28	1	35	17	21	7	168	3	237	4	23	7	16	28	3	3'351	
DK	4	0	-	0	4	8	108	1	0	0	-	-	3	0	-	1	1	0	2	5	8	-	-	16	0	1	0	163	
EE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ES	1	1	-	1	4	9	0	-	790	0	14	-	2	1	8	1	1	0	3	-	8	33	-	0	1	3	0	881	
FI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
FR	10	41	1	11	35	141	4	0	339	1	1'344	1	21	8	111	12	34	1	47	0	90	75	10	2	11	23	11	2'387	
GR	0	-	1	-	-	0	-	-	-	-	-	60	0	-	0	-	-	-	-	-	-	-	0	0	-	-	-	63	
HU	0	-	0	-	0	0	0	0	-	-	-	0	116	-	0	0	-	0	0	0	1	-	1	0	0	1	-	120	
IE	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	0	-	0	-	-	-	-	-	3	4	
IT	17	2	2	2	9	23	1	0	13	0	48	3	15	0	413	3	3	1	4	0	19	4	12	0	18	12	0	626	
LT	0	-	-	-	0	0	0	0	-	0	-	-	0	-	-	26	-	0	0	0	0	-	-	0	-	0	-	27	
LU	0	1	-	0	0	2	0	0	0	0	1	0	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	10	
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NL	0	4	-	0	1	10	0	0	1	0	1	0	0	0	0	0	1	0	77	0	3	0	0	0	0	0	0	100	
NO	0	-	-	-	0	0	1	0	0	0	-	-	0	-	-	0	0	0	0	3	0	-	-	2	-	-	0	8	
PL	0	-	0	-	0	0	0	0	0	0	-	-	0	-	0	0	-	0	0	0	129	-	0	0	0	0	-	131	
PT	-	-	-	0	-	0	-	-	8	-	0	-	0	-	0	-	-	-	0	-	-	122	-	-	-	-	0	130	
RO	0	-	1	-	0	0	-	-	-	-	-	-	0	-	0	-	-	-	-	-	0	-	213	-	0	0	-	214	
SE	1	-	-	0	1	1	18	0	0	1	-	-	1	-	-	0	0	0	1	5	3	-	-	13	-	0	0	45	
SI	2	0	2	-	0	0	0	0	0	-	0	1	6	-	2	0	0	0	0	0	4	-	3	0	55	1	0	78	
SK	0	-	0	-	1	0	0	0	-	-	-	0	1	-	0	0	-	0	0	0	1	-	0	0	0	8	-	12	
UK	0	0	-	0	0	1	0	-	0	-	1	0	0	1	0	0	0	-	1	-	1	0	0	-	0	0	3	8	
Total charges	766	148	95	710	309	2'811	176	4	1'171	5	1'456	82	246	12	718	69	72	12	344	16	559	239	292	43	141	136	24	10'655	

Annex II – Figure 1: Base case 2007: Road user charge revenues by country from national and international road hauliers in Mil. EUR



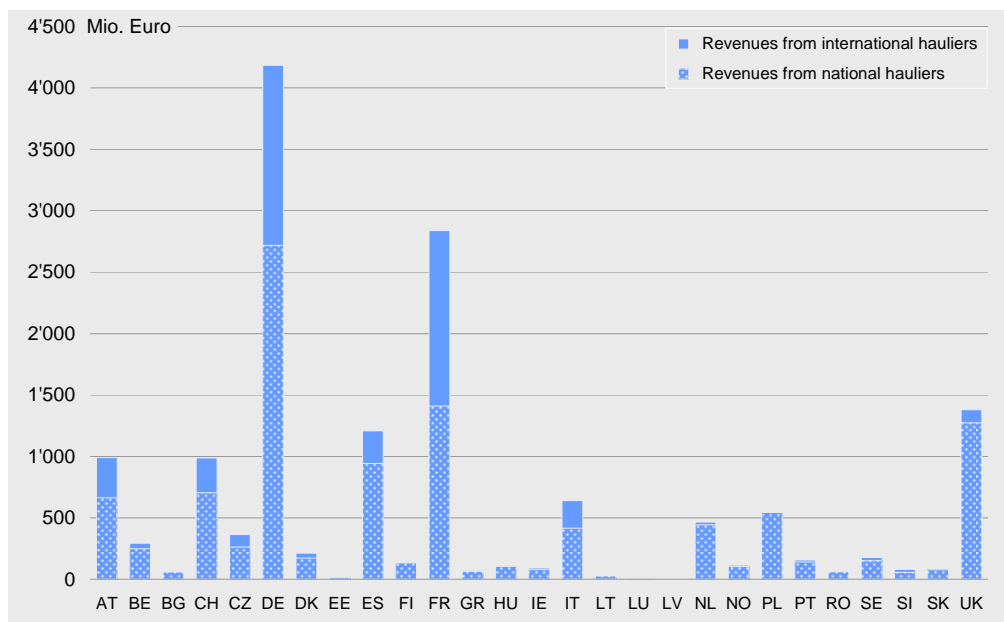
Annex II – Figure 2: Base case 2007: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



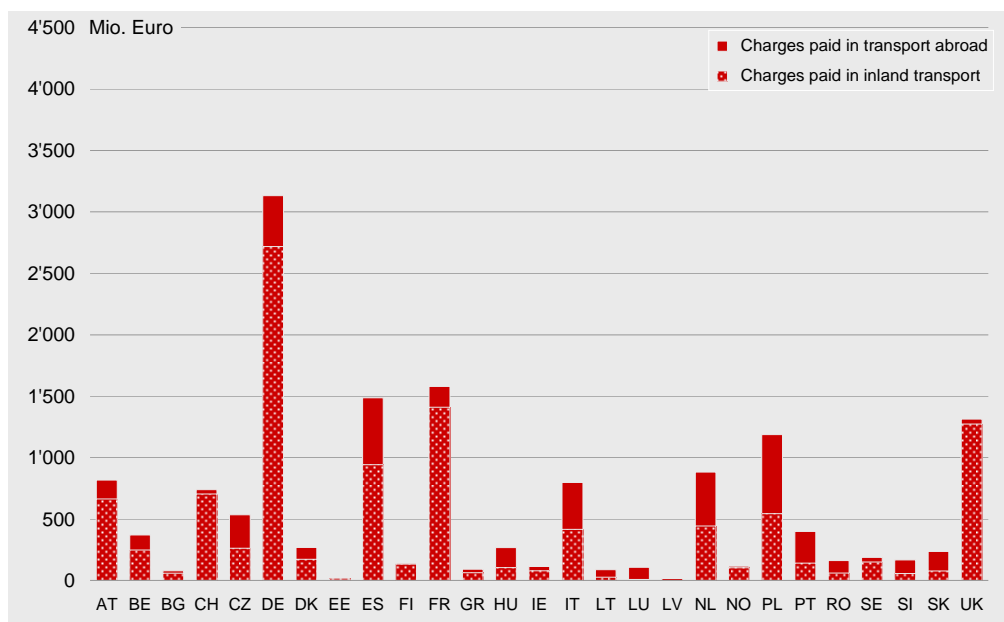
Annex II - Table 2: Base case+ 2009: Revenues and road haulier costs in national and international transport by country in Mil. EUR

BC+ 2009	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. Euro]																									Total revenues			
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI		SK	UK	
AT	663	1	4	1	35	61	2	0	0	0	1	8	30	0	56	5	1	2	5	0	22	0	18	1	43	27	3	990	
BE	0	248	0	0	1	8	0	0	2	0	6	0	0	0	1	0	3	0	18	0	3	0	0	0	0	0	0	292	
BG	-	-	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58	
CH	19	6	0	704	4	66	1	0	1	0	25	0	5	1	114	1	6	0	19	0	9	0	0	0	3	3	1	987	
CZ	5	0	1	0	261	11	0	0	0	-	0	2	19	-	0	1	0	0	0	0	0	21	-	11	0	1	29	0	364
DE	91	30	5	14	162	2718	65	4	29	4	37	11	48	1	60	30	36	11	283	4	399	7	40	12	28	48	6	4183	
DK	3	0	-	0	3	5	172	0	0	0	-	-	2	0	-	1	1	0	1	4	6	-	-	12	0	1	0	213	
EE	0	-	-	-	0	-	0	13	-	0	-	-	0	-	-	0	-	0	-	0	0	-	-	0	-	0	-	13	
ES	1	2	-	1	9	20	0	-	943	0	32	-	5	1	18	2	1	0	8	-	19	136	-	1	2	6	1	1208	
FI	0	-	-	-	0	0	0	1	0	133	-	-	0	-	-	-	0	0	0	0	0	1	-	-	0	0	0	136	
FR	12	69	2	15	45	194	6	0	475	1	1411	2	25	10	126	15	47	2	83	1	119	108	12	3	12	28	14	2837	
GR	0	-	4	-	-	1	-	-	-	-	-	63	0	-	0	-	-	-	-	-	-	-	1	0	-	-	-	70	
HU	0	-	0	-	0	0	0	0	-	-	-	0	104	-	0	0	-	0	0	0	0	1	-	1	0	0	1	108	
IE	0	0	-	-	0	0	0	-	0	-	0	-	0	78	0	-	0	-	0	-	0	0	-	-	-	0	14	92	
IT	17	2	2	2	9	24	1	0	14	0	49	3	16	0	416	3	3	1	4	0	21	4	13	0	20	13	0	639	
LT	0	-	-	-	0	0	0	0	-	0	-	-	0	-	-	26	-	0	0	0	0	-	-	0	-	0	-	27	
LU	0	1	-	0	0	1	0	0	0	0	1	0	0	0	0	0	8	0	1	0	0	0	0	0	0	0	0	15	
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NL	0	5	-	0	1	9	0	0	1	0	1	0	0	0	0	0	1	0	443	0	3	0	0	0	0	0	0	465	
NO	0	-	-	-	0	1	3	0	0	0	-	-	0	-	-	0	0	0	0	103	1	-	-	6	-	-	0	115	
PL	0	-	0	-	0	0	0	0	0	0	-	-	0	-	0	0	-	0	0	0	544	-	0	0	0	0	-	545	
PT	-	-	-	0	-	0	-	-	15	-	0	-	0	-	0	-	-	-	-	0	-	141	-	-	-	-	0	157	
RO	0	-	0	-	0	0	-	-	-	-	-	-	0	-	0	-	-	-	-	-	-	-	60	-	0	0	-	60	
SE	1	-	-	0	1	1	16	0	0	1	-	-	1	-	-	0	0	0	1	3	2	-	-	151	-	0	0	179	
SI	2	0	2	-	0	0	0	0	0	-	0	1	7	-	2	0	0	0	0	0	4	-	3	0	56	1	0	81	
SK	0	-	0	-	1	0	-	0	-	-	-	0	1	-	0	0	-	0	0	0	1	-	0	0	0	77	-	79	
UK	1	4	-	0	4	11	0	-	7	-	15	0	4	23	4	2	1	-	14	-	12	1	1	-	1	2	1274	1381	
Total charges	817	370	78	739	534	3132	269	20	1487	140	1579	92	267	114	797	88	107	17	882	116	1187	398	161	188	167	235	1314	15294	

Annex II – Figure 3: Base case+ 2009: Road user charge revenues by country from national and international road hauliers in Mil. EUR



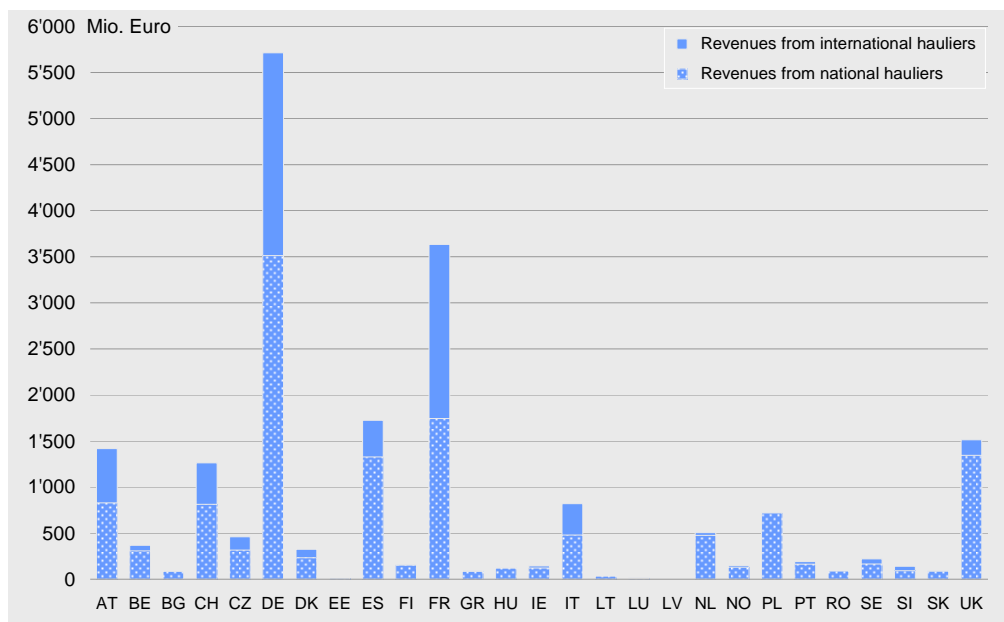
Annex II – Figure 4: Base case+ 2009: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



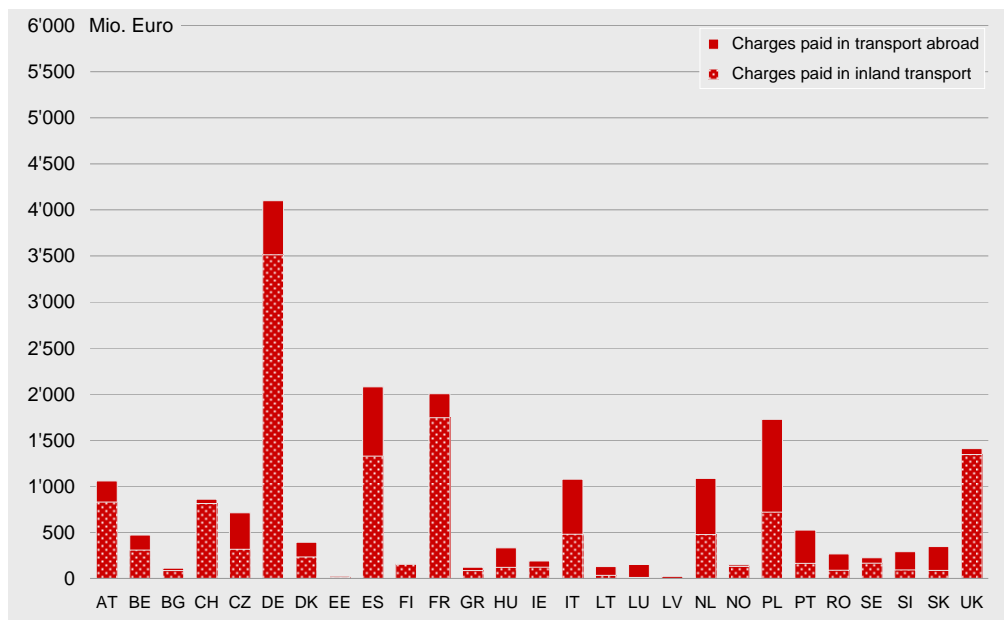
Annex II - Table 3: Base case+ 2020: Revenues and road haulier costs in national and international transport by country in Mil. EUR

BC+ 2020	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. Euro]																									Total revenues		
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI		SK	UK
AT	829	2	6	2	60	108	3	1	1	0	6	11	42	0	93	8	2	2	9	0	41	-	44	1	89	55	7	1'419
BE	0	308	0	0	1	11	0	0	2	0	9	0	0	0	1	0	5	0	25	0	4	1	0	0	0	0	0	370
BG	-	-	85	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	0	0	-	-	-	85
CH	21	13	0	812	7	99	3	0	1	0	56	0	9	1	186	2	11	0	28	0	7	0	0	1	1	3	1	1'263
CZ	6	0	1	0	317	17	0	0	0	0	0	3	22	-	0	1	0	0	1	0	33	-	9	0	1	46	0	459
DE	142	45	7	18	221	3514	103	8	43	5	54	14	58	2	89	49	54	15	387	5	654	10	65	20	49	74	11	5714
DK	5	0	-	0	6	19	234	1	1	0	-	-	3	0	-	2	2	1	9	5	14	-	0	21	0	2	0	325
EE	0	-	-	-	0	0	0	13	-	0	-	-	0	-	-	0	-	0	0	0	0	-	-	0	-	0	-	13
ES	2	4	-	2	12	29	1	-	1'328	0	47	-	7	2	30	4	2	0	12	-	27	204	-	1	2	9	1	1'726
FI	0	-	-	-	0	0	0	2	0	154	-	-	0	-	-	0	-	0	0	0	1	-	-	0	-	0	-	158
FR	17	84	2	20	64	233	8	0	641	2	1'744	2	34	15	184	22	59	2	107	1	156	138	17	5	18	39	20	3'634
GR	0	-	6	-	-	1	-	-	-	-	-	85	0	-	0	-	-	-	-	-	-	2	0	-	-	-	-	95
HU	0	-	0	-	0	0	0	-	-	-	-	0	121	-	0	0	-	0	0	0	1	-	2	0	0	1	-	127
IE	0	0	-	-	0	0	0	-	0	-	0	-	0	123	0	-	0	-	0	-	0	0	-	-	-	0	21	145
IT	25	2	4	4	14	35	2	0	24	0	65	5	22	1	480	5	4	1	6	0	31	7	23	1	35	23	1	819
LT	0	-	-	-	0	0	0	0	-	0	-	-	0	-	-	33	-	1	0	0	1	-	-	0	-	0	-	34
LU	0	2	-	0	0	2	0	0	0	0	2	0	0	0	0	0	10	0	1	0	0	0	0	0	0	0	0	19
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NL	0	7	0	0	1	11	0	0	1	0	1	0	0	0	0	0	1	0	477	0	4	0	0	0	0	0	0	506
NO	0	-	-	-	0	1	5	0	0	0	-	-	0	-	-	0	0	0	1	132	1	-	-	8	-	-	0	148
PL	0	-	0	-	0	0	0	0	0	0	-	-	0	-	0	1	-	0	0	0	720	-	0	0	0	0	-	722
PT	-	-	-	0	-	1	-	-	26	-	1	-	0	-	0	-	-	-	0	-	-	165	-	-	-	-	0	192
RO	0	-	0	-	0	0	-	-	-	-	-	-	0	-	0	-	-	-	-	-	0	-	90	-	0	0	-	90
SE	2	-	-	0	2	2	33	1	0	1	-	-	1	-	-	0	0	0	2	5	5	-	-	167	-	0	0	221
SI	5	0	1	-	1	1	-	0	0	-	0	2	7	-	5	0	0	0	0	0	9	-	13	0	93	3	0	140
SK	0	-	0	-	2	0	0	-	-	-	-	0	1	-	0	0	-	0	0	-	1	-	0	0	0	88	-	92
UK	2	6	-	0	5	16	1	-	11	-	21	0	5	45	7	3	1	-	21	-	16	2	2	-	2	3	1'347	1'514
Total charges	1'059	472	112	859	712	4'099	393	26	2'080	162	2'005	123	332	189	1'077	130	151	23	1'087	148	1'727	525	267	225	291	347	1'409	20'031

Annex II – Figure 5: Base case+ 2020: Road user charge revenues by country from national and international road hauliers in Mil. EUR



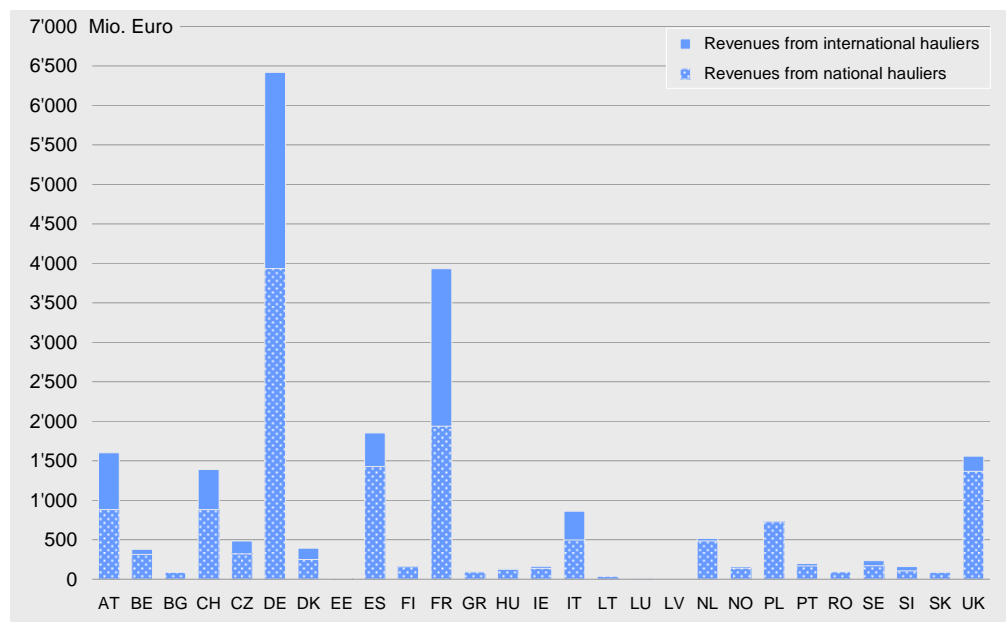
Annex II – Figure 6: Base case+ 2020: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



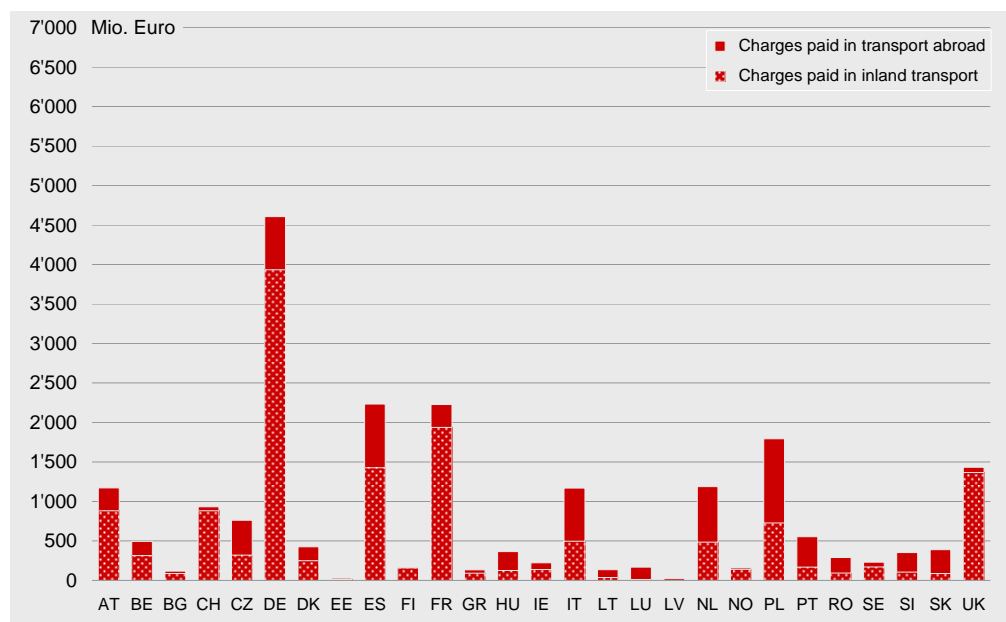
Annex II - Table 4: Base case+ 2030: Revenues and road haulier costs in national and international transport by country in Mil. EUR

BC+ 2030	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. Euro]																								Total revenues			
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE		SI	SK	UK
AT	883	2	5	2	71	138	4	1	1	0	7	11	52	0	115	9	2	1	11	0	47	-	49	1	116	68	8	1'603
BE	0	314	0	0	1	12	0	0	2	0	9	0	0	0	1	1	6	0	26	0	4	1	0	0	0	0	0	380
BG	-	-	87	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	0	0	0	-	-	-	87
CH	25	15	0	882	8	107	3	0	1	0	65	0	11	1	210	2	14	0	30	0	9	0	0	1	1	4	1	1'391
CZ	8	0	3	0	322	20	0	0	0	0	0	4	23	-	0	1	0	0	1	0	36	-	12	0	1	53	0	486
DE	183	53	7	21	244	3'934	117	10	52	5	64	16	65	2	103	52	65	16	448	5	694	12	73	20	60	86	12	6'419
DK	6	0	-	0	6	44	248	4	1	0	-	0	3	0	-	1	2	1	22	6	20	-	0	23	0	2	0	393
EE	0	-	-	-	0	0	0	12	-	0	-	-	0	-	-	0	-	0	0	0	0	-	-	0	-	0	-	13
ES	3	4	-	2	13	32	1	-	1'427	0	50	-	7	2	33	4	2	0	13	-	28	217	-	1	3	10	1	1'854
FI	0	-	-	-	0	0	0	1	0	158	-	-	0	-	-	0	-	0	1	0	1	-	-	0	-	0	0	162
FR	21	86	2	21	69	242	8	0	679	2	1'938	3	37	18	195	23	61	1	114	0	157	148	18	5	21	42	21	3'932
GR	0	-	6	-	-	2	-	-	-	-	-	92	0	-	0	-	-	-	-	-	-	-	2	0	-	-	-	103
HU	0	-	0	-	0	0	-	-	-	-	-	0	125	-	0	0	-	0	0	0	1	-	2	0	0	2	-	132
IE	0	0	-	-	0	0	0	-	0	-	0	-	0	139	0	-	0	-	0	-	0	0	-	-	-	0	25	165
IT	30	2	4	4	14	37	2	0	27	0	68	5	23	1	496	5	4	1	7	0	32	7	25	1	41	26	1	864
LT	0	-	-	-	0	0	0	0	-	0	-	-	0	-	-	35	-	1	0	0	1	-	-	0	-	0	-	37
LU	0	2	0	0	0	2	0	0	0	0	2	0	0	0	0	0	11	0	2	0	0	0	0	0	0	0	0	20
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NL	0	8	-	0	1	12	1	0	1	0	1	0	1	0	0	1	1	0	486	0	4	0	0	0	0	0	0	518
NO	0	-	-	-	0	1	5	0	-	0	-	0	0	-	-	0	0	0	0	140	2	-	0	9	-	-	0	159
PL	0	-	0	-	0	0	0	0	0	0	-	-	0	-	0	1	-	0	0	0	728	-	0	0	0	0	-	730
PT	-	-	-	0	-	1	-	-	28	-	1	-	0	-	0	-	-	-	0	-	-	168	-	-	-	-	0	198
RO	0	-	0	-	0	0	-	-	-	-	-	-	0	-	0	-	-	-	-	-	0	-	93	-	0	0	-	93
SE	2	-	-	0	2	5	34	1	1	1	-	0	1	-	-	0	0	1	6	5	6	-	0	170	-	0	0	237
SI	6	0	2	-	1	0	-	0	0	-	0	3	8	-	6	1	0	0	0	0	8	-	14	0	107	4	0	160
SK	0	-	0	-	2	0	0	-	-	-	-	0	1	-	0	0	0	0	0	-	1	-	0	0	0	88	-	93
UK	3	7	-	0	6	18	1	-	13	-	23	0	6	59	8	3	1	-	24	-	16	2	2	-	3	3	1'365	1'560
Total charges	1'171	494	117	933	763	4'608	426	31	2'235	167	2'228	134	364	223	1'169	137	169	24	1'189	158	1'794	555	291	231	355	389	1'434	21'788
Road user charge revenues by country from national and international road hauliers [in Mio. Euro]																												

Annex II – Figure 7: Base case+ 2030: Road user charge revenues by country from national and international road hauliers in Mil. EUR



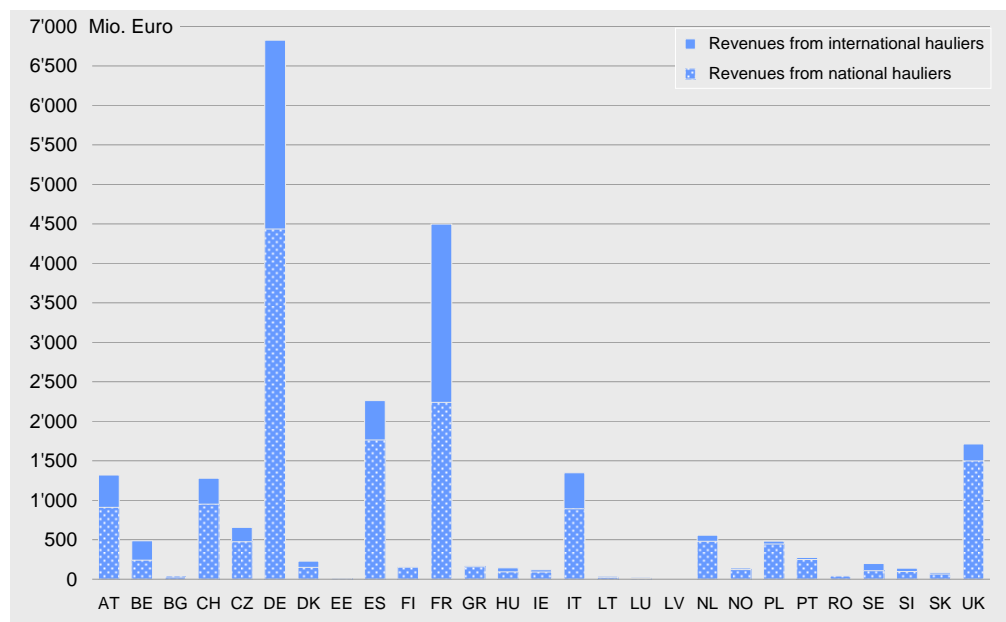
Annex II – Figure 8: Base case+ 2030: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



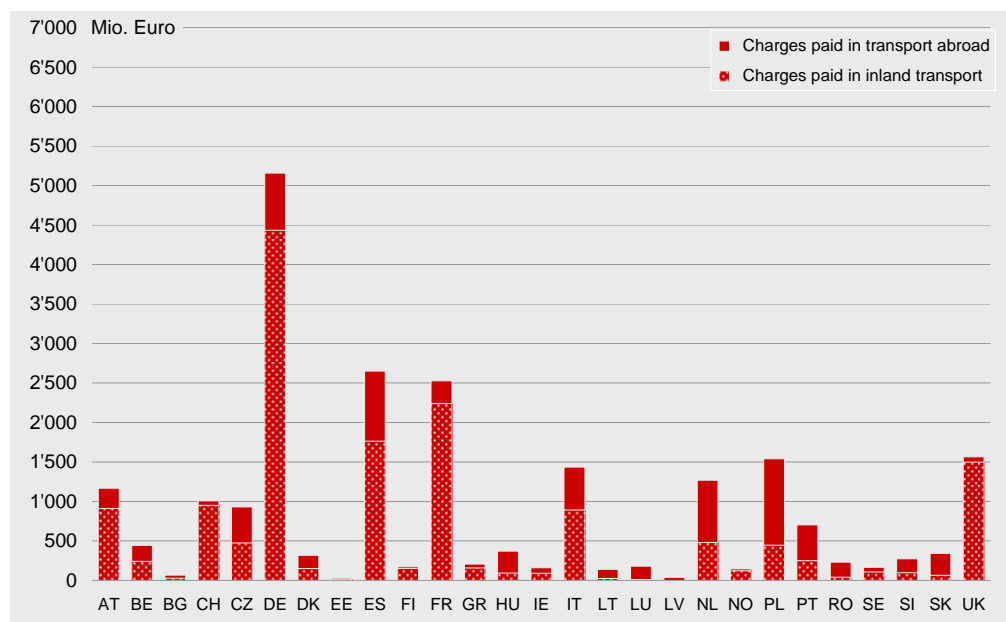
Annex II - Table 5: European Commission case 2009: Revenues and road haulier costs in national and international transport by country in Mil. EUR

EC 2009	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. Euro]																									Total revenues				
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI		SK	UK		
Road user charge revenues by country from national and international road hauliers [in Mio. Euro]	AT	909	2	5	1	45	78	2	0	1	0	2	10	40	0	63	7	2	2	6	0	28	0	24	1	54	36	4	1'320	
	BE	1	241	0	1	5	48	1	0	9	0	34	0	2	1	4	2	17	0	97	0	17	2	0	1	0	1	2	487	
	BG	-	-	31	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	31	
	CH	22	7	0	949	4	77	2	0	1	0	30	0	5	1	133	1	7	0	22	0	11	0	0	0	4	4	1	1'281	
	CZ	8	0	2	0	475	20	0	0	0	-	0	4	34	-	0	2	0	1	1	0	37	-	20	0	1	51	0	657	
	DE	148	50	8	23	264	4'435	106	7	48	6	60	18	78	2	98	48	58	18	462	7	651	12	65	20	45	78	10	6'825	
	DK	4	0	-	0	4	22	150	1	0	0	-	-	3	0	-	1	2	0	8	5	10	-	-	17	0	2	0	230	
	EE	0	-	-	-	0	-	0	15	-	0	-	-	0	-	-	0	-	0	-	0	0	-	-	0	-	0	-	15	
	ES	3	4	-	2	16	37	1	-	1'765	0	59	-	9	2	33	5	3	1	15	-	35	256	-	1	3	12	1	2'261	
	FI	0	-	-	-	0	1	0	2	0	154	-	-	0	-	-	0	0	0	1	0	1	-	-	1	-	0	0	161	
	FR	19	110	3	24	71	307	9	1	752	2	2'239	3	40	16	197	24	75	3	131	1	189	171	19	5	19	44	22	4'486	
	GR	1	-	10	-	-	2	-	-	-	-	-	157	0	-	1	-	-	-	-	-	-	-	2	0	-	-	-	174	
	HU	2	-	2	-	3	1	0	0	-	-	-	4	94	-	1	0	-	0	0	0	8	-	17	0	2	11	-	146	
	IE	0	0	-	-	-	0	0	-	0	-	0	-	0	92	0	-	0	-	0	-	0	0	-	-	-	0	26	118	
	IT	39	3	4	5	22	54	3	0	33	0	69	7	37	1	893	7	4	2	9	0	44	10	28	1	44	28	1	1'349	
	LT	0	-	-	-	0	0	0	2	-	0	-	-	0	-	-	25	-	6	0	0	6	-	-	0	-	0	-	-	39
	LU	0	4	-	0	0	4	0	0	1	0	3	0	0	0	1	0	11	0	3	0	1	0	0	0	0	0	0	0	27
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NL	1	17	-	0	2	32	1	0	2	0	2	0	1	0	1	1	2	0	480	0	11	0	1	0	0	1	0	559		
NO	0	-	-	-	0	1	5	0	0	1	-	-	0	-	-	0	0	0	1	122	1	-	-	10	-	-	0	142		
PL	0	-	0	-	3	6	0	1	0	0	-	-	1	-	0	12	-	4	1	0	446	-	5	0	0	5	-	484		
PT	-	-	-	0	-	1	-	-	26	-	1	-	0	-	0	-	-	-	0	-	-	249	-	-	-	-	0	277		
RO	0	-	0	-	0	0	-	-	-	-	-	-	1	-	0	-	-	-	-	-	0	-	41	-	0	0	-	43		
SE	2	-	-	0	2	8	36	1	0	9	-	-	1	-	-	0	0	0	6	11	9	-	-	109	-	1	0	197		
SI	4	0	3	-	1	0	0	0	0	-	0	2	11	-	4	0	0	0	0	0	8	-	6	0	98	2	0	141		
SK	0	-	0	-	5	0	-	0	-	-	-	0	5	-	0	0	-	0	0	0	3	-	2	0	0	66	-	84		
UK	3	8	-	0	7	23	1	-	15	-	30	0	8	45	8	4	1	-	29	-	23	2	2	-	2	4	1'498	1'713		
Total charges	1'168	445	68	1'007	930	5'157	319	30	2'653	173	2'528	207	371	159	1'437	140	182	39	1'270	148	1'540	703	232	167	274	344	1'565	23'255		

Annex II – Figure 9: European Commission case 2009: Road user charge revenues by country from national and international road hauliers in Mil. EUR



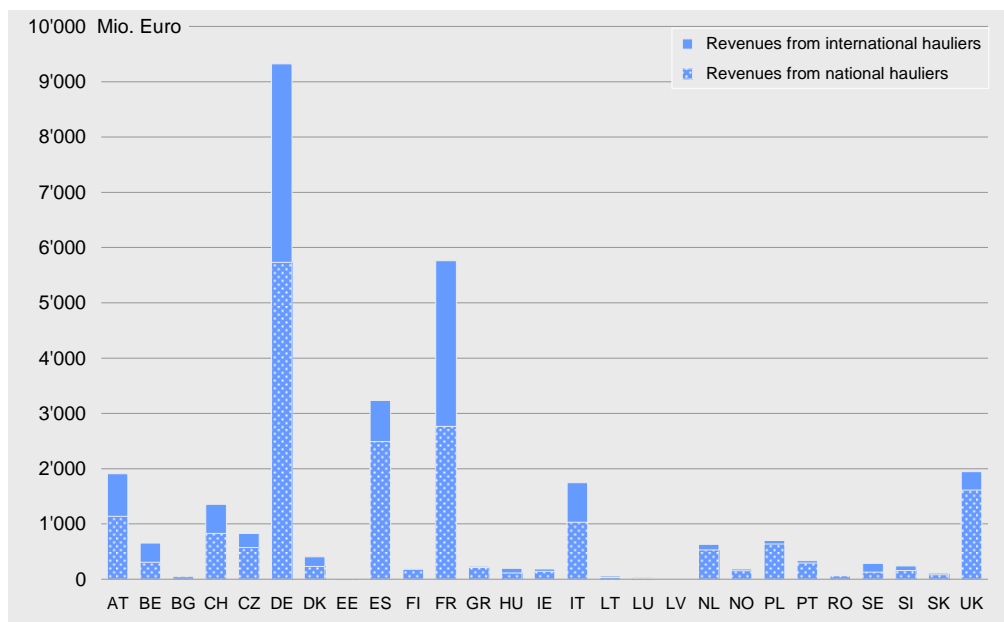
Annex II – Figure 10: European Commission case 2009: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



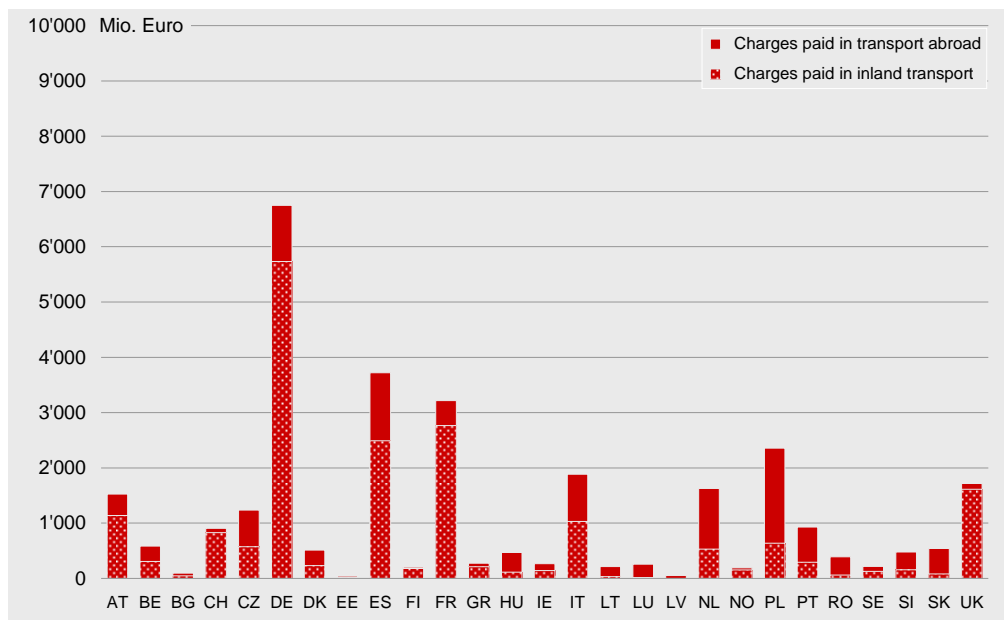
Annex II - Table 6: European Commission case 2020: Revenues and road haulier costs in national and international transport by country in Mil. EUR

EC 2020		Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. Euro]																								Total revenues			
AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI	SK	UK			
AT	1'138	3	8	2	79	140	4	1	1	0	7	14	56	0	114	11	3	3	11	0	55	-	60	1	115	75	8	1'908	
BE	1	309	0	1	6	66	2	0	12	0	50	0	2	1	6	3	29	0	134	0	25	3	0	1	1	1	2	654	
BG	-	-	45	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	0	0	-	-	-	45	
CH	25	15	0	827	8	115	4	0	1	0	66	0	10	1	218	2	13	0	33	0	9	0	0	1	1	4	1	1'355	
CZ	11	0	3	0	575	31	0	0	0	0	5	40	-	0	2	0	1	1	0	58	-	17	0	2	81	0	828		
DE	232	73	11	30	360	5'733	167	13	70	7	89	23	95	3	145	80	88	25	631	8	1'068	16	105	33	79	120	17	9'323	
DK	8	1	-	0	9	52	231	2	1	0	-	-	4	0	-	2	3	1	21	8	25	-	0	31	0	3	0	404	
EE	0	-	-	-	0	0	0	15	-	0	-	0	-	0	-	0	-	0	0	0	0	-	0	-	0	-	0	16	
ES	4	6	-	4	23	54	1	-	2'490	1	87	-	12	4	57	7	4	1	22	-	50	383	-	2	5	17	2	3'234	
FI	0	-	-	-	0	1	1	3	0	179	-	-	0	-	-	0	-	0	1	0	2	-	-	1	-	0	-	189	
FR	27	133	3	32	102	369	12	1	1'016	2	2'767	4	53	24	289	35	94	3	170	1	248	219	28	7	28	62	32	5'761	
GR	1	-	14	-	-	3	-	-	-	-	-	212	0	-	1	-	-	-	-	-	-	-	4	0	-	-	-	235	
HU	3	-	3	-	5	2	0	-	-	-	-	5	112	-	1	1	-	0	0	0	14	-	28	0	3	20	-	198	
IE	0	0	-	-	0	0	0	-	0	-	0	-	0	144	0	-	0	-	0	-	0	0	-	-	0	40	185		
IT	58	4	7	9	32	80	5	1	56	0	99	10	48	2	1'030	11	7	3	14	0	69	16	50	1	80	52	1	1'746	
LT	0	-	-	-	0	0	0	3	-	0	-	-	0	-	-	34	-	10	0	0	11	-	-	0	-	0	-	58	
LU	0	5	-	0	0	5	0	0	1	0	4	0	0	0	1	0	15	0	3	0	1	0	0	0	0	0	0	36	
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NL	1	23	0	0	3	39	1	0	3	0	4	0	2	1	1	2	3	0	530	0	14	1	1	1	0	1	1	633	
NO	0	-	-	-	0	1	9	0	0	1	-	-	0	-	-	0	0	0	1	157	2	-	-	14	-	0	185		
PL	0	-	0	-	5	10	1	2	0	0	-	-	1	-	0	18	-	4	1	0	638	-	8	0	0	10	-	700	
PT	-	-	-	0	-	1	-	-	45	-	1	-	0	-	0	-	-	-	0	-	-	291	-	-	-	-	0	339	
RO	0	-	0	-	0	0	-	-	-	-	-	-	1	-	0	-	-	-	-	-	0	-	62	-	0	0	-	64	
SE	4	-	-	0	4	13	74	2	1	13	-	-	2	-	-	1	0	1	11	15	14	-	-	128	-	1	0	285	
SI	9	0	2	-	1	1	-	0	0	-	0	3	11	-	8	1	0	0	0	0	15	-	22	0	159	6	1	240	
SK	1	-	0	-	10	1	0	-	-	-	1	7	-	0	0	-	0	0	0	-	6	-	2	0	0	83	-	110	
UK	4	11	-	0	10	33	1	-	23	-	42	1	10	88	13	6	2	-	43	-	33	3	4	-	4	5	1'613	1'948	
Total charges		1'528	584	96	906	1'235	6'750	514	43	3'721	205	3'216	277	468	268	1'887	216	259	52	1'628	190	2'568	931	391	220	477	543	1'717	30'679
		Road user charge revenues by country from national and international road hauliers [in Mio. Euro]																											

Annex II – Figure 11: European Commission case 2020: Road user charge revenues by country from national and international road hauliers in Mil. EUR



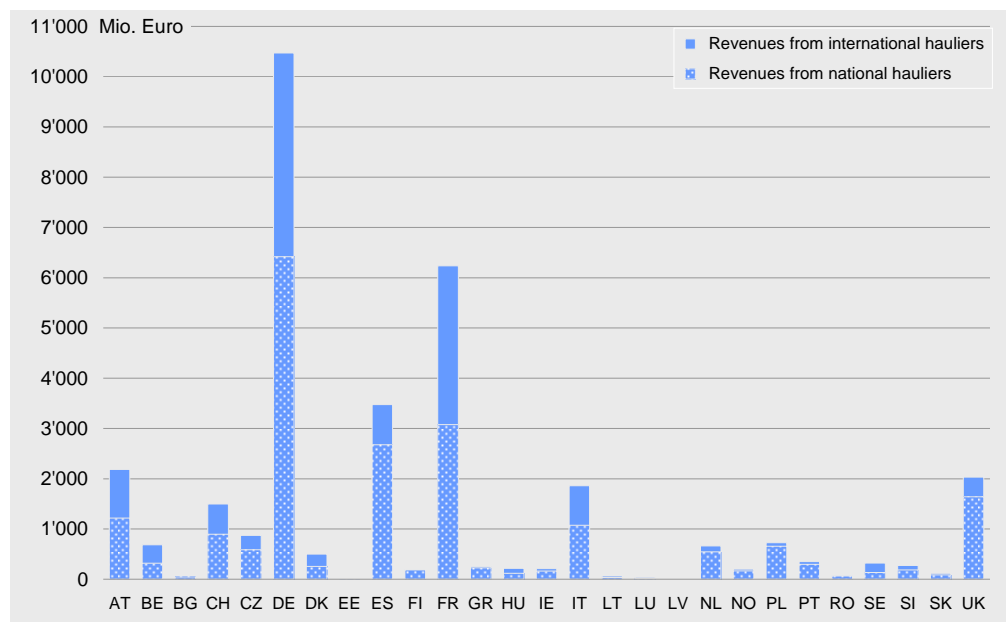
Annex II – Figure 12: European Commission case 2020: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



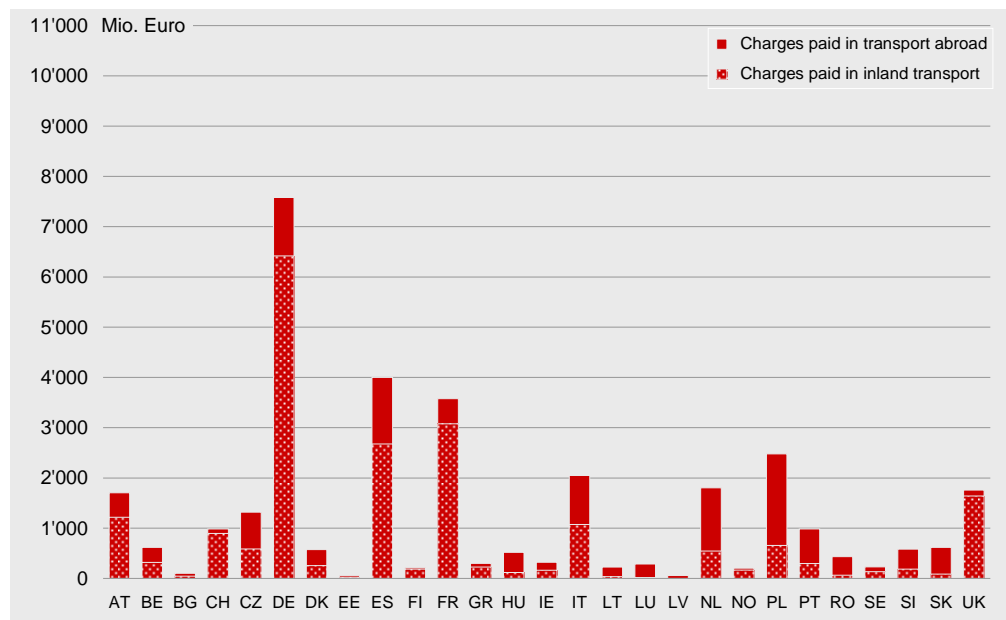
Annex II - Table 7: European Commission case 2030: Revenues and road haulier costs in national and international transport by country in Mil. EUR

EC 2030	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. Euro]																								Total revenues			
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE		SI	SK	UK
Road user charge revenues by country from national and international road hauliers [in Mio. Euro]																												
AT	1217	3	6	2	97	186	5	1	1	0	9	15	71	0	149	12	2	2	14	0	63	-	68	1	155	94	10	2185
BE	2	318	0	1	6	70	2	0	13	0	53	0	2	1	7	3	31	0	142	0	25	3	0	1	1	1	2	686
BG	-	-	46	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	0	0	-	-	-	47
CH	29	17	0	888	10	126	4	0	2	0	76	0	12	1	246	2	17	0	35	0	10	0	0	1	2	5	1	1495
CZ	14	0	4	0	585	36	0	0	0	0	0	7	41	-	1	2	0	0	1	0	63	-	21	0	2	94	0	874
DE	298	87	12	34	388	6'418	191	16	85	8	105	26	107	3	168	84	105	27	730	8	1'132	19	119	33	98	140	20	10472
DK	9	1	-	0	10	88	253	5	2	1	-	0	4	0	-	2	4	2	40	9	33	-	0	34	1	3	0	501
EE	0	-	-	-	0	0	0	14	-	0	-	-	0	-	-	0	-	0	0	0	0	-	-	0	-	0	-	15
ES	5	7	-	4	25	60	2	-	2676	1	93	-	14	4	62	7	4	0	24	-	53	407	-	2	5	19	2	3476
FI	0	-	-	-	0	1	1	3	0	184	-	-	0	-	-	0	-	0	1	0	2	-	-	1	-	0	0	193
FR	33	137	3	33	109	385	13	1	1077	3	3076	5	59	29	307	36	97	2	181	1	249	235	28	8	33	66	33	6237
GR	1	-	15	-	-	4	-	-	-	-	-	228	0	-	1	-	-	-	-	-	-	-	5	0	-	-	-	254
HU	4	-	3	-	6	3	-	-	-	-	-	5	118	-	2	1	-	1	0	0	15	-	34	0	3	24	-	216
IE	0	0	-	-	0	0	0	-	0	-	0	-	0	163	0	-	0	-	0	-	0	0	-	-	-	0	47	212
IT	70	4	8	10	33	84	5	1	63	0	109	11	51	2	1076	11	7	2	15	0	73	17	55	1	93	58	2	1863
LT	0	-	-	-	0	0	0	3	-	0	-	-	0	-	-	38	-	11	0	0	12	-	-	0	-	0	-	65
LU	0	5	0	0	0	6	0	0	1	0	5	0	0	0	1	0	16	0	4	0	1	0	0	0	0	0	0	39
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NL	2	26	-	0	4	43	2	0	3	0	4	0	2	1	2	2	3	1	546	0	15	1	1	1	1	1	1	683
NO	0	-	-	-	0	1	9	0	-	1	-	0	0	-	-	0	0	0	1	168	3	-	0	15	-	-	0	200
PL	0	-	0	-	6	12	1	2	0	0	-	-	1	-	0	18	-	6	1	0	658	-	9	0	0	13	-	727
PT	-	-	-	0	-	1	-	-	49	-	1	-	0	-	1	-	-	-	0	-	-	298	-	-	-	-	0	350
RO	0	-	0	-	0	0	-	-	-	-	-	-	1	-	0	-	-	-	-	-	0	-	64	-	0	0	-	67
SE	5	-	-	0	5	19	81	3	2	13	-	0	3	-	-	1	0	1	17	17	19	-	0	133	-	1	0	322
SI	11	0	3	-	2	1	-	0	0	-	0	4	14	-	10	1	0	1	0	0	13	-	24	0	184	7	1	275
SK	1	-	0	-	11	1	0	-	-	-	-	1	7	-	0	0	0	0	0	-	6	-	2	0	0	87	-	117
UK	5	14	-	0	12	36	1	-	26	-	46	1	11	116	16	6	2	-	48	-	32	3	5	-	5	6	1641	2033
Total charges	1705	620	103	984	1'319	7580	572	50	4001	211	3578	302	520	321	2048	227	290	57	1803	205	2'478	983	434	231	583	620	1759	33'584

Annex II – Figure 13: European Commission case 2030: Road user charge revenues by country from national and international road hauliers in Mil. EUR



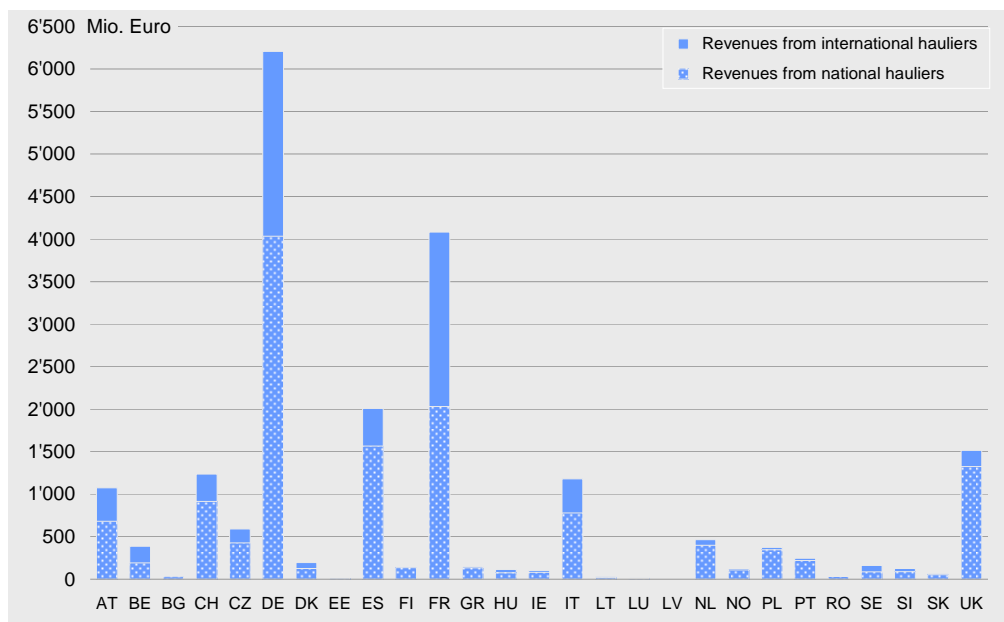
Annex II – Figure 14: European Commission case 2030: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



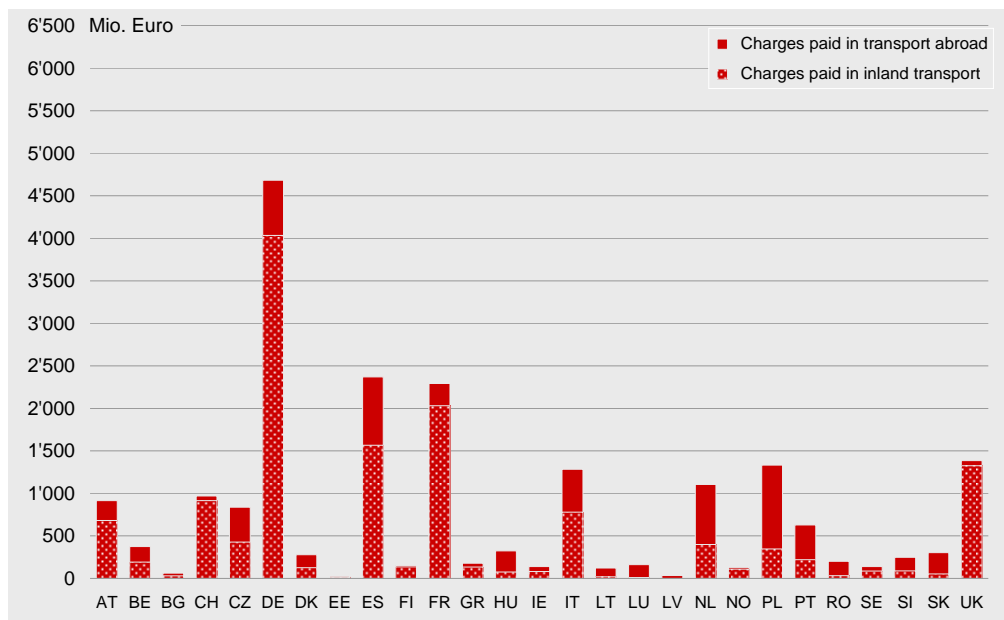
Annex II - Table 8: Handbook minimum case 2009: Revenues and road haulier costs in national and international transport by country in Mil. EUR

HB min 2009	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. Euro]																									Total revenues			
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI		SK	UK	
Road user charge revenues by country from national and international road hauliers [in Mio. Euro]	AT	683	2	5	1	42	74	2	0	1	0	2	10	37	0	61	7	1	2	6	0	27	0	23	1	52	33	3	1073
	BE	1	191	0	1	4	38	1	0	7	0	27	0	2	0	3	1	14	0	77	0	14	2	0	0	0	1	1	388
	BG	-	-	30	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	0	-	-	-	-	30
	CH	21	7	0	916	4	74	2	0	1	0	29	0	5	1	129	1	6	0	21	0	10	0	0	0	4	4	1	1236
	CZ	7	0	2	0	428	18	0	0	0	-	0	4	31	-	0	2	0	1	1	0	33	-	18	0	1	46	0	591
	DE	135	45	7	21	240	4'034	97	6	43	6	55	17	71	2	89	44	53	17	420	6	592	11	59	19	41	71	9	6207
	DK	4	0	-	0	4	18	126	1	0	0	-	-	3	0	-	1	2	0	6	5	9	-	16	0	1	0	197	
	EE	0	-	-	-	0	-	0	13	-	0	-	-	0	-	-	0	-	0	-	0	0	-	0	-	0	-	-	14
	ES	2	4	-	2	14	32	1	-	1'567	0	53	-	8	2	29	4	2	1	13	-	31	227	-	1	3	10	1	2008
	FI	0	-	-	-	0	1	0	2	0	136	-	-	0	-	-	0	0	0	1	0	1	-	-	1	-	0	0	142
	FR	18	100	3	22	64	279	8	0	683	2	2'032	3	36	14	179	22	68	2	119	1	172	155	17	5	17	40	20	4'083
	GR	0	-	8	-	-	2	-	-	-	-	-	135	0	-	0	-	-	-	-	-	-	-	2	0	-	-	-	149
	HU	2	-	2	-	3	1	0	0	-	-	-	3	74	-	1	0	-	0	0	0	6	-	13	0	2	9	-	115
	IE	0	0	-	-	0	0	0	-	0	-	0	-	0	80	0	-	0	-	0	-	0	0	-	-	0	23	104	
	IT	34	3	4	5	19	46	2	0	29	0	64	6	32	1	780	6	4	2	8	0	38	9	25	1	38	24	1	1'181
	LT	0	-	-	-	0	0	0	1	-	0	-	-	0	-	-	19	-	5	0	0	5	-	-	0	-	0	-	31
	LU	0	3	-	0	0	3	0	0	0	0	3	0	0	0	1	0	9	0	2	0	1	0	0	0	0	0	0	22
	LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NL	1	14	-	0	2	27	1	0	2	0	2	0	1	0	1	1	2	0	400	0	9	0	1	0	0	0	0	466
NO	0	-	-	-	0	1	5	0	0	0	-	-	0	-	-	0	0	0	1	108	1	-	-	9	-	-	0	126	
PL	0	-	0	-	2	4	0	1	0	0	-	-	1	-	0	9	-	3	0	0	347	-	4	0	0	4	-	377	
PT	-	-	-	0	-	1	-	-	23	-	1	-	0	-	0	-	-	-	-	-	-	222	-	-	-	-	0	247	
RO	0	-	0	-	0	0	-	-	-	-	-	-	1	-	0	-	-	-	-	-	-	-	33	-	0	0	-	34	
SE	2	-	-	0	2	7	32	1	0	7	-	-	1	-	-	0	0	0	5	10	7	-	-	87	-	0	0	162	
SI	4	0	3	-	0	0	0	0	0	-	0	2	10	-	4	0	0	0	0	0	7	-	5	0	88	2	0	126	
SK	0	-	0	-	4	0	-	0	-	-	-	0	4	-	0	0	-	0	0	0	3	-	2	0	0	54	-	68	
UK	2	7	-	0	6	21	1	-	13	-	26	0	7	40	7	4	1	-	26	-	21	2	2	-	2	3	1'324	1'515	
Total charges	916	375	63	969	840	4'681	278	26	2'370	152	2'293	180	324	140	1'284	122	163	34	1'106	131	1'334	628	203	140	249	303	1'385	20'689	

Annex II – Figure 15: Handbook minimum case 2009: Road user charge revenues by country from national and international road hauliers in Mil. EUR



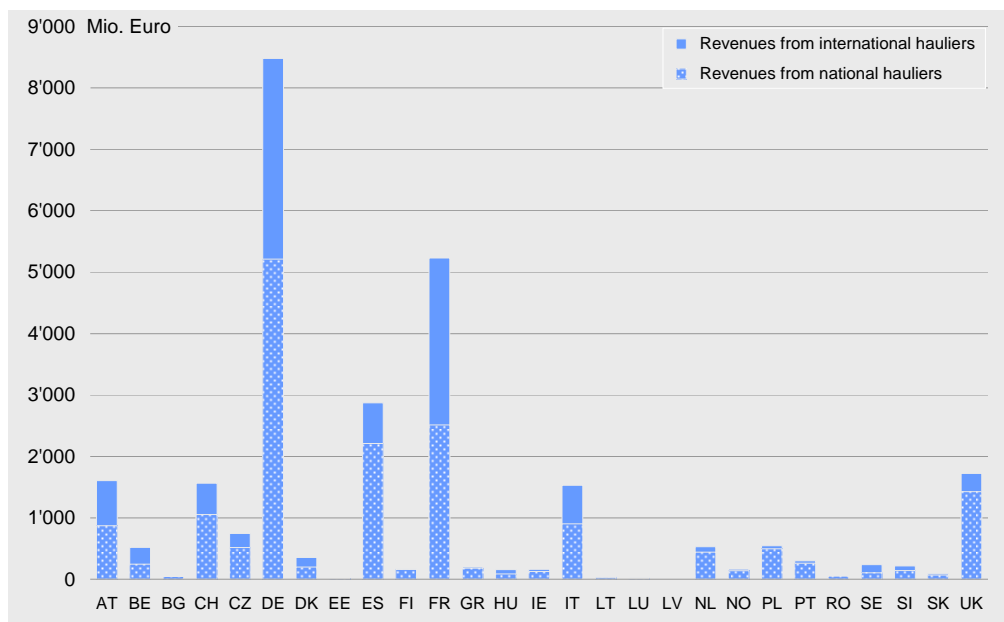
Annex II – Figure 16: Handbook minimum case 2009: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



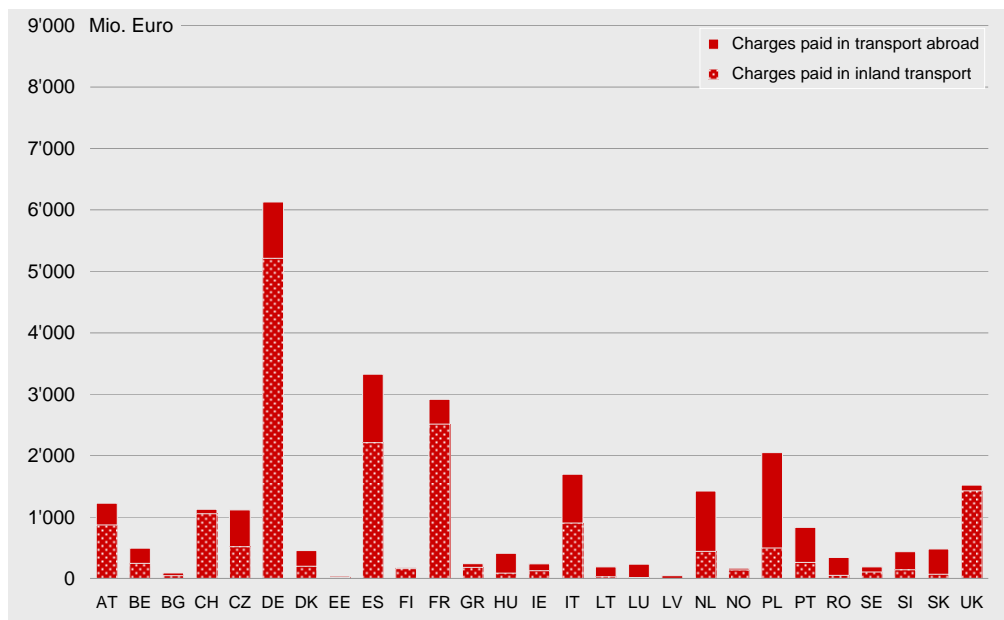
Annex II - Table 9: Handbook minimum case 2020: Revenues and road haulier costs in national and international transport by country in Mil. EUR

HB min 2020	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. Euro]																									Total revenues		
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI		SK	UK
AT	871	3	7	2	75	134	4	1	1	0	7	13	53	0	111	10	2	3	11	0	52	-	56	1	110	70	8	1604
BE	1	246	0	1	5	52	2	0	10	0	40	0	2	1	5	2	23	0	107	0	20	2	0	1	0	1	1	521
BG	-	-	44	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	0	0	-	-	-	44
CH	24	15	0	1054	8	111	3	0	1	0	64	0	10	1	211	2	12	0	32	0	8	0	0	1	1	4	1	1565
CZ	10	0	2	0	518	28	0	0	0	0	0	4	36	-	0	2	0	1	1	0	52	-	15	0	2	73	0	745
DE	211	67	10	27	328	5213	152	11	64	7	81	21	87	2	132	73	80	23	574	7	971	15	96	30	72	109	16	8479
DK	7	1	-	0	8	44	200	2	1	0	-	-	4	0	-	2	3	1	19	8	23	-	0	29	0	3	0	356
EE	0	-	-	-	0	0	0	13	-	0	-	-	0	-	-	0	-	0	0	0	0	0	-	0	-	0	-	14
ES	4	6	-	3	21	48	1	-	2211	1	77	-	11	3	51	6	3	1	19	-	45	340	-	1	4	15	2	2872
FI	0	-	-	-	0	1	1	3	0	158	-	-	0	-	-	0	-	0	1	0	1	-	-	1	-	0	-	167
FR	25	121	3	29	93	335	11	1	923	2	2512	4	48	22	263	32	86	2	155	1	225	199	25	7	25	56	29	5232
GR	1	-	12	-	-	3	-	-	-	-	-	181	0	-	1	-	-	-	-	-	-	-	3	0	-	-	-	201
HU	2	-	2	-	4	2	0	-	-	-	-	4	88	-	1	1	-	0	0	0	11	-	22	0	2	16	-	156
IE	0	0	-	-	0	0	0	-	0	-	0	-	0	126	0	-	0	-	0	-	0	0	-	-	-	0	35	163
IT	50	3	7	8	28	69	4	1	49	0	93	9	42	2	902	9	6	2	12	0	60	14	44	1	69	45	1	1530
LT	0	-	-	-	0	0	0	2	-	0	-	-	0	-	-	27	-	8	0	0	9	-	-	0	-	0	-	45
LU	0	4	-	0	0	4	0	0	1	0	4	0	0	0	1	0	12	0	3	0	0	0	0	0	0	0	0	30
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NL	1	19	0	0	3	32	1	0	3	0	3	0	1	1	1	1	3	0	441	0	11	1	1	1	0	1	1	527
NO	0	-	-	-	0	1	8	0	0	1	-	-	0	-	-	0	0	0	1	138	2	-	-	13	-	-	0	164
PL	0	-	0	-	4	8	1	2	0	0	-	-	1	-	0	14	-	3	1	0	496	-	6	0	0	8	-	545
PT	-	-	-	0	-	1	-	-	40	-	1	-	0	-	0	-	-	-	0	-	-	260	-	-	-	-	0	303
RO	0	-	0	-	0	0	-	-	-	-	-	-	1	-	0	-	-	-	-	-	0	-	49	-	0	0	-	51
SE	4	-	-	0	4	11	66	2	1	10	-	-	2	-	-	1	0	1	9	13	12	-	-	103	-	1	0	239
SI	8	0	2	-	1	1	1	-	0	0	-	0	2	10	-	7	1	0	0	0	14	-	20	0	144	5	1	216
SK	0	-	0	-	8	1	0	-	-	-	-	0	5	-	0	0	-	0	0	-	5	-	2	0	0	67	-	89
UK	3	10	-	0	9	29	1	-	20	-	38	1	9	79	12	6	1	-	38	-	29	3	3	-	4	5	1426	1724
Total charges	1224	494	90	1126	1116	6129	455	38	3324	179	2918	240	411	237	1698	189	232	45	1423	168	2049	832	343	188	434	480	1520	27581
Road user charge revenues by country from national and international road hauliers [in Mio. Euro]																												

Annex II – Figure 17: Handbook minimum case 2020: Road user charge revenues by country from national and international road hauliers in Mil. EUR



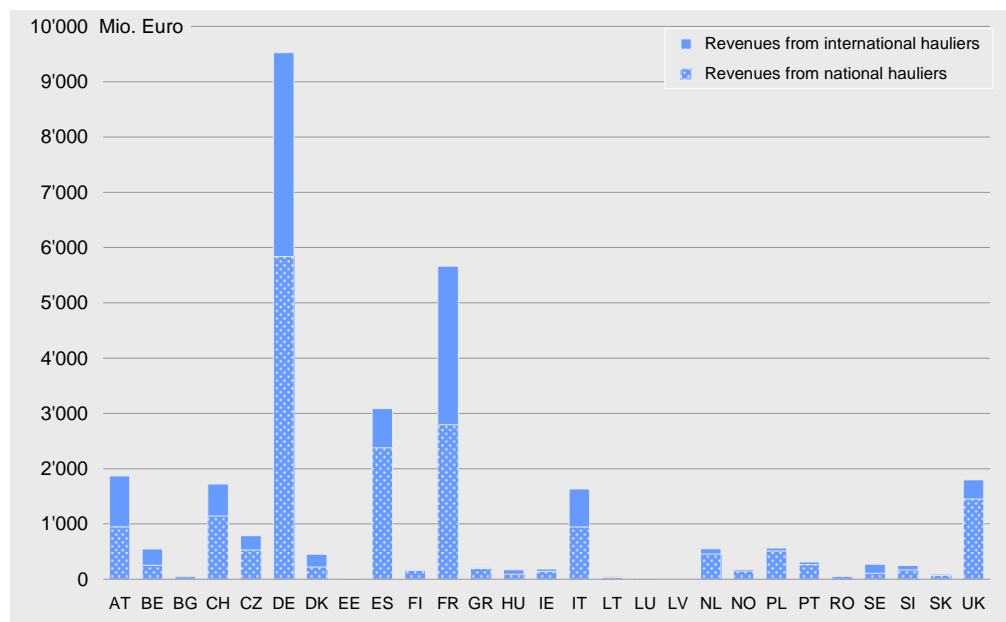
Annex II – Figure 18: Handbook minimum case 2020: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



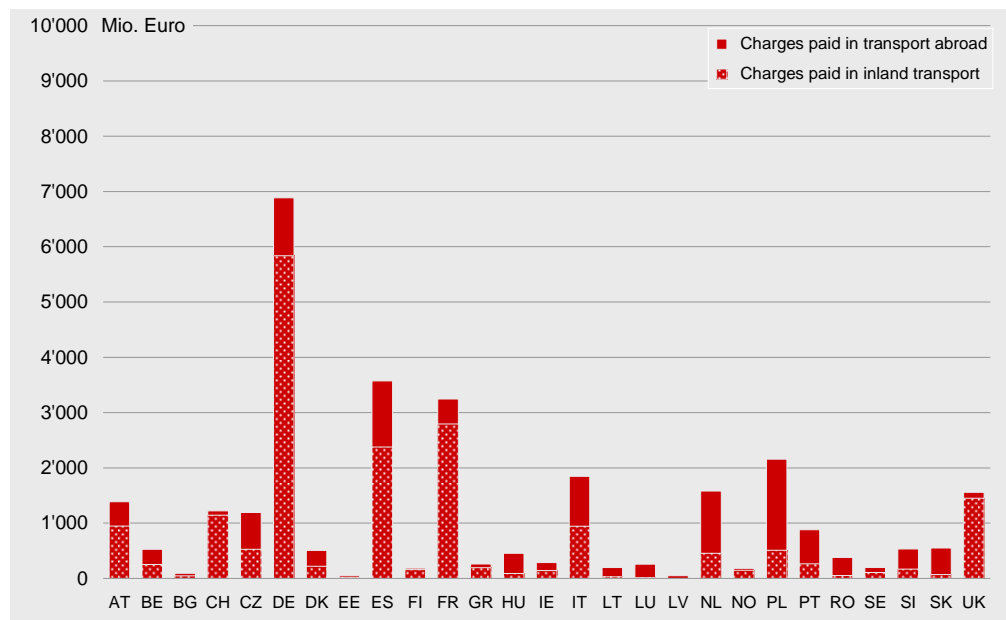
Annex II - Table 10: Handbook minimum case 2030: Revenues and road haulier costs in national and international transport by country in Mil. EUR

HB min 2030	Road user charges paid by national road hauliers in inland transport and transport abroad [in Mio. Euro]																									Total revenues			
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI		SK	UK	
Road user charge revenues by country from national and international road hauliers [in Mio. Euro]	AT	945	3	6	2	91	177	5	1	1	0	9	14	67	0	146	11	2	2	14	0	60	-	63	1	148	88	10	1868
	BE	1	254	0	1	5	56	1	0	11	0	42	0	2	1	5	2	25	0	114	0	20	2	0	1	1	1	1	547
	BG	-	-	45	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	0	0	-	-	-	46
	CH	28	17	0	1145	10	121	4	0	2	0	73	0	12	1	238	2	16	0	34	0	10	0	0	1	2	5	1	1721
	CZ	12	0	4	0	527	32	0	0	0	0	0	6	37	-	0	2	0	0	1	0	57	-	19	0	2	84	0	787
	DE	271	79	11	31	362	5837	174	14	77	7	95	23	97	3	153	76	96	24	684	8	1030	17	108	30	89	127	18	9524
	DK	9	1	-	0	9	80	221	5	2	1	-	0	4	0	-	2	4	2	37	9	31	-	0	32	1	3	0	453
	EE	0	-	-	-	0	0	0	13	-	0	-	-	0	-	-	0	-	0	0	0	0	-	-	0	-	0	-	13
	ES	4	6	-	4	22	53	1	-	2376	1	83	-	12	4	55	6	4	0	21	-	47	361	-	1	5	17	2	3087
	FI	0	-	-	-	0	1	1	3	0	162	-	-	0	-	-	0	-	0	1	0	1	-	-	1	-	0	0	170
	FR	30	124	3	30	99	349	12	1	978	2	2793	4	53	26	279	32	88	2	164	1	226	213	26	7	30	60	30	5663
	GR	1	-	13	-	-	3	-	-	-	-	-	195	0	-	1	-	-	-	-	-	-	-	4	0	-	-	-	217
	HU	3	-	3	-	5	2	-	-	-	-	-	4	93	-	1	1	-	1	0	0	12	-	27	0	3	19	-	171
	IE	0	0	-	-	0	0	0	-	0	-	0	-	0	143	0	-	0	-	0	-	0	0	-	-	-	0	42	186
	IT	60	4	7	8	29	73	5	1	54	0	102	10	45	2	942	10	6	2	13	0	63	15	48	1	80	51	1	1633
	LT	0	-	-	-	0	0	0	3	-	0	-	-	0	-	-	30	-	8	0	0	10	-	-	0	-	0	-	51
	LU	0	4	0	0	0	5	0	0	1	0	4	0	0	0	1	0	13	0	3	0	0	0	0	0	0	0	0	33
	LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NL	1	22	-	0	3	36	2	0	3	0	4	0	2	1	1	2	3	0	455	0	12	1	1	1	0	1	1	552
	NO	0	-	-	-	0	1	9	0	-	1	-	0	0	-	-	0	0	0	1	148	3	-	0	14	-	-	0	178
PL	0	-	0	-	5	9	1	1	0	0	-	-	1	-	0	14	-	5	1	0	511	-	7	0	0	10	-	565	
PT	-	-	-	0	-	1	-	-	44	-	1	-	0	-	0	-	-	-	-	0	-	266	-	-	-	-	0	313	
RO	0	-	0	-	0	0	-	-	-	-	-	-	1	-	0	-	-	-	-	-	0	-	51	-	0	0	-	53	
SE	5	-	-	0	4	16	72	3	1	11	-	0	2	-	-	1	0	1	15	15	17	-	0	108	-	1	0	273	
SI	10	0	3	-	2	1	-	0	0	-	0	4	13	-	9	1	0	1	0	0	12	-	21	0	166	6	1	248	
SK	1	-	0	-	9	1	0	-	-	-	-	1	6	-	0	0	0	0	0	-	5	-	2	0	0	71	-	95	
UK	5	12	-	0	10	32	1	-	23	-	41	1	10	103	14	6	2	-	43	-	29	3	4	-	5	5	1451	1799	
Total charges	1'387	526	96	1'222	1'192	6'887	509	45	3'574	185	3'247	262	458	285	1'847	198	259	50	1'582	182	2'156	879	381	198	532	549	1'558	30'247	

Annex II – Figure 19: Handbook minimum case 2030: Road user charge revenues by country from national and international road hauliers in Mil. EUR



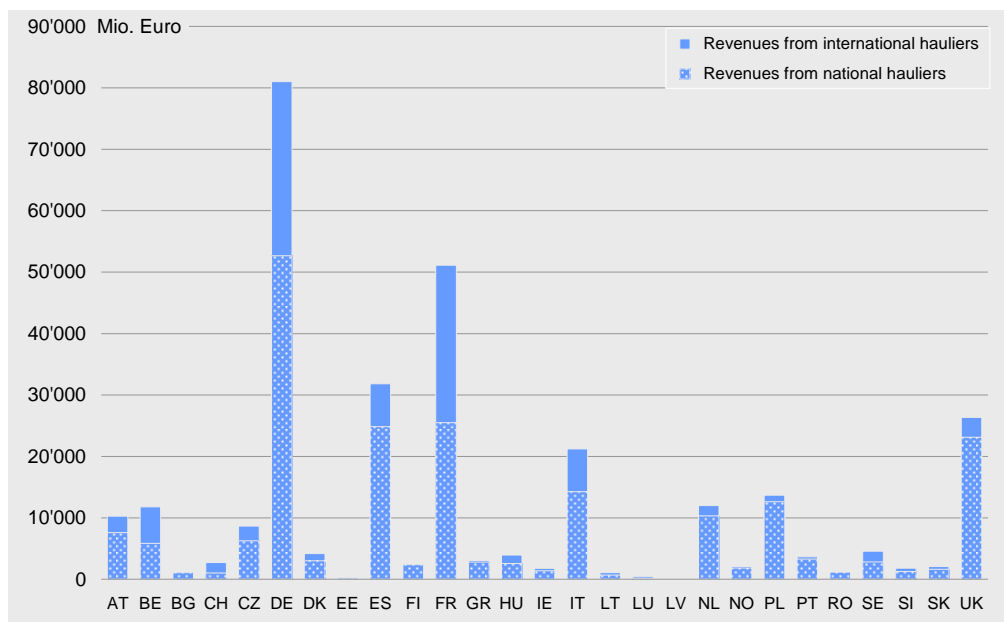
Annex II – Figure 20: Handbook minimum case 2030: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



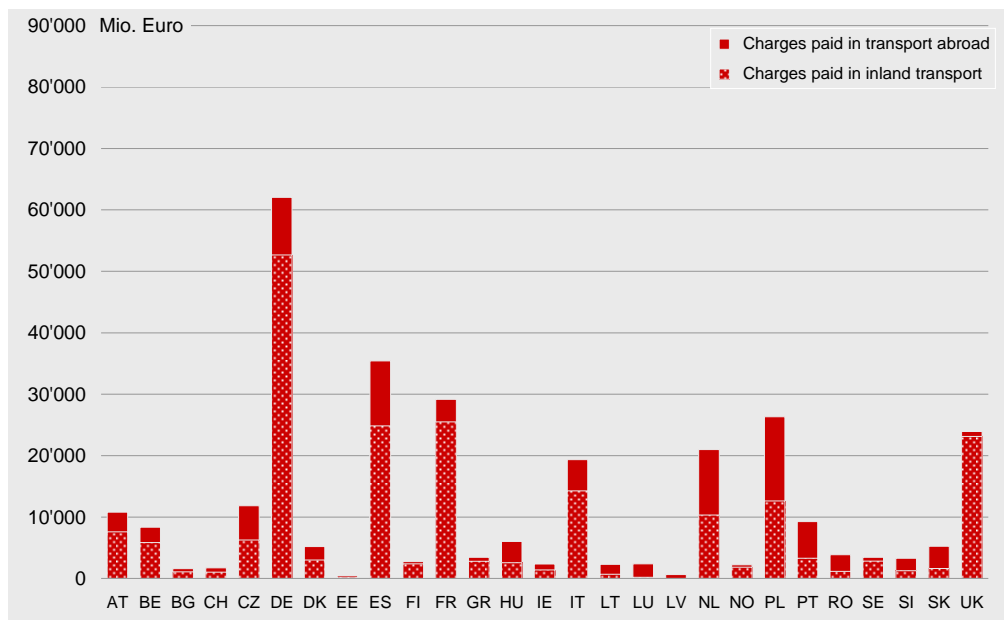
Annex II - Table 11: Handbook maximum case 2009: Revenues and road haulier costs in national and international transport by country in Mil. EUR

HB max 2009	Road user charges paid by national hauliers in inland transport and transport abroad [in Mio. Euro]																									Total revenues		
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI		SK	UK
Road user charge revenues by country from national and international road hauliers [in Mio. Euro]																												
AT	7590	8	37	9	323	519	11	0	4	0	6	75	312	0	215	59	7	17	30	1	190	0	211	3	340	291	18	10278
BE	31	5834	1	18	116	1177	32	1	208	3	824	9	47	14	97	44	414	6	2318	4	415	54	12	13	8	31	37	11786
BG	-	-	1064	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	-	2	-	-	-	-	1072
CH	111	37	0	1003	22	394	9	0	4	0	152	0	27	4	684	7	34	0	112	0	54	0	0	2	21	21	4	2702
CZ	106	1	27	0	6271	262	2	1	0	-	0	53	450	-	3	24	0	8	10	0	485	-	266	3	19	671	1	8663
DE	1762	589	95	276	3130	52656	1262	81	566	75	718	219	921	20	1158	572	690	217	5484	84	7733	139	768	242	538	923	113	81030
DK	34	4	-	1	41	485	3025	4	5	4	-	-	24	0	-	10	24	3	181	48	126	-	-	126	3	16	0	4164
EE	0	-	-	-	0	-	0	232	-	1	-	-	0	-	-	0	-	2	-	0	2	-	-	0	-	0	-	237
ES	37	56	-	34	226	515	11	-	24850	7	822	-	128	28	470	65	36	9	202	-	490	3616	-	16	41	163	17	31838
FI	1	-	-	-	1	10	7	28	1	2384	-	-	2	-	-	1	0	2	11	4	20	-	-	12	-	0	0	2484
FR	221	1249	31	273	807	3503	103	6	8555	22	25492	33	453	176	2193	277	854	29	1494	11	2152	1946	218	61	215	495	256	51128
GR	10	-	171	-	-	41	-	-	-	-	-	2799	5	-	9	-	-	-	-	-	-	-	40	3	-	-	-	3078
HU	56	-	54	-	94	39	0	5	-	-	-	101	2555	-	27	8	-	1	2	0	208	-	450	3	60	294	-	3955
IE	0	1	-	-	1	0	0	-	0	-	0	-	1	1401	1	-	0	-	1	-	3	0	-	-	-	0	356	1767
IT	651	42	71	91	366	896	49	6	568	0	612	114	607	13	14268	114	54	31	150	3	690	176	456	13	718	455	15	21227
LT	0	-	-	-	1	1	0	46	-	0	-	-	3	-	-	678	-	179	0	0	170	-	-	0	-	0	-	1079
LU	1	64	-	2	3	64	2	0	10	0	54	0	1	0	12	1	195	0	46	0	11	1	0	1	1	1	0	471
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NL	23	351	-	2	44	699	22	2	48	5	46	6	26	10	25	26	47	8	10317	3	225	10	13	8	7	12	9	11994
NO	1	-	-	-	2	11	63	2	0	4	-	-	1	-	-	1	0	2	8	1838	16	-	-	122	-	-	0	2071
PL	2	-	0	-	82	160	12	42	0	0	-	-	28	-	2	329	-	119	17	0	12614	-	128	1	2	153	-	13689
PT	-	-	-	1	-	8	-	-	342	-	8	-	1	-	3	-	-	-	3	-	-	-	3283	-	-	-	0	3649
RO	1	-	5	-	4	1	-	-	-	-	-	-	23	-	3	-	-	-	-	-	4	-	1142	-	1	1	-	1184
SE	37	-	-	0	37	218	584	19	12	236	-	-	23	-	-	9	2	9	157	228	186	-	-	2822	-	9	0	4587
SI	56	0	35	-	7	6	0	2	0	-	0	24	148	-	53	2	0	0	0	0	101	-	75	0	1272	32	3	1818
SK	7	-	6	-	132	12	-	0	-	-	-	11	125	-	0	1	-	0	0	0	82	-	55	1	3	1619	-	2054
UK	40	119	-	4	109	351	12	-	226	-	447	6	116	679	115	63	16	-	437	-	352	32	26	-	37	54	23111	26353
Total charges	10779	8354	1597	1716	11820	62027	5206	478	35401	2741	29182	3450	6028	2345	19337	2292	2373	642	20978	2225	26333	9258	3863	3450	3285	5241	23940	304338

Annex II – Figure 21: Handbook maximum case 2009: Road user charge revenues by country from national and international road hauliers in Mil. EUR



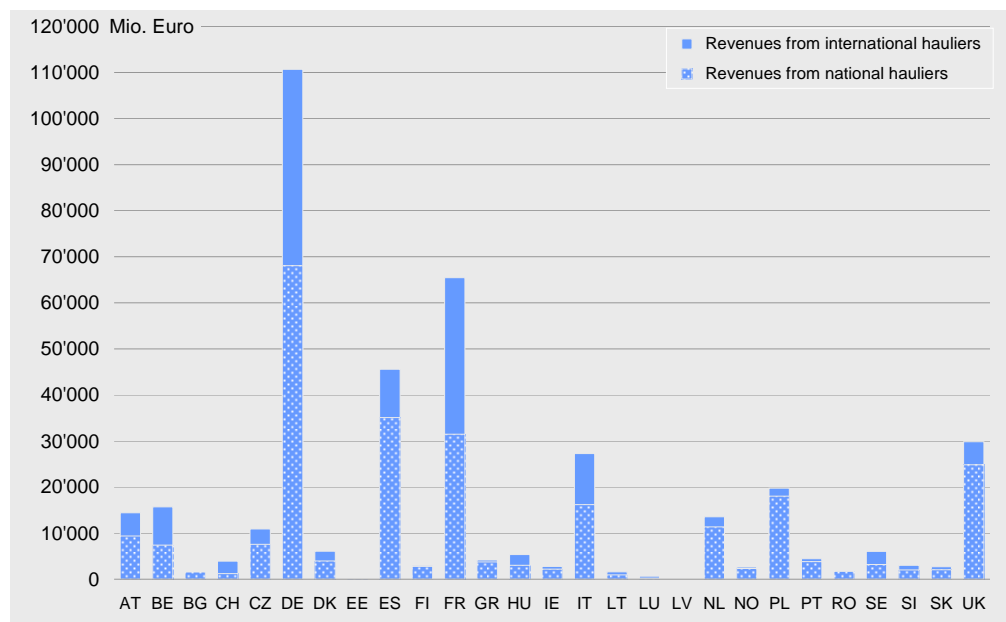
Annex II – Figure 22: Handbook maximum case 2009: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



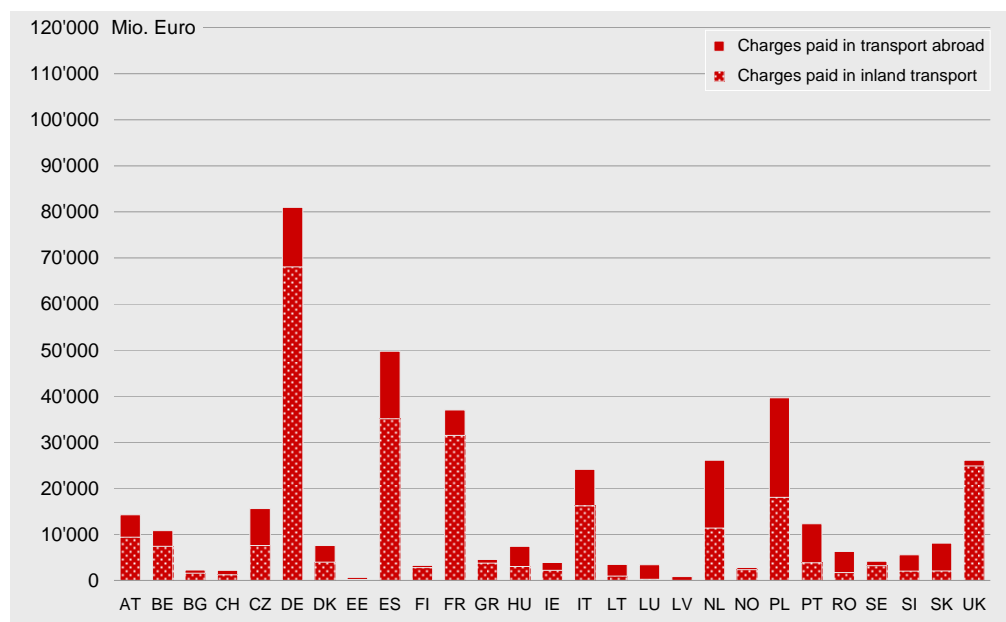
Annex II - Table 12: Handbook maximum case 2020: Revenues and road haulier costs in national and international transport by country in Mil. EUR

HB max 2020	Road user charges paid by national hauliers in inland transport and transport abroad [in Mio. Euro]																								Total revenues				
	AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE		SI	SK	UK	
AT	9381	13	58	16	575	891	20	7	8	0	25	95	425	1	429	81	11	21	53	1	393	-	527	4	698	643	41	141416	
BE	35	7423	1	26	138	1598	48	2	290	3	1200	8	47	25	148	64	676	7	3185	3	608	66	7	16	12	32	36	15704	
BG	-	-	1'555	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	-	3	0	-	-	-	1563	
CH	128	78	0	1'228	41	592	18	0	7	0	340	0	53	7	1'119	9	65	0	170	1	45	0	1	3	7	21	6	3939	
CZ	150	1	34	0	7'588	405	5	2	0	0	0	60	523	-	6	30	0	9	16	0	760	-	220	4	24	1075	2	10915	
DE	2'757	871	132	355	4'278	68'060	1'986	150	835	89	1'051	277	1'132	32	1'717	954	1'045	298	7'492	96	12'676	190	1'250	391	941	1'429	204	110'687	
DK	60	8	-	2	75	912	3'976	15	16	5	-	34	0	-	23	44	7	343	58	282	-	0	219	6	27	2	6'115		
EE	0	-	-	-	0	0	0	235	-	1	-	0	-	0	-	2	-	4	0	0	3	-	-	0	0	-	246		
ES	56	86	-	54	330	763	19	-	35'098	10	1'205	-	172	48	805	92	52	9	302	-	710	5'407	-	22	65	244	24	45'573	
FI	2	-	-	-	2	15	11	50	1	2'775	-	-	2	-	-	2	-	3	16	5	24	-	-	15	-	0	-	2'923	
FR	310	1517	33	363	1'166	4'203	142	8	11'538	28	31'493	44	603	271	3'211	394	1'070	30	19'366	9	2'829	2'492	313	83	317	700	358	65'463	
GR	14	-	241	-	-	54	-	-	-	-	-	37'566	6	-	15	-	-	-	-	-	-	-	70	4	-	-	-	4'160	
HU	83	-	76	-	146	62	0	-	-	-	-	122	3'035	-	39	21	-	1	3	0	392	-	769	3	78	544	-	5'374	
IE	0	2	-	-	1	0	1	-	2	-	0	-	1	2'202	2	-	0	-	1	-	6	0	-	-	-	0	540	2'759	
IT	984	55	112	144	545	1'333	82	12	958	0	887	169	789	24	16'224	180	86	43	225	5	11'448	269	793	20	1'316	857	23	27'285	
LT	0	-	-	-	1	1	0	77	-	0	-	-	3	-	-	940	-	266	0	0	305	-	-	0	-	0	-	1'595	
LU	1	87	-	3	4	94	2	0	13	0	76	0	2	0	18	2	263	0	61	0	9	1	0	1	1	1	1	641	
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NL	31	484	0	2	66	838	32	3	61	6	75	7	38	15	32	37	65	10	11'367	3	294	12	20	13	11	21	16	13'558	
NO	2	-	-	-	4	15	106	5	0	5	-	-	1	-	-	2	0	2	10	2'347	24	-	-	158	-	-	0	2'682	
PL	3	-	0	-	147	294	27	56	0	0	-	-	36	-	5	513	-	126	33	0	18'039	-	215	2	6	289	-	19'792	
PT	-	-	-	2	-	12	-	-	588	-	13	-	2	-	6	-	-	-	4	-	-	3'831	-	-	-	-	0	4'458	
RO	1	-	8	-	7	2	-	-	-	-	-	-	37	-	6	-	-	-	-	-	6	-	-	1718	-	2	3	-	1'790
SE	59	-	-	1	59	321	1'110	45	21	351	-	-	31	-	-	16	3	12	245	300	268	-	-	3212	-	14	0	6'068	
SI	114	0	24	-	17	13	-	0	1	-	0	22	146	-	108	9	0	1	0	0	201	-	289	0	1'998	76	8	3'025	
SK	13	-	7	-	242	19	0	-	-	-	-	12	164	-	0	2	-	0	1	-	140	-	45	1	6	2'040	-	2'693	
UK	58	172	-	6	145	493	15	-	345	-	640	8	146	1'280	203	95	22	-	645	-	492	48	55	-	61	78	24'843	29'850	
Total charges	14'243	107'96	2'281	2'202	15'581	80'990	7'598	667	49'781	3'273	37'006	4'582	7'429	3'903	24'095	3'466	3'402	850	26'109	2'829	39'566	12'315	6'296	4'172	5'548	8'095	26'104	403'272	
Road user charge revenues by country from national and international road hauliers [in Mio. Euro]																													

Annex II – Figure 23: Handbook maximum case 2020: Road user charge revenues by country from national and international road hauliers in Mil. EUR



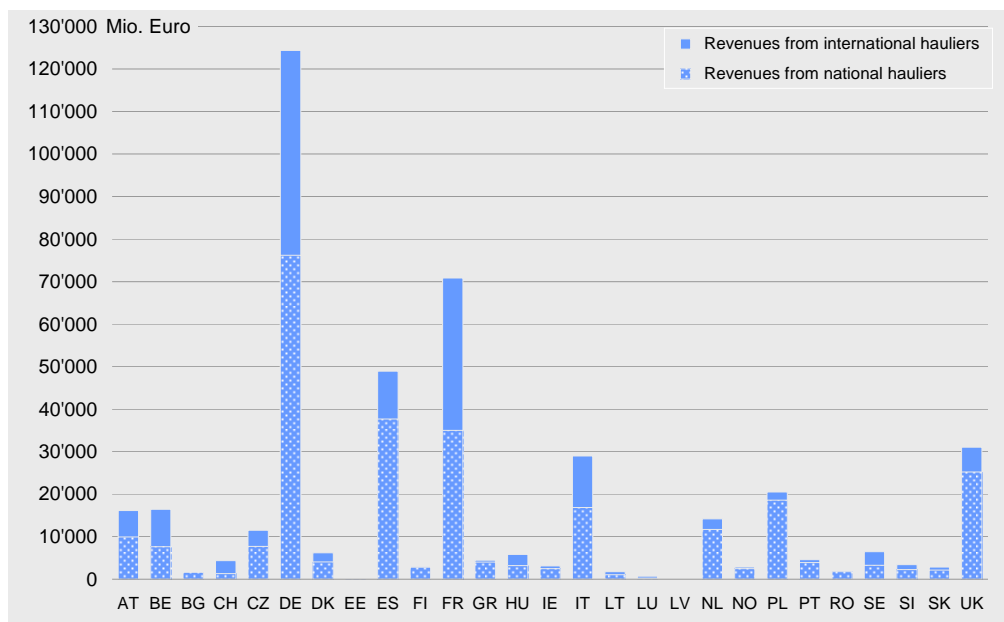
Annex II – Figure 24: Handbook maximum case 2020: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



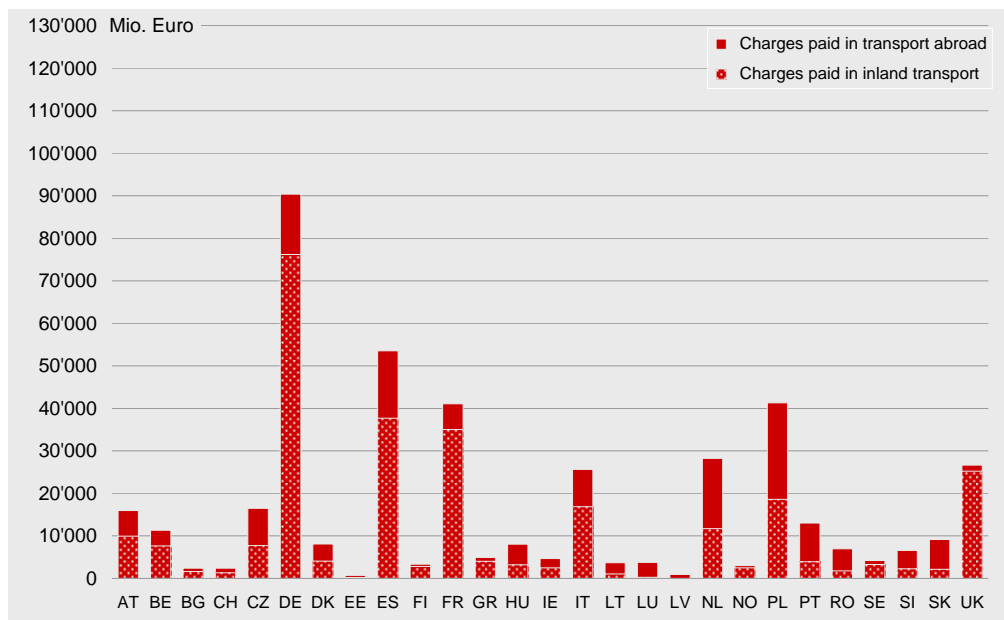
Annex II - Table 13: Handbook maximum case 2030: Revenues and road haulier costs in national and international transport by country in Mil. EUR

HB max 2030		Road user charges paid by national hauliers in inland transport and transport abroad [in Mio. Euro]																							Total revenues				
		AT	BE	BG	CH	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	NL	NO	PL	PT	RO		SE	SI	SK	UK
Road user charge revenues by country from national and international road hauliers [in Mio. Euro]																													
AT	9937	14	43	19	702	1'154	23	8	10	0	31	82	529	1	568	91	11	15	64	1	453	-	598	5	918	803	47	16'128	
BE	38	7645	1	27	139	1'720	45	2	319	3	1'273	10	59	28	160	66	745	6	3'386	3	601	68	11	16	15	36	36	16'458	
BG	-	-	1'603	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	-	4	0	-	-	-	1'611	
CH	150	88	0	1'339	51	644	20	0	8	0	389	0	64	7	1'263	9	86	0	182	1	53	0	1	4	8	24	7	4'400	
CZ	181	2	59	0	7'722	473	6	2	0	0	0	94	545	-	7	31	0	7	19	0	828	-	281	4	30	1'234	1	11'527	
DE	3'537	10'35	141	409	4'724	76'203	2'270	185	1'009	96	1'242	305	1'268	41	1'994	998	1'252	317	8'669	99	13'443	225	1'408	395	1'166	1'663	235	124'330	
DK	47	7	-	1	56	10'14	4'082	24	16	6	-	0	23	0	-	16	40	9	386	46	243	-	1	160	6	22	0	6'205	
EE	0	-	-	-	0	0	0	223	-	1	-	-	0	-	-	2	-	5	0	0	3	-	-	0	-	0	-	234	
ES	68	96	-	57	358	841	21	-	37'706	11	1'279	-	190	58	881	92	59	6	329	-	741	5'755	-	24	77	273	25	48'945	
FI	1	-	-	-	1	16	10	46	1	2842	-	-	2	-	-	2	-	4	16	4	24	-	-	14	-	0	0	2'984	
FR	373	1'556	34	375	1'243	4'381	151	9	12'233	31	35'019	53	683	323	3'402	405	1'100	25	2'052	9	2'538	2'671	321	86	375	751	374	70'852	
GR	17	-	285	-	-	62	-	-	-	-	-	4'039	7	-	17	-	-	-	-	-	-	-	78	4	-	-	-	4'490	
HU	99	-	87	-	156	72	-	-	-	-	-	123	3'191	-	45	27	-	18	3	0	407	-	913	4	89	641	-	5'874	
IE	1	2	-	-	1	0	1	-	3	-	0	-	1	2'492	2	-	0	-	1	-	6	0	-	-	-	0	630	3'142	
IT	1'178	58	121	154	568	14'222	91	13	10'666	0	949	184	835	29	16'868	187	94	41	248	5	1'204	289	858	22	1'529	964	25	28'992	
LT	0	-	-	-	1	1	0	96	-	3	-	-	2	-	-	1'055	-	298	0	0	336	-	-	0	-	0	-	1'794	
LU	1	89	0	3	5	108	2	0	18	0	81	0	4	0	20	2	279	0	66	0	10	1	0	1	1	2	1	696	
LV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NL	37	546	-	2	79	935	41	4	64	7	91	7	43	16	36	40	72	11	11'727	4	319	17	17	15	11	27	19	14'187	
NO	3	-	-	-	5	15	114	5	-	6	-	0	2	-	-	5	0	3	10	2'503	35	-	1	170	-	-	0	2'876	
PL	4	-	1	-	188	334	32	52	0	0	-	-	41	-	6	505	-	166	38	0	18'586	-	246	2	9	355	-	20'546	
PT	-	-	-	2	-	13	-	-	638	-	14	-	2	-	6	-	-	-	4	-	-	3'922	-	-	-	-	0	4'602	
RO	2	-	7	-	7	2	-	-	-	-	-	-	40	-	6	-	-	-	-	-	6	-	1'793	-	2	3	-	1'868	
SE	75	-	-	1	68	372	1'170	44	26	363	-	0	36	-	-	21	3	15	301	325	343	-	1	3'300	-	17	0	6'481	
SI	145	0	39	-	22	10	-	0	1	-	0	34	182	-	128	12	0	9	0	0	171	-	307	0	2'270	87	9	3426	
SK	16	-	12	-	273	22	0	-	-	-	-	19	178	-	0	2	0	0	1	-	156	-	57	1	7	2'137	-	2'879	
UK	78	204	-	7	173	550	18	-	388	-	699	9	170	1'667	237	96	27	-	727	-	481	51	64	-	75	87	25'254	31'063	
Total charges		15'988	113'44	2'414	2'396	16'512	90'366	8'098	712	53'508	3'368	41'067	4'959	8'076	4'863	25'647	3'663	3'768	956	28'233	3'002	41'288	13'002	6'958	4'227	6'588	9'126	26'664	436'591

Annex II – Figure 25: Handbook maximum case 2030: Road user charge revenues by country from national and international road hauliers in Mil. EUR



Annex II – Figure 26: Handbook maximum case 2030: Road user charges paid by national road hauliers in inland transport and transport abroad in Mil. EUR



Annex III: Glossary

Charge (road user charge)	Payment for using an infrastructure (road) by a vehicle for a given period or distance, related to direct (infrastructure) and/or indirect (external) costs
Fuel tax	Taxation on the sale of fuel
Gross domestic product (GDP)	The Gross domestic product (GDP) is the sum (market value) of all goods and services produced within a country and a year. GDP per capita can be regarded as the relative economic power of a country per inhabitant
Heavy goods vehicle (HGV)	Lorry, truck and trailer, articulated train
Incoming traffic	Main traffic relation with source and destination of the transport process in two different spatial units considered from the point of view of the destination; in the present study: the goods which flow into a country (import)
Inland transport	Transport within a country using the inland infrastructure networks
Load factor	The load factor is the distance weighted amount of payload (in tonnes) per trip by one vehicle and can be calculated by dividing the transport performance (tkm) by the vehicle mileage (vkm)
Motorway	<p>A road specially designed and built for motor traffic, which does not serve properties bordering on it, and which:</p> <p>a) is provided, except at special points or temporarily, with separate carriageways for the two directions of traffic, separated from</p>

	<p>each other, either by a dividing strip not intended for traffic, or exceptionally by other means;</p> <p>b) does not cross at level with any road or motorway, railway or tramway track, or footpath;</p> <p>c) is specially signposted as and is reserved for specific categories of road motor vehicles</p>
National transport	Domestic transport with origin and destination within the same country
Nationality principle	Any movement of e.g. road vehicles registered in a country irrespective of the national territory
Outgoing traffic	Main traffic relation with origin and destination in two different spatial units considered from the source's point of view; in the present study: the outgoing transports of a country (export)
Revenues	Financial income from charges
Territoriality principle	Any movement of e.g. road vehicles within a national territory irrespective of the country in which these vehicles are registered
Toll	Charge for using an infrastructure section, usually related to the type and/or the weight of the vehicle
Transit	Main traffic relation without origin and destination of the transport process within the relevant spatial unit; in this case always referring to a country

Transport abroad	Transport in other countries than the country of registration
Transport demand	Mass of the transported goods measured in tonnes and always referring to a direct (imagined) relation between source and destination, where transactions are possible
Transport distance	Distance of a transport process from origin to destination in kilometres; depending on the point of view either only the section driven within a country (principle of territoriality) or the total distance of the transport process from origin to final destination (according to the principle of nationality, if it is provided by a single vehicle holder).
Transport performance	Product of the mass of the transported goods (tonnes) and the distance travelled (km)
Trip	Vehicle movement from origin to destination, irrespective of volume or number of units of the transported goods
Trunk road	National or federal road, major road - usually connecting two or more cities, ports, airports, etc. - which is the recommended route for long-distance passenger and freight traffic. Many trunk roads have segregated lanes in a dual carriageway, or are of motorway standard
Type of transport	Direction of a transport process corresponding to a spatial unit, differentiated between national traffic, outgoing, incoming and cross-trade traffic
Vehicle	Means of transportation, like car, lorry or bus

Vehicle tax	Tax which has to be paid e.g. at the time of purchase as well as periodically (annual, monthly) to register most types of motorized vehicles
Vehicle mileage	also “Driving performance”; kilometres travelled by vehicles (vehicle-kilometres)

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Final Report
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