



Single Market in Transport and Tourism

Cost of Non-Europe Report

STUDY

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The Cost of Non-Europe in the Single Market in Transport and Tourism

Study

Abstract

Significant progress has been achieved during the last 20 years in creating a Single Market for Transports. European tourism is and will remain a vital component of the economy, with enormous economic potential. Both sectors suffer however from remaining barriers, gaps and market inefficiencies that create substantial costs and that could be addressed through further action at EU level.

The gains that could be achieved from addressing the identified issues have been estimated at 8.6 billion euro annually for the transport sector and 6.2 billion euro annually for the tourism sector. Creating a fully integrated transport sector and a more efficient tourism sector will also mean improved mobility, better environmental sustainability, enhanced internal cohesion and international competitiveness of the EU.

Action in these two sectors can be seen as a key driver of EU growth and as a response on how to face the globalisation challenges more efficiently.

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This paper has been drawn up by the **European Added Value Unit** of the Directorate for Impact Assessment and European Added Value, within the Directorate-General for Parliamentary Research Services of the Secretariat of the European Parliament.

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On 15 May 2013, the coordinators of the Committee on Transport and Tourism of the European Parliament have requested the preparation of a Cost of Non-Europe Report to analyse and quantify the benefits of completing the Single Market in Transports.

This paper has been drawn up by the **European Added Value Unit** of the Directorate for Impact Assessment and European Added Value, within the European Parliament's Directorate-General for Parliamentary Research Services.

This assessment builds on expert research commissioned for the purpose and provided by:

- **Cost of Non-Europe in Road Transport and Railways**
by Francesco Dionori, Roberta Frisoni, Simon Ellis, Lydia Rooney, Davide Raghetti, Federico Spano and Elisa Tejedor of Steer Davies Gleave
- **Cost of Non-Europe in Air and Maritime Transport**
by Andreu Ulied and Oriol Biosca (MCRIT) with the support of Julia Rzepecka (VVA) and Stephanie Kirchmayr-Novak (OIR), and the coordination of Giovanni Familiari (T33)
- **Cost of Non-Europe in Tourism policy and Passenger Rights**
by Richard Weston and Nicholas Davies of the University of Central Lancashire and Anna Scuttari, Matthias Wagner and Harald Pechlaner of the European Academy of Bozen/Bolzano

Note on methodology

Cost of Non-Europe reports are designed to study the possibilities for gains and/or the realisation of a 'public good' through common action at EU level in specific policy areas and sectors. They attempt to identify areas that are expected to benefit most from deeper EU integration, in other words where the EU added value is potentially significant.

The concept of the "Cost of non-Europe" can be traced back to the Albert Ball report of 1983, and the study carried out by the Italian economist Paolo Cecchini on the cost of non-Europe in the single market. The present report is part of a broader attempt of the European Parliament to provide an update of the original Cecchini Report in various areas of the single market.

The aim of the study is to analyse the expected benefits of the completion of the Single Market in the transport sector. In doing so, the report looks at the four major transport modes - road, railways, sky and maritime transports - as well as some cross-sectoral issues such as passenger rights¹. Although the tourism sector is clearly separate from transport, they are closely interlinked, as efficient transport is crucial for the flow of passengers into and across Europe. An analysis of the tourism sector has therefore been included.

The report seeks to identify the remaining barriers and gaps in the Single Market for transport, and need for further action in tourism, by looking at those areas where liberalization has not been completed or where markets are not functioning effectively.

Where possible, a quantitative analysis of the potential benefits has been conducted. As far as possible, overlaps between estimated benefits in different sectors have been avoided (e.g. cross sectoral issues such as modal shift) or excluded (e.g. efficiency gains in transport as a sub-sector of tourism). The calculations of the costs and benefits rely on conservative assumptions. While the exact extent of final benefits is not possible to assess as it will depend on a multitude of various factors, it will be somewhere between the minimum and maximum impact estimated for each sector. For the purpose of this study, the mid-point values are retained for further computations. Where it has not been possible to quantify all the costs, benefits and effects, a qualitative complementary approach has been used, with a view to providing insight.

¹ Gaps and inconsistencies in passenger rights legislation and resulting costs will be analysed in a separate report.

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- II - **Cost of Non-Europe in Air and Maritime Transport**
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- III - **Cost of Non-Europe in Tourism policy and Passenger Rights**
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Executive summary

Both the transport and tourism sector are vital components of the EU economy and important generators of employment. Both sectors also face important challenges. The transport sector is not free from difficulties in terms of competitiveness and environmental sustainability, exacerbated by the recent economic crisis. As for tourism, the EU will remain the world's n. 1 tourist destination, but will face growing competition from emerging markets. Both sectors have potential that can be untapped through further action at EU level.

Since its inception, transport policy has pursued the aim of integration and removal of barriers, be they technical, administrative or regulatory, in view of creating a Single Market for transport. It is indisputable that substantial progress has been achieved. However, issues associated with the implementation of new legislation in the Member States, stakeholder's opposition and vested interests have meant that 20 years of regulatory actions have not created a sufficiently open market.

In the rail sector, the main barriers identified include non-transparent public procurement, problems with non-discriminatory access to infrastructure for new entrants, a multiplicity of authorisation and certification regimes across the EU, insufficient separation between infrastructure and service management, differences in access charges and an enormous diversity in technical standards both for trains and rail infrastructure.

The road transport sector is significantly more advanced. Nevertheless, concerns remain due to the lack of sufficient market opening, incomplete harmonisation of social and employment standards and enforcement rules, as well as differences in the promotion of cleaner and safer vehicles and in the achievement of road safety targets.

In the air and maritime transport sectors, new policies and legislative initiatives are needed to prevent discriminatory access to infrastructure, to clarify public service obligations, to prevent state-aid and cross-subsidies creating unjustified market distortion, and to progress on integrated traffic management. At a more strategic level, there is a need to advance in the overall regulation of ports and airports, the internalisation of environmental externalities for maritime and air transport, and to ensure the consistency of decentralised and privatised infrastructure investments.

In the tourism sector, Europe will need to address areas with the lowest economic efficiency and, at the same time, focus on what it does best and makes

it unique, such as its cultural and natural heritage, in order to maintain its position. Supporting the development of SMEs (especially in the food-related sector), developing quality, sustainable tourism are the main areas identified for further action.

Substantial gains can be achieved from enhanced actions to fill the gaps and create a fully integrated transport sector and a more efficient tourism sector. The gains have been estimated at 8.6 and 6.2 billion euro annually for the transport and tourism sector respectively. In broader terms, action in these sectors will also mean improved mobility, better environmental sustainability, enhanced internal cohesion and international competitiveness of the EU, and as such be a driver of EU growth and a way out of the crisis.

Introduction

Transport is a vital component of the Single Market. It is not only a crucial factor for three of the four freedoms: the free movement of persons, services and goods, it also plays a major role in strengthening the economic and social cohesion of the European Union, as it reduces regional disparities and improves employment, by encouraging investment in transport infrastructure and assisting workers' mobility. Furthermore, transport is an important part of the economy itself. It generates almost 5 per cent of European GDP and employs more than 11 million people, or about 5 per cent of the EU's total workforce. When manufacturing of transport equipment is also taken into account, the impact on the EU's employment is even more significant, representing 8 per cent of the EU's workforce – or 18 million jobs. Significantly, transport plays also a major role when addressing EU's environmental challenges and the Union's capacity to live up to its international commitments in terms of CO₂ emissions and oil dependency.

Despite transport's key role in the EU economy as a common EU policy and an important generator of jobs, the sector is not without its difficulties. Land transport tends to be the most problematic mostly because the high number of small and medium size road freight businesses is generally more exposed to financial fluctuations, resulting in high numbers of insolvencies in the past decade. Aviation faces similar problems with more than 100 bankruptcies of EU commercial airlines between 2000 and 2011. This has been exacerbated by the financial crisis with at least ten European governments having to bail out national flag carriers suffering from spiraling debts. On the other hand, insolvencies are less frequent in the rail sector due to public subsidies as support provision of services.

The salient point is that the common transport market remains incomplete and vulnerable to external shocks. Without a significant overhaul of the transport sector, cross-sector economic viability will remain poor with further threat of bankruptcies and job losses.

As in other sectors of the EU's economy, transport policy, since its inception, has pursued the aim of integration and removal of barriers, be they technical, administrative or regulatory. It is indisputable that substantial progress has been achieved in increasing competition and improving the quality of services and safety in the road, rail and air transport sectors. But the liberalisation has been uneven across countries and sectors due to varying underlying factors, such as the time lag associated with the implementation of new legislation in the

Member States, stakeholder's opposition and vested interests. As a result, there are many legislative gaps that remain to be addressed.

The European Commission's White Paper of 2011 on a Single European Transport Area² called for an integrated, seamless transport system in Europe and addressed many of the challenges described above. It defined a set of priorities for achieving a competitive and resource efficient transport system. To date, several proposals have been adopted or are being discussed. But more is needed to address the existing bottlenecks.

Europe is the world no. 1 tourist destination and just like the transport sector, tourism constitutes an important pillar of the EU economy. Tourism generates on its own around 5 per cent of the EU's annual GDP, employing approximately 5.2 per cent of the total labour force. This approaches 10 and 12 per cent respectively when the indirect impact from associated industries is taken into account. In the coming decades, Europe will face increased competition as well as new opportunities in the tourism sector.

Already in 1988, the so-called Cecchini report on the Cost of Non-Europe highlighted the significant costs resulting from the failure to complete EU integration. Addressing these costs is all the more important in view of the shaky economic situation the EU is still facing. The challenge in the transport sector is twofold: not only to avoid limiting freedom of movement within the EU; but also to create the necessary conditions to boost EU growth and employment. For tourism, it is that Europe's position be reinforced in the face of new challenges. The transport and tourism sectors have a tremendous potential and should be seen as key drivers for economic growth and a way out of the crisis.

² Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, COM(2001)144 final

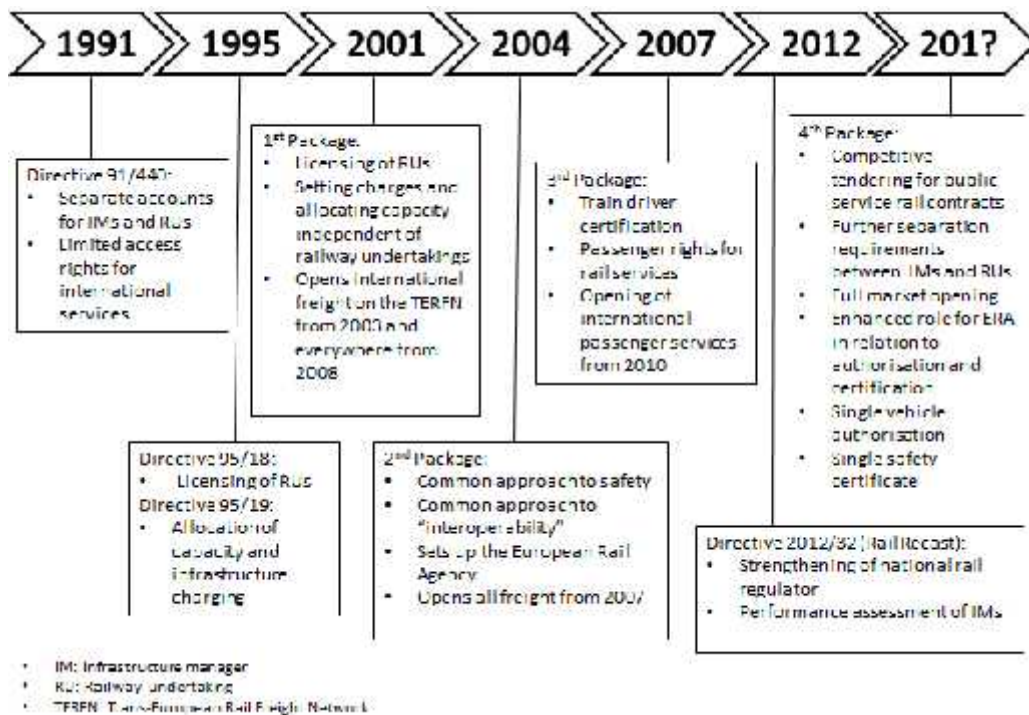
Chapter 1 - Land transport: rail and road

1) Rail

Evolution of the railway sector

The European rail sector has undergone a number of changes over the last 20 years, with the aim of increasing liberalisation and creating a Single European Railway Area. A series of Directives and Railway Packages have been adopted aiming at progressively restructuring and liberalising the market, strengthening the level of competition by requiring the independence of the capacity allocation and gradually opening up the market to new freight and passenger operators. Administrative barriers to entry have been reduced with the creation of harmonised standards and the setting up of the European Railway Agency responsible for the implementation of a common approach to safety and interoperability.

Figure 1: Rail legislation since 1991



However, the completion of a truly EU-wide single market in rail is still very far away. There is indeed a big gap between the competition and regulatory regime in place and the reality of the market. There are two main reasons for this. First, it is the overwhelming dominance of the physical infrastructure, which has the tendency to create natural monopolies of the incumbent, often state-owned operators. Second, and related to this, is the national orientation of the installed

base and how it is governed, which results in the creation of administrative barriers.

Completing a truly European market in rail is a long term process and one that requires intervention at EU level. In this respect, despite undeniable progress, there are still a number of lacunae in legislation that inhibit the move toward a single rail market.

Main gaps

Completing market opening- competition for public service contracts. In the rail sector, the benefits of liberalisation have not been as successful as hoped. This is reflected in uneven degrees of market opening. Market entry across Europe has been limited primarily to the freight sector, but even so it remains quite limited. This can partly be explained by the nature of the sector but also by the fact that rail continues to be subject to a number of limitations to competition within both national and international markets. While some limitations to competition are necessary to protect Public Service Contracts (i.e. transport services operated in the public's general interest), there is no reason why other commercial services on the rail network should not be open to competition.

Domestic passenger services remain closed to competition in the majority of Member States. Approximately one third of such services operates on a commercial basis and could therefore be subject to open access competition. In practice however, the incumbent operator holds a monopoly position in many domestic markets, which results in inefficiencies and low quality services. Only Sweden and the United Kingdom have fully liberalised their markets, with Germany, Austria, Italy, Czech Republic and the Netherlands having opened theirs to a limited extent. Experience in these open markets, has shown improvements both in quality and availability of services with passenger satisfaction steadily rising and passenger growth in some cases expanding by 50 per cent over 10 years.

Of course, some restrictions to free competition are necessary to protect Public Service Contracts (PSCs). Those are defined by the relevant competent authority in each Member State. But even here, there is room for more openness to competition. Indeed, the EC regulation in place³ indicates that the procedure to award PSCs for public passenger services is competitive tendering. However it also includes a notable exception for heavy rail, allowing for "direct awards where national laws permit it". As a result, the vast majority of rail PSCs in

³ Regulation (EC) No [1370/2007](#) of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road

Europe are granted to operators by a 'direct award', with no competitive tendering process, frequently giving exclusive rights to the part of the network covered by the contract to an incumbent. The operator in most cases is a state-owned entity.

Competitive tendering is fully or partially used in eleven Member States, and a further five only reverted to direct awards after the competitive tendering process failed. The number of bidders is often low, which has been attributed to the non-uniformity of bidding procedures across the EU. A more consistent, Europe-wide approach and more uniform tendering conditions are needed to encourage new entrants.

The 4th Railway Package seeks to remedy these lacunae by introducing competitive tendering for rail PSCs except for small-scale services and opening the domestic passenger rail market (outside public service contracts). The procedure for the adoption of the 4th Railway Package is ongoing, with a first reading completed in Parliament. The final degree of market opening will therefore depend on the final compromise on these aspects. But in order for the market to be fully open and accessible to competing operators, many other factors need to be addressed as well, such as ensuring non-discriminatory access to infrastructure or vehicle authorisation and certification issues.

Ensuring non-discriminatory access to infrastructure. Fair access of new market operators for all to the railway is crucial to underpin the development of a truly European network. To ensure that, independent track ("infrastructure") managers must run networks in an efficient and non-discriminatory manner and coordinate at EU-level. Current legislation foresees that infrastructure managers must have operational and financial independence from any transport operator running the trains. This is essential to remove potential conflicts of interest and give all companies access to tracks in a non-discriminatory way. In practice many Member States have adopted some form of vertically integrated or "holding structure", whereby the infrastructure manager and railway undertaking operate as separate legal entities but are both owned by the same parent organisation. While it is widely accepted that mechanisms to protect the non-incumbent operator should be strengthened, there is no agreement at present among the stakeholders on whether this model can fully guarantee non-discrimination or whether strict institutional separation ("unbundling") must be introduced.

EU legislation⁴ has introduced the obligation for Member States to set up Regulatory Bodies to ensure impartial oversight of the market. While it is too early to say whether this has been sufficient to create the necessary certainty,

⁴ Directive 2001/14/EC and the recast of the 1st Railway Package

some stakeholders within the sector have suggested that the introduction of a European Regulatory Body for the Railways would improve the situation further. The main argument is that a Single European Rail Regulator would help in breaking down technical and market driven barriers. Indeed investment in the rail sector requires substantial upfront payment, which is not likely to be profitable in the first three to five years. This uncertainty about the return on investment is aggravated by the fear from new entrants of potential discrimination from the incumbent operator. An independent, European regulator - not guided by specific national interests - could help removing this uncertainty and result in increased investment in the sector.

National specific vehicle authorisation and safety certification. Currently rail authorisations (necessary for placing rolling stock on the market) and safety certificates are issued by each Member State. This generates important costs to manufacturers and single operators as multiple certifications are needed for multiple countries. In addition, the current legal framework has led to differing rules and procedures in each Member State, resulting in different processes, costs for authorisation and timescales involved. Today, the 26 EU Member States (Cyprus and Malta have no rail) together have 11,000 rules on technical and safety aspects in infrastructure and for rolling stock.

In order to remove these barriers, the 4th Railway Package proposes to establish a new role for the European Railway Agency (ERA), which so far had only advisory functions. The ERA would act as a single authorisation body, a kind of "one stop shop" with strengthened control over the functioning of national rail safety authorities as well as Notified Bodies. Again, the new role of ERA will depend on the final agreement on the text.

As we see, liberalisation is a key aspect of the single market in rail transport. Yet, its success is dependent on the removal of physical and technical barriers between Member States to allow trains to travel across national borders. Some of these are directly linked to the rail infrastructure.

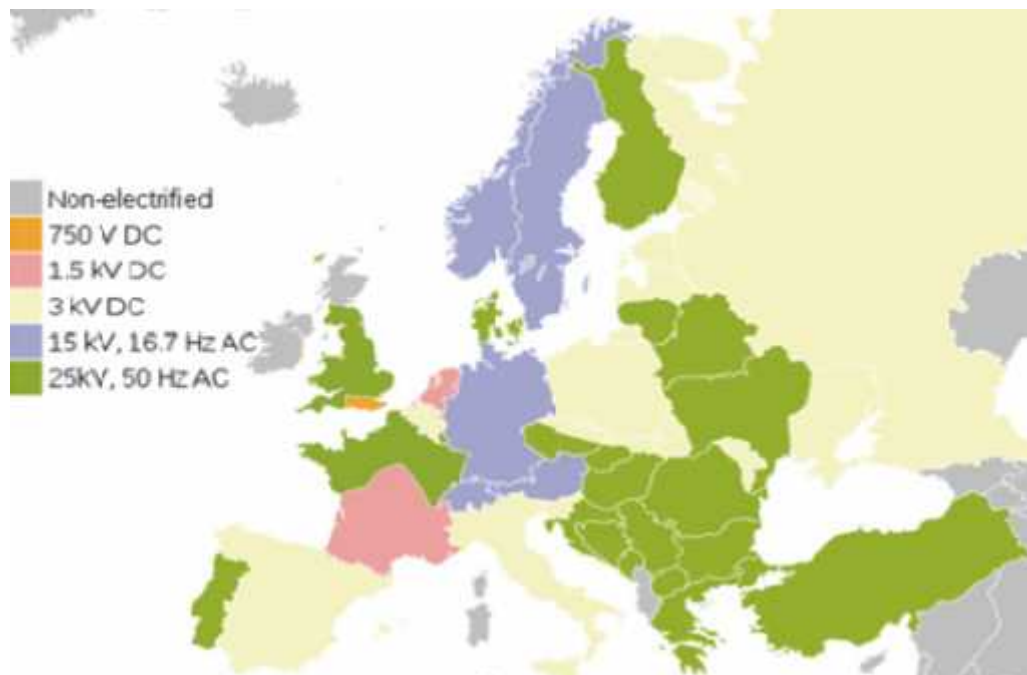
The legacy rail system. The historical development of rail systems within national borders has meant that national technical requirements have been developed independently, with little thought to the impact on operations across borders. As a result, there are many differences in Europe's railway networks, including different track gauges (the distance between rails on the track), electrification regimes and voltages, signalling, loading gauge and the design of rolling stock.

Box 1: Different track gauge across Europe

While most Member State rail networks use the standard gauge of 1,435 mm, several countries use a broader gauge and small narrow gauge networks also exist. The Baltic Member States of Estonia, Latvia and Lithuania use the same broad gauge as Russia, of 1,520 mm. Finland uses a slightly wider gauge of 1,524 mm and the Republic of Ireland and Northern Ireland use a gauge of 1,600 mm. The Iberian gauge used in Portugal and Spain measures 1,668 mm. All high-speed networks, including those on the Iberian Peninsula, use the standard gauge.

These technical constraints clearly act as a barrier to the development of a single market since the availability of rolling stock that can cross borders is typically limited.

Figure 2: Different electrification systems across Europe



There is currently no legislation in place that aims to remove these obstacles and require that one specific gauge and power supply is used across the entire European network. In any case, the cost of complying with such legislation would be prohibitive (even though it has to be noted that the renewal and upgrade of all European infrastructure will need to take place sooner or later).

Given the physical constraints that limit technical interoperability, the process must be implemented in steps. A gradual approach in the harmonisation of standards and systems is needed.

Interoperability. The Interoperability Directive (2008/57/EC) defines a number of essential requirements to be met for interoperability including safety, reliability and environmental protection of the European railway system. They are called Technical Standards for Interoperability (TSIs). The ERA is responsible for the development of TSIs. However, even where TSIs exist, they do not cover the entire network but are only implemented when a network is being upgraded or newly built.

Meanwhile European Railway Agency has started to address some of remaining barriers outside the TSIs by creating a register of national rules. The next step is to identify which of these national rules can be removed without impacting the functioning of the national network and when effective equivalence between different national rules can be established. This is by necessity work in progress, often dependant on voluntary agreements between Member States. While acknowledging that developing common technical standards is a gradual process, there are clear gaps in current legislation relating to geographical extension.

Box 2: Lack of operational interoperability – the example of the tailgate signal on trains

Due to differences between the Italian and Austrian operational rules the tailgate signal of trains (or: tail marker) has to be changed at the Austrian/Italian border station at Brennersee. In Germany and Austria, reflective boards are required at the back of the train. However, Italy does not accept such reflective boards. Instead, Italy requires illuminated tail lights. As a result, the train driver has to leave the train, walk to the end of the train, change the signal and walk back again. In addition to this procedure, a technical control has to be carried out, even though a similar control was already carried out when the train left Munich. However, the Italian railway undertaking does not accept the technical control done by the German railway undertaking in Munich, even though the journey Munich-Verona is only 448 km, which is less than the maximum 700 km required by Italian regulations.

All these additional checks take about 25 minutes. This is exactly the journey time which is saved by constructing a new high speed line between Nürnberg and Ingolstadt in Germany at an overall cost of 2.336 billion euro (with EU co-financing of 134 million euro from TEN-T).

Standardisation of rolling stock, including a single signalling system. Just as there is variance in rail infrastructure between different Member States, there are also important differences in the rolling stock, with often similar trains being specified according to different standards. One of the specific technical barriers to be addressed concerns the signalling systems used across the EU. At present, there are **over twenty different train control systems in Europe**. When a train travels from one Member State to another, it must change system, leading to increased time and costs. Discussions on a common European system began in the late 1980s, although progress has only been made over the last decade with the European Rail Traffic Management System (ERTMS), designed to remove the technical obstacles to interoperability of train control command systems.

Full deployment of such a system is however still a long term prospect. Its successful implementation is dependent on Member States working cooperatively with the rail industry, and given the relatively high investments that it requires, on adequate incentives for operators to install the system. Legislation that would incentivise the uptake of ERTMS would therefore be useful.

Another area that has potential to achieve important savings concerns the harmonisation of train and technical parts specifications. A step towards standardisation of trains could be creating a common understanding of how trains should be specified - while keeping possibility for the manufacturers to differentiate themselves on the market to attract customers. This is not something that can be legislated, but rather something that the industry would be best placed to address together.

The standardisation of technical parts is also an area where the single market in rail is still lagging significantly behind: for instance, some operators have hundreds of different wheel sizes for their passenger and freight rolling stock which is increasing their costs and making the railways less competitive. Harmonising these technical spares and common parts could benefit the industry as a whole. Again, this is something that could be achieved through industry cooperation.

Missing links at borders. The creation of a Single European Railway assumes that there are no more borders for the railways and therefore no missing links at borders. Despite targeted EU funding directed at cross-border projects the missing links remain. The EU should take a more prominent role in identifying those and targeting investment in these specific areas. Creating those links could come in various forms: building the infrastructure necessary to allow the crossing of borders without stopping; creating a cross-border service that connects two

key towns or cities that are currently only connected by road (although the rail infrastructure is there). Such administrative gaps can be easily filled by targeting those areas that create the biggest benefit with the least input.

Apart from these gaps relating to infrastructure, a number of other "softer" deficits persist.

Passenger rights. A number of passenger rights have been introduced in legislation that considerably improved the level of service for passengers. Yet, Member States can opt out of large sections of the Regulation for a limited (but renewable) amount of time meaning that although there is an EU vision of passenger rights, it is not implemented in the same way across the EU as a whole. In addition, some areas of passenger rights do not go far enough. In particular there is no obligation to inform passengers of their rights in a common language (or at least in more than just the local language) or to standardise the information that is provided to passengers in relation to delays and assistance. Finally, protection needs to be enhanced in case of multiple tickets for long-distance travel and multimodal travel.

Variable access charges. Railway undertakings are charged by infrastructure managers for using the network. The level of access charges across Member States varies substantially. While some differences in charges are inevitable given differences in network characteristics and underlying costs, a common approach to the calculation of access charges would benefit all Member States. Such a common process for the determination of infrastructure charges could lead to greater certainty for all operators and would certainly help in the creation of the single market.

Single operating language. One of the barriers that hinders cross border services is the fact that each national market speaks its national language in communicating between train and infrastructure (and passengers). In the aviation industry this has been solved by using English as international language for communication. In the rail sector local languages remain essential. For example a Eurostar train driver will need to speak English, French and Dutch to operate their services. This creates an increased cost to the industry which could be addressed by the choice of a common language across the sector or through the use of alternative languages such as pictograms to ensure that a common language is used.

Estimating the Cost of Non-Europe for rail

It is undeniable that creating a fully integrated single market in rail would mean a profound transformation of the sector bringing multiple benefits, such as increasing demand, creating new submarkets, contributing to modal shift, an overall reduction of CO₂ emissions and improving the mobility of Europeans as a whole. The overall changes would be much more significant than just some improvements of the existing market.

At present there is however no overall estimate of the economic potential of a truly European single market in rail. This is due to the absence of reliable estimates on several assumptions that are crucial for calculating costs and benefits. Another complexity arises from the slow pace of investment returns which for the infrastructure adjustments could take several decades, as likewise for many of the other identified barriers. For instance, the probable reduction of certification costs and timescales deriving from the adoption of the 4th Railway package is forecast to just 20 per cent by 2025.

The quantification of the cost of non-Europe can therefore only be based on summing up the marginal benefits from addressing the key deficits in the single market *acquis*. Given the incremental pace at which potential benefits are expected to appear, the calculations of potential benefits are projected within a 20- year timeframe: 2015-2035.

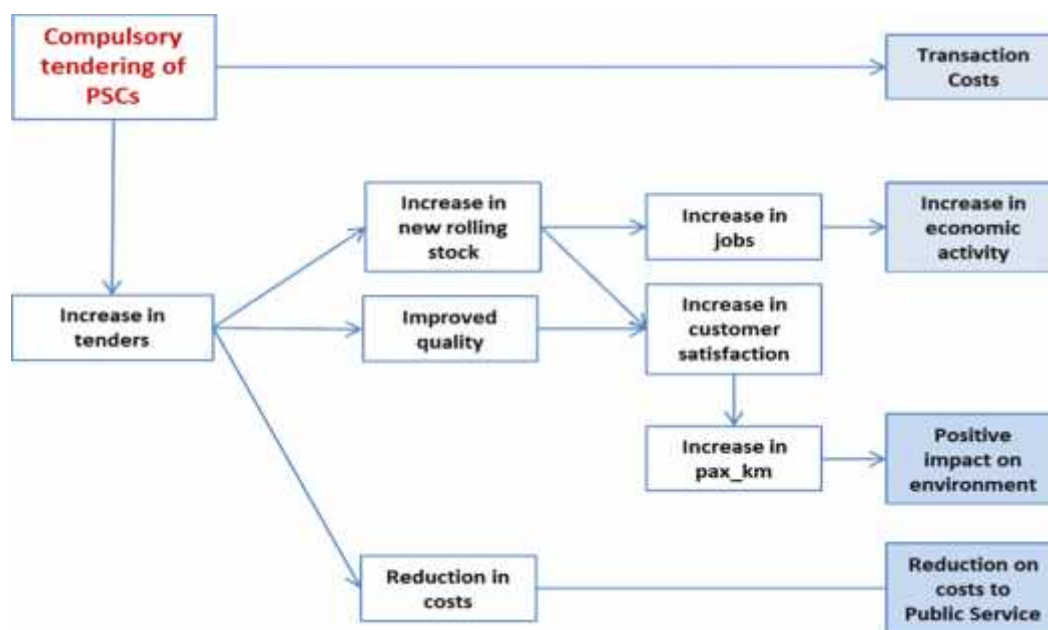
As regards the first gap identified- completing market opening⁵, it is expected to bring benefits in terms of a higher service quality and lower fares, reduction in pollution, as well as increased economic benefits associated to the additional rolling stock. Evidence from the UK, Italy and other countries that have introduced open access operations shows that this has led to enhanced service frequencies and increased the number of destinations served by operators along with an improvement of the on-board experience. Evidence in those Member States has shown that average fares have fallen by as much as 30 per cent, and on average by at least 20 per cent. The fall in fares decreases the cost of travel, increases demand and as such it is likely to increase the market share for the rail sector. This in turn would mean environmental savings in terms of a reduction in CO₂ emissions, as the additional train demand will be captured from road and air traffic. It is also likely to generate a knock-on effect on increased demand for rolling stock and therefore create temporary or permanent new jobs.

⁵ This refers to ensuring that there are no market restrictions placed in the provision of passenger services, with the important restriction of preserving the viability of Public Service Contracts.

Overall, it has been estimated - taking into account also a small increase in transaction costs - that the full opening of the market will lead to gains in the range of 3 to 6 billion euro over the 2015-2035 period.

The introduction of compulsory tendering for Public Service Contracts is likely to result in similar impacts as market opening. These are illustrated in the following diagram.

Figure 3: "Open access to PSC" cost savings diagram⁶



In total, cost savings to public authorities, environmental savings and economic benefits resulting from increased rolling stock have been estimated in the range of 10 to 25 billion euro over the 2015-2035 period.

The two administrative processes of vehicle authorisation and safety certification introduce significant additional costs to operators. A common approach to authorisation and certification, managed by the independent European Railway Agency (ERA) would increase certainty in the entire process, substantially reducing timescales and the cost of bringing a train into service and a service on-line. Based on an Impact Assessment of the European Commission⁷, updated for the purpose of this report, it has been estimated that the benefits of a common approach could be in the order of 980 million euro for the twenty year period.

⁶ Pax_km stands for passengers per kilometre.

⁷ Impact assessment support study on the revision of the institutional framework of the EU railway system, with a special consideration to the role of the European Railway Agency, Final Report, June 2012, Steer Davies Gleave

Additional gains that are likely to be achieved from ensuring non-discriminatory access to the railway infrastructure could be achieved through the creation of a European Rail Regulator and from the implementation of regulatory actions capable of enhancing the level of separation between incumbent operators and national infrastructure managers. A single European Regulator would bring increased certainty for investors and better assurances that the dominant position of the incumbent operator would not be abused. This would lead to improved entry in the market, as the investment in the sector would be less speculative. The economic benefits from a European Regulator have been estimated in the range of 53 to 114 million euro in the twenty year period. Full unbundling, if considered together with the completion of market opening and further recourse to competitive tendering for Public Service Contracts could bring gains in the range of 2.75 - 9.75 billion euro.

The harmonisation of technical aspects remains the single biggest gap for railways, as the heart of the problem for a truly European railway area lies in the lack of interoperability between the various national systems. The current accounting value of the European railways is estimated to be well over 300 billion euro. This includes infrastructure that has been extensively depreciated and, as such the replacement value is likely to be at least 10 times that figure (3,000 billion euro). This is not a value that can be invested in the short term.

However, it is important to note that the entire railway will need to be renewed in some form or another within the next 100 years and so the 3,000 billion euro will need to be spent in any case. The full benefits from this action would only eventuate once the entire system is harmonised as intermediate changes create much smaller benefits as legacy systems continue to be needed on the ground and on rolling stock to guarantee continued operation of the railway. However, action can only reasonably be taken through progressive steps. These actions create obligations that need to be met in the short term (through changes in rules or regulations) but are only implemented fully in the long term.

The removal of wider technical barriers will reduce costs for operators wishing to buy or lease rolling stock. On-board signalling costs could fall by as much as 75 per cent for cross border installation and 50 per cent in terms of authorisation, which has been estimated to lead to a potential benefit ranging between 200 million and 1.3 billion euro over the 2015-2035 period. Given that some ERTMS deployment plans go well beyond 2035, full, network wide installation could increase this value further in terms of savings to existing operators which could, in turn, make some marginal freight traffic more profitable, encouraging therefore a shift to rail traffic. In the longer term period the benefits could range between 50 and 100 per cent higher than the figure above, potentially creating gains between 300 million and 2.5 billion euro after 2036.

Standardisation of rolling stock could lead to a benefit of between 4 and 9 billion euro until 2035, due to a foreseeable reduction in design costs. Again, the benefits of standardisation increase further as more rolling stock is replaced. As such, the benefits post 2036 could also be between 50 and 100 per cent higher leading to potential savings ranging from 6 to 13.5 billion euro.

Benefits are also likely to further accrue. The adoption of a single signalling system will have a significant impact on maintenance costs for infrastructure, as infrastructure managers will no longer need to maintain parallel signalling systems. However, it is impossible to quantify this impact because of the absence of relevant data on current signalling maintenance expenditure. Finally, it is likely that the single signalling system will also result in increased capacity in the majority of Member States, in some Member States this could be as much as 20 per cent. The resulting annual benefit to the infrastructure manager in capacity terms following full deployment is projected between 0.7 and 0.9 billion euro per year at EU level. Again, such gains are not likely to be achievable before 2035.

Regarding passenger rights, addressing the gaps would certainly have a significant impact on the accessibility of rail and as such benefit all passengers. Those benefits will be nonetheless counterbalanced by the costs of implementation of new measures, including for instance upgraded systems for integrated ticketing. The limited data available at present suggests that the economic impact, though slender, is not negligible and would lead to a benefit of between 0.2 and 4.5 billion euro between 2015 and 2035. These figures are likely to be higher, if also the inconsistencies in passenger rights between different modes of transport are taken into account.

The variability of access charges across the EU renders different flows more or less viable. A harmonised approach would help in the creation of the single market by increasing certainty for all operators, but the potential economic benefits would be minor.

Reduced training costs and the possibility to have fewer drivers to run cross border services could result from having a single common language for the railways or a single language for regions. This could lead to benefits that could be anywhere between EUR 11 and EUR 194 million euro, but this would be a one-off gain and not on-going.

Appropriately targeted investments in cross-border links could also have a positive effect on the competitiveness of rail. In this case, targeted EU funding focusing at resolving key bottlenecks at or around borders could have a significant impact. This should not be limited to interventions at border

crossings, but should include investments around these borders to maximise gains. Using EU funds to subsidise some cross-border passenger rail services would also lead to increased connectivity between Member States and reduce car dependence for those journeys, enhancing the environmental benefit for the Union as a whole.

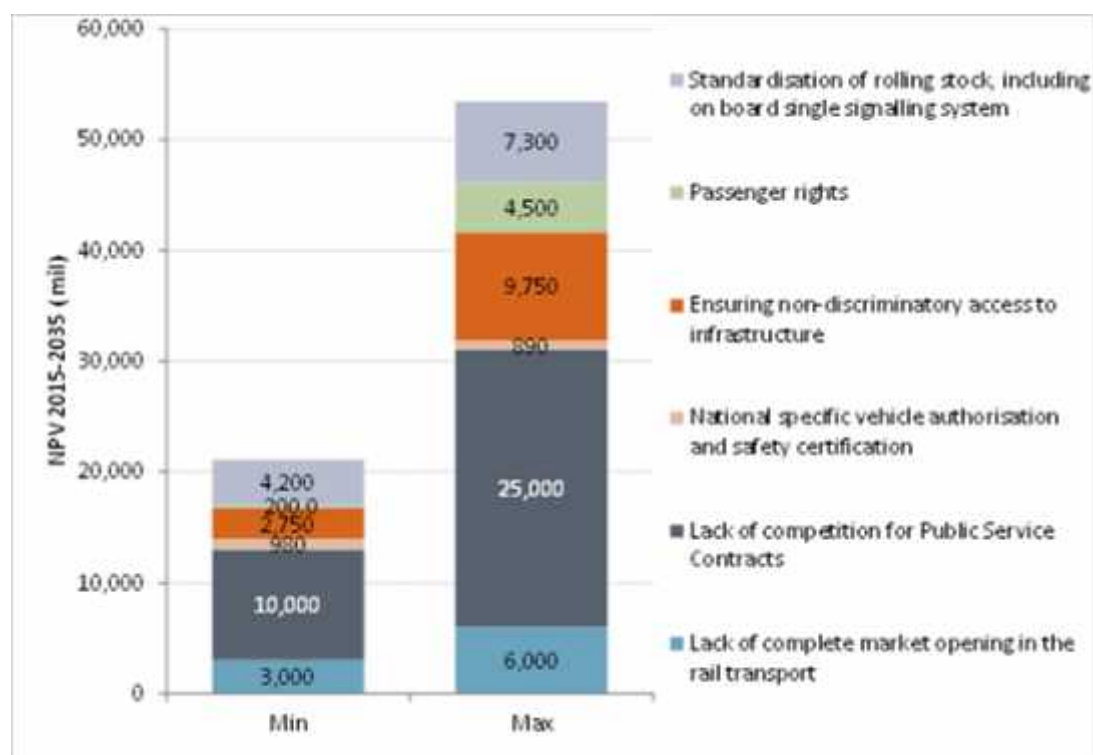
Figure 4: Summary of key rail gaps and impacts

Gap	Necessary action	Potential impact from filling the gap
Completing market opening	- Allow unrestricted access to commercial services	3-6 billion euro
Lack of competition for Public Service Contracts	- Introduce compulsory competitive tendering - Provide more consistent, Europe-wide approach and more uniform business conditions to encourage new entrants	10-25 billion euro
National specific vehicle authorisation and safety certification	- Harmonising the approach to and cost of vehicle and safety certification	980 million euro
Ensuring non-discriminatory access to infrastructure	- Have effective independent regulation; - Unbundling (separation of incumbent operators from infrastructure managers)	2.75-9.75 billion euro (if tied with the completion of market opening and further recourse to competitive tendering for PSCs)
Varied access charges	- Harmonisation of existing access charge structure and procedure	Greater transparency and certainty for operators, but minor economic impacts-not quantified
Passenger rights	- Extend existing legislative provisions to other areas/fields and harmonise application across EU	0.2-4.5 billion euro
Different technical standards across Europe	- Further harmonisation of technical standards	4.2-7.3 billion euro
The legacy of the rail system	- Harmonisation of gauge and power source of rail networks in the EU	
Standardisation of rolling stock, including on board single signalling system	- Deeper standardisation of rolling stock	
Missing links at borders	- Appropriately targeted investment	Positive effects on competitiveness of rail Reduced bottlenecks, improved connectivity-not quantified
Total		20-55 billion euro

Summary of expected impacts

There would be notable gains for the EU that reflect the potential of harmonising further the EU's rail sector. The potential economic benefit from bridging these gaps in legislation will bring about between **20 and 55 billion euro** during the 2015 and 2035 period, that is between **1 billion and 2.75 billion euro annually**.

Figure 5: Summary of expected savings by addressing existing gaps in the EU rail transport



This is a conservative estimate of gains achievable in the short term. It is likely that the aforementioned amounts represent only a small proportion of the overall benefits that could be achieved with a single European railway. This would require major investments to address the broader barriers stemming from differences between Member States' rail infrastructures. In this case, the benefits could be up to 10 times above the values stated here.

2) Road transport

Road transport dominates the European freight and passenger markets. The road transport sector employs approximately 5 million workers and accounted for 46 per cent of intra-EU goods transport in 2010 and over 80 per cent of passenger transport (car, bus and coach).

To date the road transport market is probably the most developed Single European Transport Market. This is largely due to actions already taken at EU and national level in recent decades on aspects such as liberalisation of international transport operation, access to the profession, the harmonisation of social conditions of workers, harmonisation of vehicle and infrastructure standards, and harmonization of the charging system. The intrinsic nature of a market that does not face critical technical and interoperability issues such as those in rail has also supported the creation of a Single Road Area in the EU.

However, concerns remain in the areas of road safety and environmental sustainability. Although the number of fatalities across the EU has fallen significantly in the last decades, it still remains at very high levels. Moreover, road transport is the largest single emitter of greenhouse gas and polluting emissions in the EU.

Main gaps

Lack of sufficient market opening. Although the liberalisation of the road transport sector is relatively well developed in the road transport sector, the market is still not fully open or harmonised across the EU. This is particularly the case for cabotage in road freight. The current rules limit road hauliers to three cabotage operations in seven days. Moreover, they have not been implemented homogeneously. Rules for the partial loading of cabotage operations (multidrops), enforcement, monitoring and sanction regimes for cabotage vary considerably across Member States and there is little cooperation between the authorities responsible for the enforcement of the rules in different Member States.

International bus and coach transport has been largely liberalised, with operators permitted to provide international services subject to national authorisation. However, minimal legislation at a European level has led to different regimes in each Member State. Some have opened the market for commercially viable services or introduced tendered franchises. Others have highly regulated markets with direct award of Public Service Contracts. The volume of cabotage passenger services in most Member States is minimal.

Full domestic liberalisation could bring a range of benefits including more services and greater cost efficiency. This would need to be implemented carefully, to protect transport integration and the coordination of services. For a fully open and accessible market, operators should also have access to the terminal infrastructure. In some areas with poor rail infrastructure and low volumes of rail services, there is also potential to reduce subsidies to rail services by using bus or coach services as an alternative.

Harmonisation of social legislation in road transport. One of the biggest gaps in the EU road transport market is the fact that the liberalisation process has not been accompanied by a parallel process of harmonisation in social and employment conditions. Poor harmonisation has resulted in differences in labour and social market structures and varying levels of effectiveness of driving behaviour enforcement mechanisms in different Member States. These disparities have created incentives for transport companies to adopt dumping practices such as using drivers who falsely claim to be self-employed in other Member States. It has also caused a significant worsening of working conditions for drivers in the EU-15 and very little progress for drivers from new Member States,

Greater harmonisation of social and employment legislation and enforcement practices, sanctions and penalties across the EU Member States could help reduce differences in social and employment standards and enforcement priorities. Strategies which could facilitate the legal framework harmonisation include: creation of a European register of transport companies; enhancement of cooperation between Member States and between different authorities; introduction of reporting mechanisms on the application of Directive 96/71/EC on the posting of workers; more guidance to ensure common interpretation of EU legislation; increasing existing cooperation between Member States through the work of European associations (such as CORTE, TISPOL and ECR); and completion of international research projects.

Ensuring better enforcement of rules. A harmonised and effective enforcement system is crucial for the prevention of illegal practices not only for social and employment standards. At present, different standards apply also for technical, safety and market rules and sanctions and penalties for infringements in these areas vary across Member States. The human and financial resources dedicated to the enforcement of these rules also vary considerably, leading to wide variation in the probability of infringements being detected and the resulting penalties. This has led to increased safety concerns, unbalanced competition and different administrative regimes.

Some progress is being made in this respect. For instance, on the technical side, the introduction through recent legislation of ever more efficient "smart" tachographs, which record vehicle locations using satellite positioning provides enforcement authorities with the data needed to verify compliance with driving time and rest period legislation. Additional checks for overloading and linking weight sensors to the tachograph could further improve the control of driving and resting times.

On the administrative side, a European register of road transport undertakings was established in 2013 to provide a platform for the exchange of information of infringements by non-registered undertakings. The Commission has proposed to use this register in the future to enable enforcement authorities to carry out targeted roadside checks using real time information. These initiatives, if implemented, should bring about faster checks and a reduction in the administrative burden for compliant firms.

Vehicle standards. Road transport systems need to become safer and more secure. Significant progress has been made in research and development of new materials, systems and ICT tools that could contribute to improving the economic, environmental and safety performance of the road sector, helping to reduce congestion, polluting and CO₂, as well as road accidents. The technologies are available but deployment needs to be accelerated. As the technologies develop, it is necessary to ensure that the systems are interoperable and built with open system architecture.

More intelligent vehicles can contribute to a reduction in energy consumption and improvements in energy efficiency. Some measures already promote greater use of hybrid and electrical vehicles in the European market. Freight operators and road hauliers are encouraged to plan their routing so as to optimise fuel consumption. Vehicle emission standards have also become stricter and improvements have been made in fuel quality, reducing gas and particulate emissions. But further initiatives will be needed to achieve the EU's ambitious target of a 60 per cent reduction in greenhouse gas emissions in the transport sector by 2050.

In the freight sector, the Commission recently proposed an approach aimed at increasing the maximum permitted weights and dimensions for trucks (currently governed by the 'weights and dimensions' Directive 96/53/EC). The primary goal of this proposal is to allow aerodynamic improvements, as the installation of alternative, more environmentally friendly propulsion systems can only be introduced at the detriment of vehicle capacity. This could bring considerable cost reductions to road freight transport, but further analysis is needed on the

potential effects on the environment and safety as well as on the competing rail mode.

Road charging. Road transport operations impose costs on the wider society, such as congestion, environmental impacts and road accidents. Road charging, as it supports the “user pays” approach, is a fundamental element of a policy aimed at reducing the environmental impact of transport.

Directive 2011/76/EC, the so-called “Eurovignette Directive” sets a harmonised charging system for the TEN-T road network, which can be extended by Member States to other road sections, and which permits the introduction of pricing schemes that take into account the negative effects of road transport activities on the environment. In practice however, Member States have adopted different approaches to road charging, with a variety of tolling systems and vehicle segmentation in place across Europe. This variety of road charging arrangements in Europe means that users do not receive, across the EU, consistent price signals and incentives to more sustainable use of the infrastructure. Vignette schemes do not provide incentives for minimising the distance travelled, and tolls that differentiate by vehicle type but not by infrastructure use fail to reduce congestion, the costs of which are estimated to be in the order of 100 billion euro per year in the EU (1 per cent of EU GDP).

Lack of harmonisation in the type of charges levied (vignettes, tolls differentiated or not) could be addressed at the EU level, to ease the free movements of goods and passengers, and might also allow progress towards pricing schemes that best address the “user pay” and “congestion/polluter pay” principles. Road charging tools to internalise environmental costs would need to be coordinated with other instruments already in place or to be introduced, such as energy production taxation that might be better tailored to address this point.

The lack of harmonisation in road charging schemes also poses a problem regarding the interoperability of toll systems. EU rules have been put in place that lay down the conditions for the interoperability of electronic road toll systems in the EU and foresee the creation of a European Electronic Toll Service (EETS), allowing users to subscribe to a single contract with one EETS provider and, using a single on-board unit, pay tolls electronically throughout the whole EU. Progress achieved in the deployment of the EETS is however disappointing.

Box 3: Lack of interoperability of toll collection systems

The various European electronic toll collection (ETC) systems introduced at local and national levels from the early 1990s onwards are generally non-interoperable and each require vehicles to be fitted with a different electronic tag. International hauliers currently need 11 different on-board units and tolling contracts and 6 vignettes to cover the whole network.

Road Safety. The EU has pursued a number active and passive measures to increase road safety, such as setting tough standards for vehicles and infrastructure, educating drivers on better driving standards, and, as already mentioned, improving working conditions of professional drivers to allow for adequate resting periods. In addition, the EU primarily through the European Regional Development Fund, has provided substantial amounts of funding to improve road infrastructure (e.g. road widening, carriageway separation, the introduction of enforcement cameras, etc.) with the goal of increasing road safety. However, road safety remains a key challenge for the EU. Although the number of fatalities occurring on EU roads decreased by 6 per cent per year between 2000 and 2012, more than 28,000 people still die on EU roads each year.

Greater exposure is faced by vulnerable users, such as motorcyclists, cyclists and pedestrians, the elderly, children and persons with reduced mobility. This issue has not yet been addressed at EU level and there is scope for concerted action between the EU, national governments and local authorities to reduce the number of accidents involving vulnerable and fragile users. This could be done namely by extending safety principles applied to national road networks to secondary road networks, introducing safer road infrastructure for vulnerable road users, particularly in urban areas, improving and harmonising processes and quality of driver training and education programmes.

Another way to address road safety is to encourage technological developments. Wider deployment of Intelligent Transport Systems (ITS) that can detect incidents, identify their causes, request medical intervention, support traffic supervision, and provide information to road users in real time will improve traffic safety. Equipment of vehicles with eCall, which automatically calls the nearest emergency centre if the vehicle is involved in a crash), or other systems such as Advanced Driver Assistant Systems (e.g. Pedestrian Recognition, Lane Departure Warning and Anti-Collision Warning) could also be pursued.

Environmental sustainability of road transport. The environmental sustainability of road transport is a crucial issue that cuts across most of the policy areas described above as well as those relating to other transport modes. Road transport is the largest single emitter of greenhouse gas and polluting emissions in the EU, accounting for about 27 per cent of total EU energy consumption.

A number of actions have been taken to improve the sustainability of road freight transport (including the update of the Eurovignette Directive and rules concerning weights and dimensions of vehicles discussed above), but more measures will be required as the sector still accounts for more than three quarters of inland freight transport in the EU and about 94 per cent of its CO₂ emissions. These should include better policy coordination for the implementation of the existing frameworks for climate and energy, promoting the shift towards more sustainable modes of transport both for long-distance freight transport and at local level.

Urban road transport is increasingly subject to EU policy initiatives as approximately a quarter of CO₂ emissions from transport, and 69% of road accidents occur in cities. However, the actions taken at the EU level in these areas need to be balanced against the principle of subsidiarity - that is, decisions should be taken as closely as possible to the citizen and action at the EU level should only be taken after consideration of the scope for action at national, regional or local level.

Passenger rights. Road passengers have not seen many benefits from the adoption in the coach and bus market of equivalent legislation to that introduced in the aviation and, recently, rail sector. There is substantial scope for improvement to ensure that passengers have, and more importantly, are aware of their passenger rights while travelling. As for the rail sector, in some areas road passenger rights do not go far enough. It is also necessary to improve and harmonise the way information on road transport is provided to users across the EU.

Estimating the cost of Non-Europe in road transport

The single market is – as was mentioned above- relatively well advanced in the road transport sector. However, a number of gaps and other market deficits identified above generate costs that could potentially be removed through legislation and increased harmonization between Member States, facilitating convergence towards best practice. Some of the benefits that would result from

such action can- and have been- estimated in economic terms with a reasonable degree of certainty, while for others clear and reliable evidence is missing and thus the figures referred to provide merely an indication of the scale of the problem to be addressed.

Full market opening has yet to be achieved, especially in the freight sector. This incomplete integration hampers the efficiency of the market. On one hand, there is the need to improve the efficiency of the market by reducing empty runs and optimize the load factors of single vehicles. It is estimated that to date, the presence of empty runs generates a direct cost of about 50 million euro to 60 million euro per year in the road freight transport market.

On the other hand, liberalisation of road freight cabotage is a means of achieving the overarching goal of creating a European Single Transport Area where road hauliers from different Member States are free to access the transport profession in different countries as well as to undertake transport operations across the EU. However, a fully integrated EU road freight market would first need a greater degree of harmonisation of socio-economic-legal conditions.

Today, the hourly labour costs of cabotage operations in the EU run from 12 euro per hour for Polish drivers to more than 30 euro per hour for French drivers. If further harmonisation is not achieved, there is a serious risk that, given the significant national differences in social legislation (and associated costs), the success of road hauliers in an open and competitive EU market would not be as a result of their relative economic efficiency, but rather their ability to get access, legally or illegally, to the most favourable labour provisions. In order to avoid this, there is the need for a gradual, managed process where liberalisation and harmonisation of the rules are carried out together. A first step is to make sure that none of the actors seek to “cheat”. This can be guaranteed through appropriate enforcement and ensuring that the entire supply chain is liable for any illegal activity (as is already the case in some Member States).

If a common approach is agreed, the opening-up of the road haulage market could lead to efficiency improvements that will allow the industry purchasing transport operations to gain from lower costs, resulting in increased profitability for them and increased economic activity. It is estimated that the full liberalisation of the road freight transport market could lead to a benefit in the range of **50 - 90 billion euro** over the 2015-2035 period. Benefits from addressing this gap would be higher in the short-medium term and would level out in the longer term once existing differences in labour and operational costs between different Member States disappear.

Having a harmonised framework for road charging and for electronic tolling interoperability would smooth the functioning of the road transport market and make it easier for freight and passenger vehicles to drive across the EU. While it is not currently clear whether the different national systems to set the price of the use of road infrastructure create a cost gap that would be worth filling to benefit EU citizens in forthcoming years, the potential benefits of electronic tolling interoperability have been estimated to be in the order of 100 million euro to just above 500 million euro annually⁸.

The areas where further EU integration and standardization would lead to higher benefits are those related to the reduction of the environmental impact of road transport and to the improvement of its safety performance.

EU citizens suffer from not having the same level of road safety across all EU countries. This creates a serious cost for society in terms of losses of life, injuries, accident damages, as well as the resulting pain and suffering.

Box 4: Differences in road safety levels across

Malta, the UK and Sweden are the three countries with the safest road networks in 2012, with 30 or less deaths per million inhabitants. Denmark, Ireland, the Netherlands and Spain follow, with a road mortality rate below 40 deaths per million inhabitants. Sweden has the lowest number of road deaths per vehicle-km, followed by Ireland, Great Britain, Finland, and the Netherlands. Road risk per kilometre travelled in Poland is more than five times as high as in Sweden⁹.

It is estimated that if all EU Member States achieved to date the same level of road safety performance of the best performing ones, about 14,000 lives could be saved. This would correspond - using a methodology recommended for harmonised European approaches for transport costing - to a cost for society of about 19 billion euro¹⁰. Furthermore, it is estimated that if the long term goal of achieving zero road deaths in the EU indicated in the EU Transport White Paper were met by 2040, about 164,000 additional lives could be saved, which would

⁸ Hamilton, Carl & Eliasson, Jonas (2013), Costs and benefits of the European directive on road tolling interoperability, published on Transportation Research Part C: Emerging Technologies, Vol. 30.

⁹ ETSC (2013), 7th Road Safety PIN Report.

¹⁰ This estimate values human costs in road crashes on the basis of the values recommended by Bickel, P. et al (2006) "HEATCO deliverable 5. Proposal for harmonised guidelines". HEATCO is project funded by the European Commission for developing harmonised European approaches for transport costing and project assessment.

Available at: http://heatco.ier.uni-stuttgart.de/HEATCO_D5_summary.pdf

result in a benefit of about **150 billion euro** over the 2015-2035 period. These figures are merely indicative of the size of potential benefits that could be achieved: they do not take into account the costs of the measures needed to be implemented to achieve such a target nor other positive impacts that could be expected through the reduction of serious and other injuries or of accident damages. It has also to be noted that, although EU action is fundamental to set a harmonised framework and lead the process, Member States have a key role in filling the existing gap, as it is their responsibility to enforce rules in areas such as speeding, driving under the influence of drugs or alcohol and seat belt use, to quote only those causes that contribute the most to accident statistics.

The improvement of the environmental sustainability of road transport can be addressed through different means, such as for instance the introduction of cleaner vehicles and modal shift towards more sustainable modes of transport.

Different estimates can be found relating to the potential benefits from adapting features of road vehicles and standards. There is also currently an ongoing debate on the actions that need to be taken to best address this issue. The preferred policy option on weights and dimensions of vehicles could lead to benefits of 540 million euro per year of avoided environmental costs, and that it might also have a high positive effect on road safety which would correspond to a gain of the order of 470 -670 million euro annually to the EU as a whole¹¹.

More broadly, a study¹² recently carried out for the European Parliament, shows that a radical change in the type of vehicles across all transport modes has the potential to lead to an overall abatement of 5,052 million ton of CO₂ over the 2015-2035 period. This would result in a gain of up to 60 billion euro.

The same study estimates that if EU and national policies promoted modal shift towards more sustainable modes of transport, the car modal share could be reduced from 70 per cent in 2010 to 58 per cent in 2050 and the share of trucks be equal to 50 per cent in the 2050s, against a 57 per cent share in the reference scenario. This would mean an overall abatement of 6,957 million ton of CO₂ over the 2015-2035 period, which could result in a gain of a up to 85 billion euro over the same horizon.

The above range of 60 - 85 billion euro provides an economic indication of quantifiable impacts. It is clear that enhancing the sustainability of road transport would bring a better quality of life of EU citizens and contribute to the reduction of health risks.

¹¹ Impact assessment on the Proposal for amending Council Directive 96/53/EC ("Heavy weights directive), COM(2013) 195 final

¹² European Parliament study on "Eco-efficient transport", published in September 2013. Available at: http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/513520/IPOL-JOIN_ET%282013%29513520_EN.pdf

Figure 6: Summary of key road gaps and impacts

Gap	Necessary action	Potential impact from filling the gap
Lack of complete market opening in the freight transport	- Removal of existing restrictions on cabotage rules	50-90 billion euro (between 2015-2035)
Harmonisation of social legislation	- Further harmonisation of social rules to accompany market opening	
Enforcement of rules	- Further cooperation and coordination among Member States and between different enforcement bodies within single Member States	
Vehicle standards for more efficient, cleaner and intelligent vehicles	- Revision of "weights and dimension" Directive 96/53/EC	540 million euro per year of avoided environmental costs 470-670 million euro per year of avoided safety costs
	- Massive review of rules, standards and procedures	Up to 60 billion euro of avoided environmental costs (between 2015-2035)
	- Promote diffusion of Intelligent Transport System Technology vehicle	Potential reduction in emissions; reduced congestion due to better traffic management; improved safety
Road charging - Setting the price - EETS technologies	- Further harmonisation of road taxation rules across the EU, including local charging schemes on congestion	Smoother functioning of the EU road market, more standardised rules for drivers 100 million- 500 million euro annually
	- Improve interoperability between different charging schemes	
Environmental sustainability	- Strong cooperation among different EU Institutions and various levels of governments to promote modal shift	Up to 85 billion euro (between 2015-2035)
Passenger rights	Improve and harmonise the way information on road transport is given to users	Facilitating the way EU citizens get access to road transport services across the EU.
Total		50- 90 billion euro gains from completing the Single Market Further potential gains: 60-85 billion euro from addressing the environmental impact 150 billion euro from improving the safety performance of road transport (2015-2035 timeframe)

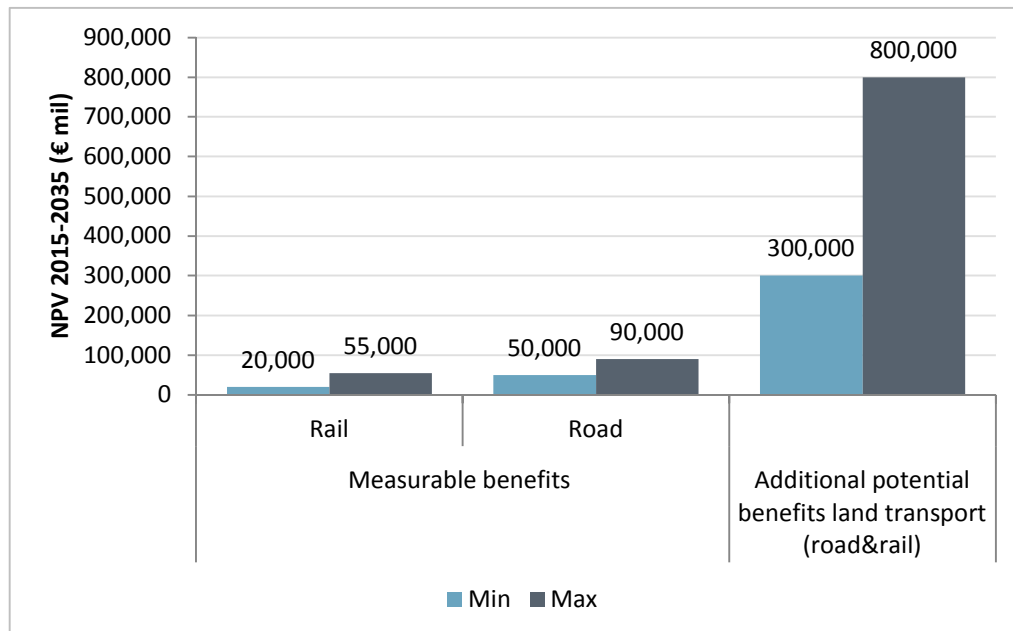
Summary of expected impacts

The potential economic benefit of closing these gaps in legislation and achieving the full liberalisation of road freight transport could lead to a net benefit in the range of **50 - 90 billion euro** within the 2015-2035 timeframe, that is **between 2.5 billion euro and 4.5 billion euro annually**.

Additional gains would stem from the reduction of the environmental impact of road transport (estimated in the range of 60 to 85 billion euro) and from the improvement of its safety performance (estimated to be around 150 billion euro) bringing the overall estimates of the Cost of Non- Europe to 260 - 325 billion euro. However, it must be pointed out that these figures do not take into account the costs of the measures needed to achieve the ambitious targets behind these scenarios and, as such, need to be considered only as an indication of the scale of the problem to be addressed.

At the same time, it must be pointed out that while the completion of market opening is certainly an area that needs deeper EU integration, the best way to address the environmental and road safety gaps needs to be assessed on a case by case basis as the role the EU could play can range from a “soft” coordination of Member States policies and actions, to the imposition of specific regulation and standard.

Figure 7: Summary of expected savings by addressing existing gaps in the EU land transport



Overall, it is estimated that addressing the cost of non-Europe across the EU land transport – i.e. considering the rail and road sectors jointly – could lead to measurable benefits of between 70 billion euro and 145 billion euro. Considering the additional benefits, and once the overlaps between estimates in the road and rail sectors have been taken out (i.e. cross sectoral issues such as modal shift), could raise the total gains to between 300 billion and 800 billion euro by 2035.

Chapter 2 - Intercontinental flows: air and maritime transport

1) Air transport

Evolution of the air transport sector

Liberalisation of European air transport started slowly in 1983, inspired by the American Air Deregulation Act adopted by the United States 3 years earlier. The process was rather complicated as it had to dismantle an international institutional structure, as opposed to the purely domestic one in the US, and bring together a number of distinct European national markets, previously interlinked by a web of bilateral air services agreements. The key concerns for the sector were related to the difficulties for national flag carriers to adapt to a more open trading environment, the risk of putting jobs and air services under threat as well as to the potential downgrade on safety and security matters.

Box 5: Fact and figures on the EU air transport sector

The European aviation sector is one of the most important drivers of economic growth for the European Union. In 2012 it was estimated that more than 820 million passengers were transported by air in Europe. With economic globalisation and increasing travel demand, up to a two-fold increase in air traffic is projected within the next 20 years. As a strategically important sector that makes a vital contribution to the EU's overall economy and employment, aviation supports 5.1 million jobs and contributes 365 billion euro, or 2.4 per cent to European GDP¹³.

The first significant opening of the market derived from a series of Air Liberalisation Packages, ending in 1997 with the freedom to provide “cabotage” services. Measures have been developed to allow effective entrance to the market of new operators and, to improve their access to airports, which was often dominated by already well-established airlines. Since then, progress has been made in opening competition for airport services and increasing transparency on airport charges. The development of the internal market was then accompanied

¹³Eurostat:

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=ttr00012&plugin=1>

Eurocontrol: <https://www.eurocontrol.int/sites/default/files/publication/files/long-term-forecast-2010-2030.pdf>

with a parallel opening to international competition, namely via the signature of a first Open Skies agreement with the USA in 2008.

The market opening in the air transport sector has brought visible gains to the EU air-industry and can be seen as a success story. Nevertheless, the pace toward a well-functioning single market has been very slow and much remains to be done to attain full liberalization. The analysis below lists the major gaps in the sector.

Main gaps

Integration of the European traffic management. There is still significant fragmentation of the European airspace. It is one of the most obvious and costly problems to be solved. The absence of a single integrated European airspace management has significant negative repercussions on airspace users. It results in aircrafts flying unnecessary detours rather than direct routes and suffering from air traffic delays, which has a significant economic and environmental cost. Efforts to unify the European airspace began in 1999, with the launching of the Single European Sky initiative. Building on initiatives from the late 1990s, the Single European Sky I (SES I) package was adopted in 2004, followed by the Single Sky II Package (SES II) in 2009. SES II was a step forward in establishing targets in key areas: safety, network capacity, effectiveness and environmental impact. But the creation of a European Single European Sky (SES) has been progressing very slowly, mainly due to fears of threats to the national security of Member States. The SES initiatives have encouraged cooperation between civil and military authorities, a sensitive area of sovereignty for most European countries. Without tackling this issue, a full liberalisation in the air space will be difficult achieved.

Box 6: The fragmentation of the European airspace

The Maastricht Upper Area Control Centre (MUAC), operated by EUROCONTROL on behalf of four States, provides air traffic control for Belgium, the Netherlands, Luxembourg and north-west Germany. According to MUAC, in 2009, a flight's route was on average 47.6 km too long (5.4 per cent) due to sub-optimal airspace design, civil-military airspace sharing, and inappropriate flight planning and route utilisation or route restrictions. The FRAM project, launched in 2009 by MUAC, is a specified airspace within which aircraft operators may freely plan a route between a defined entry point and a defined exit point. MUAC estimates that the project brings a direct yearly savings to airlines of 62 million euro due to reduced flight distances (fuel, maintenance, fleet, crew costs).

Moreover, as a matter of comparison, both Europe and the US have similar air spaces and a similar number of air traffic divisions and airports; however the air space en-route in Europe is under the control of 38 service providers, whereas the US uses only one service provider.

Direct State aids to carriers and industry. State aids to airline companies or airports is forbidden, unless it fits under the exemptions foreseen under Article 107 (2) or (3) of TFEU. The State aid is evaluated on a case by case basis by each Member State. As a result, subsidy regimes across Member States are likely to differ from one to another.

The new 2014 EC Guidelines on state aid rules for airports and airlines (to be adopted by Member States in their existing aid schemes before April 2015) introduce improvements and clarify criteria to grant subsidies. But the exemptions introduced for airports below 700.000 passengers per annum (circa 45 per cent of all European airports) will still allow current market distortions and potential misuse of public resources for at least 5 more years. These airports will not be required to justify the nature of general interest to keep benefiting from state aid, or to perform transparent appraisals of the magnitude of social and economic impacts of state aid to airports on local communities and territorial cohesion.

Box 7: State aid and regional airports in Spain

On the one hand the development of regional airports is important for economic growth and territorial cohesion, but on the other the proliferation of unused or inefficient regional airports should be avoided.

With the dynamism of Spanish economy and massive growth of tourism in the 2000s, National, Regional and Provincial administrations, as well as the private sector, invested in a number of regional airports. Most of these airports have proven unprofitable after 2007. Their low performance is partly due to over-optimistic traffic forecasts in the 2000s, a decrease of tourism in non-consolidated destinations during the crisis, competition by largest airports in Spain and new high-speed rail competing with domestic air services over many routes.

Despite this negative experience, most of these airports would still be in position to receive public aid according to the new 2014 *Guidelines on State aid rules to airports and airlines*. This is due to their low air traffic figures - below 700,000 passengers per year - and to the lack of an arbitration body in Spain, which would be in a position to assess the reliability of mid-term business plans for regional airports.

Non-discriminatory Slot Allocation of airports. Analysis on Slot Regulation performance has suggested that the allocation system currently in place prevents optimal use of the scarce capacity at busy airports. Slot allocation in airports is based on the principle that slots used by one carrier are reallocated to the same carrier over the next period if they are used for over more than 80% over the season, but are lost if not used. Aiming at a better use of the existing airport capacity and better access conditions of new entrants, secondary slot trade was introduced in 2008 but is not yet formally regulated. The Better Airports¹⁴ package, under negotiation, aims to clarify the operation of the secondary trade slot market. The package was approved by the European Parliament in April 2013, but the Council's approval is pending due to lack of agreement on self-handling issues.

Ground handling services. The Directive 96/67/EC on access to the ground handling market at Community airports introduced minimum requirements on transparency and competition for the provision of these services depending on the size of the airport. Currently, each EU airport with annual traffic of 2 million passengers or more must have at least two suppliers of ground handling services, with at least one being entirely independent of the airport authority or the dominant air carrier at that airport. The Better Airports package aims to further increase competition and quality standards in ground handling services by raising the number of minimum ground handling operators and introducing the possibility of self-handling by air carriers, ie air carriers to be able to carry out their own ground handling operations. It is noteworthy that debates in the European Parliament revolved around the impact of further increase of competition on employment (higher work pressure on employees, increase of collective dismissals) without being counterbalanced by sufficient other advantages. An amended proposal was approved by the European Parliament in April 2013, but is pending before the Council.

Incomplete harmonisation of airport charges. The incomplete harmonisation of airport charges hampers competition between and creates costs for airline companies. A common framework has been established for airport charges, with the aim of improving the transparency of the costs and related charges and explicitly prohibiting discrimination between users¹⁵ (airlines receiving the same

¹⁴ Better Airports Package, COM(2011) 823 final “Airport policy in the European Union - addressing capacity and quality to promote growth, connectivity and sustainable mobility”. The package was approved by the European Parliament in April 2013, but is pending on Council approval due to lack of agreement on self-handling issues.

¹⁵ Directive (EC) 2009/12 on airport charges

service at a given airport in Europe have to pay the same charge). There are however persisting gaps in terms of scope as well as implementation of the legislation. The Directive on airport charges applies only to airports with over 5 million passenger movements, which leaves the majority of airports exempted from the Directive. Also, the implementation of the Directive is uneven across the EU¹⁶. Furthermore, security charges are excluded as they are ruled by the aviation security Regulation (300/2008). A proposal for a Directive (COM (2009) 217 final) on security charges was approved by the Parliament in 2010, but is still awaiting the Council's formal position.

The full internalisation of environmental externalities. Most regulatory measures on noise and air pollution impose minimum standards, but they make little use of market-driven mechanisms. Currently very few airports apply emission charges. This is one of the most important legislative gaps. The gradual internalisation of environmental externalities will result in dramatic changes in the industry, making carriers more sensitive to shorten the lengths of their services. The application of taxes on emissions throughout the EU would induce air carriers to adjust their hub and spoke networks, particularly for intercontinental services, which would have an impact on modal shift towards rail. Directive No 2008/101 set up the inclusion of all flights taking off and landing at EU airports in the EU Emissions Trading Scheme (ETS) as of January 2012, but the application of the Directive has been postponed to allow the International Civil Aviation Organisation (ICAO) to develop a common position on this matter.

Passenger rights. There is a well-developed legislation on consumer rights. However, several issues would gain from further clarification: This is for instance the problem of price transparency in relation to the proliferation of tariffs. EU regulation on denied boarding, cancellation and delay has also been the source of litigation, especially linked to the interpretation of the “extraordinary circumstances”.

Investment programs associated to TEN-Ts. In order to improve the competitiveness of certain airports (as well as territorial cohesion), investment is necessary in order to provide intermodal infrastructure. The TEN-T program is intended to improve coordination in the planning of infrastructure projects by the Member States. Progress in the TEN-T implementation has been slow. One of the performance targets of the Connecting Europe Facility (CEF) as proposed in

¹⁶ European Commission report on the application of the airport charges directive, 19 May 2014.

2011 was to increase the number of airports connected to rail. Austerity policies have finally downsized the overall CEF budget and explicit targets in relation to airports were removed as a consequence.

Estimating the Cost of Non-Europe

Several estimates of the benefits related to the further development of the Single Market in air transport have been carried out in the past. They all confirm that the economic gains stemming from closing the remaining gaps in air transport would be substantial.

For instance, the cost of air traffic management fragmentation has been estimated at between 1.5 and 5.0 billion euro per year by different sources. According to Eurocontrol, the additional cost of the European system in relation to the USA is in the range of additional EUR 2-3 billion every year¹⁷. IATA reports that in monetary terms the failure to implement the Single European Sky initiative in 2012 resulted in EUR 4.5 billion in costs from flight inefficiencies and 7.8 million tonnes of wasted CO₂¹⁸.

These estimates mostly derivate from summing up the various costs that stem, from the fragmentation of the European airspace, such as: constrained system design, lack of common systems, limited possibilities for economies of scale, etc. In addition, they were focused mainly on intra-EU transport. But the potential benefits of closing the gaps are even more far-reaching if we take into account the broader implications – taking into account intercontinental air traffic- that a fully integrated and open single market would have on the economy as a whole and the environment.

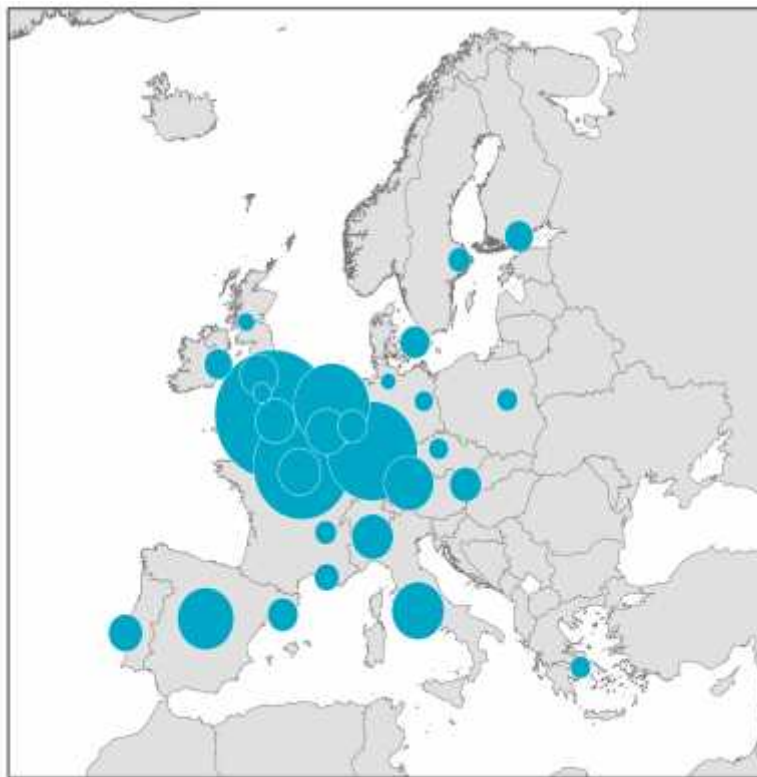
The global air market has undergone radical changes during the latest decades with the emergence of Asian markets. These geostrategic changes are already inducing important logistic adaptations in America, in Africa and, needless to say, in Asia. In Europe, these shifts are painfully slow, largely because of a number of legislative gaps in the air market described above. The assessment of strategic legislative gaps within the EU has to be seen through the prism of intercontinental transport in order to carefully gauge their impact.

¹⁷ Eurocontrol (2012); *US/Europe Comparison of ATM-Related Operational Performance 2010*

¹⁸ Commission Staff Working Document – Draft Impact Assessment accompanying the document “Legislative proposal to update the regulations on Single European Sky – SES2+” SWD(2013)206final

Intercontinental air trips to North-America still outnumber today those to Asia, although this is rapidly changing: out of 170 million passengers in intercontinental trips from the European Union abroad, 58 million travel to North-America, and 35 million already travel to Asia. Air traffic is today still concentrated in few gateways. As much as 60 per cent of intercontinental traffic from and to Europe is served by only four European hubs: London Heathrow, Paris CDG, Frankfurt Main and Amsterdam Schiphol. This is explained by the dominant role of European full-service carriers on intercontinental services. Air liberalisation in Europe has so far not affected much this situation.

Figure 8: Distribution of intercontinental air passengers in EU airports (2014)



Instead, the most important impact of market opening so far has been the emergence of low-cost carriers (LCC) that have usurped a significant share of the total domestic and intra-EU market and which are continuously expanding. LCCs' share of the intra-European passenger market is forecasted to grow from 38 per cent in 2010 to around 45 per cent in 2020, even reaching more than 50 per cent in 2030.

Figure 9: Main impacts of the completion of the single market in air transport¹⁹

Completed Single Market in air transport	More balanced geographic distribution of intercontinental air gateways	More efficient transport service	Total savings of 910-1,820 million euro annually
Air market opening and harmonisation	Enhanced competition, entry of new companies on inter-continental market	Lower operational costs for carriers: reduced travel time and fuel consumption, savings on aircraft maintenance	Savings of 499-997 million euro annually
Internalisation of environmental externalities	Carriers becoming more sensitive to length of services	Better service for passengers: reduced travel time and fares	Savings of 426-853 million euro
Improving infrastructure around airports, cross-border links		Reduced impact on the environment: lower GHG emissions and congestion costs	Savings of 32-65 million euro annually

Further removal of barriers to competition as described in the previous section will likely result in the entry of low cost companies in the intercontinental market, matched with the gradual opening of the market to non-European air carriers, through Open Sky agreements. The progressive internalisation of environmental costs will result in dramatic changes for the industry, by making air-carriers more sensitive to shortening the length of their services. For instance, for the transatlantic connections, besides London, Dublin or Lisbon airports are well situated. For trips to Asia, Africa, Middle East or Eastern Europe, which are becoming increasingly significant, other airports located in the north-east and the south-east of Europe, will become more competitive, for geographical reasons. Likewise, in relation to South-America, Lisbon and Madrid airports will become more prominent. All in all, the completion of the single market in air will likely lead to a more balanced distribution of intercontinental gateways in Europe.

This in turn would represent a more efficient air transport system, with shorter routes and lower operational costs (e.g. reduced travel time, lower fuel consumption, aircraft maintenance) and lower environmental and congestion costs (e.g. reduction of Greenhouse Gas emissions through shortening of routes, avoiding the concentration of routes on the same geographical areas through redistribution and thus minor congestion of airports and air corridors).

The redistribution of traffic would be gradual and would require not less than 20 years, i.e. until 2034, to be significant. The ultimate savings/benefits would

¹⁹ Total savings include transaction costs, which are estimated at 48-96 million euro annually

depend on the final extent of the redistribution in the period considered. It has to be noted that the distribution of air passenger traffic is in big part dictated by other factors than the geographic situation. These include the concentration of population, the touristic attraction of a region or its importance as a business centre, or even the commercial image of the airport. Therefore, the rebalancing of traffic will never be fully based only on the geographical situation of airports, and it is likely that current gateways in Europe will maintain a dominant position anyway because they have large scale economies, excellent roads, rail and inland waterway connections with their hinterlands, where most European population and economic activities are located. It is also likely that non-European gateways (e.g. the port of Tanger-Med, the airports of Istanbul, or Dubai...) will benefit of the de-concentration of European intercontinental traffics.

This is taken into account in the two scenarios considered. The conservative scenario assumes that 17.5 per cent of intercontinental traffic currently originated in core airports would be redirected to airports with optimal geographic location by 2034. The optimal scenario assumes that the redistribution affects only 35 per cent of the traffic. The rebalancing of traffic would also entail certain transaction costs (e.g. transposition of EU laws into Member States orders, organisational changes, and modification of currently existing airport infrastructures) which are considered together with total savings.

Summary of expected impacts

Based on these assumptions, it is estimated that the average annual benefits from completing the single market in air, taking into account intercontinental exchanges would be between 910 million euro and 1.8 billion euro, depending on the scenario considered. This means between 18.2 and 36.4 billion euro for the overall 2014- 2034 period. The table below summarises the benefits.

Table 1: Average net benefits from the rebalancing of intercontinental air traffic (million euro)

	Conservative scenario	Optimal scenario
Operational costs	499	997
Travel time	426	853
CO ₂ spared emissions	32	65
Transaction costs	48	96
Annual net benefits	910	1,820
Cumulated benefits 2014-34	18,200	36,400

2) Maritime transport²⁰

Evolution of maritime transport

Maritime Transport was in the focus of EU legislators since the inception of the European Single Market. In 1986, a major legislative initiative introduced the freedom to provide maritime transport services (maritime cabotage). This was followed by the adoption of a substantial set of rules aiming at improving competition, developing common standards, increasing ship safety and preventing pollution. In 2001 the White Paper "European transport policy for 2010: time to decide" identified short-sea shipping as a key alternative to road transport and measures were adopted to open national markets in this respect.

Box 8: The importance of the maritime transport market

Almost 90 per cent of the EU external freight trade is seaborne. Short sea shipping represents 40 per cent of intra-EU exchanges in terms of ton-kilometers. Each year, more than 400 million passengers use European ports. Overall, maritime industries are an important source of employment and income for the European economy²¹

The impact of liberalisation is however mixed. On the one hand, deep-sea transport was always a global market, increasingly dominated by large shipping companies and container terminal operators. Today many EU ports, especially in the north, are very competitive. On the other hand, short-sea shipping has not managed to capture, the increased international road freight traffic despite earlier predictions. There are several major constraints, which hamper the tapping of the full potential of the maritime sector, and which require further legislative action. These are for instance the poor competitiveness of ports, complex administrative procedures or the lack of necessary intermodal infrastructure connections in ports. They are described in the following section.

²⁰ The Cost of Non-Europe in Inland Waterways is not extensively treated in this report, as no assessment of overall costs of Inland Waterway transport is at present available. Inland Waterways are today fully liberalised, including cabotage rights, however the following problems remain: administrative and regulatory barriers, due to harmonisation gaps, missing capacity regulation and lack of internalisation of environmental externalities. Inland waterway transport is negatively impacted by the limited renewal of the Danube vessel fleet and by the insufficient water depth in several inland waterways. For more details see Annex II on *Air, Maritime and Inland waterways*

²¹ Communication from the Commission on "Strategic goals and recommendations for the EU's maritime transport policy until 2018" (COM(2009)8).

Main gaps

Ports are not specifically regulated at EU level yet, and many are inefficient to the point that it limits their opportunities to compete for short sea-shipping. The efficiency of the ports is critical to avoid congestion and environmental costs and not to put future economic growth at risk. There is, in this sense, a structural performance gap in the European port system, which results in traffic detours, longer sea and inland trips and more emissions. To improve port efficiency, there is a need first to liberalise ports activities (the lack of transparency in management may reduce the attractiveness of potential private investments in ports) and support administrative simplification, provide for the necessary infrastructure (in terms of maritime terminals, as well as rail and road connections) and apply environmentally differentiated port charges.

Insufficient access to and competition in port services. Almost half of the costs on short-sea shipping are related to port handling costs. Excessive port tariffs come from a lack of competition, abuse of monopoly power and imperfect knowledge of costs.

Several proposals have attempted to liberalise access to the market of port services. However, despite the support of ship-owners, freight forwarders, ship agents and shipbrokers as well as cargo owners, neither the First (2001) nor the Second Port Service Package (2004) managed to get approval, mainly due to the strong opposition of the trade union's on the issue of "self-handling" (the option for a shipping company to provide certain port services, normally provided by the port, using its own land-based personnel). In 2013, the European Commission provided a new proposal, currently under negotiation. The aim of the regulation is to improve transparency of port finance and governance, and port efficiency, and to simultaneously reduce administrative burden: clarify access to the port services market, preventing market abuse by designated service providers, improving coordination mechanisms within ports, ensuring transparent port charges, enforce transparent financial relations between public authorities, port authorities and providers of port services. Self-handling activities in ports are not likely to be included into the port's regulation under development.

Incomplete harmonisation of port charges. Excessive tariffs also come from a lack of transparency of the cost structure. In 1998, the EC provided the White Paper on Fair Payment for Infrastructure Use²², proposing a system of port charging aimed at recovering costs of new investments, operating and external costs and thereby at ensuring fair port competition. Most of the times however,

²² White Paper on Fair Payment for Infrastructure Use: a phased approach to a common transport infrastructure charging framework in the EU (European Commission, 1998)

this system does not provide sufficient revenue to allow the financial coverage of upfront investments on infrastructure, and in practice, it has not been implemented in Europe.

Reporting formalities for Maritime Transport. Maritime transport must comply with tedious reporting formalities, even for intra-EU transport and when the cargo consists of goods in free circulation. An EU framework for the simplification and harmonisation of reporting formalities has been partially introduced, but is faced by several implementation problems and delays. Those are mainly due to the budgetary impact of the new measures, the complexity of the implementation process which involves a large range of stakeholders, legal difficulties regarding exchanging confidential (sensitive) information and the lack of sufficient technical specifications at EU level.

Ensuring shipping competition (antitrust regulation). The EU legal framework on maritime transport foresees detailed rules on non-distortion of competition. Although cooperation in price and capacity fixing arrangements has recently been banned as they prevented price competition, vessel sharing consortia are permitted, provided that market shares resulting from the consortium remain below 30 per cent (or higher, if they do not represent an abuse of dominant position). This block exemption is due to be renewed in 2015. Many stakeholders argue that these rules should be made more stringent or totally removed.

Box 9: The P3 Network Vessel Sharing Agreement

The P3 Network Vessel Sharing Agreement between Maersk, MSC and CMA-CCGM will, concentrate more than 40 per cent of Asia-Europe and trans-Atlantic trade and 24 per cent of the trans-Pacific market. As such, it is likely to change the structure and competitive state of global container market, and could effectively eliminate competition in the world's main liner trades. The Global Shippers Association (GSA) has raised concern over the fact that although the agreement does not explicitly allow common commercial strategies nor fares fixing and retains individual commercial status and control of consignments, the fact that costs will be increasingly shared among the 3 shipping corporations creates the risk limiting price competition. It argues that P3 partners shall be required to demonstrate how they are going to compete on price.

Integration of the European maritime area. This is another challenge in the completion of the single market in this sector. Currently, traffic between European port pairs is technically considered to take place outside the Union if ships exit territorial waters and therefore require for customs clearance at destination. For instance, when a ship sails from Antwerp to Rotterdam, it leaves

the EU's Customs Territory because the ship sails more than 12 miles away from the coast. Consequently, all goods are considered non-EU goods and must be subjected to all the necessary customs procedures. This issue is partially addressed by the recent rules on reporting formalities as well as the Blue Belt communication²³ presented in 2013 to further elaborate on the European single shipping area.

Finally, as for the air transport, the **full internalisation of environmental externalities** is crucial. In the maritime sector, competition from road freight transport, especially for short sea shipping will likely increase, as marine fuels are currently undertaxed. However, introducing environmentally differentiated port charges would provide an incentive for maritime carriers to shorten their routes, and, as in the air transport sector, it is likely to lead to a reorganisation of the distribution of ports in Europe in the long run.

Estimating the Cost of Non-Europe

According to impact assessment studies conducted so far by the European Commission²⁴, full port competition and reinforced port authorities will generate savings in port costs of the order of 1 billion euro per year, and bring on additional short sea shipping traffic of around 13.3 billion euro tonne-kilometres (an increase of up to 6.5 per cent on a number of routes). This will in return lead to increased port activities and the creation of direct and indirect port-related jobs. The elimination of administrative procedures in ports, including customs, has been estimated at about 2.1 billion euro within the time frame 2009-2040, so approximately 60 million euro per year.

Since the 19th century, all major ports in Europe were strategically located in the North Atlantic, to serve the major lucrative maritime routes that were linking the North of Europe, heart of Europe's industrial boom, with the markets of North America. During the last twenty years, emerging Asian economies have completely redefined world maritime trade and today the trade between Europe and Asia is four times bigger than traffic with North-America (30 million standardised containers (MTEU) Europe-Asia against 7 MTEU Europe-North-America in 2010). Yet the route from the Far East to the centre of Europe is still conducted through the major ports of North of Europe such as Rotterdam, Antwerp or Hamburg: 75 per cent of total freight passing Suez is bound to the

²³ European Commission Communication, Blue Belt , A Single Area for Shipping (COM (2013) 510 final)

²⁴ Commission Staff Working Document – Impact Assessment accompanying the document “Proposal for a regulation of the European Parliament and of the Council establishing a framework on the access to port services and the financial transparency of ports” SWD(2013)181

European northern rim, using big containerships of more than 10,000 standardised containers and railways from the port to the hinterland region.

The ports of the North, owned by local institutions are managed as private corporations and have very competitive management, good infrastructure and expansion plans. They are located in the more industrialised area of Europe and thus they enjoy high economies of scale. On the other hand, the relatively low level of traffic that concentrates on Mediterranean ports perpetuates their less competitive management, and the use of smaller and slower container vessels, with higher cost and CO₂ emissions per transported ton, also as the transport to the hinterland is often made by road. These conditions result in a preference for traders to continue using the northern routes' ports.

Figure 10: Maritime container traffic in European ports (2014)



This implies however increased cost in terms of resources (e.g. fuel, vessel operation, time) and deeper environmental impact, as the alternative route from Asia through any Mediterranean port is on average 15 per cent shorter than through the North of Europe.

The completion of the single market in maritime transport would lead to gradual rebalancing of trade among Northern and Southern ports, based on minimising the costs, i.e. choosing the shortest cost path. This would emanate from the harmonisation of transport costs across Europe due to an increase in competitiveness and the construction of the essential infrastructure, as well as from the full internalisation of environmental costs.

Such rebalancing would bring clear benefits in terms of making European transport networks more cost-effective by reducing the congestion of the northern rim's transport system, and shortening the average trip distance. The economic impact of such likely redistribution is accentuated by the potential savings on energy consumption and the reduced Greenhouse Gas (GHG) emissions that could be achieved within the next 20 years.

Figure 11: Main impacts of the completion of the single market in maritime transport²⁵

Completed Single Market in maritime transport	More balanced geographic distribution of maritime traffic	More efficient transport service	Total savings of 1,315-2,630 million euro annually
Market opening and harmonisation	Enhanced competition, entry of new companies on inter-continental market	Lower operational costs for carriers: reduced travel time and fuel consumption, savings on ship	Savings of 1,273-2,545 million euro annually
Internalisation of environmental externalities	Carriers becoming more sensitive to length of services	Reduced impact on the environment: lower GHG emissions and congestion costs	Savings of 111-222 million euro annually
Improving infrastructure around ports, cross-border links			

Like for the air transport sector, the impacts of such redistribution have been estimated using different scenarios. The optimal scenario assumes that by 2034, all maritime container flows between the EU and the rest of the world are reassigned to ports based on the optimal geographic position. This would require a major change in the logistic chains of shipping companies as well as major investments in hinterland infrastructures (e.g. rail access to ports). As such, it is the less realistic scenario in the short term. The conservative scenario (improved/half scenario) assumes that only half of the flows are rerouted to the optimal logistic chain. The table below summarises the benefits.

Summary of expected impacts

It is estimated that the total benefits cumulated in 20 years would be between 26.3 and 52.6 billion euro, depending on the scenario considered. This means that average annual benefits from completing the single market in maritime transport,

²⁵ Total savings include transaction costs, which are estimated at 69-138 million euro annually

taking into account intercontinental exchanges would be between 1.3 billion and 2.6 billion euro.

Table 2: Average net benefits from the rebalancing of maritime container flows (million euro)

	Conservative scenario	Optimal scenario
Operational costs	1,273	2,545
CO ₂ spared emissions	111	222
Transaction costs	69	138
Annual net benefits	1,315	2,630
Cumulated benefits 2014-34	26,300	52,600

Chapter 3 - Tourism

Challenges and opportunities for tourism in the EU

Europe is the world's number 1 tourism destination, contributing 52 per cent of international tourism arrivals. In 2013 Europe led growth in absolute terms as well: 563 million arrivals, with the best performing regions being Central and Eastern Europe and Southern Mediterranean Europe. The prediction over the next two decades is optimistic but not without challenges: Europe's tourist places will attract new markets, as the median income especially in emerging economies will continue to rise. But it will also face increasing competition, as those economies' own tourism infrastructure develops and expands, attracting an increasing share of the global market. Hence, Europe will need to focus on what it does best and makes it unique, if it is to maintain its position as the world's number 1 tourism destination.

The Treaty of Lisbon introduced a new legal basis (Article 195 TFEU) that explicitly enables the Union to complement actions of Member States in the tourism sector. The new article, based on an approach that compliments the principle of subsidiarity, allows the EU to support, coordinate or supplement the action of Member States, by encouraging the creation of an environment which is conducive to developing tourism enterprises and cooperation between Member States, excluding any harmonisation of the legal and regulatory provisions.

In the light of the new EU competences, it is important to look at the still untapped potential of the tourism sector and at areas where further action can be most beneficial.

Potential actions to support the development of tourism

There are significant differences in the development of tourism across Europe, both between nations and at a sub-national level. Many new Member States are still in the early stage of infrastructure development. Similarly, within some of the older Member States, the economies of regions that are away from popular city and coastal destinations, would benefit from further investment in tourism. The established city and coastal destinations are already well organised as regards tourism marketing through local professionally run organisations. Travel companies, hotel chains, airlines, etc. provide a generally high standard of service to these markets. It is outside of these areas where the new EU tourism policy is likely to be most effective. In those regions small and medium size enterprises do not always have access to professional marketing and product development resources, hindering thus their ability to develop appealing tourism

services. Article 195 TFEU objectives of complementing national and regional initiatives by improving competitiveness and skills are well matched to alleviate deficiencies within this sector.

Whilst Europe experiences increasing growth from the new tourism markets such as the BRIC²⁶ and MINT²⁷ countries, the majority of tourism trips are generated 'domestically', either national or intra-EU. According to a recent Eurobarometer²⁸, 42 per cent of tourists stayed within their own country whilst another 38% travelled to another EU country; less than one in five travelled outside the Union. Improving the 'offer' for this market is as important as attracting new tourists from outside Europe, both for economic as well as environmental sustainability reasons.

The European Parliament report on Europe, the world's N° 1 tourist destination²⁹ lays out the approach to tackle some of the above challenges. A number of actions included in the report could have particular added value and are analysed in more detail below.

Promoting the development of SMEs. An important characteristic of the tourism industry is its dependence on Small and Medium Enterprises. Table 3 shows that the two largest sectors within the tourism industry, by value and number of enterprises, are also those which contain (on average) the smallest firms by turnover.

SMEs are often able to adapt quicker to changing market conditions as they tend to be less capital intensive (i.e. fewer fixed investments) and although they can often be less economically efficient (particularly in terms of economies of scale) they present significant opportunities for growth. Expanding and further developing these opportunities has the potential to have a significant impact, especially in the accommodation and food related sectors where the prevalence of SMEs is noted.

The development of transnational organisations for accommodation providers could support professional marketing platforms, provide advice on regulation, quality standards, business start-up and a range of other services to encourage their development. In the food related sector the development of local networks

²⁶ Brazil, Russia, India and China

²⁷ Mexico, Indonesia, Nigeria and Turkey

²⁸ http://ec.europa.eu/public_opinion/flash/fl_392_sum_en.pdf

²⁹ Report on Europe, the world's N° 1 tourist destination- a new political framework for tourism in Europe adopted on 13 July 2011 (Rapporteur Carlo Fidanza), A7-025/2011, adopted in response to the European Commission communication of 2010 (COM(2010)352

of food suppliers and retailers would increase the impact of tourism spending in the local economy.

Table 3: Tourism volume and value by sector

	Value (billion euro)	Number of enterprises	Average turnover (euro)
Real Estate	426.9	1,146,330	372,382
Food related	314.5	1,494,827	210,364
Transport related	236.4	340,455	694,262
Travel agencies and tour operators	145.6	91,525	1,590,385
Accommodation related	138.0	269,634	511,983
Car and other rental	61.2	46,741	1,309,557
All tourism related sectors	1,324.6	3,389,515	390,783

Source: Adapted from 'Tourism industries – economic analysis, 2013'

Promoting rural tourism. There is considerable scope for the EU to direct more focus towards rural tourism. The 2010 European Commission communication notes the importance of rural tourism and in particular the diversification of rural business and seeks to promote trans-national cooperation in rural regions, in order to attract more tourists. Increased tourism in rural regions will likely benefit businesses and improve quality of life of residents, and extend social and economic sustainability. This is based on the principle that more localised in comparison to national spending, has an amplified economic impact on rural areas.

In rural areas, living conditions for local people are generally below the EU average. Local population is often poorer, and skills for employability generally lower. Tourism could play a vital role to regenerate these regions: tourism initiatives could provide an income boost, training on tourism services could enhance job skills for residents and social benefits could accrue.

Box 10: Relative impact of spending with local businesses

In the UK, the 'New Economics Foundation', and the 'Countryside Agency' produced a Local Multiplier tool (Sacks, 2002), entitled LM3, which is based on the localised flows of income in both urban and rural economies. The tool was aimed at identifying hidden benefits of local initiatives and is applicable to individual businesses and tourism development. The over-riding principle is the measurement of how much of the input of funds for these initiatives, plus their output stays in the local economy: direct income (such as spending by tourists on tourism products), indirect income (re-spending within the local economy by the suppliers of the services and products provided, and their suppliers, plus salaries of local residents involved in the spending chain) and induced spending (re-spending from the profits of the tourism businesses, including that by their employees from salaries).

The tool was first applied to a local organic food scheme (local being 24,1km or less from the organisation running the scheme), in 2001. A multiplier of 2,58 was obtained, which indicates that for every 1 euro spent, a total of 2,58 euro is generated in the local economy. Using the same technique a local multiplier of just 1.4 was found analysing the impact of two local branches of national supermarket chains (Tesco and Asda).

This clearly demonstrates that spending with locally based business with strong local connections can have a significantly larger impact in the local economy.

Promoting quality, sustainable tourism. Europe's reach cultural and historical heritage, complex political history and diverse geography offer *unique selling points*, giving it a competitive advantage in the global tourism market. This immense diversity allows a more relaxed approach with regard to pricing for tourism services. The alternative would be to compete targeting on 'price', a strategy unlikely to succeed as other regions have a considerable cost advantage in this regard.

A number of initiatives have already been put in place in this respect: the European Destinations of Excellence project (*EDEN*) champions the sustainable development of destinations. The *European Tourism Quality Principles* is a set of principles developed in order to promote service quality for tourism providers and increase the confidence of consumers in the product. These and other proposals such a "European Brand" or the "European heritage label" should be further promoted. The EP Fidanza report responding to the Communication, suggests "*that [whilst] a proliferation of labels must be avoided*" there is need for "*the*

Commission to promote a specific initiative to harmonise gradually the accommodation classification systems”.

Utilising the diverse array of cultures is an important element to stimulate a favourable environment for SMEs, as well as to fulfil the goal of environmental sustainability. The link between culture and environmental sustainability is again underlined by the Findanza report, which stresses the particular importance of developing *"an alternative style of tourism that is sustainable and accessible to all"*.

The promotion of EuroVelo cycle routes is a significant derivative of this approach. The development of long distance cross-border routes brings tourism to rural, often remote locations, encourages the development of infrastructure and tourism business networks within and between the different countries and as such benefits the local and regional economies. In addition, the low-carbon nature of non-motorised leisure travel can have a positive environmental effect in terms of reducing motorised leisure travel.

Box 11: The Iron Curtain Trail

The ‘Iron Curtain Trail’ is a Euro Velo cycle route, which links a number of European countries along the former ‘Iron Curtain’ and has been developed over recent years. The Iron Curtain Trail allows tourists to experience the cultural and natural heritage of the countries as they travel. It also meets other policy objectives by supporting tourism development in Eastern European countries.

A recent study for the European Parliament estimated that when complete, the Iron Curtain Trail will generate annually around 1 million holiday trips and 5.3 million daytrips resulting in a total of 521 million euro in direct revenues (direct expenses by the holiday makers and day excursionists).

Apart from the tourism specific measures, some of which have been highlighted above, the tourism sector is impacted by a number of other policies, such as legislation to reduce the effects of climate change, legislation on environmental standards, taxation and employment, social affairs, and of course transport and passenger rights.

The impact of transports on tourism is rather obvious: transportation is an integral part of the tourism industry. It is largely due to the improvement of transportation that tourism has expanded and it is likely that further improvements in the transport sector (cheaper, more efficient, safer, better

distributed and cleaner transport) will positively influence the development of tourism.

Box 12: Sectors with major impact on tourism

- *Justice*: several Directives are directly connected to tourism, such as the Directive 90/314 on package travel, package holidays and package tours – whose revision was proposed in July 2013 after a four-year period of consultations, the Timeshare Directive (Directive 2008/122/EC) and the Consumer Rights Directive (Directive 2005/29/EC);
- *Communications, Networks, Content and Technology*, whose main contribution is the regulation of roaming prices for mobile phones (Regulation No 717/2007) and the aim to create a “single market” with shared tariffs;
- *Employment, Social Affairs and Inclusion*, having an impact on tourism both in terms of regulation of contracts (fixed-term contracts, posted workers) (Directive 96/71/EC) and in terms of health insurance (European Health Insurance Card) (Decision No 189 of June 2003);
- *Climate Change*, that is both influencing tourism – e.g. through climate-related legislation (Directive 2008/101/EC) – and influenced by tourism – e.g. through travel-related environmental impacts; *Home Affairs*, and particularly the benefits derived from the Community Code on Visas (Regulation (EC) No 810/2009);
- *Taxation*: the common system of Value Added Tax across Member States sets a special scheme for travel agents (Directive 77/388/EEC), which is not implemented in all Member States.
- *Transport*: see previous sections.

The analysis of the other sectors that have a direct impact on tourism falls outside the scope of this paper and will not be examined in extenso here. Nevertheless, it is important to note that the full exploitation of European tourism's potential requires continued coordination with these policy sectors.

Estimating the Cost of Non-Europe

Few previous studies have attempted to estimate the Cost of Non-Europe for initiatives, policies and legislation related to specific tourism sectors, rather than the overall potential of the tourism sector³⁰.

³⁰ A London Economics Study on ‘The cost of non-Europe: the untapped potential of the European Single Market’ estimated for instance the potential for reductions in the productivity gap between

With little previous research and inconsistent data sources available, this paper uses a hybrid approach to estimate the impact of on-going and potential future EU tourism policies and initiatives. Firstly, the level of economic efficiency of each tourism sector was assessed and ranked as low, medium or high. These estimates were based on indications of industry concentration, labour share, nature of the industry, opportunities for market intervention and similar studies. Consideration was then given to the extent to which there were further potential gains both from current policies and interventions - whose benefits are not yet realised- as well as from further EU actions. The potential for future gains was subsequently calculated, taking into account the relative size of each subsector, compared to the total value of the tourism industry, i.e. 650 billion euro per year (5 per cent EU GDP).

Summary of expected impacts

Table 4: Cost of Non-Europe in tourism

	Economic Efficiency	Potential for EU action	Potential efficiency gains (billion euro per year)		
			From current policy	From further EU intervention (Cost of non-Europe)	Total impact
Real Estate	Medium	Low	3.7-7.3	0.6-1.2	4.3-8.5
Food related	Low	Medium	11.6-14.5	4.1-4.4	15.7-18.9
Transport	Medium	Medium	11.6-13.6	2.6-3.0	14.2-16.6
Travel agencies and tour operators	High	Low	1.5-2.9	0.0-0.0	1.5-2.9
Accommodation	Medium	Medium	5.9-7.1	1.0-1.2	6.9-8.3
Car and other rental	High	Low	0.6-1.2	0.0-0.0	0.6-1.2
Total tourism sector			34.9-46.6	8.3-9.7	43.2-56.4
Total considering only further intervention and without transport				5.7-6.7	

the EU average and best practice for the hotel sector. No overall assessment of the Cost of Non-Europe

As it could be expected, the sector considered to have the lowest economic efficiency (food related) shows significant potential for gains. There are also probable gains from transport, which confirms the analysis in previous sectors. Overall it is estimated that the total cost of non-Europe is between 43.2 and 56.4 billion euro, or between 3.2 per cent and 4.2 per cent respectively of the total tourism industry turnover. This is an overall estimate with a large margin of error as it includes the gains to be realised if current policies and legislations are fully implemented, as well as the benefits that would stem from further actions to revise/complete the current framework. The missing actions in the current regulatory framework are precisely the ones which are the focus of a "cost of non-Europe" analysis.

For the purpose of this paper, the transport gains are excluded, in order to avoid double counting and inconsistencies stemming from the use of different methodologies, and only the gains corresponding to new actions are considered. Under these conditions, the total cost of non-Europe in the tourism sector is estimated between **5.7 and 6.7 billion euro annually**.

Conclusion

The analysis for the "Cost of Non-Europe" in this report has shown that substantial gains can be achieved from enhanced actions to create a fully integrated transport sector and a more efficient tourism sector. The estimates indicate that benefits from further action, or the cost of non-action ("Cost of non-Europe") would amount to 14.8 billion euro of net gains per year.

Table 5: Total Cost of Non-Europe in transport and tourism

Potential savings and efficiency gains in transport and tourism by sector	Cost of Non-Europe (billion euro)	Cost of Non-Europe (billion euro) Mid-point
Rail transport Completing market opening; harmonising vehicle authorisation and safety certification; clarifying access charges and addressing technical barriers	1-2.7	1.9
Road transport Completing market-opening; harmonisation of social legislation; enforcement of rules; clarifying vehicle standards and rules on road charging; improving road safety	2.5-4.5	3.5
Air transport Completing market-opening; integration of the European air traffic management; opening of the European sky to third countries; environmental externalities; airport planning; network integration to ensure modal inter-operability	0.91-1.8	1.3
Water transport Completing market-opening; liberalisation of port regulation; reducing administrative and reporting formalities; addressing environmental externalities; network integration to ensure modal inter-operability	1.3-2.6	1.9
Total for transport	5.71-11.6	8.6
Tourism General efficiency gains; creating a favourable environment for SMEs, developing rural and cultural tourism;	5.7-6.7	6.2
Total for transport and tourism:	11.4-18.3	14.8

When removing the remaining barriers of the common transport market, individual and professional transport users (passengers and freight importers/exporters), as the economy as a whole, will be directly beneficial because of price reductions and more efficient transport services.

As regards EU welfare in general, the benefits will stem from the internalisation of external costs. The impact on improving the quality of EU citizens is notable: less noise, less pollution and a lower environmental foot-print whilst transport companies will become increasingly effective in durably reducing their environmental footprint. This in turn will be accretive to achieving the EU's climate change objectives.

Filling the gaps in the Single Market in transport and boosting tourism is also likely to contribute to enhancing the cohesion of the European Union: a more balanced distribution of transport hubs, a fairer and sustainable offer for tourism, an upgraded infrastructure removing bottlenecks, and the reorganisation of cross-border transport operations for passengers and businesses will ensure quicker and more efficient connections throughout the EU. Second tier regions will thus have better opportunities to attract new entrant operators and influx of investment, which in turn will boost job creation locally.

As will all integration efforts within the EU, the actions to complete the Single Market in transports will inevitably be embedded in the context of an ever stronger globalisation. The process of globalisation is unavoidable and the EU, as the world's leading and most advanced economy has been reaping the benefits of it. The issue for the EU is not about how to shut down competition from third countries, but more about how to shield its internal market by enhancing its efficiency and viability. As such completing and deepening the EU Single Market in transport and further improving the efficiency of European tourism can be a response on how to face the globalisation challenges more efficiently.

Cost of Non-Europe Reports identify the possibilities for economic or other gains and/or the realisation of a 'public good' through common action at EU level in specific policy areas and sectors. This Cost of Non-Europe Report seeks to analyse the costs for citizens, businesses and relevant stake-holders of remaining gaps and barriers in the European Single Market, building on and updating the 1988 Cecchini Report, which quantified its potential benefits.

Based on results from work commissioned on further ways of completing the Single Market in a series of fields - road transport and railways, air and maritime transport, tourism policy and passenger rights - the gains that could be achieved from addressing the identified issues have been estimated at 8.6 billion euro annually for the transport sector and 6.2 billion euro annually for the tourism sector.

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