UNECE

Railways at the centre of a post-pandemic recovery
Measures to support international rail carriers

UNITED NATIONS

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

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UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

The United Nations Economic Commission for Europe (UNECE) is one of the five United Nations regional commissions, administered by the Economic and Social Council (ECOSOC). It was established in 1947 with the mandate to help rebuild post-war Europe, develop economic activity and strengthen economic relations among European countries, and between Europe and the rest of the world. During the Cold War, UNECE served as a unique forum for economic dialogue and cooperation between East and West. Despite the complexity of this period, significant achievements were made, with consensus reached on numerous harmonization and standardization agreements.

In the post-Cold War era, UNECE acquired not only many new member States, but also new functions. Since the early 1990s the organization has focused on assisting the countries of Central and Eastern Europe, Caucasus and Central Asia with their transition process and their integration into the global economy.

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UNECE's multisectoral approach helps countries to tackle the interconnected challenges of sustainable development in an integrated manner, with a transboundary focus that helps devise solutions to shared challenges. With its unique convening power, UNECE fosters cooperation among all stakeholders at the country and regional levels.

TRANSPORT IN UNECE

Today, UNECE services 59 United Nations inland transport conventions. Several of the Conventions are global either by design or because their success has caused them to grow beyond the ECE region. In addition to negotiating the amendments to existing legal instruments, UNECE has been active in facilitating new legal instruments. Its normative activities are enhanced with developing methodologies, guidelines, and definitions on subjects such as transport planning, data collection and the collection of transport statistics. UNECE functions with the support of the work of the Inland Transport Committee (ITC) and its 20 Working Parties which are in turn supported by more than 40 formal and informal expert groups and in cooperation with 11 treaty bodies (Administrative Committees). Annual sessions of ITC are the key moments of this comprehensive intergovernmental work, when the results from all subsidiary bodies and secretariat, as well as the UNECE Sustainable Transport Division, are presented to ITC members and contracting parties.

In addition to servicing ITC and its subsidiary bodies, the Division also services other intergovernmental bodies including the ECOSOC Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals, as well as 11 treaty bodies of United Nations legal instruments and the TIR Executive Board. In cooperation with UNESCAP, UNECE Sustainable Transport supports the United Nations Special Programme for the Economies of Central Asia. It also annually alternates with UNESCAP as the secretariat to the SPECA Thematic Working Group on Sustainable Transport, Transit and Connectivity. In cooperation with the UNECE Environment Division and WHO Europe, the Division services the Transport, Health and Environment Pan-European Programme (THE PEP). It ensures the management and oversight of the Trans-European North-South Motorway (TEM) and the Trans-European Railway (TER) projects. Finally, since 2015, UNECE hosts the secretariat of the United Nations Secretary-General's Special Envoy for Road Safety and since 2018 the secretariat of the United Nations Road Safety Fund (UNRSF). Additionally, as part of the United Nations, the Division has been responsible supporting the accession and implementation of the legal instruments through policy dialogues, technical assistance, and analytical activities with the priority of promoting regional and subregional cooperation and capacity-building.

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CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER I INTRODUCTION

The COVID-19 pandemic has had a significant impact on all aspects of transport across the pan-European region for both the passenger and freight sectors with borders being closed temporarily and consecutive lockdowns limiting movements. The rail sector, which in recent years was experiencing growth across all areas, was particularly hit. Passengers all but stopped travelling and freight was, in some areas, reduced dramatically. Given this background, and with the gradual reduction in limitations in 2021, the Working Party on Rail Transport of the United Nations Economic Commission for Europe decided to dedicate a workshop on Railways at the centre of the post-pandemic recovery – Connectivity through the railways, on 17 November 2021. The Working Party agreed that a follow-up publication should be prepared building on discussions at this workshop.

This publication provides:

- (Chapter I), a summary of the impact of the pandemic on the rail sector, a summary of discussions at the workshop;
- (Chapter II) a review of the incentives provided by national governments to the sector, and;
- (Chapter III) conclusions for further discussion.

This publication also provides the information requested in the terms of reference for the Group of Experts on International Railway Passenger Hubs in relation to incentives to international passenger services.

Table I – Acronyms and definitions list

Acronym	*Definition*
AGCM	Autorità Garante della Concorrenza e del Mercato (Italian antitrust authority)
ART	Autorità Regolazione Trasporti (Italian Transport authority)
CQGR	Compound Quarterly Growth Rate
DCC	Digital COVID-19 Certification
IM	Infrastructure Manager
IRG-Rail	Independent Regulators' Group – Rail
PSO	Public service obligations
PY	Previous Year
RU	Railway Undertaking
TAC	Track Access Charge
VAT	Value Added Tax

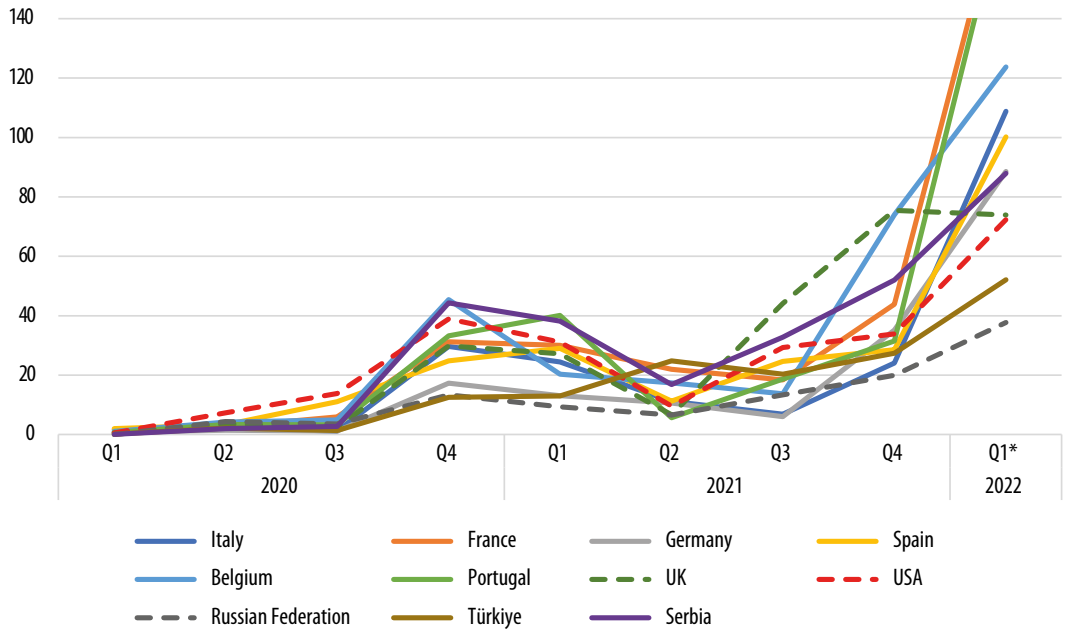
A. THE IMPACT OF THE PANDEMIC

1. *Health evolution*

There is no doubt that the pandemic has affected people's lives in numerous ways which have had a consequential negative economic and social impact. The spread of the virus led to the forced quarantine of large parts of the population to mitigate the impact on vulnerable citizens. Figure I, shows the evolution of new cases (per 100k inhabitants) showing a clear cyclical pattern (with higher values in first and fourth quarters of the year, i.e. the coldest months), but it also shows an increasing trend over time for two main reasons:

- The larger number of tests carried out, due both to the strengthening of the tracking policies of the various countries, and because, as in some countries, a complete vaccine cycle or a negative test were prerequisites for some activities (such as traveling, going to a restaurant or working);
- The greater degree of contagiousness of the latest variants (e.g., Omicron).

Figure I – New cases rate (per 100k inhabitants)



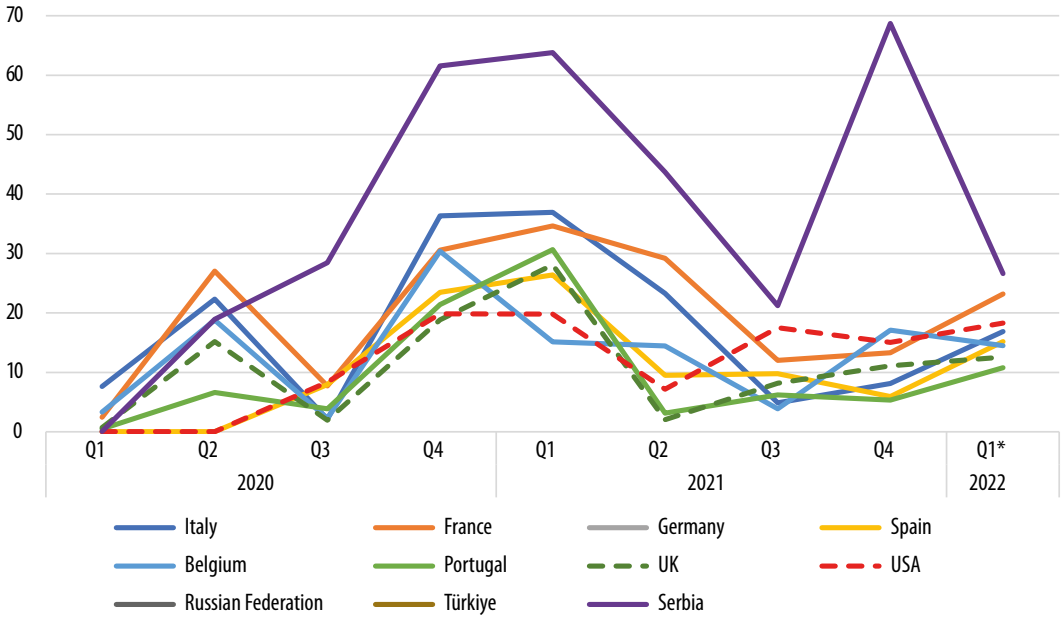
Source: www.ourworldindata.org/coronavirus.

* Data updated to 25 February 2022.

Note: that the graph does not show the values of France and Portugal because they are out of range (187.3 and 182.1 respectively).

The high number of cases has also been accompanied by high hospitalization rates. As with the infection rate, the hospitalization rate (per 100k inhabitants), as set out in figure II below, is also cyclical, but unlike the new cases, in the last few quarters the overall trend has fallen. The reason behind this difference is given both by the smaller number of tests carried out at the start of the outbreak and by the evolution of the vaccination campaign which reduced the probability of having severe symptoms.

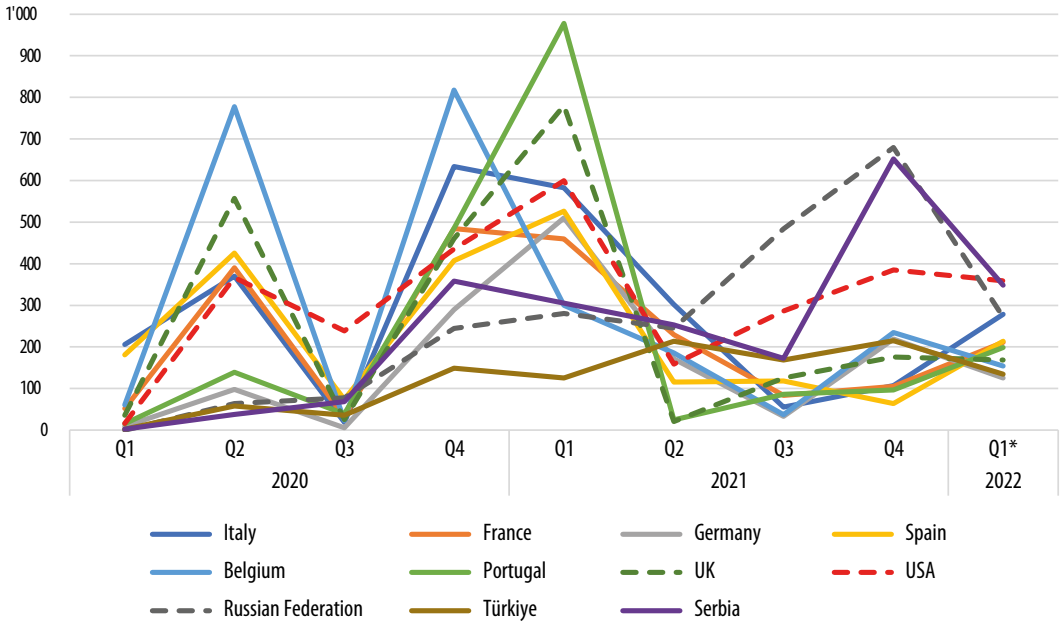
Figure II – Hospitalisation's rate (per 100k inhabitants)



Source: www.ourworldindata.org/coronavirus.
* Data updated to 25 February 2022.
Note: There is no data available for Germany, Russian Federation and Türkiye.

The last factor to consider is the fatalities resulting from contracting the virus. As can be seen from figure III below, the death rate is also cyclical, but is also reducing as a result of vaccinations.

Figure III – New deaths rate (per 1 million inhabitants)

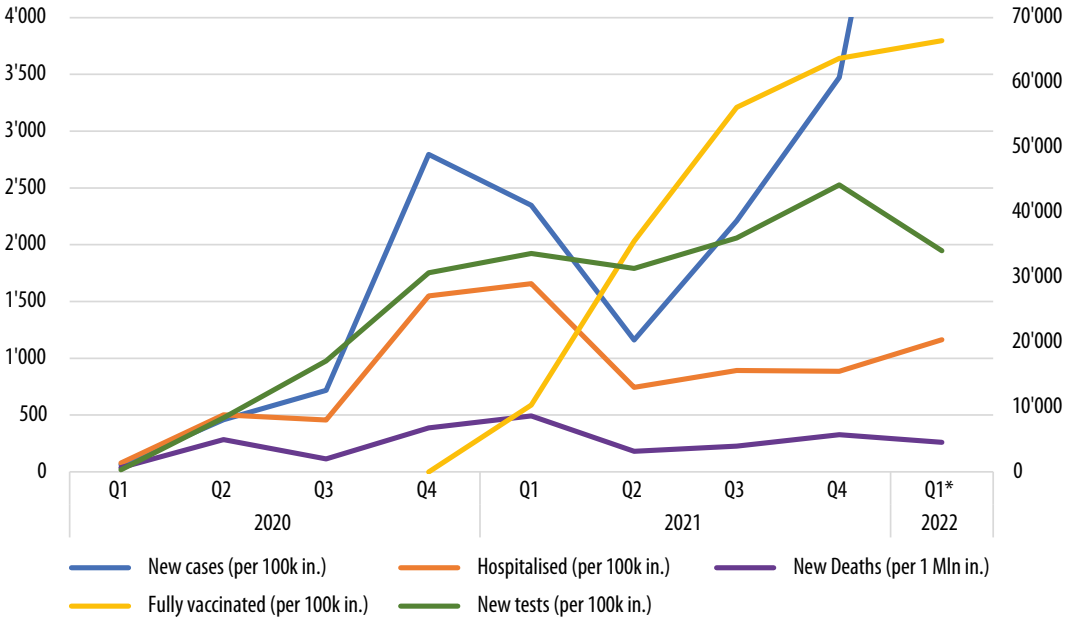


Source: www.ourworldindata.org/coronavirus.
* Data updated to 25 February 2022.

Figure IV combines all these parameters into one figure. From this, it is possible to observe that:

- Since the vaccines were introduced, death rates and hospitalization rates have decreased (with a slight reversal in the last period resulting from the spread of the Omicron variant).
- The Omicron variant has greatly increased the number of new positive cases, rising with the increase in the number of tests.

Figure IV – Evolution of pandemic crisis (different scales)



Source: www.ourworldindata.org/coronavirus.

* Data updated to 25 February 2022.

Note: The 2022 Q1* value of the new cases curve is 8,078 (not represented in the chart). New tests are represented on the scale on the right.

2. *Public measures aimed at fighting the pandemic*

To counter the effects of the pandemic listed above, governments across the region adopted a series of measures that, amongst other things, significantly affected the mobility habits of people. These measures can be divided into two categories: first, the tracking of individuals and second, pandemic containment (intended for the population of one or more regions or the entire country, mainly used in periods with a greater number of infected people).

The first measure consists in verifying whether a particular individual is affected by the virus, through testing, in order to trigger the related health protocols in the event of a positive result. In some cases, in the event of a positive test, close contacts were also tacked or put into quarantine.

The second measure relates to introduction of a series of limitations imposed on the population at a regional or national level, which included:

- School closures
- Border closures
- Event cancellations

- Non-essential shop closures
- Limitations on non-essential movements
- Non-essentials production shutdown[1]
- Use of individual protective equipment (e.g., masks) and social distancing when in contact with other people
- Travel (domestic and international) restrictions
- Measures to shift passengers away from mass (public) transport modes[2]
- Improvement of quality and safety of public and shared transport.[3]

All these measures had a very strong impact on commuter, business and leisure travel. Table II sets out a schematic representation of the situation at the beginning of March 2022 in a subset of countries.

Table II – Containment measures on 1st March 2022

Country	*School and workplace closure*	*Events cancellation*	*Mask utilisation*
Belgium	No measures	Recommended cancellations	Required in some public spaces
France	Recommended	Required cancellations	Required in some public spaces
Germany	Required (at some levels)	Required cancellations	Required in some public spaces
Italy	Required (at some levels)	Required cancellations	Required in all public spaces
Portugal	No measures	No measures	Required in all public spaces
Russian Federation	No measures	Recommended cancellations	Required in all public spaces
Serbia	Recommended	Recommended cancellations	Required in all public spaces
Spain	Recommended	Recommended cancellations	Required in some public spaces
United Kingdom of Great Britain and Northern Ireland	Recommended	No measures	Required in all public spaces

Source: www.ourworldindata.org/coronavirus.
Note: Different colours represent the different intensity of the interventions and represents the national measures.

[1] The activities involved in the market supply chain and in the operation of the services of centres producing essential goods and services, as well as certain health centres, services and establishments, are considered essential.
[2] E.g., in 2020 and 2021, the Italian government introduced the "mobility bonus" which consisted of a public grant for the purchase of bicycles, electric scooters and e-bikes.
[3] Measures that have the purpose, on the one hand of guaranteeing social distancing (greater frequency of transport and limited capacity on transport), on the other hand, to improve the hygienic conditions of means of transport (forcing transport companies to sanitize vehicles more frequently).

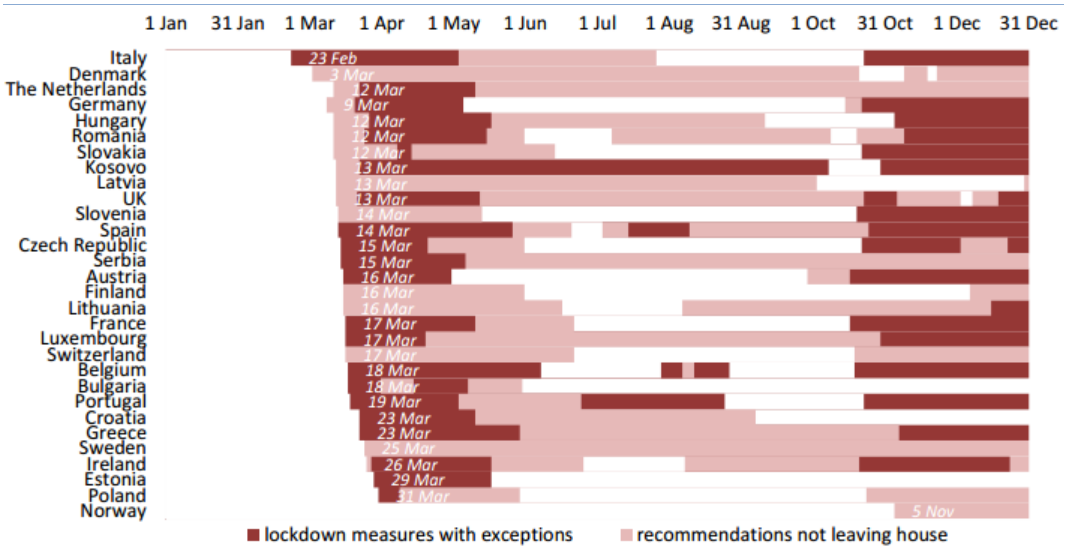
As a horizontal element between these types of measures, the European Union (EU) introduced on 1st July 2021, a Digital COVID-19 Certificate (DCC) (through Regulation 2021/953/EU), as digital proof that a person has either:[4]

- Been vaccinated against COVID-19;
- Received a negative test result; or
- Recovered from COVID-19.

This certificate allows holders both to carry out some activities within national borders (depending on the country),[5] and to travel within the EU and some other non-European states.[6]

The governments of various countries also introduced generalized lockdowns in the worst months of the pandemic, as set out in figure V below.

Figure V – Calendar of "Stay at home" requirements/recommendations per country identified



Source: IRG-Rail (2021).

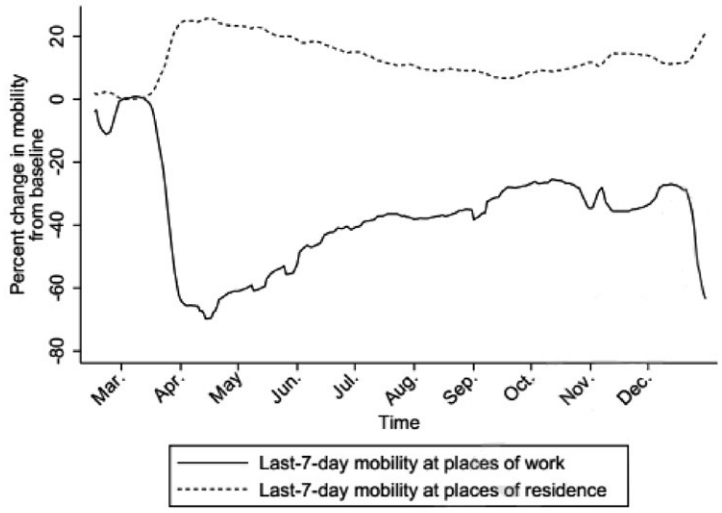
With these restrictions in place, many companies resorted to remote working. By mid-2020, about half of the employed population worked exclusively from home in many countries, a practice that is expected to continue after the end of the pandemic (Deole *et al.*, 2021). This has led to a significant reduction in daily commuting but increased mobility in those areas around people's homes as shown in figure VI for the United Kingdom of Great Britain and Northern Ireland.

[4] https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/safe-covid-19-vaccines-europeans/eu-digital-covid-certificate_en.

[5] E.g., in Italy the DCC is necessary both to carry out "secondary" activities, such as going to a restaurant or participating in events, and to work, through Decreto Legge 127/2021.

[6] This certification is not recognized by major non-European countries, such as the United States of America.

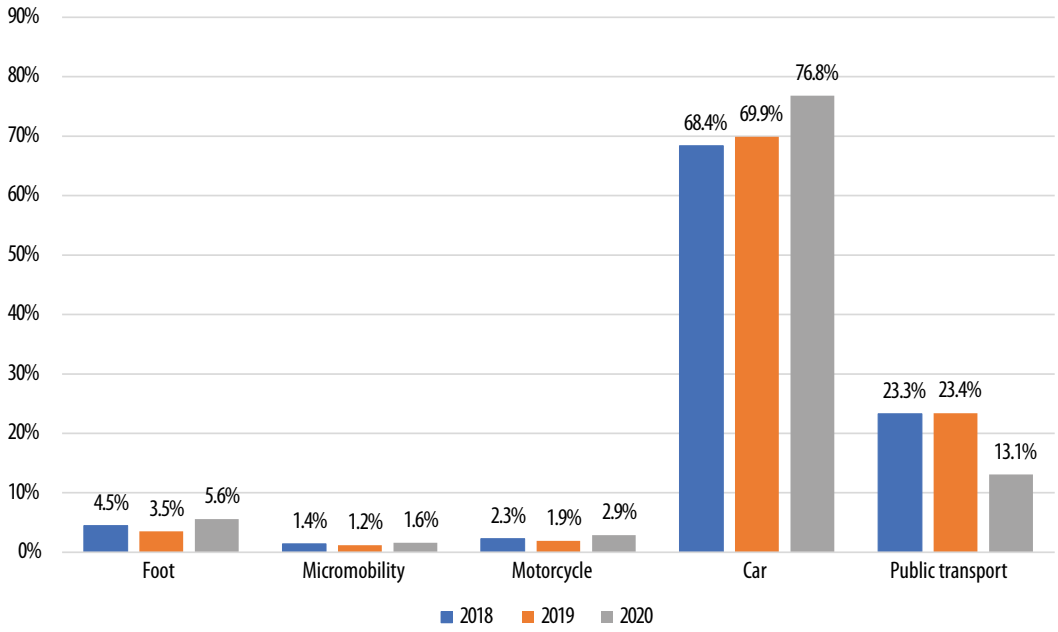
Figure VI – Last-7-days average mobility change at workplace and residence place in the United Kingdom of Great Britain and Northern Ireland (2020)



Source: Deole et al. (2021).

Similar changes were also seen in other countries. In Italy for example, in 2020, the average length of journeys fell from 11.2 km in 2019 to 8.7 km and consequently the share of short-distance journeys (up to 10 km) grew from 75% to 81.4%. Furthermore, figure VII below shows how the pandemic has also radically changed modal split in Italy, with local public transport losing approximately 50% of passengers. This has also been accompanied by a fall in multimodal journeys.

Figure VII – Percentage distribution of passenger-kms per mode of transport in Italy



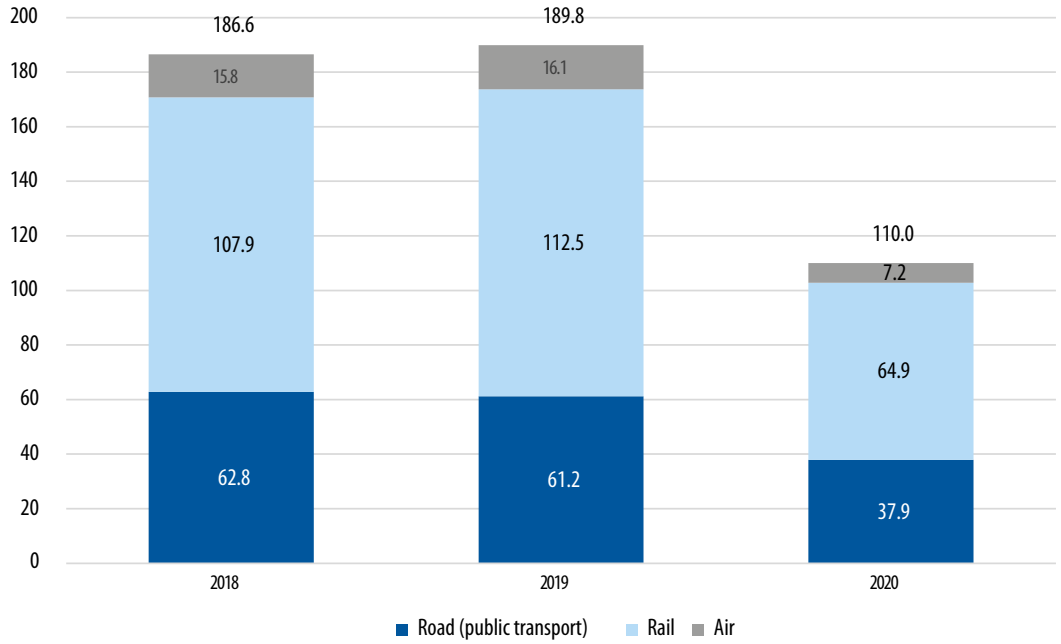
Source: ISFORT (2021).

3. *Impact on the transport sector*

While remote working had a strong impact on commuting patterns, wider restrictions had a significant impact on longer distance, domestic and international business and leisure travel. The various measures adopted by governments to limit movements (including quarantine period after arrival at destination and travel bans),[7] have enormously penalized all modes, especially aviation and long distance (including international) rail passenger journeys. This is best seen in the following the examples of some member States.

France, for example, in 2020 saw a sharp fall in passenger-km in the three main modes: 38% reduction for road, 42% reduction for railways, and 55% reduction for aviation (figure VIII). With this background, it is important to note that the total private transport volume for 2020 amounted to 639.4 billion passenger-kms, a decrease of about 19% when compared to 2019.

Figure VIII – Evolution of passenger-kms (billion), France

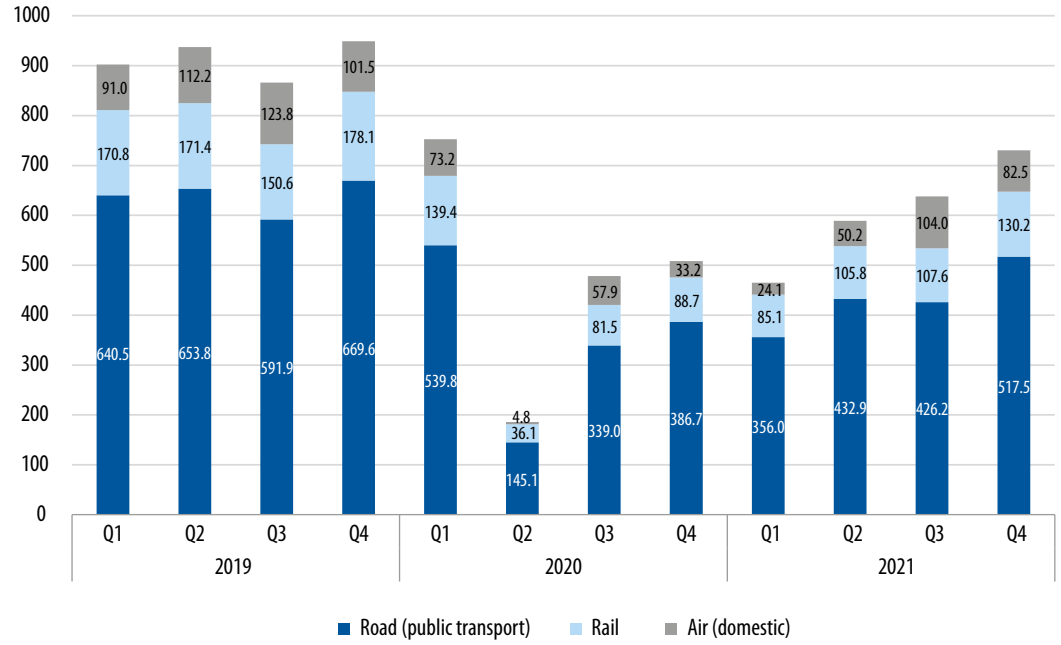


Source: Ministère de la Transition Écologique (2021).

In Spain, a significant decline was identified in the second quarter of 2020 with road traffic levels still below historical levels at the end of 2021 (figure IX).

[7] In order to contain the spread of the pandemic.

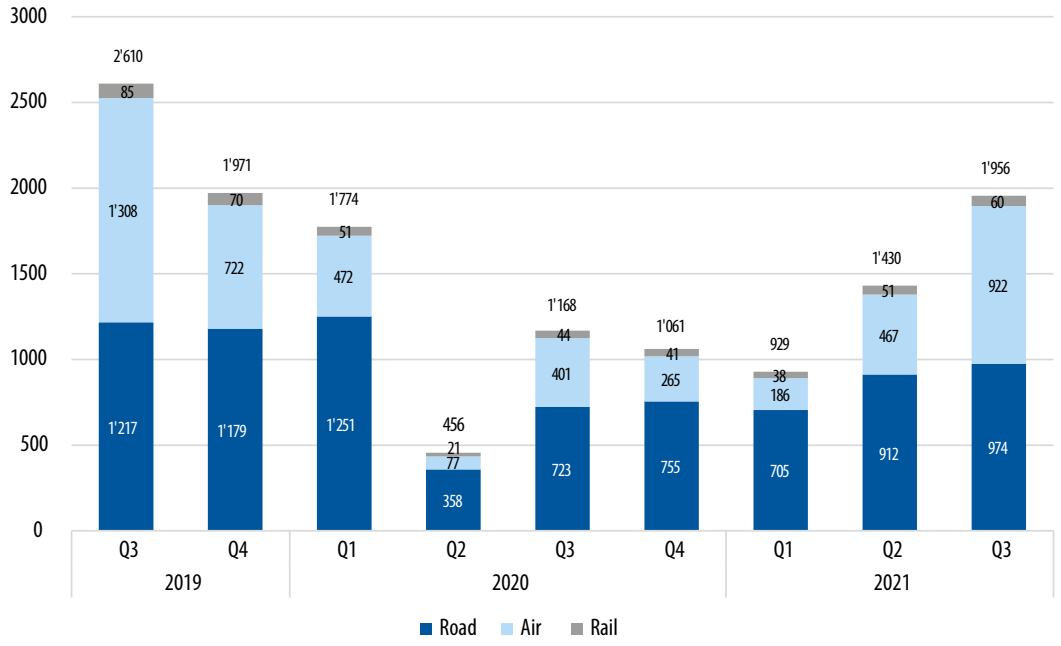
Figure IX – Evolution of passengers (thousand for Road and Rail, hundred for Air), Spain



Source: Istituto Nacional de Istatìstica (2022).
Note: To facilitate the representation, the volumes of Air passengers is expressed in hundred passengers' units, not thousands as for Road and Rail.

In Serbia, where air transport has a considerable share of the overall market, only the rail sector recovered to pre-pandemic volumes, already in the second quarter of 2021, as shown in figure X. Although this is may be due to the fact that these are very small volumes.

Figure X – Evolution of passenger-kms (million), Serbia



Source: Statistical Office of the Republic of Serbia (2022).

Looking exclusively at rail data, passenger volumes measured in passenger-kms fell significantly between 2019 and 2020 across the continent from 419 billion passenger-kms to 217 billion passenger-kms. This is equivalent to an average decrease of 48%, but ranging from a fall of 26% to a fall of 65%. In contrast, train-km figures were less affected as operators were required to maintain their public service obligations (PSO). The resulting change was a fall of about 11% from 3.2 billion train-km to 2.9 billion train-km. Both for passenger-kms and train-kms, those services that were not under PSO contracts saw a much greater fall as set out in table III below.

Table III – Change in European Rail traffic (comparison between 2019–2020)

Country	*Passenger-km*	*Train-km*	*PSO services (passenger-km)*	*Non-PSO services (passenger-km)*
Austria	-46%	-6%	-29%	-88%
Belgium	-55%	-7%	-54%	-65%
Bulgaria	-26%	-2%	-25%	-70%
Croatia	-39%	-16%	-38%	-70%
Czech Republic	-41%	-3%	-37%	-62%
Estonia	-33%	-5%	-29%	-93%
Finland	-43%	-7%	-41%	-81%
France	-41%	-21%	-41%	-41%
Germany	-42%	-1%	-39%	-47%
Greece	-49%	-21%	-49%	-61%
Hungary	-37%	+1%	-37%	-43%
Ireland	-65%	-15%	-65%	n/a
Italy	n/a	-22%	n/a	n/a
Latvia	-34%	-1%	-32%	-79%
Lithuania	-46%	-13%	-31%	-81%
Netherlands	-59%	-9%	n/a	n/a
Norway	-54%	-10%	n/a	n/a
Poland	-43%	-6%	n/a	n/a
Portugal	-49%	-11%	-44%	-71%
Romania	-34%	-9%	-34%	n/a
Serbia	n/a	-17%	n/a	n/a
Slovakia	-47%	-8%	n/a	n/a
Slovenia	-43%	-23%	-48%	+258%
Spain	-59%	n/a	-49%	-66%
Sweden	-46%	-12%	n/a	n/a
United Kingdom of Great Britain and Northern Ireland	-65%	-19%	-65%	-72%
Total	**-48%**	**-11%**	**-48%**	**-49%**

Source: IRG-Rail (2021).

With such significant falls in traffic and consequential revenue, it was necessary for governments to assist operators to ensure that operations remained viable. In this framework a workshop was held within the framework of the Working Party on Rail Transport to discuss how member States have focused their attention in assisting operators in facilitating the post-pandemic recovery.

B. SUMMARY OF THE HIGH-LEVEL WORKSHOP ON "RAILWAYS AT THE CENTRE OF THE POST-PANDEMIC RECOVERY – CONNECTIVITY THROUGH THE RAILWAYS"

1. Introduction

As part of the seventy-fifth session of the Working Party on Rail Transport, almost one hundred delegates participated in the Workshop on "Railways at the centre of the post-pandemic recovery – Connectivity through the railways". Participants addressed a number of issues which will affect the railway sector in the coming years to ensure that the railways can grow and gain more market share to facilitate the achievement of the United Nations Sustainable Development Goals. This chapter sets out the main findings from this Workshop specifically related to the post pandemic recovery.

2. Summary of discussions

Pandemic Impact

The focus of many of the interventions was the impact that the pandemic has had on local economies and, in particular, the impact on the railways. This varied considerably between countries. For example, the intervention from Azerbaijan highlighted that it had not suffered significantly in terms of the volume of freight transport, which only decreased slightly, by 4%, whereas passenger volumes fell dramatically by 45% (2020). Rail flows in Azerbaijan are mostly international (import and export) covering 61% of the total market, while transit and national traffic account for 19% and 20%, respectively.

The Netherlands noted that public transport, which citizens widely used during the pandemic, did not suffer significantly given the financial compensation measures from the government. However, it was decided to calculate the possible losses incurred by public transport as a result of the pandemic in order to return the volume of passenger traffic to pre-pandemic levels. From a financial point of view, the pandemic has had a powerful impact on revenues, especially in the rail sector compared to other modes of transport. The volume of these losses was about 56%. Additionally, in the Netherlands, public transport passenger journeys were calculated as being 60% lower than expected based on previous pre-pandemic years, with trips increasing again from 2020 to 2021, but not reaching 2019 levels. However, private car traffic volumes recovered faster, reaching 98% of pre-pandemic levels.

In Kazakhstan, following the decree of the President of Kazakhstan, and based on a letter from the Ministry of Transport and Infrastructure Development, from 16 March 2020, in order to prevent the spread of COVID-19 all international passenger traffic was temporarily suspended, and the transit of goods through the territory of Kazakhstan was also limited.

The International Union of Railways noted that the crisis caused by the pandemic had a severe impact on the economy and the railways. The volume of traffic decreased to almost 67%, and revenues to about 60% across its members. Freight traffic was not as severely affected and is starting to return to 2019 levels. New freight and passenger movement patterns have developed during the pandemic, which has affected the distribution of traffic. For example, business travel has fallen by almost 40% due to remote working and fewer face-to-face meetings. In this framework, it is essential to note that railways need to be at the centre of the recovery.

Additional measures taken to prevent the spread of the pandemic on the railways

The railways across the region have taken significant measures to prevent the spread of the pandemic. For example, in the Russian Federation, measures have been strengthened to sanitize rolling stock and protect staff involved in freight and passenger transportation. Additional training of train crews was carried out, in addition to the recruitment of backup for specialists in critical positions, such as dispatchers. Furthermore, a plan of temperature measurements and regular COVID-19 testing was introduced for all railway staff.

In Kazakhstan, in order to prevent the spread of the virus, all railway crews are required to undergo a medical examination, briefings, and are provided with personal protective equipment, including masks, gloves and antiseptic. Video information on measures to prevent COVID-19 infection is made available in passenger cars, in some trains it is broadcast through the audio systems. While the train is in operation, the train controller is in charge of the cleaning teams' work that disinfects the wagons twice a day and the common area, including toilets, four times a day as necessary. Pre-journey briefings on compliance with sanitary and quarantine conditions during passenger operations are carried out on an ongoing basis. In April 2021, Kazakhstan signed a joint agreement under which similar measures are planned to be introduced after the resumption of international passenger traffic. Discussions were ongoing in November 2021 on how to resume international passenger and freight trains. To support the return to the railways and to travel as a whole, Kazakhstan developed a mobile application and a digital government portal that allows citizens to sign up for vaccinations.

Post-pandemic recovery programs, subsidies and development strategies

As part of its efforts to facilitate the post-pandemic recovery, the Netherlands continues to carry out corrective and compensatory measures together with neighbouring countries in order to optimize rail transport and increase cross-border flows.

On this subject, Germany has provided temporary subsidies for the entire railway sector. Assistance is primarily focused on long distance freight and passenger transport. The Federal Ministry of Transport and Infrastructure has promoted a cost-cutting program for rail companies and managed to use some of the funds made available from the cost-cutting drive to modernize railway infrastructure facilities as well as to reducing ticket prices and invest in other services for users. The financing program was perceived as a type of bridge to strengthen the competitiveness of railways in comparison with roads. The share of rail versus road subsidies is now being calculated, and the results were expected to be available shortly. Based on these results, a final decision will be made on how to further develop this program, especially in the light of measures aimed at reducing the effects of climate change. The program will remain in force until 2030. Given the current situation, Germany expects that subsidy measures will continue to be implemented until at least July 2023. Germany has introduced temporary subsidies for long-distance passenger transportation, partially covering part of the cost of train tickets to stimulate demand and partially offset the losses incurred due to the pandemic. In total, EUR 1.2 billion were allocated for this in the period from March 2020 to December 2021, the subsidy rate was more than 90% of the cost of railway transport services. It is planned to gradually reduce this share to below 50%. While passenger groups have been supportive of the introduction of subsidized tickets, the government has made it clear that it does not intend to make these measures permanent. In addition to the whole industry sector, two special measures were developed to address two extensive railway holdings. Together with the European Commission, Germany agreed on the main elements of the pricing structure of these companies to be able to compensate for the losses of the two largest German railway companies. The government increased its shareholdings in these two companies, which

freed up additional funds for infrastructure upgrades. After intensive consultations with the European Commission, Germany agreed to pay EUR 550 million in compensation for losses incurred by the pandemic in the first phase of the lockdown from March to May 2020. At the time of writing, the review of planned compensation by the European Commission on the planned compensation for long-term losses from reduced freight traffic and for losses during the second lockdown from November 2020 to March or April 2021, had not yet been completed.

Institutional reforms are still ongoing to expedite the recovery of the railways in Azerbaijan. The national operator, Azerbaijan Railways (ADY) has been transferred under the management of Azerbaijan Investment Holding, a public legal entity established according to the Decree of the President of the Republic of Azerbaijan. The purpose of the transfer is to increase the economic efficiency and transparency of the ADY investment programs while ensuring their competitiveness and improving overall financial health and sustainability.

The Ministry of Infrastructure and Transport of Ukraine, in its national transport strategy developed in 2018, identified key steps and priorities for infrastructure development. As part of this work, Ukraine has a new draft law on rail transport being discussed in parliament which seeks to align the rail sector to international comparators. The main goal of the new reform is to open the market, improve infrastructure, create modern transport markets through technical support and improve information availability. The new bill is entirely consistent with the Directives of the European Union and provides for a competitive market for the transport of goods and passengers, the introduction of a transport security system, the introduction of an accident investigation authority, and the creation of a legal basis for technical regulation. The bill is aimed at creating conditions for future development and attracting investments to the railway market, taking into account the basic requirements of European legislation, including:

- Defining the procedures for the issuing of safety certificates and licences
- The framework for the issuing of driver's licenses
- Applying free tariffs for passenger and freight transport
- Defining public service contracts
- Allowing open access to the market
- Establishment of minimum quality standards for passenger and freight services.

The reforms and plans of Ukraine will provide a new approach to tariff regulation for rail transport services. Given limited public finances, Ukraine hopes that the liberalization of the sector will allow for private financing to play a major role in the recovery of the railways. The state sees an advantage in private funding as it will help create additional conditions for market operations and increase efficiency, which will open the market based on equal access to railway infrastructure and fair competition between carriers.

In Albania, a EUR 30 million programme was implemented to accelerate post-pandemic recovery. Albania plans to reach the pre-pandemic level of profitability for the transport sector, however, for the moment profitability is 50% of the expected level. A job retention incentive programme is being implemented for employees forced to leave their jobs due to the pandemic. During the recovery from the pandemic, Albania is expecting an increase in demand for railway sector employees, and as result training efforts are being accelerated in this area.

Mongolia is investing significantly in a number of railway projects aimed at growing the importance of the sector. Many of these are along Corridor 1B of the Organization for Cooperation of Railways and is the shortest route that connects Asia and Europe. In the next ten years, Mongolia plans to build about 6,000 km of railways to create three railway corridors connecting Asia and Europe, three dry-ports connecting to Russia, and five dry-ports for connections to China. As a result, the railway transportation capacity of Mongolia will increase 2.5 times, with a total of approximately 80 million tonnes of cargo passing through the country per year. In 2021, Mongolia organized pilot transportation of goods to Europe by rail, road and air, and calculated transport cost and time for each mode. The freight shipment from Ulaanbaatar city in Mongolia to Italy passing through the Chinese port of Tianjin took an average of 90 days and cost about USD 7,000. The shipment time was about 20 days by road, but the transport cost was higher – USD 8,356. By rail transport, it is estimated to take an average of 40 days and to cost about USD 4,000, showing the importance of having a strong railway sector in the country.

CHAPTER II EXAMPLES OF RESPONSE POLICIES

A. GENERAL OVERVIEW

The pandemic has produced effects not for transport, but also for the wider economy. The table below shows the United Nations' (2020) forecast of the likely effects of the pandemic going forward.

Table IV – Pandemic's impact (forecast)

Theme	*Forecast*
Poverty	40-60 million people will be pushed into extreme poverty
Gender Equality	• On average, women make up almost 70% of health care workers and social care sector in 104 countries. • Women already do three times as much unpaid care work as men. With COVID-19, unpaid care work has increased, with children out-of-school, heightened care needs of older persons and overwhelmed health service. • In developing countries, vast majority of women's employment is in the informal economy – about 70% COVID-19 quarantining has caused a spike in domestic violence levels.
Education	Nearly 1.2 billion students (or 68% of the total students enrolled) are affected by school closures 144 countries still have nationwide closures in place
Social Protection	55% of the world's population (as many as four billion people) are not covered by social insurance or social assistance. Globally, only 20% of unemployed people are covered by unemployment benefits, and in some regions the coverage is much lower
Internally Displaced People	1/3 of the world's internally displaced persons live in 10 countries most at risk to the COVID-19 socio-economic impacts
Slum Dwellers	• Over 90% of COVID-19 cases are happening in urban areas. • With over one billion people living in informal settlements and slum-like conditions, COVID-19 is exacerbating the vulnerability of these population groups.
Jobs	About 1.6 billion informal workers lost 60% of their income, with little to no savings and no access to social protection
Remittances	Remittances to low-income countries and low and middle-income countries are expected to fall by almost 20% cutting off a significant lifeline to many vulnerable households
Trade	• Global trade values fell 3% in the first quarter of 2020. • An estimated quarter-on-quarter decline of 27% is expected in the second quarter.
Commodities	• Commodity prices fell by a record 20% in March, driven by steep drops in oil prices. • Oil prices remain subdued trading at almost 40% lower than the start of the year.
Food Insecurity	• COVID-19 will double the number of people facing food crises. • About 265 million people in low and middle-income countries at risk of acute food insecurity by the end of 2020 unless swift action is taken. • Most people suffering acute food insecurity in 2019 were in countries affected by conflict (77 million), climate change (34 million) and economic crises (24 million people).
Tourism	• Tourism is considered one of the hardest hit by the COVID-19 outbreak. • Potential loss of 850 million to 1.1 billion international tourists. • Potential loss of USD 910 billion to USD 1.2 trillion in export revenues from tourism. • Estimated 100 and 120 million jobs at risk.

Source: United Nations (2020).

To mitigate these effects on the economy and to sustain public welfare, governments adopted different measures, that can be divided into four categories (Gourinchas, 2020; Sarcher, 2020):

- Fiscal measures
- Monetary measures
- Public health measures
- Human control measures.

Due to the enormous consequences of the pandemic, countries have faced enormous efforts to create stimulus to their economies. The following table shows the fiscal measures implemented by some countries during 2020.

Table V – Fiscal measures in 2020

Country	*Direct Spending (billion)*	*Per cent of GDP*	*Fiscal support via loans and loan guarantees (billion)*	*Per cent of GDP*
France	EUR 45	1.9	EUR 315	14.0
Germany	EUR 70	2.0	EUR 757	23.0
Italy	EUR 25	1.4	EUR 340	19.0
Russian Federation	RUB 300	0.3	RUB 1 800	1.8
Türkiye	USD 121.6	1.5	USD 3.8	0.5
United Kingdom of Great Britain and Northern Ireland	GBP 498.7	2.2	GBP 330	15.0
United States of America	USD 2 800	11.0	USD 700	3.3

Source: Sarcher (2020).

In addition to fiscal support, some member States have opted for solutions aimed at providing funding to support a green shift in transport as set out in table VI below.

Table VI – Green recovery spending sectors in France, Germany and the United Kingdom of Great Britain and Northern Ireland (EUR billion)

Sector	*France*	*Germany*	*United Kingdom of Great Britain and Northern Ireland*
Railway infrastructure	4.70	5.00	4.72
Electric vehicles	3.38	6.90	3.25
Building energy retrofits	6.70	2.00	4.60
Hydrogen	2.00	9.00	0.27
Green transition	5.90	0.40	-
Air and maritime transportation	2.10	3.20	0.10
Environmental rehabilitation and protection	3.15	0.70	1.33
Urban commuting and mobility	1.20	-	2.25
Agriculture, aquaculture, food and animals	1.05	0.30	-
Nuclear	0.20	-	0.67
Renewables	-	-	0.18
Total	**30.38**	**27.50**	**17.37**
% Sectors related to transportation on total	**44,0%**	**87,6%**	**60,9%**

Source: Geels et al. (2021).

B. TRANSPORT SECTOR

To address the traffic, passenger and revenue shortfalls across the transport sectors mentioned in the previous chapter, member States adopted a number of targeted initiatives as well as initiatives coordinated at the international level.

In the railway sector, the first relevant measures were included in Regulation 2020/1429/EU which authorised, temporarily, infrastructure managers to remove, postpone or lower track access charges (TAC) for infrastructure during the pandemic while ensuring state aid to the infrastructure mangers themselves. This measure, with its extensions, was in place until December 2020.

The specific measures that were allowed include:

- Adjustments to the TAC: these adjustments could be applied as raw discounts of global or specific charges, the postponing of invoicing, or as changes of the references for charges or discount schemes to consider the sudden decrease of volumes. Several infrastructure managers also decided to apply a relaxation of cancellation charges or reservation penalties.
- State aid to operators through a variety of methods aimed at limiting the impacts on the railway sector, as funding to pay track access charges and/or in some cases direct compensation for the loss of revenue or as an increase in public subsidies. Other countries also granted temporary unemployment aid and subsidised loans, or the postponement of public charges or debt repayment. Temporary PSO contracts were granted in certain countries.
- State aid to infrastructure managers or specific funding and incentives for infrastructure projects (or direct capital increase) were also granted in some countries to compensate for their loss of revenues.

A summary of these measures is included in table VII below as prepared by IRG-Rail.

Table VII – Financial measures adopted by states or infrastructure managers by category in the European Union

Country	*Adjustment of TAC and cancellation/ reservation charges*				*State aids to RUs or IM*					
	Changes of the TAC level	*Postponing the invoicing*	*Changes of the eference for TAC*	*Relaxation of cancellation charges/ reservation penalties*	*Funding of TAC*	*Compensation for the loss of the revenue for the IM*	*Compensation for the loss of revenue for RUs*	*Temporary PSO contract*	*Loan facilities, credit guarantees, or postponing of public charges or debts (or "tax vacation")*	*Temporary unemployment aid and hort-term work*
Austria				X	X	X		X		X
Belgium				X					X	X
Bulgaria										
Croatia				X			X		X	
Czech Republic										
Estonia			X				X			
Finland							X		X	
France					X		X			X
Germany				X	X	X	X		X	X
Greece							X			
Hungary						X	X			
Ireland										
Italy	X	X		X		X	X		X	X
Latvia									X	
Lithuania									X	
Netherlands							X			
Norway		X		X				X	X	X
Poland				X			X		X	
Portugal				X						
Romania						X	X		X	X
Serbia										
Slovakia	X									
Slovenia				X						X
Spain			X	X					X	
Sweden		X					X		X	X
United Kingdom of Great Britain and Northern Ireland							X			X

Source: IRG-Rail (2021).

In addition to incentives to the rail sector, the aviation sector also benefitted from a number of measures. It is important to note this as often international rail passenger services operate in competition with some air services and as such some of these routes may have been disadvantaged by assistance to the aviation sector. A summary of this assistance is set out in table VIII below.

Table VIII – Financial measures for European airline companies (updated at end of August 2020)

Airline	*Amount (EUR million)*	*Status*	*Type*
Air France – KI.M Group (France)	7 000	Agreed	Loan and loan guarantee
Lufthansa AG – Lufthansa (Germany)	6 840	Agreed	Loan/Partial takeover
Air France – KI.M Group (Netherlands)	3 400	Agreed	Loan and loan guarantee
TUI Group (Germany)	1 800	Agreed	Loan
Lufthansa AG – SWISS/ Edelweiss (Switzerland)	1 420	Agreed	Loan
TAP (Portugal)	1 200	Agreed	Loan
SAS (Scandinavia)	1 130	Agreed	Credit Guarantee
Finnair (Finland)	826/414	Agreed/Under Discussion	Credit guarantee and recapitalisation
IAG – Iberia (Spain)	750	Agreed	Loan
Easy Jet (United Kingdom of Great Britain and Northern Ireland)	670	Agreed	Loan
Ryanair (Ireland)	670	Agreed	Loan
Condor (Germany)	550	Agreed	Loan
Lufthansa AG – Austrian Airlines (Austria)	450	Agreed	State aid and loan
Wizz Air (Hungary)	344	Agreed	Loan
IAG – British Airways (United Kingdom of Great Britain and Northern Ireland)	343	Agreed	Loan
All airlines operating in Sweden	318	Agreed	Loan Guarantee
Lufthansa AG – Brussels Airlines (Belgium)	290	Agreed	Loan
Norwegian Airlines (Norway)	277	Agreed	Loan Guarantee
IAG – Vueling (Spain)	260	Agreed	Loan
Air Baltic (Latvia)	250	Agreed	Recapitalisation
SATA Air Açores (Portugal)	133	Agreed	Loan
Wideroe and other small regional carriers in Norway	121	Agreed	Loan Guarantee
Blue Air (Romania)	62	Agreed	Loan
Nordica (Estonia)	30	Agreed	Recapitalisation
Alitalia (Italy)	3 000	Under discussion	Takeover
Total agreed	**29 134**		
Total under discussion	**3 414**		
Total	**32 548**		

Source: Cifuentes-Faura & Faura-Martínez (2021).

Table IX sets out a schematic comparison of economic measures taken for the railway and air sectors.

Table IX – Comparison between railway and aviation sector about economic measures

Economic measure	*Rail*	*Air*
Direct financial contribution	Limited	Yes
Decrease access charge/air traffic fees	Yes	Yes
Decrease/elimination VAT and other taxes	Not yet	Limited
Guarantee loans	Limited	Yes

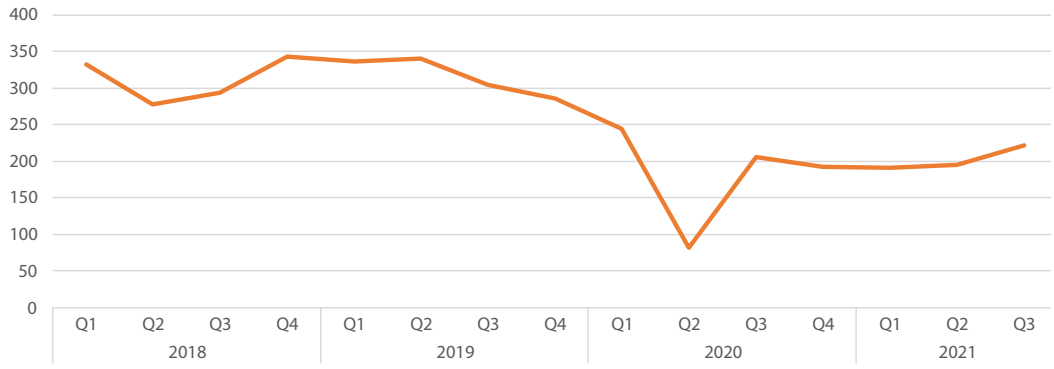
Source: Author's personal elaboration.

C. NATIONAL EXAMPLES

This section provides some examples of the evolution of passenger rail transport (with an international focus where present) in a subset of countries, providing an analysis of the impact of COVID-19 on traffic volumes, the measures taken by governments to support the sector and the pandemic containment measures adopted by operators and infrastructure managers.

1. France

Figure XI – Railway passengers in France (million)



Source: Eurostat (2022).

In France, total passenger volumes were already in decline in the second half of 2019, however the fall in 2020 was still significant. It was therefore essential to ensure support for all operators in this period. This support included:[8]

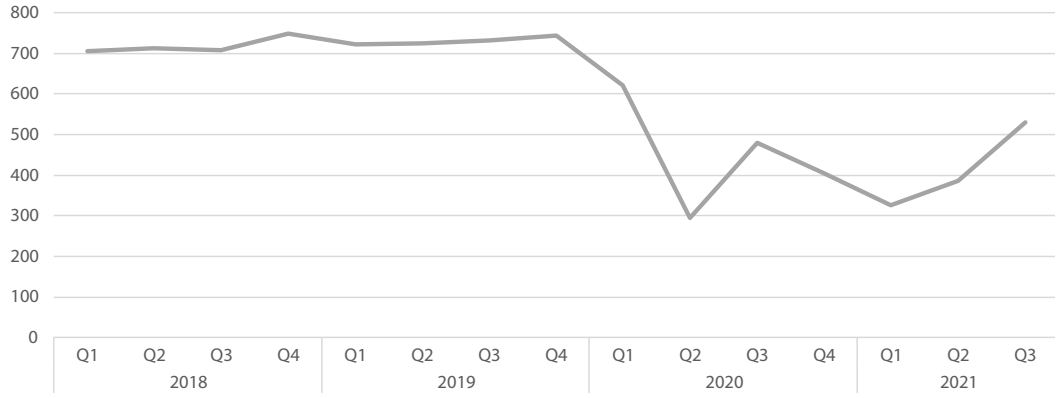
- Contributions to infrastructure managers (Euro 4.5 billion)
- Tax reduction of 50% for operators and other ad hoc measures
- Contributions to operators for the provision of non-PSO services.

[8] Sources: IRG-Rail, 2021; Author's personal elaboration based on different legal sources.

These measures also helped operators cover the costs of specific passenger safety measures including vehicle sanitisation, social distancing requirements limiting capacity, and service cancellations.

2. *Germany*

Figure XII – Railway passengers in Germany (million)



Source: Eurostat (2022).

A similar trend is also visible in Germany. However, the second quarter 2020 value is 59% lower than the same quarter in 2019. Table X below shows how the drop off in international rail passenger transport was just as significant as the fall in domestic travel.

Table X – International railway passengers in Germany (million)

Variable	*2018*	*2019*	*2020*
Passengers	2 873.53	2 921.64	1 801.12
International passengers	11.08	12.03	5.41
% International passengers	0.39%	0.41%	0.30%

Source: Eurostat (2022).

The support that was provided by Germany to operators included:[9]

- For the incumbent operator: capital increase and compensation for missed dividends
- Time bound financial support to small and medium sized companies (not purely rail-focussed but the sector also benefitted from this)
- Financial contribution for the infrastructure manager
- Financial contributions supporting PSO services
- Reduction of the TAC for non-PSO services.

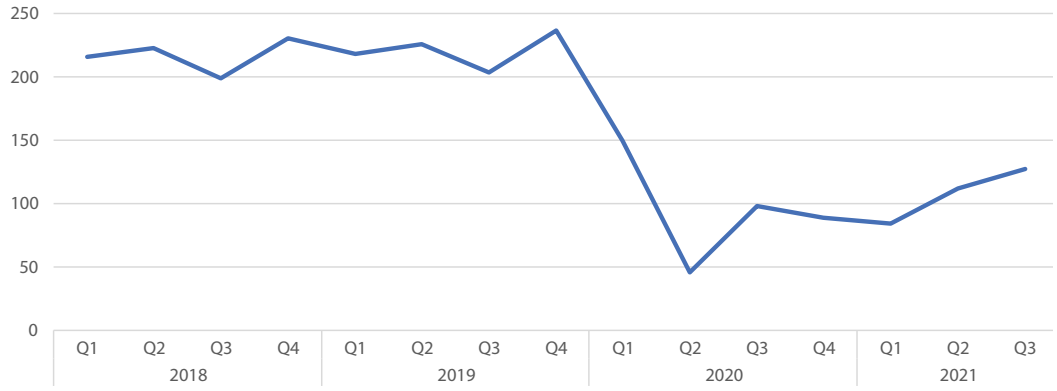
[9] Sources: IRG-Rail, 2021; Author's personal elaboration based on different legal sources.

These measures also supported the costs associated with increased sanitisation of rolling stock, capacity limitations and service cancellations introduced for passenger health and safety reasons.

3. *Italy*

Rail passenger transport in Italy experienced a drastic decrease in volumes in the first semester of 2020. Unlike other member States, this drop was already clear in the first quarter, as Italy was the first European country to impose restrictions on mobility (in particular, total lockdown on the entire national territory, excluding some key sectors). Figure XIII below shows this fall in detail.

Figure XIII – Railway passengers in Italy (million)



Source: Eurostat.

Although international rail passenger travel is small in Italy, it can be seen from table XI below that the pandemic also had a significant impact on this component of rail journeys. As a result of this, no specific incentives were directed at international rail passenger services.

Table XI – International railway passengers in Italy (million)

Variable	*2018*	*2019*	*2020*	*2021**
Passengers	866.59	883.30	382.38	323.07
International passengers	2.60	2.86	1.02	0.66
% International passengers	0.30%	0.32%	0.27%	0.21%

Source: Author's personal elaboration based on Eurostat (2022) and Istat (2022).
* For "Passengers" value, data related to Q3; forecast for "International passengers".

Focusing on the high-speed railway which is open to competition with two operators currently operating on the national network – one legacy, state owned operator (Trenitalia), and a privately owned operator (NTV) – during 2020. With the two national lockdowns in the periods March to June 2020 and then October 2020 to March 2021, both companies experienced a significant funding shortfall due to a collapse of passenger numbers. NTV, not having revenues from PSO services was particularly exposed but managed to remain profitable as a result of the "COVID-19 contribution"[10] provided by the government amounting to EUR 141 million. This was supported by

[10] Decreto Legge 34/2020.

other measures, to the benefit of all operators, which included the reduction and/or elimination of a part of the TAC for non-PSO services and an increase in funds to cover special situations.

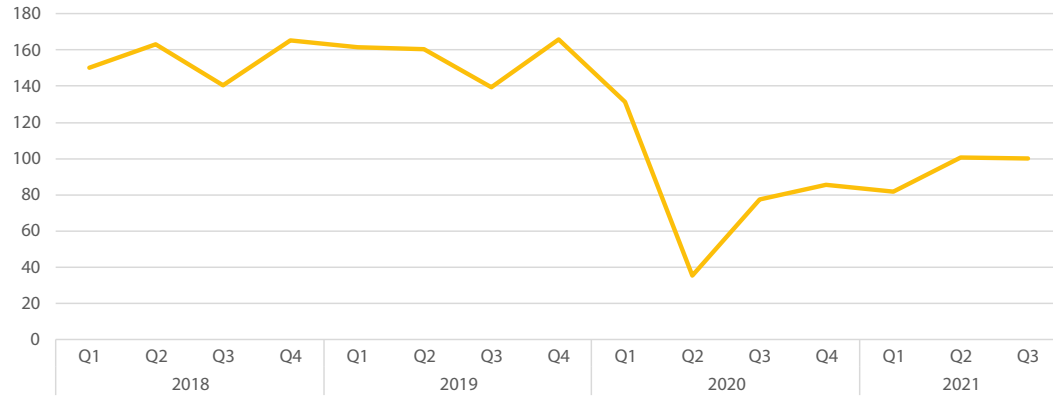
Overall, a number of different interventions and financial assistance has been provided to operators and infrastructure managers in Italy which include: [11]

- Removal of penalties for not using the previously requested infrastructure capacity
- Compensation (EUR 115 million) for fees not paid to the infrastructure managers
- Reduction of the "B" component of the TAC
- Financial support for losses of operators that run non-PSO services (EUR 1 billion)
- Financial support to cover the losses of infrastructure managers (EUR 150 million)
- Contributions for loans and staff related expenses to operators and infrastructure managers.

This support also covered measures that operators introduced in order to increase passenger safety which included: capacity limitation on tarins, COVID certification checks, vehicle sanitisation, social distancing and service cancellations.

4. Spain

Figure XIV – Railway passengers in Spain (million)



Source: Eurostat (2022).

From figure XIV above, it can be seen that passenger numbers in Spain also experienced a significant fall in 2020 totalling about 78% when comparing the second quarter of 2020 and 2019. International passenger traffic (identified in table XII below), already low in previous years, fell more significantly than in previous cases, probably primarily due to it being mainly tourism flows.

[11] IRG-Rail, 2021; Author's personal elaboration based on different legal sources (Camera dei Deputati auditions; MIMS website; Decreto Legge 34/2020; Decreto Legge 104/2020; Legge 178/2020; Decreto Legge 59/2021; Legge 234/2021).

Table XII – International railway passengers in Spain (million)

Variable	*2018*	*2019*	*2020*
Passengers	619.06	627.11	329.48
International passengers	1.03	1.06	0.28
% International passengers	0.17%	0.17%	0.08%

Source: Eurostat (2022).

In order to support the rail sector, Spain introduced the following measures:[12]

- Reduction of the A and B components of the TAC (summing to a total of about 50%)
- Financial contributions to infrastructure manager
- Reductions of the reference traffic level (on which access charges are calculated)
- Increase in the maximum amount of debt that the incumbent operator is allowed to take on
- Suspension of the application of the infrastructure manager performance scheme.

These measures have also supported the introduction of dedicated health and safety provisions including vehicle sanitisation, capacity limitations, and service cancellations.

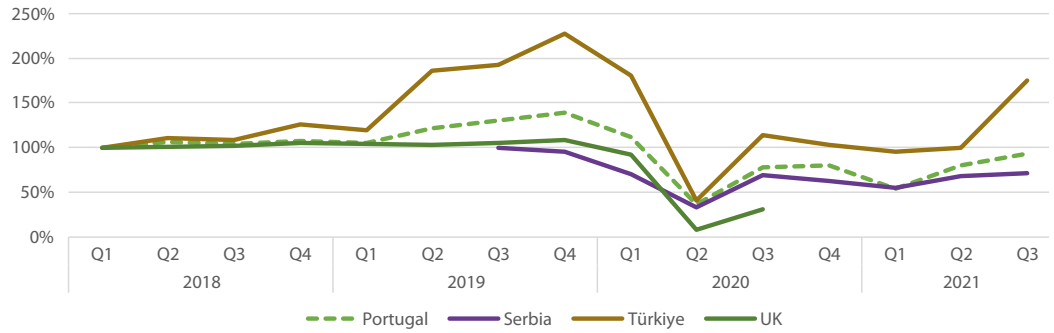
5. Additional country examples

The trends identified above were common across a number of other countries as shown in figure XV below. In particular, all countries except Serbia were experiencing some degree of growth before the pandemic struck. From 2020, the fall that was experienced in these countries was as significant as in the previous examples (with the United Kingdom of Great Britain and Northern Ireland having the worst fall, probably due to the greater intensity of the mobility limitations adopted by the government and the different situation related to PSO services).[13]

[12] IRG-Rail, 2021; Author's personal elaboration based on different legal sources.

[13] Unlike other countries, PSO market in United Kingdom of Great Britain and Northern Ireland is extremely fragmented into several private operators, therefore there is no RU incumbent. For this reason, the remuneration models are different and have probably led to numerous cancellations of services. More details on the United Kingdom of Great Britain and Northern Ireland will be provided in the survey responses.

Figure XV – Railway passengers in Portugal, Serbia, Türkiye and the United Kingdom of Great Britain and Northern Ireland (2018 Q1 = 100*)



Source: Eurostat (2022); Statistical Office of the Republic of Serbia (2022).
Note: For Serbia: 2019 Q3 = 100.

The only country that has managed to recover to pre-pandemic volumes is Türkiye. Table XIII below shows the change in international rail passenger traffic between 2018 and 2020, where data is available, that the general trend for international passengers was very similar to domestic travel.

Table XIII – International railway passengers in Portugal, Türkiye and the United Kingdom of Great Britain and Northern Ireland (million)

Country	*Variable*	*2018*	*2019*	*2020*
Portugal	Passengers	147.47	175.33	108.4
	International passengers	0.17	0.18	0.02
	% International passengers	0.12%	0.10%	0.02%
Türkiye	Passengers	100.57	164.48	99.47
	International passengers	0.01	0.01	0.01
	% International passengers	0.01%	0.01%	0.01%
United Kingdom of Great Britain and Northern Ireland	Passengers	1 783.39	1 836.89	575.32
	International passengers	20.52	20.54	n/a
	% International passengers	1.15%	1.12%	n/a

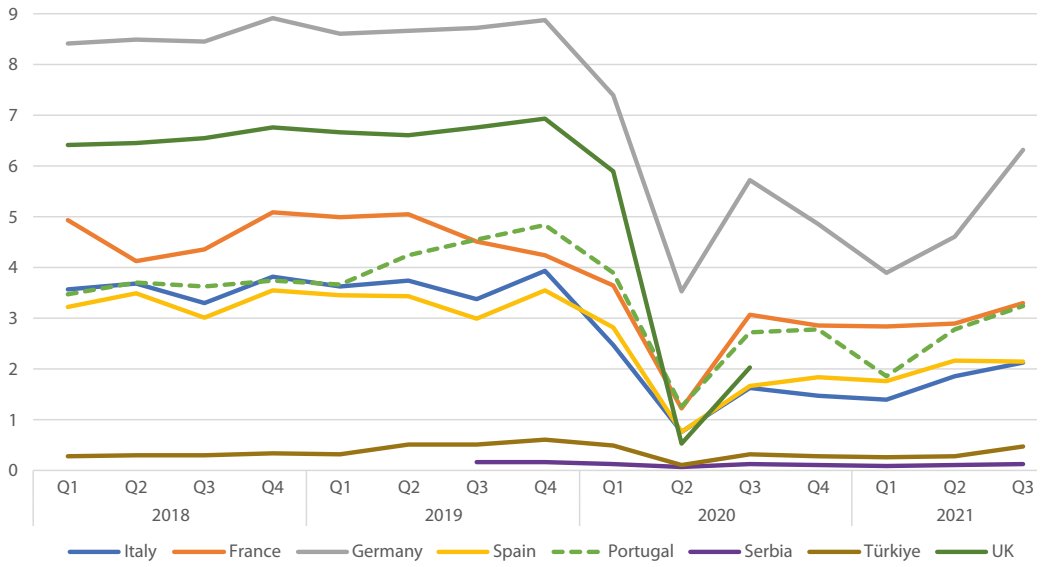
Source: Eurostat (2022).

Information on the financial incentives provided in these countries is set out in table XV below.

6. *Summary of data and provisions*

In order to better review the impact of the pandemic on passenger numbers across member States a comparison based on the passenger/population[14] ratio is set out in figure XVI below.

Figure XVI – Passengers/population ratio in analysed countries



Sources: Author's personal elaboration base on Eurostat (2022); www.ourworldindata.org.

The figure shows that Germany appears to be the country in which the ratio has seen the biggest bounce back in terms of final ration values, followed by the United Kingdom of Great Britain and Northern Ireland and France, while Portugal, Italy and Spain have very similar values with the lowest results being obtained in Türkiye and Serbia. It is interesting to note that the United Kingdom of Great Britain and Northern Ireland, which before the pandemic was halfway between Germany and France, in the second quarter of 2020 saw a much larger drop than most other countries examined.

In terms of compound quarterly growth rate (CQGR) before the pandemic and after the pandemic, table XIV sets out the results for the member States data was provided for. Germany appears to be the country that has suffered less from the pandemic in percentage terms but is at the same time the slowest to recover pre-pandemic levels. Türkiye is the country that has managed to respond more positively, while the biggest drop is seen in the United Kingdom of Great Britain and Northern Ireland.

[14] Using population value on 31 December 2021 for every quarter (Source: www.ourworldindata.org).

Table XIV – Pre- and post-pandemic period comparison of passengers (per cent)

Country	*2020 Q2 vs PY*	*CQGR 2018 Q1–2020 Q2*	*CQGR 2020 Q2–2021 Q3*
France	-76.06	-14.48	22.24
Germany	-59.33	-9.23	12.39
Italy	-79.60	-15.76	22.61
Portugal	-70.53	-10.75	20.96
Serbia*	-66.40	-11.41	16.17
Spain	-78.14	-14.93	23.31
Türkiye	-77.90	-9.39	33.52
United Kingdom of Great Britain and Northern Ireland	-91.94	-24.17	n/a

Source: Author's personal elaboration based on Eurostat (2022).
* For Serbia the initial values are related to 2019 Q3.

Table XV below summarises the provisions introduced in each country to support the rail sector according to the information provided by participants to the survey.[15]

[15] Note that all the data are taken from the survey, but those with "X".

Table XV – Summary of government assistance to the rail sector

	Belgium	*Portugal*	*Russian Federation*	*Serbia*	*Türkiye*	*United Kingdom of Great Britain and Northern Ireland*
Type of Entity	Government	Government	RU	Government	IM	Government
Changes to track access charges and/or its parameters	Reduction to 1.50 EUR/train-km for international passenger transport and 0.75 for freight transport for first semester and 1.5 for the second	Yes	No	No	For incumbent RU and a commuter RU	No
Relaxation of capacity cancellation charges/ reservation penalties	X	X				
Compensation to cover the losses of RUs and/or IM	Both	Incumbent RU	RU	IM and state RU; to private RU contribution of salary reimbursement	Incumbent RU	No
Other financial aid (e.g., on VAT)	X	X	X	X		
Staff cost contributions	X					X
Guaranteed loans	No	No	Yes: preferential loans to pay salaries, tax liabilities and current activities	Yes: RSD 1.563 billion	No	No
Financial contributions	Yes: for incumbent RU 86.8 million EUR in 2020-2021. In addition, 1,277 million EUR in 2022 for incumbent RU and IM	Yes	Yes: additional fund to the company capital	Yes: RSD 1.03 billion	No	No: (domestic traffic) all costs, and revenues are passed to government
Adjustments to PSO related funds	No	Yes: EUR 80 million	No	Yes: level of compensation and requested services	Yes: to incumbent RU	No
Measures to increase passengers' safety	Yes: social distancing, facial covering and limited capacity	Yes: face covering, limited capacity and vehicles sanitisation	Yes: in evaluation a law to check vaccination status	Yes: social distancing, facial covering and vehicles sanitisation	Yes: social distancing, limited capacity and timetable and check on vaccination/illness status	Yes: vehicles sanitisation and facial covering
These measures were time limited	Yes	Yes, about limited capacity	Yes	No	Yes, but social distancing is still active	No
If yes, they will be extended in 2022	Yes	Yes	Yes	n/a	n/a	No
Ranking the measures to railway sector	Direct economic contribution: n/a Decrease access charge: n/a Decrease/elimination TVA: n/a Guaranteed loans: n/a Fair modal shift: n/a	Direct economic contribution: n/a Decrease access charge: n/a Decrease/elimination TVA: n/a Guaranteed loans: n/a Fair modal shift: n/a	Direct economic contribution: 1 Decrease access charge: 2 Decrease/elimination TVA: 5 Guaranteed loans: 3 Fair modal shift: 4	Direct economic contribution: 3 Decrease access charge: 5 Decrease/elimination TVA: 5 Guaranteed loans: 2 Fair modal shift: 5	Direct economic contribution: n/a Decrease access charge: n/a Decrease/elimination TVA: n/a Guaranteed loans: n/a Fair modal shift: n/a	Direct economic contribution: 2 Decrease access charge: 4 Decrease/elimination TVA: 5 Guaranteed loans: 3 Fair modal shift: 1

Sources: Author's personal elaboration based on Eurostat (2022); IRG-Rail (2021); survey answers and national legal sources.

Question	*Belgium*	*Portugal*	*Russia*	*Serbia*	*Türkiye*	*United Kingdom of Great Britain and Northern Ireland*
Type of entity	Government	Government	Railway Undertaking	Government	Infrastructure manager	Government
Financial contributions	Yes: for incumbent RU EUR 86.8 million in 2020-2021. In addition, EUR 1,277 million in 2022 for incumbent RU and IM	Yes	Yes: additional fund to the company capital	Yes: RSD 1.03 billion	No	No: (domestic traffic) all costs, and revenues are passed to government
Contribution to IM or RUs	Both	Incumbent RU	RU	IM and state RU; to private RU contribution of salary reimbursement	Incumbent RU	No
Decrease in access charge	Yes: reduction to 1.50 EUR/train-km for international passenger transport and 0.75 for freight transport for first semester and 1.5 for the second	Yes	No	No	For incumbent RU and a commuter RU	No
Decrease of VAT or other taxes	No	No	No: before the pandemic crisis there was a reduction to stimulate long-distance segment	No	No	No
Guaranteed loans	No	No	Yes: preferential loans to pay salaries, tax liabilities and current activities	Yes: 63 billion	No	No
Adjustments to PSO related funds	No	Yes: EUR 80 million	No	Yes: level of compensation and requested services	Yes: to incumbent RU	No
Measures to increase passengers' safety	Yes: social distancing, facial covering and limited capacity	Yes: face covering, limited capacity and vehicles sanitisation	Yes: in evaluation a law to check vaccination status	Yes: social distancing, facial covering and vehicles sanitisation	Yes: social distancing, limited capacity and timetable and check on vaccination/illness status	Yes: vehicles sanitisation and facial covering
These measures were time limited	Yes	Yes, about limited capacity	Yes	No	Yes, but social distancing is still active	No
If yes, they will be extended in 2022	Yes	Yes	Yes	n/a	n/a	No
Ranking the measures to railway sector	Direct economic contribution: n/a Decrease access charge: n/a Decrease/elimination TVA: n/a Guaranteed loans: n/a Fair modal shift: n/a	Direct economic contribution: n/a Decrease access charge: n/a Decrease/elimination TVA: n/a Guaranteed loans: n/a Fair modal shift: n/a	Direct economic contribution: 1 Decrease access charge: 2 Decrease/elimination TVA: 5 Guaranteed loans: 3 Fair modal shift: 4	Direct economic contribution: 3 Decrease access charge: 5 Decrease/elimination TVA: 5 Guaranteed loans: 2 Fair modal shift: 5	Direct economic contribution: n/a Decrease access charge: n/a Decrease/elimination TVA: n/a Guaranteed loans: n/a Fair modal shift: n/a	Direct economic contribution: 2 Decrease access charge: 4 Decrease/elimination TVA: 5 Guaranteed loans: 3 Fair modal shift: 1

CHAPTER III CONCLUSIONS

This analysis has shown that each country for which information was available has sought to mitigate the effects of the pandemic on the railway sector in different ways, also depending on the situation that it found itself in and the peculiarities of its rail sector. Varying incentives and different approaches were adopted to cope with the severe drop-off in passenger numbers as well as the increased costs associated with making the sector compliant with ever increasing health related requirements. Some of these incentives were targeted (such as on track access charges) while others were more general (such as compensation for losses).

What is clear is that without support, the railways would not have been able to survive throughout and beyond the pandemic and it was in the interest of member States to ensure that the sector could cope with the pandemic shock and be in a good footing to recover post-pandemic. Only with this support could the railways be the locomotive pulling sustainable mobility and a sustainable recovery fuelled by clean and efficient transport.

At discussions at the workshop held in the framework of the seventy-fifth session of the Working Party on Rail Transport all member States reiterated the importance of these measures and highlighted the following as the ones of most importance:

- Direct financial contribution to accounts
- The provision of guaranteed loans
- Level playing field between all transport mode
- Corrections and/or reductions in track access charges
- Changes to the level, or elimination, of value added tax.

These measures have certainly helped transport companies, especially those operating non-PSO services, but if the limitations to mobility were to continue and become seasonal due to a further evolution of the pandemic, then the sector may struggle to survive without a more systematic approach. Therefore, a pan-European approach to helping the rail sector deal with a pandemic and to rebuild post-pandemic is of fundamental importance to ensure that the railways can grow as an integrated service across the region and support citizens in their mobility needs in a sustainable manner.

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Railways at the centre of a post-pandemic recovery
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