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The Good, the Bad and the Rest: How the European Union Responded to the COVID-19 Pandemic in the Transport Sector

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Abstract

Due to its severity, the COVID-19 pandemic is one of the greatest crises to have tested the European Union's (EU) ability to take effective action. The restrictive measures adopted by the Member States to curb its spread affected in particular the free movement of people and partly of goods. This prompted the EU to take action *inter alia* to maintain essential travel, protect supply chains, enhance contact tracing and facilitate the coordinated resumption of travel. Building on the notion of "output legitimacy", this paper assesses the EU's success in responding to the COVID-19 pandemic in transport by looking at the four main initiatives between the end of 2020 and June 2022, namely: (1) the EU Digital COVID Certificates; (2) cross-border contact tracing through Passenger Locator Forms; (3) the "Green Lanes" for freight transport; and (4) the coordinated approach to facilitating safe and free movement. These initiatives are measured against the EU's legal competence, economic interests, political pressure and the added value of EU action. While recognising the small set of cases, the results show that, although legal competence is a decisive factor for success, EU initiatives can achieve equivalent effect even in its absence, provided other conditions are met.

Keywords: COVID-19; European Union; free movement; single market; transport

1. Introduction

As the COVID-19 strains reached Europe, the European Union (EU) quickly took action and put in motion several initiatives on an unprecedented scale. Over two years, the EU has promoted measures ranging from funding research and encouraging joint procurement to establishing a recovery budget and implementing transport facilitation measures. As Boin and Rhinard put it, "the Union acted quickly after a somewhat slow start and was very effective in mobilizing a variety of resources".¹

According to Eurobarometer No. 96, referring to the winter of 2021/2022, 49% of Europeans were satisfied with EU measures to fight the pandemic, against 42% who were dissatisfied (and 9% who "did not know"). Similar figures apply to citizens' perceptions of the responses by their national governments.² While these are European averages, a majority of Member States indicated their satisfaction with and trust in the EU to make the right decisions in the future, albeit with great variation across countries.

¹ A Boin and M Rhinard, "Crisis Management Performance and the European Union: The Case of COVID-19" (2022) Journal of European Public Policy DOI: 10.1080/13501763.2022.2141304.

² See Eurobarometer 96, *Public Opinion in the European Union*, January–February 2022.

As regards the transport sector, the right to move and reside freely within the territory of the EU Member States is one of the rights EU citizens cherish most.³ This right is enshrined in Article 21 of the Treaty on the Functioning of the European Union (TFEU) and Article 45 of the Charter of Fundamental Rights. Yet the unrestricted exercise of this right was faced with unprecedented challenges during the COVID-19 pandemic: Member States restricted free movement in order to limit the spread of COVID-19 and protect national healthcare systems from overload.

These measures took different forms. In some cases, Member States prohibited entry to or exit from their territory. Some reintroduced internal border controls within the Schengen Area. Others required travellers to test for infections or committed travellers to quarantine. In general, provided that restrictions were justified from a public health perspective and complied with principles of non-discrimination and proportionality, Member States did not violate the fundamental right to free movement described above, although the issue remains controversial in the literature.⁴ Similar challenges existed in the freight sector.

Assessing how the EU performed is important, as the Union's ability to produce outcomes that benefit its citizens helps legitimise the entire integration project. As early as 1998, Giandomenico Majone referred to "output legitimacy" to describe the legitimacy that the EU derives from the policy outcomes it produces. Later studies considered this source of legitimacy from a more complex perspective. Indeed, it has been tested against other major EU crises, in particular the euro and sovereign debt crisis at the end of the 2000s.⁵ Given its magnitude and impact on citizens and businesses, it is unsurprising that the COVID-19 pandemic became a fundamental test of the Union's capacity to respond to systemic and even existential threats.⁶ Such studies, in particular that of Schomaker et al, highlight the EU moving from initial hesitation and inadequate preparation to subsequent assertiveness and enhanced effectiveness, suggesting that this crisis (like previous crises) ultimately made the EU stronger.⁷

When responding to the COVID-19 pandemic in the transport and mobility sector, the EU has had to act in a multifaceted context. The linear trajectory from hesitation to effectiveness often detected elsewhere does not fully capture how the EU actually behaved. In fact, there are areas where the response has been hesitant and ineffective. In some cases, the response has been late but strong, whilst in others it has been surprisingly effective from the start. Our main research question is therefore the following: under which conditions was the EU successful (or otherwise) in responding to the COVID-19 pandemic in areas relating to transport?

This paper offers a perspective on the Union's performance based on the tools at the EU's disposal and in light of other possible explanatory variables. It does so by looking at four case studies of COVID-19-related initiatives that have in common their relevance for

³ According to the Eurobarometer 91 of spring 2019, the free movement of people, goods and services within the EU is seen by Europeans as the most positive result of the EU, with 60% of the total answers.

⁴ See A Alemanno, "The European Response to COVID-19: From Regulatory Emulation to Regulatory Coordination?" (2020) 11(2) *European Journal of Risk Regulation* 30716; H van Eijken and JJ Rijpma, "Stopping a Virus from Moving Freely: Border Controls and Travel Restrictions in Times of Corona" (2021) 17(3) *Utrecht Law Review* 34–50.

⁵ VA Schmidt, "Democracy and Legitimacy in the European Union Revisited: Input, Output and 'Throughput'" (2013) 61 *Political Studies* 2–22; G De Angelis, "Political Legitimacy and the European Crisis: Analysis of a Faltering Project" (2017) 18(3) *European Politics and Society* 291–300.

⁶ R Forman and E Mossialos, "The EU Response to COVID-19: From Reactive Policies to Strategic Decision-Making" (2021) 59 *Journal of Common Market Studies*, 56–68; L Van Middelaar, *Pandemonium: Saving Europe* (Newcastle upon Tyne, Agenda Publishing 2021); Boin and Rhinard, *supra*, note 1.

⁷ See RM Schomaker, M Hack and A-K Mandry, "The EU's Reaction in the First Wave of the Covid-19 Pandemic between Centralisation and Decentralisation, Formality and Informality" (2021) 28 *Journal of European Public Policy* 1278–98.

the transport sector, namely: (1) the EU Digital COVID Certificates (EU DCC); (2) cross-border contact tracing through Passenger Locator Forms (PLFs); (3) the designation of “Green Lanes” for freight transport; and (4) the coordinated approach to facilitating safe and free movement. While limited in number, these case studies do represent the most important COVID-19-related EU initiatives affecting mobility and transport at the systemic level.⁸ Our objective is to formulate a replicable methodology for evaluating the Union’s performance in crisis situations through applying independent variables to specific case studies.

We will review these different initiatives by first identifying their historical development and then by explaining the results that they achieved by looking at four independent variables: (1) the legal competence to act; (2) the economic interests at stake; (3) the political context of the decision; and (4) the added value of EU action. These variables could be seen as preconditions, enabling factors or pressures for the EU to deliver. As such, they all qualify as potential explanatory variables. One could argue, for example, that the EU only delivers when legally equipped to do so, or when economic interests are at stake, or when there is political pressure to act or when there is an added value of acting at the EU level. These variables will be assessed one by one, but they could obviously operate in combination with each other. We will conclude by answering our main research question and identifying lessons learned that could apply to similar cases in other policy areas.

II. Case studies

1. The EU Digital COVID Certificates

The first COVID-19 case in Europe was recorded on 24 January 2020. As case numbers rose, Member States developed national immunity certificates. As early as 8 April 2020, the Commission published a recommendation setting out a common Union “toolbox” on how to use technology and data to combat the spread of COVID-19. This related in particular to mobile applications and the use of anonymised mobility data. Yet initially the Commission was opposed to the idea of creating COVID-19 certificates, and the European Centre for Disease Prevention and Control (ECDC) refused to endorse immunity certifications.⁹

Over time, this stance changed, driven primarily by the appearance of vaccines and their imminent large-scale roll-out, the increased availability and use of tests and the growing number of people infected and immunised. There was a growing perception of the need to have a common framework to evaluate and address these situations. As a result, on 17 March 2021, the Commission proposed the creation of a Digital Green Certification to facilitate free movement, based on quick response (QR) codes on “gateways” to ensure that all certificates could be verified across the EU. The related technical specifications were published on 22 April 2021,¹⁰ and one month later, on 1 June 2021, the Digital Green Certificate (now known as the EU DCC) went live in seven connected countries.

⁸ Other important initiatives had a more specific focus on certain transport modes, such as those on airport slots, the derogations to rest time in road transport or the provisions on rail access charges.

⁹ J Deutsch and H Cokelaere, “European Union commissioner: Coronavirus immunity certificates aren’t reliable” (*POLITICO EU*, 25 May 2020) <<https://www.politico.eu/article/eu-health-commissioner-warns-that-immunity-certification-isnt-reliable/>>.

¹⁰ European Commission, Proposal for a Regulation of the European Parliament and of the Council on a framework for the issuance, verification, and acceptance of interoperable certificates on vaccination, testing and recovery to facilitate free movement during the COVID-19 pandemic (Digital Green Certificate).

On 14 June 2021, the European Parliament and the Council adopted the EU DCC Regulation.¹¹ This set out a common framework for the issuance, verification and acceptance of interoperable certificates for COVID-19 vaccination, test or recovery, the aim being to facilitate the free movement of EU citizens and their family members during the COVID-19 pandemic. The regulation specifies that it should not be understood as facilitating restrictions to free movement. In fact, the EU DCC framework prohibits Member States from introducing limits on the right to free movement, and its implementation should not negatively affect the enjoyment of that right. It is accompanied by a parallel regulation that extends the EU DCC framework to third-country nationals legally staying/residing in a Member State who are entitled to travel to other Member States in accordance with EU law.¹²

The adoption of these two regulations – from proposal to adoption by Council and Parliament – took fewer than three months (this being significantly below the average length of legislative procedures for acts adopted at first reading and could be considered a record time given the scope, complexity and sensitivity of the topic). To ensure that the EU DCC could be rolled out immediately after the legal framework was in place, the necessary technical developments had to take place in parallel with the legislative negotiations. As a result of the adoption, citizens from all twenty-seven Member States could have their certificates issued quickly and verified easily across the EU. The EU-wide activation of the EU DCC coincided with the 2021 summer travel period and the mass roll-out of vaccines.

2. Cross-border contact tracing through Passenger Locator Forms

Even with the successful roll-out and uptake of the EU DCC, contact tracing remained a central element in the fight against COVID-19. PLFs are key in the effective contact tracing of cross-border passengers, especially in connection with the emergence of new variants. PLFs are paper or digital forms that passengers must complete according to their country of destination or transit. They allow health authorities to identify and contact those who may have unknowingly been exposed to an infected person.

At the national level, some Member States introduced their own version of PLFs. Differences in Member State approaches to PLFs were related to their objective (eg some used them for contact tracing, while others also used them for calibrating testing strategies or enforcing quarantine requirements), to the way the forms were collected from passengers (eg paper, digital or both) and to the data collected. In fact, no two national PLFs in the EU collected exactly the same data from passengers. Initially, especially when the forms were used to select categories of travellers for priority testing, some Member States required their submission within a deadline before travel. In some cases, this led to passengers being denied boarding for failure to submit a PLF within the given time limit.

During the pandemic, several Member States gradually required passengers entering their territory to complete a PLF. This approach was not universally followed. At its peak, twenty-one EU Member States required such a document. An attempt to oblige Member States to collect PLFs and to connect their PLF system to the EU PLF exchange platform (see *infra*) was pursued in December 2021, following the spread of the Omicron variant.

¹¹ European Commission, Regulation (EU) 2021/953 of the European Parliament and of the Council of 14 June 2021 on a framework for the issuance, verification, and acceptance of interoperable COVID-19 vaccination, test, and recovery certificates (EU Digital COVID Certificate) to facilitate free movement during the COVID-19 pandemic.

¹² European Commission, Regulation (EU) 2021/954 of the European Parliament and of the Council of 14 June 2021 on a framework for the issuance, verification, and acceptance of interoperable COVID-19 vaccination, test, and recovery certificates (EU Digital COVID Certificate) with regard to third-country nationals legally staying or residing in the territories of Member States during the COVID-19 pandemic.

However, this did not receive the required support of Member States and the idea was dropped.¹³

Despite these persisting differences, the Commission tried to promote a harmonised and a more effective approach to PLFs in two ways. On the one hand, with a grant, it supported the work of the “EU Healthy Gateways” to develop a common PLF template and application – the EUdPLF¹⁴ – that would facilitate the use of a similar digital PLF across the EU¹⁵ (and potentially beyond). In parallel, it developed a PLF exchange platform – a digital infrastructure to enable the rapid and automatic exchange of passenger data among participating Member States. To this end, minimum standards were defined at the EU level in two implementing acts that the Commission adopted in May¹⁶ and July¹⁷ 2021. As of 1 June 2021, Member States were thus able to connect to this platform and to exchange passenger data from across all the transport modes for which they collected PLFs. Member States could choose to connect to the PLF exchange platform with their own national PLF provided they complied with the minimum requirements defined in the implementing decisions or by adopting the template developed by the EU Healthy Gateways, namely the EUdPLF.

In its first year, five Member States connected to the PLF exchange platform, namely Spain, Malta, Italy, Slovenia and France. The first exchange of real passenger data through the platform occurred on 16 November 2021 between Italy and Spain. In total, the PLF exchange platform transmitted 256 messages (concerning individual cases) between connected Member States, with the vast majority going from Spain to Malta (200) and Slovenia (26). From May 2022, most Member States stopped cross-border contact tracing and no longer collected PLFs.

3. Green Lanes for freight transport

At the outbreak of the COVID-19 pandemic, many Member States unilaterally reintroduced border controls, including for the circulation of goods. Thus, on 23 March 2020, the Commission published a Communication¹⁸ establishing so-called “Green Lanes” in order to guarantee the functioning of supply chains in the single market. In particular, the document stipulated that freight vehicles should be able to cross internal borders on the Trans-European Transport Network (TEN-T) within fifteen minutes, irrespective of the goods they carried. The system covered the 178 border-crossing points along the internal TEN-T network and several points at the EU external border. To monitor implementation and address bottlenecks in a timely fashion, the Commission set up a network of national transport contact points, bringing together representatives from the EU ministries of transport. As measured at the end of 2022, the time to cross internal borders on the TEN-T network continues to be regularly monitored.

¹³ Discussions on this initiative took place also at the December 2021 meeting of the Transport, Telecommunications and Energy Council and are available online at <https://video.consilium.europa.eu/event/en/25283?start_time=0>.

¹⁴ European Union Digital Passenger Locator Form.

¹⁵ Accessible at <<https://app.euplf.eu/>>.

¹⁶ Commission, Implementing Decision (EU) 2021/858 amending Implementing Decision (EU) 2017/253 as regards alerts triggered by serious cross-border threats to health and for the contact tracing of passengers identified through Passenger Locator Forms.

¹⁷ Commission, Implementing Decision (EU) 2021/1212 amending Implementing Decision (EU) 2017/253 as regards alerts triggered by serious cross-border threats to health and for the contact tracing of exposed persons identified in the context of the completion of Passenger Locator Forms.

¹⁸ European Commission Communication: upgrading the transport Green Lanes to keep the economy going during the COVID-19 pandemic resurgence pandemic resurgence, 28 October 2020 – 2020/685.

3. Coordinated approach to facilitating safe and free movement

When Member States imposed travel restrictions within the EU to protect public health, the Commission promoted a coordinated approach to such restrictions by means of Guidelines¹⁹ and proposals for Council Recommendations.²⁰ Based on proposals from the Commission, which the Council then adopted, these documents reflected criteria agreed among Member States for assessing epidemiological conditions, including the use of a common colour-coded map. They promoted common approaches for travellers coming from higher-risk areas, such as the obligation to undergo quarantine or self-isolation or to take a COVID-19 test. They also identified categories of travellers with an essential function or need to be exempted from quarantine and encouraged Member States to require persons entering their territory to submit PLFs.

Adopted for the first time in autumn 2020, the recommendations were revised twice until summer 2022 to reflect major epidemiological developments, including vaccine uptake and the emergence of new variants of concern, such as Omicron. Ultimately, in an April 2022 Communication, the Commission invited Member States that still required intra-EU travellers to present COVID-19 certificates or imposed other travel restrictions to lift them when not justified by public health needs.²¹

III. Assessment framework

We will now assess the success (or otherwise) of these four initiatives by looking at four main explanatory variables, namely: (1) the EU legal competence to act; (2) the political pressure surrounding each of them; (3) the economic interests at stake; and (4) the added value of EU action. Based on these, which will be scored for each case study, we will seek to identify the conditions that affected the EU's performance in these situations. These variables have been identified – admittedly among many possible others – for their explanatory potential in the context of the EU response to COVID-19.

The strength of each independent variable ranges from none (–) and weak (+) to moderate (++) and strong (+++). In each section, each variable will be further explained and applied to the four initiatives.

1. The EU's legal competence to act

The first variable is a strong (or, conversely, limited) EU legal competence to pursue the various initiatives, as defined in the EU Treaties and related case law. The assessment is based on the distinction in the EU Treaties between “exclusive”, “shared” and “supporting” competences, but also on the exact wording of the article(s) identified as a legal basis and the legal acts (typical or otherwise) that the EU can adopt. This assessment takes into account the argument made by Purnhagen et al that the EU has more possibilities to act in the area of health than those based on the narrow definition of health as a “supporting”

¹⁹ Eg Guidelines for border management measures to protect health and ensure the availability of goods and essential services or Guidelines concerning the exercise of the free movement of workers during COVID-19 outbreak.

²⁰ Council Recommendations (EU) 2020/1475 of 13 October 2020 <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020H1475&from=EN>>, (EU) 2021/119 of 1 February 2021 <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H0119&from=EN>>, EU 2021/961 of 14 June 2021 <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H0961&from=EN>> and (EU) 2022/107 of 25 January 2022 <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0107&from=EN>>. Equally, the Commission promoted a coordinated approach to the temporary restrictions imposed by Member States on non-essential travel into the EU.

²¹ European Commission Communication: COVID-19 – Sustaining EU Preparedness and Response: Looking ahead, COM 2022/190.

competence.²² In fact, not all of the four measures analysed in this paper are based on a health legal basis, which confirms that the tools in the EU armoury to combat COVID-19 are actually more numerous than those available using a health legal basis. Yet the legal basis on which the EU action rests does make a difference (eg in terms of the level of ambition and of compliance by Member States).

The EU DCC finds a direct legal basis within EU primary law, as it is founded on the fundamental right to free movement enshrined in Article 21(2)²³ TFEU, which is included in the list of “shared” competence. The EU competence in this area is therefore considered “strong”. The EU DCC Regulation (EU) 2021/953 underlines the need for a common approach among Member States on the content, technical standards and levels of security of vaccination certificates. The choice of a regulation reflects the intention to harmonise and deny Member States both the option of not implementing the measure (they must all do so) and of achieving the same objective using different means (unlike a directive, a regulation allows no such flexibility).

In contrast, the initiatives on cross-border contact tracing based on PLFs, the development of “Green Lanes” for freight transport and the coordinated approach to facilitating safe and free movement lack a similarly legal basis and/or competence to intervene, for different reasons.

The PLF exchange platform was established through two implementing decisions that specified the minimum criteria of information that needed be exchanged. The consolidated Commission Implementing Decision 2017/253 provided the legal basis and specified that both national digital PLF systems or the common EUdPLF could be used to connect to the PLF exchange platform. As implementing decisions, their legal basis was in a legal act based on the EU Treaties; notably, the relevant act was Decision No 1082/2013/EU on serious cross-border threats to health, and in particular Article 8(2). This Decision is in turn based on Article 168(5) TFEU, which does allow the adoption of incentive measures *inter alia* to combat major cross-border health scourges but excludes any harmonisation of Member State laws and regulations.

The protection of human health is included in the list of “supporting competences” under Article 6 TFEU. This, combined with the strict formulation of Article 168(5) TFEU, meant that the EU could not require Member States to perform contact tracing based on a common PLF template, nor to transmit passenger data to each other through a dedicated exchange platform. The same limitations applied to the actions that led to the development of the EUdPLF template and application. For the purposes of our assessment, this means that the EU has a “weak” legal competence to act in this area.

The Green Lanes initiative was developed informally through a Commission communication that established these lanes to guarantee the functioning of supply chains in the single market. Communications are not mentioned in the list of acts that EU institutions can adopt under Article 288 TFEU (regulations, directives, decisions, recommendations and opinions) and are therefore commonly considered “atypical EU acts”. They do not refer to a specific legal basis under the EU Treaties, nor can they have any binding force.²⁴ The EU

²² See K Purnhagen, A De Ruijter, M Flear, T Hervey and A Herwig, “More Competences than You Knew? The Web of Health Competence for European Union Action in Response to the COVID-19 Outbreak” (2020) 11(2) *European Journal of Risk Regulation* 297–306.

²³ Treaty on the Functioning of the Europe Union Art 21(2): “If action by the Union should prove necessary to attain this objective and the Treaties have not provided the necessary powers, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, may adopt provisions with a view to facilitating the exercise of the rights referred to in paragraph 1.”

²⁴ In case the EU had decided to intervene with a typical act – binding or otherwise – and it had to identify a relevant legal basis, this would have been, at most, a supporting competence under Art 6 TFEU (ie the protection of human health). This is because the core of the Green Lanes initiative is about exempting transport workers from those health-related measures (eg quarantine and mandatory testing) that could have paralysed cross-border freight transport.

thus had no explicit legal competence to act in this area, making it the “weakest” among the four case studies considered here.

The coordinated approach to facilitating safe and free movement involves a set of Council recommendations. Recommendations have no binding force. Due to the wide range of policy areas touched upon in these initiatives and the multiple policy objectives they pursue, different legal bases are mentioned, notably free movement under Article 21(2) TFEU and public health under Article 168(6) TFEU, which explicitly mentions recommendations. The non-binding nature of recommendations means that Member States are free to diverge from these precepts or indeed to ignore them. The EU legal competence to act in this case is thus “weak”. One may of course discuss whether the same aims could have been pursued through legally binding instruments, at least for some of the provisions contained in the Council recommendations. Yet a recommendation was chosen also in view of the simpler adoption process compared to a regulation under ordinary legislative procedure. In light of the highly unpredictable evolution of the pandemic, an instrument that could be adopted quickly and that could be adapted swiftly to new situations was deemed more appropriate, despite it being a “weaker” legal instrument.

2. Political pressure to act

Regarding the second variable, we take into account the political pressure on Member States to solve a certain problem. In some cases, such pressure came from public opinion or the tension that the issue sparked among political parties and their respective electorates. In other cases, pressure was also transnational, as certain issues became salient for similar segments of society across Member States such as frequent travellers and transport workers. Sometimes issues became so prominent that they directly involved EU leaders in the European Council.

Before the EU DCC was introduced, national measures occasionally led to mass protests and demonstrations in some Member States. Citizens were dissatisfied with the patchwork of different rules, the related high administrative burden and blanket limitations on free movement.²⁵ Health certification, as a condition to enjoy certain services and access social activities, remained extremely controversial in Member States, and growing and increasingly vocal segments of the population judged it an undue restriction of individual freedom. By providing a solution at the EU level, the issue of health certification was removed from the national political arena and elevated to the European stage. There were also emerging fears about false COVID-19 certificates and the reliability of national data infrastructures. These too reinforced the demand for a European solution. In addition, the prospect of a multitude of separate, not interoperable national certification systems – as seen with test certificates during the winter travel period of 2020 – was seen as a possible further obstacle to free movement. Member States needed a solution that addressed these and other concerns. The EU DCC was designed to simplify travel during the pandemic by re-establishing the confidence of travellers in the protection of their health and rights.²⁶ The EU DCC thus came

²⁵ See The Brussels Times, “Dozens Arrested at Anti-Coronavirus Measures Protests in Brussels (*The Brussels Times*, 26 October 2020) <<https://www.brusselstimes.com/137612/dozens-arrested-at-anti-coronavirus-measures-protests-in-brussels-corona-covid19-dictatorship-police-parc-cinquantenaire-schuman-gare-du-nord>>; V Dekimpe, “Berlin Police Disband Mass Protest against Covid-19 Restrictions” (*France 24*, 29 August 2020) <<https://www.france24.com/en/20200829-berlin-police-disband-mass-protest-against-covid-19-restrictions>>.

²⁶ Para 4 of the statement of the Members of the European Council following the informal video conference on 25 and 26 February 2021.

about in an environment in which the EU was under at least moderate political pressure to find a solution that worked in all Member States, was convenient, complied with citizen rights and was quickly operational.

The coordinated approach to facilitating safe and free movement came about in circumstances that created moderate pressure for action. Since the start of the pandemic, Member States had adopted various measures to limit the spread of the virus. These measures had severe consequences for freedom of movement inside the Union, with knock-on effects on the single market. It created an environment in which the EU institutions had to facilitate a solution at the European level while respecting the need for Member States to take measures aimed at protecting public health. As early as 13 February 2020, the Council adopted Conclusions on COVID-19, in which it urged Member States to act together in a proportionate and appropriate manner to develop close and enhanced coordination in order to ensure optimal protection. This was reinforced on 10 March 2020 by the European Council, which emphasised the need for a joint European approach with regard to COVID-19.²⁷ There was thus pressure to launch this initiative at the EU level. Yet the primary focus was not on cross-border travel, which several Member States decided to restrict more than domestic travel.

The Green Lanes initiative was developed after initial national reactions to the COVID-19 pandemic led to heavy congestion at EU border-crossing points, which, in turn, resulted in severe supply chain disruption and significant risks to the functioning of the single market. The Communication of March 2020 acknowledged that, at the onset of the pandemic, land-based supply chains were severely affected by the introduction of entry bans at internal land borders and by restrictions on professional drivers' access to certain Member States.²⁸ This meant pressure was placed on Member States to find a solution that enabled continued travel for essential people, goods and services before national interests were affected. In numerous cases, citizens travelled from one Member State to another to gain access to basic supplies, supermarkets and other necessities. This provoked concern about the availability of supplies (such as toilet paper, sanitisers and canned foods) in urban areas and strong dissatisfaction with rules that diverged between Member States.²⁹ At the same time, the credibility of the restrictive measures adopted domestically also rested on a uniform application of the same regime across the board. Thus, granting exemptions from quarantine rules or other obligations to certain categories such as transport workers was ultimately accepted but remained politically delicate.

Practical observation of the challenges that Member States faced in cross-border contact tracing ultimately led to the creation of a common EUdPLF and an infrastructure to exchange passenger data (PLF exchange platform). Initially, national public health authorities exchanged personal data through existing systems, in particular the early warning and response system (EWRS) selective messaging function, which existed before the COVID-19 pandemic. Not only did Member States use different versions of PLFs, but many pursued cross-border contact tracing without collecting PLFs at all. Given the growing number of infections affecting cross-border travel, some

²⁷ Conclusions by the President of the European Council following the video conference on COVID-19 on 10 March 2020.

²⁸ European Commission, Communication on the implementation of the Green Lanes under the Guidelines for border management measures to protect health and ensure the availability of goods and essential services.

²⁹ See C Taylor, Here's Why People Are Panic Buying and Stockpiling Toilet Paper to Cope with Coronavirus Fears (CNBC, 11 March 2020) <<https://www.cnbc.com/2020/03/11/heres-why-people-are-panic-buying-and-stockpiling-toilet-paper.html>>; M Chini, "Why the Netherlands Goes into Strict Lockdown, but Belgium Does Not" (*The Brussels Times*, 14 December 2020) <<https://www.brusselstimes.com/145476/why-the-netherlands-goes-into-strict-lockdown-but-belgium-doesnt-steven-van-gucht-closing-shops-bars-restaurants-incidence-ecdc-coronavirus-covid-19-infections-contacts-christmas-consultative-committee>>.

Member States felt that the existing EWRS was unsuited to handling the volume of passenger data that the situation generated. This posed a risk to timely and effective contact tracing. This was relevant in particular when contact tracing had to be performed for cross-border passengers using collective transport means with pre-assigned seats (such as in planes), where the number of exposed passengers and the duration of exposure to an infected passenger could be significant. Despite the importance of cross-border contact tracing and the annoyances that PLFs may have occasionally caused, the issue hardly made it to the political agenda of most Member States. Thus, the political pressure in this domain can be considered “weak”.

The four initiatives analysed here were extensively debated also at the European level, including by Heads of States or Government in the European Council. For example, as early as March 2020, the Green Lanes were mentioned in the conclusions of the video conference of the members of the European Council, highlighting the importance of preserving the functioning of the single market.³⁰ Starting on 16–17 October 2020, the European Council frequently addressed the issue of coordinating restrictions at the EU level, a topic that remained consistently on its agenda until December 2021.³¹ Following the announcement of the first vaccine, in December 2020 the EU leaders asked for a coordinated approach to vaccination certificates and, in March 2021, they urged the EU co-legislators to take forward the work on the EU DCC as a matter of urgency.³² PLFs, on the contrary, never made it to the European Council agenda or conclusions. Because the conclusions of the EU leaders are agreed unanimously, we are able to conclude that the topics referenced in such documents were salient in each Member States’ political debate.

In addition, the European Parliament took interest in these topics. Table 1 shows the numbers of questions for both written and oral answer asked by Members of the European Parliament (individually or jointly) to the Commission between 2020 and 2022. It provides a good picture of their political priorities during the pandemic period. It should be noted that questions for oral answers are dealt with during the plenary sittings, for which available spots are extremely scarce. EU DCC and the coordination of restrictions caught the largest share of the Parliament’s political attention, followed by the Green Lanes. PLFs appeared in only one question, asked by an individual member, for written answer.

3. Economic interest

The third variable concerns the economic interest of Member States to pursue the four listed initiatives. “Economic interest” is defined here as the implications that each initiative may have for the economy of each Member State and of the EU as a whole.

The EU DCC played a significant role in facilitating the recovery of EU Member State economies, partly due to its availability for the 2021 summer travel season. The initiative did not directly address economic concerns. It did, however, indirectly support economic recovery by facilitating intra-EU travel and enabling Member States to reopen certain commercial sectors. This was most notable in tourism and hospitality, with hotels, airlines and restaurants again able to serve customers after a period of significant losses. Preliminary studies indicate that after the introduction of the EU DCC demand for

³⁰ European Council, Joint statement of the Members of the European Council, Brussels 26 March 2020.

³¹ European Council, Council Conclusions 16 October 2020, 11 December 2020 and 22 October 2021, December 2021.

³² European Council, Outcome of the European council videoconference of 25 February 2021; European Council, Statement of the Members of the European Council, 25 March 2021; Further calls for action in Council Conclusion December 2021.

Table 1. Overview of the questions asked by Members of the European Parliament to the Commission between 2020 and 2022.

	EU DCC	PLFs	Green Lanes	Coordination of restrictions
Written questions	56 (16)	1	11 (2)	29 (4) ³³
Oral questions	1	0	1	3 ³⁴

Note: Numbers in parentheses represent the number of priority questions within the total number of written questions. EU DCC = European Union Digital COVID Certificates; PLF = Passenger Locator Form.

passenger air transport rose from approximately 5% to over 25% of total intra- and extra-EU travel compared to 2019 levels. Similarly, there was a notable increase in the accommodation and food service sector after the introduction of the EU DCC.³⁵ We therefore consider this initiative as having “moderate” economic implications.

The coordinated approach to facilitating free movement and travel set out in Council recommendations was not primarily developed for economic reasons but to facilitate travel between and into EU countries, as the pandemic resulted in uncoordinated actions that hindered free movement. Yet estimates from the World Travel and Tourism Council indicated that EU Member States could “lose up to billions” from the tourism sector, with Italy initially being projected to have an economic shortfall of over €36 billion.³⁶ Several tourism industry representatives called on the EU to work on the mutual coordination of travel in order to help the affected sector. According to reports published in 2022, the tourism sector faced booking shortages at least 30% below 2021 levels due to uncertainties in travel requirements.³⁷ For this reason, the lack of a coordinated approach impacted the travel sector and created a demand for action, which we can classify as having at least “moderate” economic implications.

As COVID-19 raised general uncertainty regarding the supply of goods in the single market, the “Green Lanes” communication offered practical advice on how to implement the guidelines for border management and keep freight moving across the EU.³⁸ Freight transport has systemic importance for the Union insofar as it keeps its economy moving both internally and internationally. Businesses, factories and commerce need to know that supply chains will function “unhindered” and that staff will be able to move, including across borders, as underlined by EU leaders in various statements.³⁹ Recent research and statistics underline that the Green Lanes initiative ensured that road freight transport continued its

³³ Includes four that concerned both the travel restrictions and the COVID certificate.

³⁴ Includes one that concerned both the travel restrictions and the COVID certificate.

³⁵ Eurostat (2022), Air Transport Statistics, “Impact of Covid-19 Crisis on Services” <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Impact_of_Covid-19_crisis_on_services>.

³⁶ “COVID-19: Absence of Tourists Could Harm Italy with €36.7 Billion Loss, WTTC Says” (*Schengen News*, 4 September 2020) <<https://www.schengenvisainfo.com/news/covid-19-absence-of-tourists-could-harm-italy-with-e36-7-billion-loss-wttc-says/>>.

³⁷ European Tourism Manifesto Alliance, “European Tourism Manifesto Urges EU to Coordinate on Coronavirus Travel Restrictions” (*Schengen News*, 9 September 2020) <<https://www.schengenvisainfo.com/news/european-tourism-manifesto-urges-eu-to-coordinate-on-coronavirus-travel-restrictions/>>; EU Reporter, “Transport and Tourism Associations Reiterate Their Call for EU Member States to Align Their Travel Rules and Avoid Patchwork System” (*Airlines for Europe*, 26 January 2022) <<https://a4e.eu/publications/transport-and-tourism-associations-reiterate-their-call-for-eu-member-states-to-align-their-travel-rules-and-avoid-patchwork-system/>>.

³⁸ European Commission Communication, Upgrading the transport Green Lanes to keep the economy going during the COVID-19 pandemic resurgence pandemic resurgence, 28 October 2020.

³⁹ European Council, Joint statements of the Members of the European Council, Brussels 26 March 2020 and 25 March 2021.

forecasted growth during the pandemic, while other transport sectors faced sharp declines.⁴⁰ For this reason, we consider that the initiative has “strong” economic implications, as it specifically targeted supply chain difficulties, contributed to logistical transfers and directly helped small and medium-sized enterprises to survive.

The common PLF template and exchange platform were put in place to support Member States in their contact-tracing efforts and, as such, there was no direct economic interest at stake. The PLF initiative instead focused on administrative burdens and on improving Member States’ ability to perform contact tracing rather than contributing to economic recovery. Even in the best-case scenario, with all Member States connected and exchanging PLF-based passenger information, the system would not have a significant direct or even indirect impact on the economies of Member States, except of course for the economic gains inherent to a reduced circulation of the infection thanks to a more effective system (ie digital PLFs coupled with the PLF exchange platform) curbing its spread.

4. EU added value

The last variable refers to the principle of subsidiarity as defined in the Treaty on the European Union and concerns situations where, “by reason of the scale or effects of the proposed action”,⁴¹ the intended objectives are better achieved with an initiative at the EU level rather than the national level.

The EU DCC is among the initiatives with the clearest potential EU added value. To put it simply: there is no other way to develop a fully interoperable tool at the EU level than through a pan-EU initiative, especially under the time pressure that the COVID-19 pandemic generated. The initiative was launched in a situation where Member States had imposed different restrictions on free movement, documentation requirements and entry criteria. This disrupted travel and generated significant administrative burden for officials and citizens.

The Commission put forward the idea of the EU DCC to address these challenges by providing a legally binding framework for the issuance and acceptance of interoperable COVID-19 vaccination, test and recovery certificates compliant with data protection requirements. The EU DCC made it possible for Member States to issue certificates that could be reliably authenticated throughout the EU, regardless of the level of digitalisation of Member States’ healthcare systems, rather than having to rely on different infrastructures with their own specifications. This ensured that users enjoyed greater predictability and more safety guarantees than if measures had been taken at the national level. National solutions would have been inadequate. Action was needed at the EU level to combat the divergences observed at the start of the vaccination and testing campaigns and to address issues related to the validity of national certificates.

The common PLF template and exchange platform had “moderate” EU added value. These initiatives were launched to improve the effectiveness of contact tracing for cross-border passengers, to reduce the administrative burden and to simplify the exchange of data through standardised formatting and data use. Initially, the idea was to facilitate the exchange of information between Member States in order to facilitate intra-EU free movement and travel. Moreover, it was created with the idea of reducing inconvenience for passengers and transport operators. Yet, due to legal restrictions (and political resistance), the EU could not propose mandatory harmonisation, and

⁴⁰ Statista Research Department, “Road Freight Market Size in Europe 2010–2025 (*Statista*, 29 September 2022) <<https://www.statista.com/statistics/1068472/road-freight-market-size-europe/>>; N Blain, “Covid-19 Crisis and European Mobility: What Lessons? What Future? (*European Issues* no. 604, 19 July 2021) <<https://www.robert-schuman.eu/en/european-issues/0604-covid-19-crisis-and-european-mobility-what-lessons-what-future>>.

⁴¹ Art 5 of the Treaty on the European Union.

Member States remained free to decide upon their own solutions. While some Member States did adopt the common EUdPLF template and even more connected to the PLF exchange platform, the possibility remained for Member States to keep their own PLFs and to continue to exchange messages via the pre-existing EWRS selective messaging function. This diminished the attractiveness and effectiveness of the EU initiatives.

In contrast, the Green Lanes initiative had “strong” EU added value, as no unilateral Member State actions could have prevented congestion at cross-border points and ensured the functioning of supply chains. Member States could not have resolved the problem by acting alone. Only EU action could ensure the continued adequate functioning of the single market at the height of the pandemic. Without EU action, the situation at the start of the pandemic (with waiting times at cross-border points exceeding one hour) would have worsened significantly.

Finally, we consider the coordinated approach to facilitating safe and free movement to have had “moderate” EU added value. The recommendations centred on a “pool” of measures from which Member States could draw, leaving some flexibility on how they were to comply. Departing from them meant inconsistencies across Member States and major inconvenience for passengers but not major disruptions (as in the case of the Green Lanes).

IV. Performance assessment

As far as it is possible, this section identifies information, articles, surveys and reports, where available from third parties, to assess the EU’s performance in these areas. The June 2022 special report of the European Court of Auditors was particularly useful in this regard.

1. EU DCC: successful

Over time, the Commission has published several reports on the implementation of the EU DCC across the EU. These reports demonstrate that the EU certificate was a crucial element in Europe’s response to the pandemic. It rapidly became a standard in Europe and beyond, with over 1.7 billion certificates issued until March 2022.⁴² A Eurobarometer survey published in September 2021 recorded that 65% of respondents agreed that the EU DCC was the best way to guarantee safe and free travel during the COVID-19 pandemic. The initiative was also widely endorsed by Member States for both intra-EU travel and for domestic purposes.

There was also an important international dimension. The EU DCC Regulation empowers the Commission to connect with certificate systems in third countries to facilitate free movement. Since its introduction, the EU DCC has developed into a global standard, with approximately fifty third countries and territories across five continents joining the system as of October 2022, in addition to the twenty-seven EU Member States.⁴³ This is further confirmed by various academic articles, including that of Blaine, underlining the importance of the EU DCC in reintroducing “hassle”-free travel within the Union.⁴⁴ Clearly, the EU DCC established a successful system to facilitate free movement during the COVID-19 pandemic.

⁴² European Commission, Report to the European Parliament and the Council: on a framework for the issuance, verification, and acceptance of interoperable COVID-19 vaccination, test, and recovery certificates (EU Digital COVID Certificate) to facilitate free movement during the COVID-19 pandemic.

⁴³ For an updated list, please see <https://ec.europa.eu/info/publications/commission-implementing-decisions-eu-equivalence-covid-19-certificates-issued-non-eu-countries_en>.

⁴⁴ Blain, *supra*, note 40.

2. Cross-border contact tracing through PLFs: mostly unsuccessful

The objective of developing a common EUdPLF was achieved insofar as a template and an application were completed and put into operation in some Member States. Yet the uptake was limited, as only Italy, Slovenia, Malta and, at a later stage, France used it. The uptake was also uneven: EU Member States collected approximately 27 million EUdPLFs, 91.6% of which came from Italy alone. The use of the PLF exchange platform was even more limited, with only 256 messages being exchanged. Not only did it incorporate just five Member States (the abovementioned four plus Spain), but its use was effectively symbolic – only Spain sent messages using this infrastructure. Many factors explain the limited uptake and use of these solutions, primarily related to the voluntary nature of both projects,⁴⁵ the coexistence of the EWRS selective messaging function as a valid alternative involving all Member States and the administrative burden for Member States of managing the transition to the PLF exchange platform at a time where national resources were under severe strain. In sum, the lack of PLF messages exchanged through the PLF exchange platform as well as the limited and late uptake of the EUdPLF lead us to conclude that the initiative can be considered as “mostly unsuccessful”.

3. Coordinated approach to facilitating safe and free movement: only partially successful

The European Court of Auditors recognised the particular importance of the Commission's Council recommendation proposals “for a coordinated approach to restrictions on free movement in response to the COVID-19 pandemic”⁴⁶ and acknowledged that the Commission was quick “to provide support for tackling issues relating to freedom of movement for specific categories of persons, in particular transport personnel and seasonal workers”.⁴⁷ The Commission assessed the travel restrictions on the basis of these recommendations, which provided an important baseline for the assessment of Member States' measures. Yet the Court concluded that “the travel restrictions imposed by Member States remained uncoordinated and formed a patchwork of individual measures that varied widely from one Member State to another”.⁴⁸

In parallel, the Court also recognised the Commission's complementary effort to make COVID-19 travel restrictions more transparent and predictable for citizens through tools such as Re-open EU,⁴⁹ a website that sought to consolidate essential information on borders, available means of transport, travel restrictions and public health and safety measures within the EU. Yet its effectiveness was hampered by the fact that more than a year after Re-open EU was launched, a third of EU Member States had not provided updated information. There was thus a risk that EU citizens could travel on the basis of misleading information.

4. Green Lanes: successful

The Green Lanes system has effectively kept EU traffic flowing and enabled transport workers to cross borders without discrimination. Daily monitoring developed by the EU

⁴⁵ Member States are free to collect PLFs or not, to collect them using their own form or with the common template (EUdPLF), to connect to the PLF exchange platform or otherwise and to exchange passenger data using the PLF exchange platform or the EWRS selective messaging system.

⁴⁶ European Court of Auditors, special report on “Free movement in the EU during the COVID-19 pandemic” published on 13 June 2022, p 31.

⁴⁷ *ibid.*

⁴⁸ *ibid.*, p 37.

⁴⁹ <<https://reopen.europa.eu/en>>.

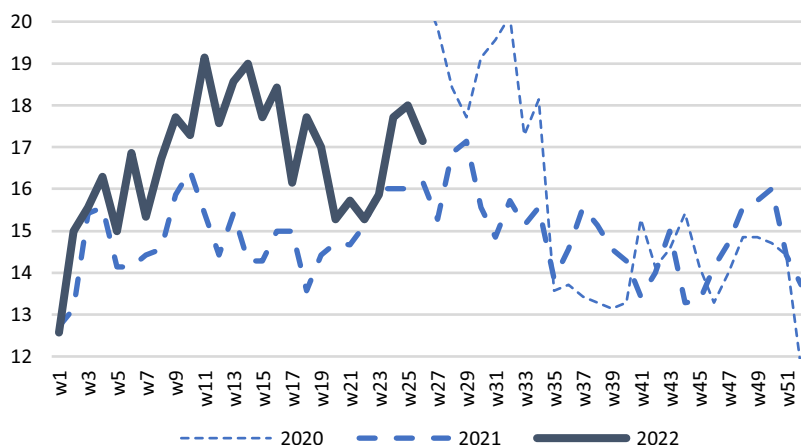


Figure 1. Green Lanes fifteen-minute compliance. w = week.

Agency for the Space Programme has shown that average waiting times at intra-Schengen borders remained below the fifteen-minute threshold (Figure 1). Figure 1 displays the situation until the end of June 2022 on the entire network, including non-Schengen and external borders (the ordinate axis indicates the average minutes it takes to cross a border, while the abscissa axis refers to the relevant week of the year).

The European Court of Auditors referred to the “Green Lanes” as a “major achievement”⁵⁰ that ensured “the continuous flow of goods across the EU and the free movement of transport personnel which were affected by the reintroduction of internal border controls, particularly in the early days of the pandemic”. The Court also praised the network of national transport contact points set up under the same “Green Lanes” initiative as “an effective tool for triggering quick, coordinated action between transport ministries and the Commission”. This sentiment was echoed by Luxembourg’s Prime Minister, who labelling the initiative as a key example of “pragmatic success” during the pandemic.⁵¹ Stakeholders participating in the public consultation launched by the Commission in preparation for the Contingency Plan for Transport also recognised the “Green Lanes” as a very useful initiative. They largely confirmed the notion that the initiative had an immediate positive impact, ensuring uninterrupted transport services and limiting disruption to supply chains, while also ensuring transport workers’ health and safety thanks to rules on sanitation and rest facilities.⁵²

V. Conclusion

Delivering for its citizens is one of the ways for the EU to legitimise itself. Our article examined whether it did so when responding to the COVID-19 challenge in the area of mobility and transport, looking in particular at four initiatives that had a systemic impact

⁵⁰ European Court of Auditors, *supra*, note 46, p 31.

⁵¹ “European Council President, Luxembourg PM Discuss Climate Change, Rule of Law” (*Chronicle.lu*, 16 September 2021) <<https://chronicle.lu/category/at-home/37736-european-council-president-luxembourg-pm-discuss-climate-change-rule-of-law>>; Statista Research Department, *supra*, note 40; Blain, *supra*, note 40.

⁵² European Commission, “Contingency Plan for Transport” <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A211%3AFIN>>; International Road Transport Union (IRU), “EU Must Not Backtrack on COVID-19 Border and Driver Commitments” (IRU, 3 February 2021) <<https://www.iru.org/news-resources/newsroom/eu-must-not-backtrack-covid-19-border-and-driver-commitments>>.

Table 2. Assessment overview.

Initiative	Performance assessment	EU legal competence	Political pressure	Economic interest	EU added value
EU DCC	Successful	+++	++	++	+++
PLFs	Mostly unsuccessful	+	–	–	++
Green Lanes	Successful	–	+	+++	+++
Coordination of restrictions	Only partially successful	+	++	++	++

Note: See text for descriptions of the –, +, ++ and +++ indicators.

EU DCC = European Union Digital COVID Certificates; PLF = Passenger Locator Form.

potential. We identified four variables that could explain the results of these initiatives on the ground, referring in particular to the legal competence to intervene, the political pressure surrounding the decision, the economic interests at stake and the added value of action at the EU level. Depending on whether these initiatives have been successful or otherwise, which we assessed to the extent possible through third-party sources, we identified the most influential variables at play (Table 2).

From this assessment, we can draw only preliminary and tentative conclusions. The first is that EU initiatives can be successful, even when the EU does not have a strong legal competence to act. In fact, a combination of political pressure and/or economic interest coupled with added value of the action at the EU level can compensate for the absence of a strong legal competence. This was the case with the “Green Lanes” initiative. The EU had no legal competence to harmonise health measures (eg to exempt transport workers from quarantine or testing requirements). Such exemption is indispensable if freight vehicles are to cross internal borders within fifteen minutes, which is the key objective of the initiative. Yet the “Green Lanes” communication, which explained the dangers for the single market of such measures, persuaded Member States to respect the suggested approach. This can be explained by the substantial economic interests at stake and the need for Member States to act in a coordinated manner, as only a few Member States insisting on such quarantine or testing requirements would have been sufficient to paralyse the entire EU transport network. This finding confirms the argument by Purnhagen et al that the EU had more tools to deliver an effective response to the COVID-19 challenge than those strictly based on its legal competence in “health”.⁵³

The limited nature of these cases does not allow a “counterfactual” consideration, notably whether the other successful case – the EU DCC initiative – would have been equally successful in the absence of a strong legal competence to act. While not identical, one could take as a similar example the work undertaken at the EU level to make national tracing and warning apps interoperable⁵⁴ across Member States. After almost two years of effort at the EU level, only twelve Member States have interoperable apps, while others still have incompatible contact-tracing apps (ie centralised) or no contact-tracing apps at all. Based on this comparison, the strong legal competence to act that underpinned the EU DCC appears to have been a decisive success factor. It is unlikely that, in the absence of a legal obligation, all Member States would have made adaptations to their healthcare IT systems necessary to make the EU DCC function reliably.

⁵³ Purnhagen et al, *supra*, note 22.

⁵⁴ European Commission, “How Tracing and Warning Apps Can Help During the Pandemic” <https://commission.europa.eu/strategy-and-policy/coronavirus-response/travel-during-coronavirus-pandemic/how-tracing-and-warning-apps-can-help-during-pandemic_en>.

The two “less successful” projects have in common the absence of a strong legal basis to act at the EU level. The coordination of restrictions regarding free movement scored moderately highly on the other three criteria (political pressure, economic interest and EU added value) and yet the outcome was not fully satisfactory. Economic interest and EU added value were the main differences compared to the successful “Green Lanes” initiative. A possible explanation for this is that Member States could only ensure the integrity of supply chains (ie one of the stated objectives of the “Green Lanes”) if all of them respected the same rules – even if they were non-binding – and refrained from taking unilateral action that could have undermined their common objective. Member States did not feel the same pressure regarding ensuring the free movement of people, especially in relation to non-essential travel. At a time of competing emergencies and overstretched national administrations, PLFs became nobody’s priority, particularly because Member States were not obliged to act (unlike for the EU DCC) and there was no political pressure nor economic incentive to do so, despite the potential EU added value of coordinated action in this area.

Given the limited number of case studies presented here, more work is needed to provide a more solid foundation in order to draw wider conclusions regarding the success or otherwise of EU policymaking in times of crises (including in areas beyond transport). In addition to adding more cases to this analytical framework, future research could also expand the geographical scope to other regions of the world for which a similar approach may be suitable. A comparative study on US and EU responses to the COVID-19 pandemic in the transport sector could offer valuable insights for international decision-makers and could support better understanding of the factors that drive successful initiatives.

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Competing interests. The authors declare none.