econPOL POLICY REPORT

39
2022

June
Vol. 6

The European Added Value of the Recovery and Resilience Facility:

An Assessment of the Austrian, Belgian and German Plans

Francesco Corti, Daniel Gros, Tomas Ruiz, Alessandro Liscai, Tamas Kiss-Galfalvi, David Gstrein, Elena Herold, Mathias Dolls, Clemens Fuest

CESifo ifo INSTITUTE

EconPol is CESifo's economic policy platform. With key support from the ifo Institute, it seeks to leverage CESifo's globe-spanning network of 1 800 high-ranked economists – eleven of whom have won the Nobel Prize – and ifo's decades-deep research expertise to provide well-founded advice to European policymakers. Drawing on the wide range of specializations of its members, EconPol's mission is to contribute to the crafting of effective economic policy in the face of the rapidly evolving challenges faced by the European economies and their global partners.

EconPol POLICY REPORT
A publication of the CESifo Research Network

Publisher and distributor: CESifo GmbH
Poschingerstr. 5, 81679 Munich, Germany
Telephone +49 89 9224-0, Email office@cesifo.de
Editors: Clemens Fuest, Florian Dorn

EconPol Europe: www.econpol.eu

The European added value of the Recovery and Resilience Facility:

An Assessment of the Austrian, Belgian and German Plans

Francesco Corti, Daniel Gros, Tomas Ruiz, Alessandro Liscai, Tamas Kiss-Galfalvi, David Gstrein, Elena Herold, Mathias Dolls Clemens Fuest[*]

Brussels/Munich, June 20, 2022

Abstract

This paper conducts an in-depth analysis of the National Recovery and Resilience Plans (NRRPs) of Austria, Belgium, and Germany. Exploiting a detailed database that covers all the investments and reforms included in the NRRPs and building on insights from semi-structured expert interviews, we study their alignment with EU objectives, the additionality of the spending, and the cross-border effects. We find that all three NRRPs are well aligned with the objectives defined in the RRF Regulation but differ greatly in terms of additionality. Cross-border projects are only of limited importance. We finally highlight some missed opportunities for other cross-border projects.

Acknowledgment

This study was originally published at the request of the Committee on Economic and Monetary Affairs of the European Parliament and commissioned by the Directorate-General for Internal Policies of the Union and supervised by its Economic Governance Support Unit (EGOV). The opinions expressed in this document are the sole responsibility of the authors and do not necessarily represent the official position of the European Parliament. The original paper is available on the European Parliament's webpage (here).

* Francesco Corti, CEPS and University of Milan, Brussels, francesco.corti@ceps.eu; Daniel Gros, CEPS, Brussels, danielg@ceps.eu; Tomas Ruiz, CEPS, Brussels, tomas.ruiz@ceps.eu; Alessandro Liscai, CEPS, Brussels, alessandro.liscai@ceps.eu; Tamas Kiss-Galfalvi, CEPS, Brussels; tamas.kiss-galfalvi@ceps.eu; David Gstrein, ifo Institute, Munich, gstrein@ifo.de; Elena Herold, ifo Institute, Munich, herold@ifo.de; Mathias Dolls, ifo Institute, Munich, dolls@ifo.de; Clemens Fuest, ifo Institute, Munich, fuest@ifo.de

TABLE OF CONTENTS

Executive Summary

This paper conducts an in-depth analysis of the national recovery and resilience plans (RRPs) of Austria, Belgium and Germany with regard to their alignment with the Recovery and Resilience Facility Regulation objectives, the additionality of the spending under the Recovery and Resilience Facility (RRF), and their cross-border and spill-over effects. We find that the plans are aligned with the RRF objectives. In all three countries, the largest share of the spending is addressed to projects primarily aimed at supporting the green transition and digital transformation objectives. Austria allocates 50% of the RRF grants to green projects and 38% to digital measures. The respective shares are 38%/52% (green transition) and 56%/22% (digital transformation) in Germany/Belgium.

Concerning the additionality of public investments, we build on and extend the methodology proposed by Corti et al. (2021, 2022) and perform both a macro-level (overall public investment) and a micro-level (project by project) analysis investigating to what extent the RRF grants are used to finance new projects not already planned by Member States before the creation of the RRF.

At the macro level, overall public investment increased strongly in these three countries and on average in the EU-27. However, there is no significant relationship between the share of RRF grants (calculated as a share of GDP or as a share of public investment) received by each country and the acceleration in public investment. The macro-level analysis hence suggests that RRF funds are at least partly used to finance existing investment projects.

A micro-level analysis of the individual projects in the three recovery and resilience plans under investigation indicates that the share of new investments projects in terms of allocated amounts is smallest in Germany (52%) and highest in Belgium (77%). Austria ranks in the middle with 54%. New projects are defined as projects which were planned after July 2020 when the Council agreed on NGEU. Projects already planned before the creation of the RRF – but which started after 1 February 2020 so that they are eligible for funding through the RRF – make up 35% of German investment volume, 20% for Austria and 12% for Belgium. Existing projects that have been continued and expanded constitute 11% of Belgian investment, 13% of German investment and 26% of Austrian investment. We do not find cases of clear overlap with any EU funded project.

Finally, our analysis shows that only a minor share of projects has a cross-border impact. The German plan allocates about 26% of the volume to such projects, the Austrian one 24%, the Belgian only 15%. We also discuss potential missed opportunities for other cross-border projects and in developing European public goods as part of the RRF. We conclude with policy recommendations on how the EU value added of NRRPs could be further enhanced in the future.

1 Introduction

The mantra accompanying the deployment of the Next Generation EU (NGEU) funds is that Europe needs a huge increase in public investment to succeed in the green and digital transitions while guaranteeing a socially inclusive recovery from the Covid-19 crisis. The funds provided by the Recovery and Resilience Facility (RRF) – the largest part of the NGEU – should support this investment push enabling Member States to recover from the Covid-19 crisis, but they are also supposed to ‘generate European added value’.

This paper examines whether and how this requirement is met for three countries (Austria, Belgium and Germany), based on three key dimensions of EU added value described in the RRF Regulation. These are:

- Alignment with EU objectives
- Additionality of public investments
- Development or implementation of cross-country projects.

The first dimension is reflected in article 3 of the RRF regulation, which defines the common European objectives of the plans. Such objectives are described under six pillars: “*(a) green transition; (b) digital transformation; (c) smart, sustainable and inclusive growth, including economic cohesion, jobs, productivity, competitiveness, research, development and innovation, and a well-functioning internal market with strong SMEs; (d) social and territorial cohesion; (e) health, and economic, social and institutional resilience, with the aim of, inter alia, increasing crisis preparedness and crisis response capacity; and (f) policies for the next generation, children and the youth, such as education and skills*” (Art. 3 Regulation (EU) 2021/241).

The second dimension refers to the principle of additionality, which is enshrined in Article 5(1) and Article 9 of Regulation (EU) 2021/241. The former specifies that “*financial support from the Facility shall not, unless for duly justified cases, substitute recurring national budgetary expenditure and shall respect the principle of additionality of the Union funding*”. In other words, RRF funds should in principle be used to finance public capital expenditure and not current spending. The latter provides that “*financial support under the Facility should be additional to the support provided under other Union programmes and instruments*”. This means that investment projects may receive support from other Union programmes and instruments provided that such support does not cover the same cost. While additionality is a long-time debated issue around the effectiveness of the EU cohesion policy (see Box 1), the launch of the RRF breathed new life into such debate. In this study, we are interested in measuring the additionality of the plans by looking not only at the actual non-substitution with other EU programmes, but also at their actual contribution to relaunch public investments.

Box 1. Brief history of the debate on additionality of EU funds

Within the EU funds framework, additionality refers to the fact that the appropriations of the structural funds in the regions targeted shall not replace public or equivalent expenditure by the Member States but complement them, thus requiring the Member States also to contribute to receive the funds (Del Bo, Florio, Sirtori and Vignetti, 2011, p. 7). Such principle has been the object of an extensive debate by the European Commission, central governments, local authorities, and the research community since the establishment of regional policy. Scholars have discussed the actual use of EU funds to cover expenditure that had already been incurred instead of complementing national efforts (McAleavey, 1995). One of the most memorable comments on the European Regional Development Fund was provided by Fritz Scharpf who dismissed it as an insignificant programme reflecting national priorities (Scharpf 1988). Since then, various reforms have been adopted to avoid substitution effects and increase EU funding additionality. Initially, Regulation 214/1979 gave the Commission the primary responsibility of EU funds management, which was previously in the hands of Member States, to promote an effective regional and cohesion policy. Regulation 2052/1988 was the first legislative text that institutionalised and formalised the principle of additionality, intending to prevent the Structural Funds from being used by national governments in place of their own investments and to seek maximum impact from Community interventions. To this end, a general rule was established in Article 9 of the Regulation 2082/93[1], according to which the level of spending was at least equal to the amount of average annual expenditure in real terms accomplished in the previous programming period. Additional reforms were adopted in the years to come to simplify the geographical level of control and facilitate compliance with the additionality principle as well as to introduce sanction mechanisms in the event of non-compliance with the principle of additionality (see Kaiser Moreiras, 2008). This notwithstanding, concerns remain about the actual functioning of this principle. The Fifth Cohesion Report by the Commission indeed remarked that there was a need to review how the additionality principle is verified and that “a reform of the system is needed to make it more reliable, transparent and straight-forward” (European Commission 2010). Various scholars have provided evidence of the crowding-out effect of national public investments by the EU structural funds and highlight the non-acceleration effect of the EU funds on public investment across Member States (OECD 2016; Mohl 2016)[2].

[1] Art. 9 (1) (2) “To achieve a genuine economic impact, the Structural Funds and the FIFG appropriations allocated in each Member State to each of the objectives under Article 1 of Regulation (EEC) No 2052/88 may not replace public expenditure on structural or comparable expenditure undertaken by the Member State in the whole of the territory eligible under an objective. For this purpose, in establishing and implementing the Community support frameworks, the Commission and the Member State concerned shall ensure that the Member State maintains, in the whole of the territory concerned, its public structural or comparable expenditure at least at the same level as in the previous programming period, taking into account, however, the macroeconomic circumstances in which the funding takes place, as well as a number of specific economic circumstances, namely privatizations, an unusual level of public structural expenditure undertaken in the previous programming period and business cycles in the national economy.”

[2] This is true for both Centre-Eastern European Member States (Halasz, 2018) and Southern countries (Del Bo and Sirtori, 2016). However, not all scholars share this view. Some authors found that inflows from cohesion funds actually result in additional public expenditure and that, hence, the cohesion policy funds tend to increase the net amount of public structural/development expenditure in recipient countries (Šlander and Wostner, 2018).

Finally, the third dimension of European value added is defined in Article 18(4) of the RRF Regulation. It refers to the fact that the RRF plans should support cross-border and multi-country projects having a Single Market dimension, such as important projects of common European interest (IPCEI). In the Commission guidance (European Commission, 2021a; European Commission, 2021b), Member States are encouraged to work together to integrate value chains, strengthen the resilience of industrial ecosystems and deepen the Single Market: "*such projects are essential for the recovery and to strengthening Europe's resilience and are of a particular relevance for the flagship initiatives*" (European Commission 2021a, p. 21). This is supposed to increase the potential spill-over effects that the RRF – as a coordinated investment and reform programme across the EU - can foster. A key assumption of the RRF is indeed that a lack of coordination in the EU countries' recovery would "*lead to negative spill-over effects of shocks between Member States or within the Union as a whole, thereby posing challenges to convergence and cohesion in the Union*" (Recital 6, Regulation 2021/241).

Against these premises, the purpose of this contribution is to shed light on the EU value added of the recovery and resilience plans (NRRPs) by looking at the three dimensions illustrated above. While the focus of the study is on three national recovery and resilience plans (Germany, Belgium, and Austria), the comparative perspective is expanded – when relevant - to other Member States.

The remaining sections of this study proceed as follows. Section 2 illustrates the methodology adopted in the study. Section 2.1 presents the database on investment projects and reforms. Section 2.2 outlines how we study the alignment of NRRPs with the EU objectives. Section 2.3 presents our approach for measuring the additionality of public investments. Section 2.4 describes how we identify projects that have the potential for positive spill-over effects across borders. Section 2.5 motivates our approach to conduct semi-structured interviews.

Results are presented in section 3. Section 3.1 illustrates the alignment of the NRRPs with the RRF objectives. Section 3.2 presents the results of the analysis regarding the additionality of RRF spending. Section 3.3 illustrates the NRRPs' cross-country projects, assesses the potential spill-over effects on the Single Market and discusses the possible missed opportunities. Section 4 concludes and provides policy recommendations.

2 Methodology and Database

This section presents, first, the database with information about the NRRPs. Second, it introduces the methodological approach adopted to assess the alignment of the national recovery and resilience plans with the RRF objectives. Third, it illustrates the approach to measure the additionality of public spending under the NRRPs which builds on and extends the methodology proposed by Corti et al. (2021, 2022). Fourth, it presents the methodology to identify cross-border projects included in the NRRPs. Finally, it describes the semi-structured interviews that we conducted with representatives from Austria, Belgium and Germany in charge of drafting the NRRPs and the European Commission.

2.1 Presentation of the database on projects and reforms

Evaluating the NRRPs requires detailed information on the individual projects and reforms proposed by each country. This information is collected in a database which – at the moment of writing (March 2022) - covers all the investments and reforms included in the NRRPs of eight Member States[3], including the three (Belgium, Austria, and Germany), which are the objects of this report. When we started writing this report (September 2021), Austria and Belgium were not included in the database, which has been *ad hoc* extended for this purpose.

The database relies on a combination of European Commission and national sources. The main documents used for the identification and classification of the measures (reforms and investments) contained in the plans are retrieved from the annexes to the *Council Implementing Decisions on the approval of the assessment of the recovery*[4] and resilience plans and the Com*mission Staff Working Document: Analysis of the recovery and resilience plans*, which accompany the proposals for the Council implementing decisions.[5] The data collected from the Commission and Council documents are then completed with information directly retrieved from the RRPs submitted by Member States.

[3] Austria, Belgium, Croatia, France, Germany, Greece, Italy, Portugal, Slovakia, and Spain. All the links to the recovery and resilience plans presented by Member States as well as the EC assessments and Council Implementing decisions can be retrieved here.

[4] Council Implementing Decision for Germany can be retrieved here, for Belgium here, and for Austria here.

[5] Staff Working document for Germany can be retrieved here, for Belgium here, and for Austria here.

For each investment and reform, the following information was collected (when possible)[6]:

- **Component**: Groups of reforms and investments, which reflect related reform and investment priorities in a policy area or related policy areas, sectors, activities, or themes, aiming at tackling specific challenges, forming a coherent package with mutually reinforcing and complementary measures;
- **Name and codification**: Name and the identification code provided in the Council implementing decision;
- **Description**: Objectives and the type of intervention;
- **Target group**: Households, financial corporations, non-financial corporations, non-profit institutions serving households (e.g. hospitals) or general government (e.g. local municipalities);
- **NACE (Statistical classification of economic activities in the European Community)**: (only for investments) classification of economic activities in the European Union (EU);
- **RRF budget (EUR billon)**: the total amount allocated under the RRF;
- **Complementary national budget (EUR billion)**: if provided by the member state, the complementary national budget to implement a specific measure;
- **Timeline (details)**: The intermediate milestones or targets to be completed to receive the EU disbursement;
- **Timeline (completion)**: The time (year and quarter) by when an investment/reform is expected to be completed, i.e., each milestone[7] and target[8] is completed;
- **EU flagship objectives**: Six RRF Pillars, i.e., Green Transition; Digital Transformation; Smart, sustainable and inclusive growth; Social and territorial cohesion; Health, and economic, social and institutional resilience and Policies for the Next Generation (see details below);
- **Policy area**: Each investment and reform is classified based on the policy area of intervention (see details below);
- **Cross-border nature of the measure**: Investments that contribute to any cross-border and multi-country project, with the potential to better integrate value chains and deepen the Single Market.

[6] Compared to the CEPS RRF Monitor Database (see here), the following information has been added for the specific purpose of this study: EU flagship objectives and cross-border nature of the measure.

[7] According to the definition of the Commission: A milestone does not reflect amounts but rather an objectively verifiable qualitative achievement (adopted legislation, full operationalisation of IT systems, etc.), and details desirable content and characteristics (European Commission 2021c, p. 33).

[8] According to the definition of the Commission: A target is a quantitative achievement on an agreed indicator (number of kilometres of rail built, number of square meters of a renovated building, number of beneficiaries of a particular investment scheme, etc.). The choice of targets should reflect the implementation of reforms and investments and therefore be operational (European Commission 2021c, p. 33).

2.2 Alignment with the EU objectives

Article 3 of the RRF regulation identifies the key objectives that the national recovery and resilience plans are meant to contribute appropriately to achieve. Such objectives are described under six pillars (the ‘six pillars’):

1) green transition;
2) digital transformation;
3) smart, sustainable, and inclusive growth, including economic cohesion, jobs, productivity, competitiveness, research, development and innovation, and a well-functioning internal market with strong small and medium enterprises (SMEs);
4) social and territorial cohesion;
5) health, and economic, social, and institutional resilience with the aim of, inter alia, increasing crisis preparedness and crisis response capacity; and
6) policies for the next generation, children, and the youth, such as education and skills.

There are mandatory quotas for the first two pillars. According to the RRF regulation, each plan should allocate at least 37% of the total allocation to climate action and at least 20% to digital measures. The guidance of the Commission for the Member States further specifies how Member States may address the requirements of the regulation under the six pillars and provides a non-exhaustive exemplary list of measures that can address the digital and green objectives (European Commission, 2021a; European Commission, 2021b). A taxonomy is elaborated for green and digital tracking of the measures included in the plans in Annexes VI and VII of the RRF regulation. Such taxonomy includes the dimensions and codes for the types of intervention and the coefficients for the calculation of the support to climate change, support to environmental objectives, and support to digital transition. The inclusion of measures appropriately addressing all the six pillars is one of the criteria for the Commission assessment of the relevance of the plans’ draft presented in April 2021 (Art. 19 Regulation). The six pillars are also used by the Commission in its review report, that shall be presented to the European Parliament and the Council, as a part of its monitoring exercise of the plans’ implementation (Art. 16) as well as in the Commission ex-post report on the expenditure financed by the Facility (Art. 29). The table below summarises the types of intervention ex-post identified by the EC per policy area that are included under each pillar in the Member States RRPs.

Table 1: Breakdown of the RRF six pillars per policy area

RRF Pillar	Policy area
Green transition	Sustainable mobility
	Energy efficiency
	Renewable energy
	R&D&I in green activities
	Climate change adaptation
	Sustainable use and protection of water and maritime resources
	Transition to a circular economy, waste prevention and recycling
	Protection and restoration of biodiversity and ecosystems
	Pollution prevention and control
	Green skills and jobs
Digital transformation	E-governments, digital Public Administration, and local digital ecosystem
	Digitalisation of businesses
	Human capital in digitalisation
	Digital capacities and deployment of advanced technologies
	Connectivity
	Digital-related measures in research, development, and innovation
Smart, sustainable, and inclusive growth	Building renovation and construction
	Support to SMEs
	Research, Development, and Innovation
	Competitiveness
	Business environment
	Industrialisation and reindustrialisation
	Business infrastructure
	Cultural sector
	Regulatory changes for smart, sustainable, and inclusive growth
	Support to large enterprises
	Transnational cooperation
Social & territorial cohesion	Territorial infrastructure and services
	Adult learning, including continuous VET and skills recognition
	Social housing and other social infrastructure
	Social protection, including social services and integration of vulnerable groups
	Development of rural and remote areas
	Modernisation of labour market institutions (including PES, social dialogue etc.)
	Non youth employment support and job creation (hiring & job transition incentives and support for self-employment)
Health, and economic, social, and institutional resilience	Healthcare
	Effectiveness of public administration and national systems
	Crisis preparedness
	Long-term care
	Effectiveness of judicial systems
	Strategic autonomy
	Tax measures
	Crisis reaction capacity
	Business and public service continuity in crises
	Fiscal policy and fiscal governance
	Fraud prevention
Policies for the next generation	General, vocational, and higher education
	Early childhood education and care
	Youth employment support and job creation (hiring & job transition incentives and support for self-employment)

Source: European Commission RRF Scoreboard.

To assess the alignment of the national recovery and resilience plans with the EU objectives, we first classify the spending under the RRF based on the six pillars described above. For each measure, we also specify the policy area of intervention based on the list provided in the table above. Once the measures are classified, we qualitatively assess – based on a mapping exercise showing how individual measures corresponded to the pillars - whether the plans contribute in a comprehensive and adequately balanced manner to all six pillars, considering the specific challenges of the Member State concerned.[9]

Specific attention is paid to whether the plans effectively contribute to the green transition and the digital transformation objectives. Based on the methodology for climate tracking set out in Annex VI and for digital tagging set out in Annex VII of the RRF Regulation, we check whether the green and digital measures included represent at least 37% and 20% of the recovery and resilience plan's total allocation, respectively. In addition, attention is paid to the extent to which the plans "*effectively contribute to strengthen the (…) social resilience of the Member State, contributing to the implementation of the European Pillar of Social Rights*" (Article 16 (3)(b) RRF Regulation). Based on the delegated act on social expenditure reporting that was approved in December 2021, the social measures within the plan are first classified in four categories and nine policy areas: A) Employment and Skills[10]; B) Education and Childcare[11]; C) Health and long-term care[12]; D) Social Policies[13]. As a second step, based again on a mapping exercise, we qualitatively assess the degree of alignment with the principles of the European Pillar of Social Rights and the relevance of the measures included against the social challenges and needs of the countries under study (based on the Country Reports and the Country Specific Recommendations (CSRs)).

Finally, to analyse the alignment of the measures in the plans with the Country Specific Recommendations, we carried out a mapping exercise (see Tables 2-4 in the Appendix) and compared out findings with the Commission's analysis of the CSRs by component in its *Commission Staff Working Document: Analysis of the recovery and resilience plans*.

2.3 Additionality of public investments

We present two approaches to measure additionality. The 'macro' approach investigates the relationship between the increase in public investments and the size of

[9] The challenges are identified by the authors based on the European Commission Country Reports 2020, World Bank Doing Business Annual Reports, OECD Economic Surveys, OECD Better Life Index, European Commission Education and Training Monitor, OECD Reviews of School Resources, European Commission Innovation Scoreboards, Bertelsmann Stiftung Taxes Reports Sustainable Governance Indicators, OECD Product Market Regulation (PMR) Indicators.

[10] 1) Adult learning; 2) Employment support and job creation; 3) Modernisation labour market institutions.

[11] 4) Early Childhood Education and Care; 5) General, vocational, and higher education.

[12] 6) Healthcare; 7) Long-term care.

[13] 8) Social housing/infrastructure; 9) Social protection.

the RRF grants, whereas the 'micro' approach looks at each project to check whether it had already been planned before the pandemic and the NGEU agreement and if there is overlap with other EU-funded projects. Such a two-fold approach to additionality builds on the proposal elaborated by Corti et al. (2021; 2022), which we initially conceived for the purpose of this study and that has been expanded and further fine-tuned for this study as explained in sections 2.3.1 and 2.3.2.

2.3.1 Macro-approach

According to the RRF Regulation and the Commission guidance to Member States on the RRPs (European Commission, 2021a, p. 16), an investment is understood as expenditure on an activity, project, or other action, which is consistent with a broad concept of capital formation in areas such as fixed capital, human capital, and natural capital.[14] Investments can be direct (e.g., financing a project with public money) or indirect (e.g., public schemes to incentivise private investments, such as building renovations to improve energy and resource efficiency or digitalisation of small businesses). Investments may also take the form of financial instruments, support schemes, subsidies, and other facilities, especially given their capacity to crowd-in additional private investments. This would include, inter alia, guarantees, loans, equity, venture capital instruments, and the setting-up of dedicated investment vehicles.

Based on this definition, we measure the macro-additionality of the RRPs by looking at their impact on the increase in public investments. Our hypothesis is that – since the principle of additionality requires Member States to use the RRF money neither to substitute already planned national public spending nor to finance projects already financed by the EU funds – the RRF funds should, in principle, be used to finance new additional public investments. Therefore, we expect the level of public investments to increase along with RRF funding. Notably, we expect that the size of the RRF transfers is positively correlated across Member States with an increase in public investment, which is defined in national account statistics as general government gross fixed capital formation (GFCF).

It is not straightforward to measure the impact of RRF funding on public sector GFCF. Many Member States were planning to increase public investment, already long before the Covid-19 crisis. It would thus not be appropriate to just look at the increase in public sector GFCF in the next years relative to the pre-pandemic level.

We look at a different measure, namely the extent to which public investment will be higher than planned before the crisis (and before the NGEU package). We thus compare

[14] Fixed capital is broadly equivalent to the concept of 'gross fixed capital formation' used in national accounts. Human capital is accumulated through spending on health, education, and training, etc. Natural capital is enhanced by actions aiming at increasing resource efficiency and the share of renewable natural resources, protecting or restoring the environment, or by mitigating/adapting to climate change.

the forecast for public GFCF before the outbreak of Covid-19 with the most recent forecast published by the Commission in Autumn 2021. Since the Commission forecasts are only two years forward looking, we can compare today's forecast for 2022 with Member States' forecasts included in the Stability Programme of 2019. The difference between these two forecasts for the level of GFCF in 2022 can provide a measure of the shock to public investment due to the crisis[15]. The question is whether the size of the unexpected increase in public investment is related to the amount of RRF funding a country receives or to additional national spending due to the Covid-19 crisis.

To answer this question, Corti et al. (2021, 2022) compare the forecast for public GFCF before the outbreak of Covid-19 with the most recent forecast published by the Commission in Autumn 2021 by plotting the RRF funding and the acceleration in public investment both as percentage of GDP and percentage change and test their co-variation. By contrast, here we compute four different models:

- Model 1: the share of RRF grants in GDP (independent variable), change in public investment forecasts in percentage of GDP (dependent variable)
- Model 2: the share of RRF grants in GDP (independent variable), change in public investment forecasts as percentage (dependent variable)
- Model 3: share of RRF grants in public investment (independent variable), change in public investment forecasts in percentage of GDP (dependent variable)
- Model 4: share of RRF grants in public investment (independent variable), change in public investment forecasts as percentage (dependent variable)

Computations using GDP as weights are used to ensure that the effect on smaller economies where the RRF injection can more easily have a larger fiscal impact does not disproportionately drive the outcomes.

The share of cohesion policy budget in GDP is used as a control variable. This is a theoretically important consideration intended to filter out differences in the level of EU-funded investments in national budgets. Member States with higher cohesion policy allocations might find it relatively easier to ensure additionality vis-a-vis their investments funded through national budgets, which might be more modest compared to countries benefitting from less EU funding.

[15] Please note that we cannot disentangle NGEU effects from the effects of investment at national level to deal with COVID-19. In principle, this would be possible by taking the forecast of Spring 2020 when NGEU was not yet existing, but Member States had already put in place the largest part of their fiscal packages. However, the AMECO Spring 2020 vintage includes GFCF forecasts only up to 2021. The AMECO Autumn 2020 vintage contains forecasts for 2022 but might already reflect the shift implied by the announcement of the NGEU approval (July 2020).

We also repeat the same exercise to see whether RRF funds catalysed private investments. The four models computed for this purpose use the same control variables and weights:

- Model 5: the share of RRF grants in GDP (independent variable), change in private investment forecasts in percentage of GDP (dependent variable)
- Model 6: the share of RRF grants in GDP (independent variable), change in investment forecasts as percentage (dependent variable)
- Model 7: share of RRF grants in private investments (independent variable), change in investment forecasts in percentage of GDP (dependent variable)
- Model 8: share of RRF grants in private investments (independent variable), change in investment forecasts as percentage (dependent variable)

2.3.2 Micro-approach

An assessment of the additionality in the RRPs can also be done 'bottom up', which again requires a granular approach, i.e., one needs to look at each project to see whether Member States' proposed measures are new or are already part of an ongoing (or planned) project.

According to the RRF Regulation, any measure that did not exist before 1 February 2020 can be eligible. Therefore, even though the plans were submitted in May 2021, Member States could have potentially included projects in their plans already launched or planned in 2020. This creates a problem with respect to the identification of the cut-off date when to consider investments under the RRF as actually new. Since the agreement on NGEU was achieved in July 2020, we consider that truly additional (alias, new) measures under the recovery plans are the ones adopted by Member States from mid-2020 on. Therefore, in line with Corti et al. (2021, 2022), we check whether each investment was already planned before July 2020, when the Council agreed on the NGEU, or whether it is a continuation/extension of a project already existing before. To do so, a valid source of information are the Stability and National Reform Programmes presented in 2020 as well as the 2020 national budgets presented by the end of 2019. Additional national sources were further used for each of the Member States analysed. Overall, the following documents have been consulted:

- **Germany:**
  - Stability Programme and National Reform Programme 2020;
  - Konjunkturprogramm 2020
  - German Recovery and Resilience Plan 2021
  - Webpage of the responsible ministries and the federal government
  - Federal gazette

- Information sheet of the BMU funding programme „Dekarbonisierung in der Industrie“ 2021
- Masterplan Ladeinfrastruktur der Bundesregierung 2019
- 7. Energieforschungsprogramm 2018
- Klimaschutzprogramm 2030 2019
- **Austria:**
  - Stability Programme and National Reform Programme 2020;
  - Budget for 2020
  - Konjunkturprogramm 2020
- **Belgium:**
  - Stability Programme 2020 and National Reform Programme 2020;
  - Federal and state budget 2019 and 2020

For each investment included in the RRF plan, it is indicated whether:

A. It is a new project;
B. It is an expansion or a continuation of a pre-existing project;
C. It corresponds exactly to an already planned project.

In so doing, we draw from Corti et al. (2021, 2022). Yet, they identify four categories. Notably, they distinguish between completely new projects not included in the documents considered above and new projects that fall in the scope of existing ones. This second category, however, turns out to be quite problematic and hard to interpret. It is not clear if and to what extent a project financed under the RRF would otherwise be financed under national budget only because the scope is similar, simply because the counterfactual situation without the RRF is unobserved. We, therefore, decided to have one category, ‘New projects’ (A), for all the cases of investments included in the plan. As a second category, we consider projects that finance already existing projects by continuing or extending them (B). Investment projects that replace already budgeted expenditures are summarised in a third category (C).

Moreover, Corti et al. (2021, 2022) considered both the expansion/continuation (B) and the already existing (C) categories as non-additional projects and did not differentiate between the two. Again, the classification of expansion/continuation of pre-existing projects as non-additional is debatable. Certainly, it can be argued that in many cases the continuation of existing investments would have taken place also in the absence of RRF funding. However, this cannot be taken for granted a priori, especially after the pandemic shock. We indeed do not know with certainty whether post-pandemic financial constraints would have hindered Member States to expand or continue these pre-existing projects. In this sense, Member States could use the RRF to expand or continue already existing projects, which would not have happened without the RRF funding. For this reason, we keep the two categories B and C separate, document the share of investments for both categories, and consider only the latter as fully non-additional.

In addition to the programmes listed above, additionality with the Multiannual Financial Framework was also considered. Given that the overlaps (and thus a substitution effect) are most likely to occur with funding available under the Cohesion Policy envelope (because of the strong alignment of the objectives of the two policies/instruments), the Structural Funds were the focus of the investigation[16]. Since 2021-27 Partnership Agreements – and thus Operational Programmes and concrete project calls– are not finalised yet for all countries, the only source of information currently available comes from the 2014-20 programming period. The N+3 rule[17] theoretically makes this exercise still relevant. However, it did not yield meaningful results (i.e., overlaps) in any of the countries under investigation, with a negligible number of projects falling under categories A and B. Therefore, the results are not presented in the analytical sections.

2.4 Cross-border projects and spill-over effects

To assess the effectiveness of the RRF, it is also necessary to analyse the potential benefits from the combined action of the Member States. According to the RRF regulation, plans can include cross-border and multi-country projects. The unique structure of the RRF could lead to an increased amount of cross-border cooperation and a deepening of the single market. Furthermore, national projects might have positive spill-over effects on other Member States. To assess these effects, we identify projects that have the potential for positive spill-overs. First, we rely on countries' own description of cross-border projects in the plan. This is in line with the approach used by Dias et al. (2021). Second, we add to this list national projects that are expected to contribute to European goals such as freedom of movement or deepening of the internal market. For example, we consider contributions to the system of Trans-European Networks which include the establishment of a transport, communication and energy network in Europe. We do not focus on projects that might have other effects on Member States. For instance, we do not consider the effects on demand for foreign goods or services. Pfeiffer et al. (2021) use an approach more focused on these macroeconomic demand spill-overs, but they do not model specific plans proposed by

[16] This exercise was functional to check for possible cases of double funding and ensure the principle of complementarity between RRF and Cohesion Policy has been properly applied. Indeed, Article 9 of the RRF Regulation stresses that "Support under the Facility shall be additional to the support provided under other Union programmes and instruments. Reforms and investment projects may receive support from other Union programmes and instruments provided that such support does not cover the same cost."

[17] Allocations under the Cohesion Policy are divided into annual amounts, which must be spent within three years after allocation. This means that even though the 2014-2020 programming period is concluded, part of the project funding is still ongoing.

the Member States. In contrast, our approach carefully identifies specific projects that are likely to have a large impact. Hence, both approaches are complementary and illuminate different aspects of the issue.

2.5 Semi-structured interviews

We conducted 5 semi-structured interviews with one representative for each Member State in charge of drafting the RRF plans and one representative of the European Commission responsible for each country desk.[18] In the interviews, we covered all aspects of the NRRPs that are analysed in this report, i.e., their alignment with the EU objectives, the additionality of public investments and their cross-border dimension. Moreover, we asked the representatives from the Member States about the process of setting up the governance of their NRRP, the involvement of additional actors (e.g. the regional and local authorities and social partners), and the interaction with the Commission during the drafting process of the NRRP.

These interviews serve the purpose to validate our findings, facilitate their interpretation and provide additional insights on the key challenges faced by the Member States in implementing their NRRP. For example, while our results on the additionality of the investments tell a story that ultimately depends on the classification strategy, being able to draw conclusions from the micro-analysis requires a good understanding of both the rationale and the context behind the investments' choice. Similarly, our methodology described in section 2.4 clearly defines which projects are considered to have a cross-border dimension. The semi-structured interviews provide insights into *why* only a small fraction of the projects outlined in the NRRPs of Austria, Belgium and Germany have a cross-border impact. Semi-structured interviews are, in this respect, the most suitable approach to gather a set of comparable data while still leaving room for a more in-depth analysis of the specificities of cases and to explore individual differences between interviewees' experiences.

[18] In the case of Germany and Austria the interviewed official is in both country desks.

3 Analysis

Building on the database and the methodological approach described above, this section first compares and assesses the extent to which national RRPs are aligned with EU priorities and agendas, notably the six pillars of the RRF. Second, it presents the results of the macro- and micro-analysis of the additionality of the investments included in the NRRPs, intending to evaluate the extent to which the RRPs cover new projects that were not yet foreseen in national spending programming. As a third step, it identifies and assesses cross-country projects and the potential extent of positive spill-overs, followed by a discussion of possible missed opportunities for further cross-border projects and the development of European public goods.

3.1 Alignment of the NRRPs with the EU objectives

Germany, Austria, and Belgium presented their plans in April 2021 and received a positive assessment by the Commission in June 2021. The Council subsequently approved on 13 July 2021 the implementing decision based on the assessment of the European Commission, thus paving the way to start the disbursement of the financial support. The German plan will be financed by EUR 27.9 billion in grants and includes 25 investment projects and 15 reforms. The Belgian plan includes 88 investment projects and 34 reforms for a total amount of EUR 5.9 billion, although the plan indicates that Belgium may ask for loans by 2023. The Austrian plan includes 32 investments projects and 27 reforms for a total amount of €4.5 billion, consisting entirely of grants. As in the case of Belgium, the Austrian plan indicates that it may apply for loans by 2023.

For all three countries, the annualised share of RRF grants as a percentage of GDP is not economically significant: 0.1% for Germany and Austria and 0.2% for Belgium. In terms of Gross Fixed Capital Formation, the annualised share of RRF grants remains quite low, in all cases around 4%. The low macro-relevance of the RRF grants for these three countries does not come as a surprise (Alcidi et al., 2020). As a matter of fact, the three countries experienced a lower contraction of GDP in 2020 and 2021 compared to Southern or Centre Eastern Member States due to the Covid-19 crisis and, already in the third quarter of 2021 in the case of Germany and Belgium and the fourth quarter 2021 in the case of Austria, reached their pre-crisis output levels.[19] In addition, the macroeconomic context before the pandemic outbreak was stable, with a structural unemployment rate well below the Euro area average in 2019 (around 7%). Finally, the three countries have a GDP per capita higher than the EU average, which further

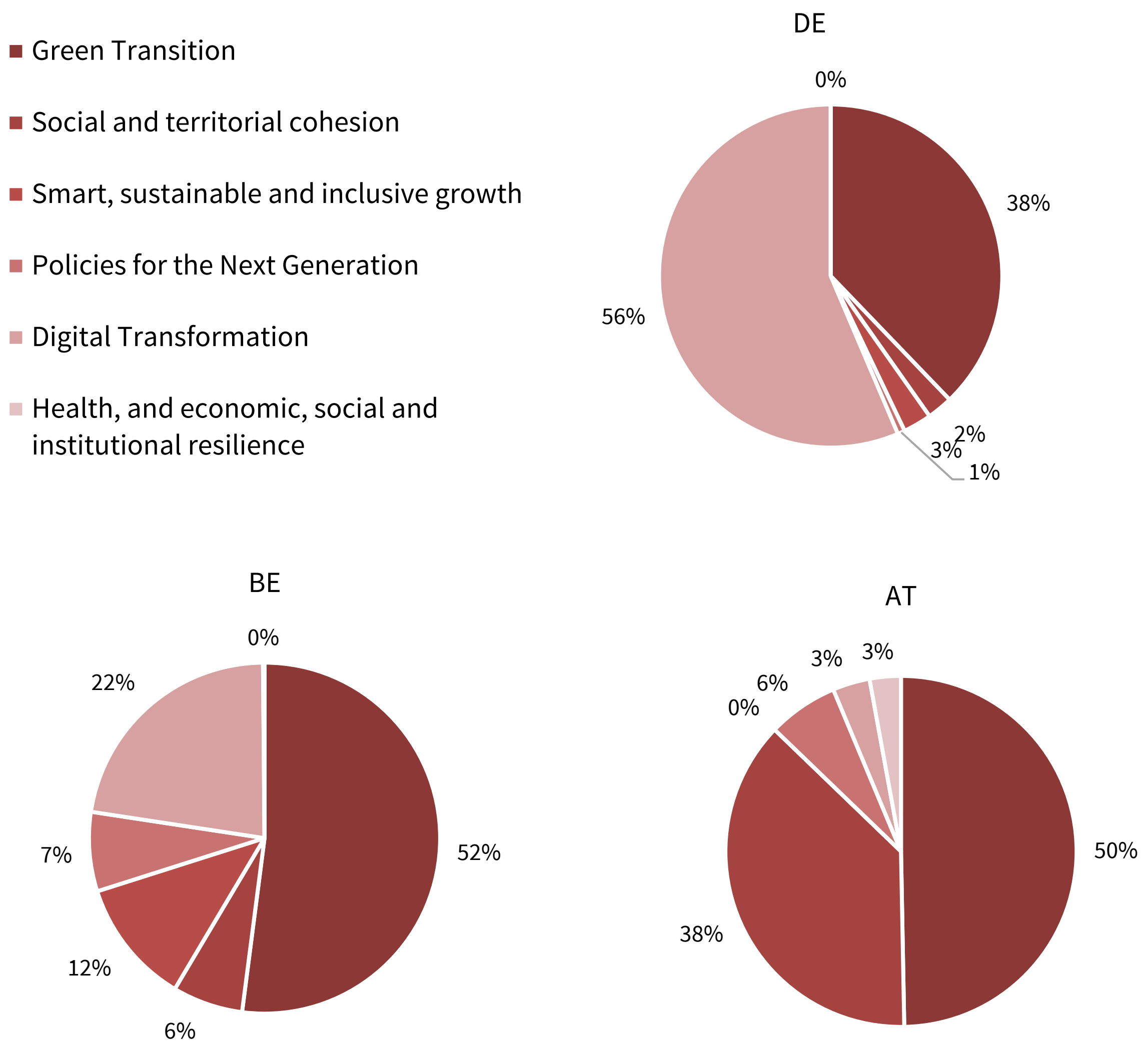
[19] In the case of Austria and Belgium, both countries will receive a lower amount than the initially allocated one, since the forecast on GDP contraction for 2021 was more negative than the actual contraction, while by contrast Germany is expected to receive slightly more. The GDP contraction in 2021 only partially impacts on the RRF distribution criteria, notably on the second RRF tranche, which accounts for 30% of the RRF grants (see Annex III of the Regulation).

explains why they received a smaller amount of RRF transfer compared to other Member States.

Overall, the largest share of the spending is addressed to projects primarily aimed at supporting the green transition and digital transformation objectives. As shown in Figure 1, Austria allocates 50% of the RRF grants to green projects and 38% to digital measures. Similarly, 38% of the German resources are allocated to the green transition projects and 56% to digital transformation measures. Finally, Belgium allocates 52% of its RRF resources to green projects and 22% to measures aimed at fostering the digital transformation. As stressed by our interviewees, the large focus on the twin transitions in the allocation of resources is largely explained by the existence of the mandatory criteria on devoting a minimum of 37% and 20% of total estimated expenditure to green and digital measures, respectively. By contrast, the lack of quantifiable and comparable targets makes it harder to pursue other objectives than the green and digital ones, unless they are subordinated, part of larger measures or they are already part of the national government agenda.

With respect to the reforms, the three countries show different priorities. Belgium focuses mostly on green transition related reforms (38%), notably in the area of energy efficiency and sustainable mobility, followed by reforms to foster social and territorial cohesion (24%), notably the integration of vulnerable groups in the labour market and to strengthen the education system, and reforms to strengthen the federal budget sustainability (18%). Austria includes the largest share of the reforms on the green transition (33%), equally distributed in different policy areas (renewable energy, sustainable mobility, transition to circular economy and protection of biodiversity). The remaining reforms are distributed between social and territorial cohesion (19%), smart, sustainable, and inclusive growth (19%), and digital transformation (15%). Finally, Germany includes reforms mostly on addressing the digitalisation and modernisation of the public administration (60%) and the reduction of regulatory barriers to investments (20%).

Figure 1: Share of RRF funds contributing to the RRF pillars: Austria, Belgium, and Germany (% total)

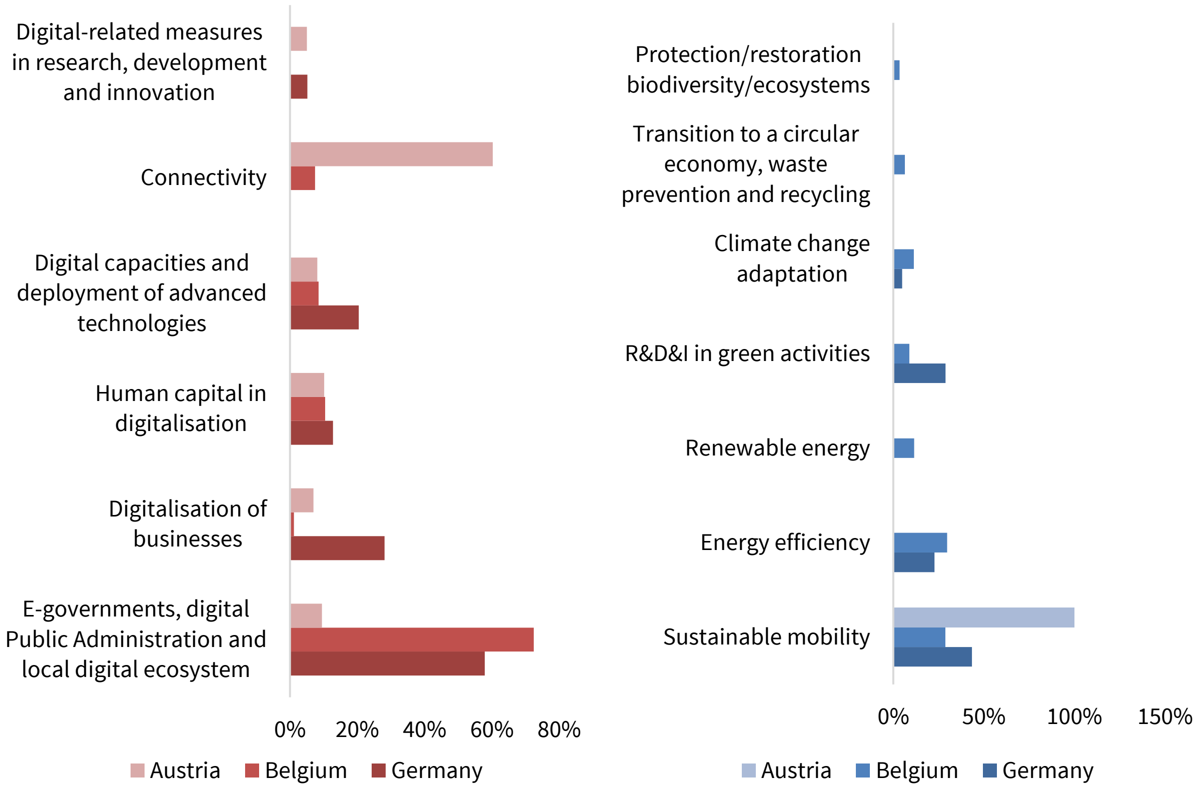


Source: Own elaboration.

The concentrated distribution of resources primarily addressed to fulfil the green and digital investments does not mean that the other pillars are not satisfied, nor that the three countries pursue similar priorities. With respect to the first aspect, Figure 1 shows the headline priority of the investments. Yet, this does not mean that this is the only priority. For instance, the renovation of a public school can fall under the green transition label as well as the one on policies for the next generation. In this respect, under each label, the measures included can touch upon different policy areas.

Figure 2 illustrates the breakdown of expenditure supporting the digital transformation and the green transition pillars. In the case of investments in the digital transformation, Austria allocates the largest share of the resources to investments in connectivity and human capital development. This is in line with the digital challenges faced by Austria before the outbreak of the pandemic. Austria indeed accounted for a low level of basic digital skills of the population, a low digitalisation of the economy, notably with respect to the integration of digital technologies in the business sector, and a low coverage of very high-capacity fixed networks.

Figure 2: Share of RRF funds contributing to the RRF pillars: Austria, Belgium, and Germany (% total)



Source: Own elaboration, based on Commission RRF Scoreboard[20]

By contrast, Germany allocates the largest share of the resources for the digitalisation of the public administration as well as the digitalisation of education and businesses. Indeed, the German Public Administration suffered from a slow implementation of the digitalisation of services and open data. Moreover, Germany performs below the EU average with respect to DESI indicator (European Commission, 2020) on the integration of digital technology. Similarly, Belgium allocates its digital spending mostly in the public administration, as well as in the education and the deployment of advanced

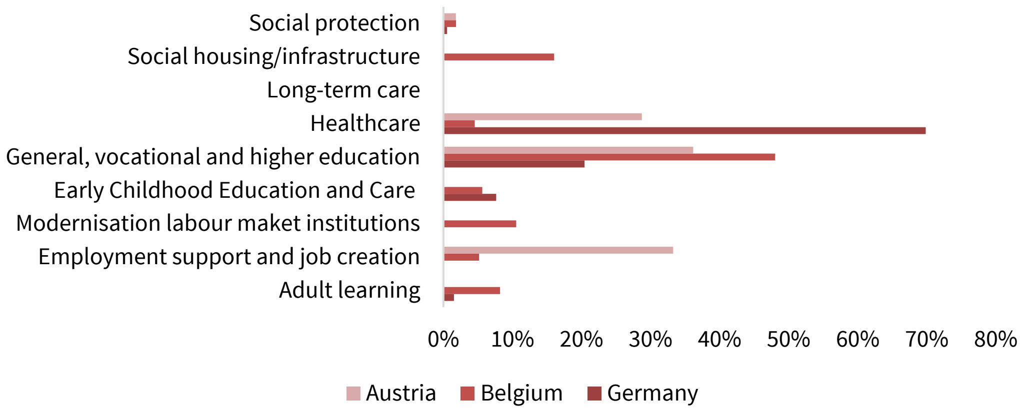
[20] The classification has been carried out using: i) the intervention field used by the Commission in the annex of the SWD: Analysis of the Recovery and Resilience Plan for each country, which refers to Annexes VI and VII of the RRF Regulation (methodology for climate and digital monitoring) to define the climate and digital coefficients of the measures included in the plan; and ii) own identification of their correspondence with the categories included by the Commission in the RRF Scoreboard.

technologies. Indeed, even though Belgium is among the best positioned in the DESI (European Commission's Digital Economy and Society Index), various problems remain, notably low level of digital skills among young people, the provision of e-government services to citizens, and the use of open data.

With respect to the green transition objective, all Member States allocate the largest share of the resources to sustainable mobility and energy efficiency. Significant investments are also planned to support research and innovation, and development, especially in Belgium and Germany, while Austria allocates a significant share of its green spending to renewable energy. In this respect, before the crisis, Austrian greenhouse gas emissions were above the 2019 EU average and not on track to achieve the 2030 GHG emissions target. The same is true for the energy and resource efficiency target (Bertoldi et al., 2020). Germany faced various challenges to increase the share of renewable energies, notably in electricity, heating and cooling, and transport as well as to meet the energy efficiency targets, which makes the measures adopted and the accompanying law fit for purpose. Such challenges are only partially addressed in the investments included in the plan, as they are mainly focused on the use of hydrogen energy to decarbonise the system, on sustainable transport through the renovation of public and private means of transport and on the renovation of private buildings to make them climate friendly, while no relevant reforms are proposed in this respect.

With respect to the social objectives, about 30% of total investments in the German and Belgian recovery plans will target social issues, while Austria allocates around 18% of its RRF resources to it. Figure 3 below illustrates the social spending priority in each country under study. Austria evenly distributes its spending for general education (36%), employment support and job creation measures (33%), and healthcare (29%). Belgium, conversely, allocates most of its expenditure to general education (48%), social housing (16%), and modernisation of the labour market institutions (11%). Germany concentrates the largest share (70%) of its spending on the healthcare system, and the remaining mostly on general education (20%).

Figure 3: Breakdown of social spending under RRF per policy area



Source: Own elaboration based on the Commission Delegated Regulation.

In terms of reforms, Germany and Austria do not address all the challenges identified in the country report. For instance, the German plan does not intervene to reduce disincentives to work, foster affordable housing, reduce staff shortages in hospitals (especially nurses), remove barriers to entry in the regulated market, reduce teachers' shortages, closing territorial gaps in access to childcare and increasing the number of pupils enrolled in VET programmes. Similarly, Austria does not intervene to address the challenges in the low participation in early childhood education and care, as well as gender employment gap and rising (regional) inequalities. By contrast, Belgium includes various interventions to address the social needs and challenges identified in the country report. Various interventions are included in the plan, intended to strengthen the effectiveness of active labour market policies, in particular for the low-skilled, older workers and people with a migrant background, and address skills mismatches. Tables 2-4 in the Appendix provide an overview of CSRs that are (not) being addressed according to our assessment.

3.2 Additionality of public investments

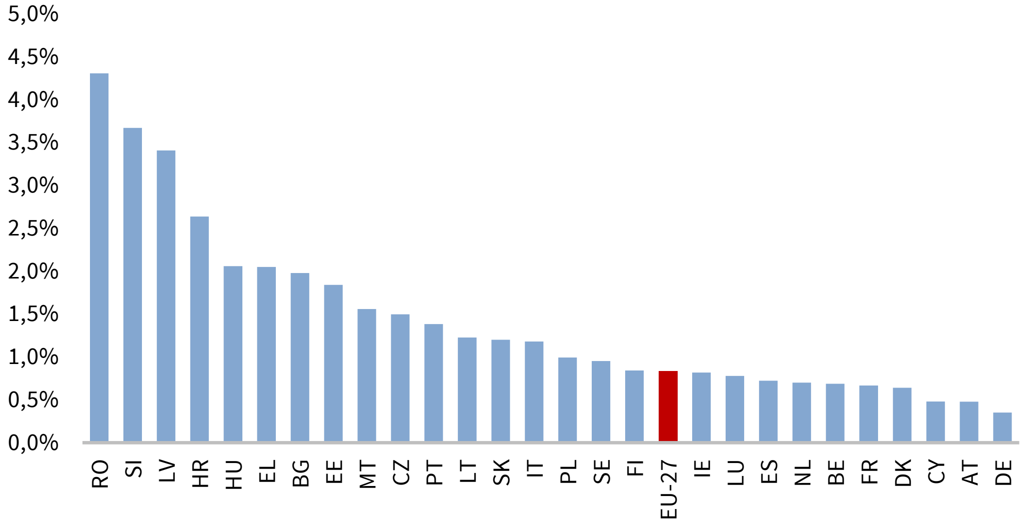
3.2.1 Macro-level

Before delving into the macro-level analysis described under section 2.3.1, it is important to put the size of the additional RRF stimulus into perspective. According to the recent Autumn 2021 Commission forecasts, the EU aggregate public investment-to-GDP ratio is projected to increase from 3% of GDP in 2019 to 3.5% in 2023.[21] Almost all Member States are expected to spend more on public investment than they did before the pandemic. The expected increase in the level of public investment in 2022 in the EU is equal to 0.8% of GDP, 26% higher than the pre-pandemic levels of public investments.

[21] Such forecast does not reflect the consequences of the Ukrainian crisis.

The increase varies significantly across Member States, with the largest change registered in Bulgaria (+57%), Croatia (+56%), Greece (+73%), Italy (+47%), Portugal (+70%), Romania (+122%) and Slovenia (+94%). Germany, Austria and Belgium are expected to increase the level of public investment by 13%, 14% and 24%, equal respectively to 0.4%, 0.5% and 0.7% of the GDP (see Figure 4).

Figure 4: Expected increase in (planned) general government GFCF as % of GDP in 2022 compared to 2019

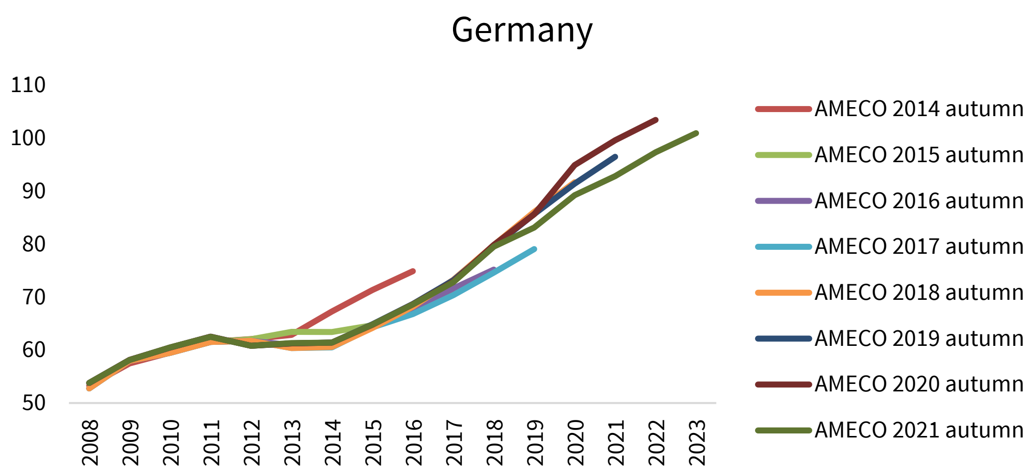


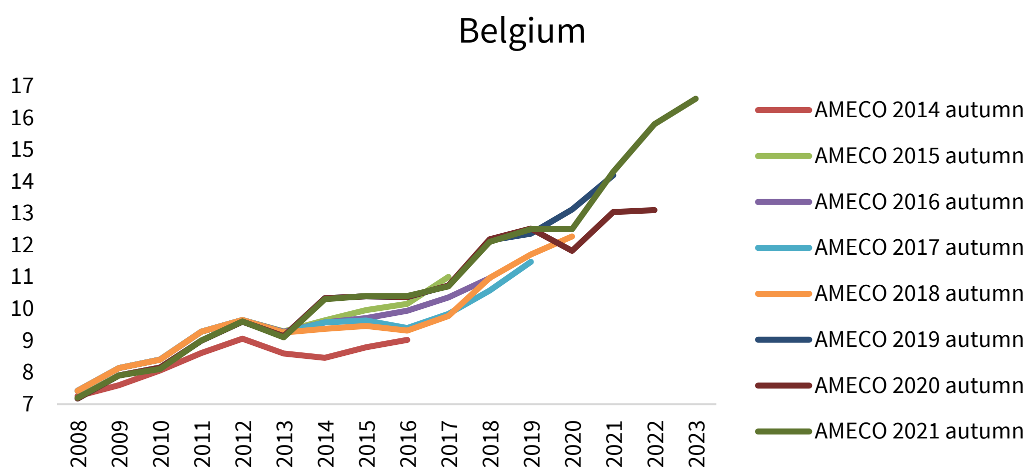
Source: AMECO

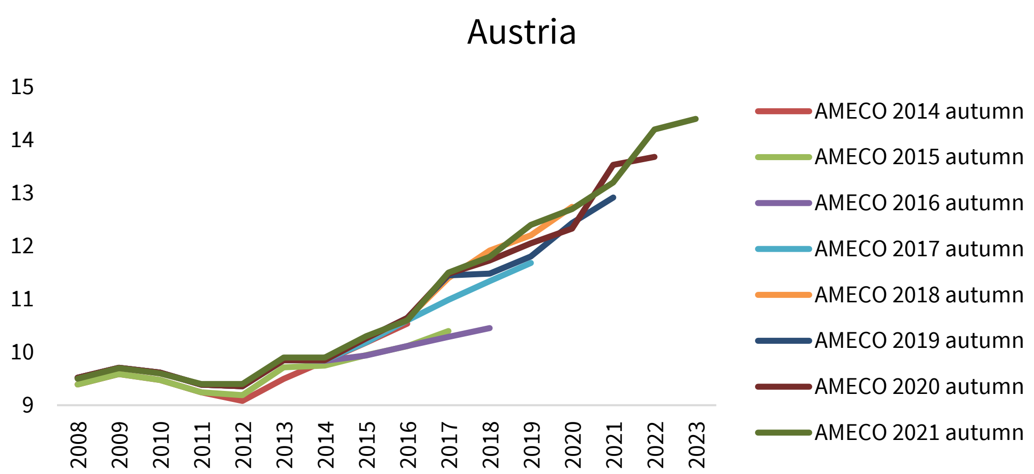
In this sense, one could argue that the overall strategy has been a success. Contrary to what happened after the last financial crisis, public investment is now increasing. However, for the time being the figures budgeted for 2022 (and 2023) remain just plans. This raises the question of how likely it is that these plans will be executed. A second issue is whether the increase in public investment effort is linked to the support of the RRF.

We addressed the first question by looking at the track record of the three countries under investigation in implementing the planned future increases in public investment by comparing past plans with subsequent realisations. Figure 5 below illustrates this by showing the expenditure on GFCF by general government as recorded in the different vintages of the annual macroeconomic database (AMECO) of the Commission published in autumn of each year.

Figure 5: Comparison GFCF forecasts over time (2014-2021)





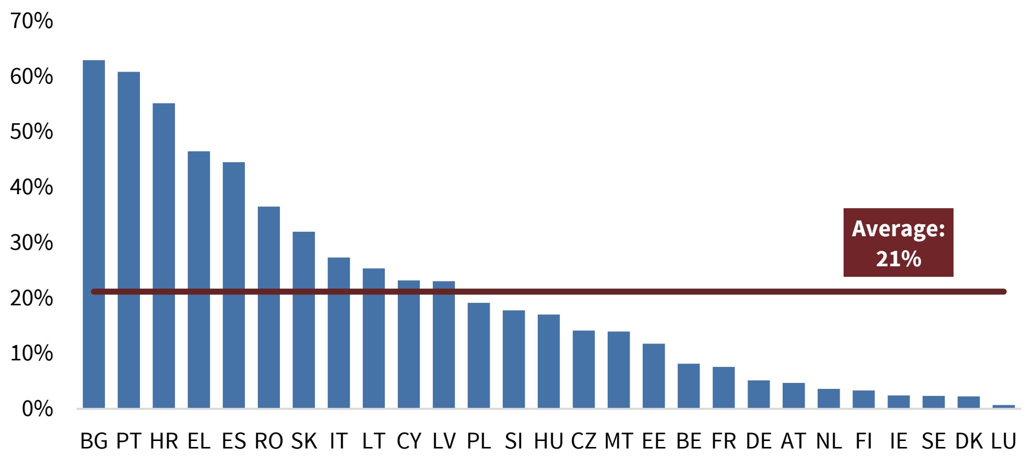


Source: own calculations from different vintages of AMECO

The main conclusion from this comparison of plans and outcomes is that there is always some difference between plans and outcome, but there is no persistent bias of underperformance. Moreover, the figures also show that public investment already increased considerably before the pandemic, but now one finds an unprecedented acceleration.

We now turn to the second question, whether one can establish a cross country link between RRF funding and the increase in public sector investment (planned). To understand this, a first step is to compare the (average) annual RRF grants with the share of investments (i.e., GFCF) in the GDP of EU national economies. Unsurprisingly, the outcome of this exercise exhibits wildly different results across Member States. As shown in Figure 6, RRF money translates into negligible support for investments in several countries, while it represents a whopping 64% of Bulgarian GFCF.

Figure 6: Share of annual RRF grants in investment



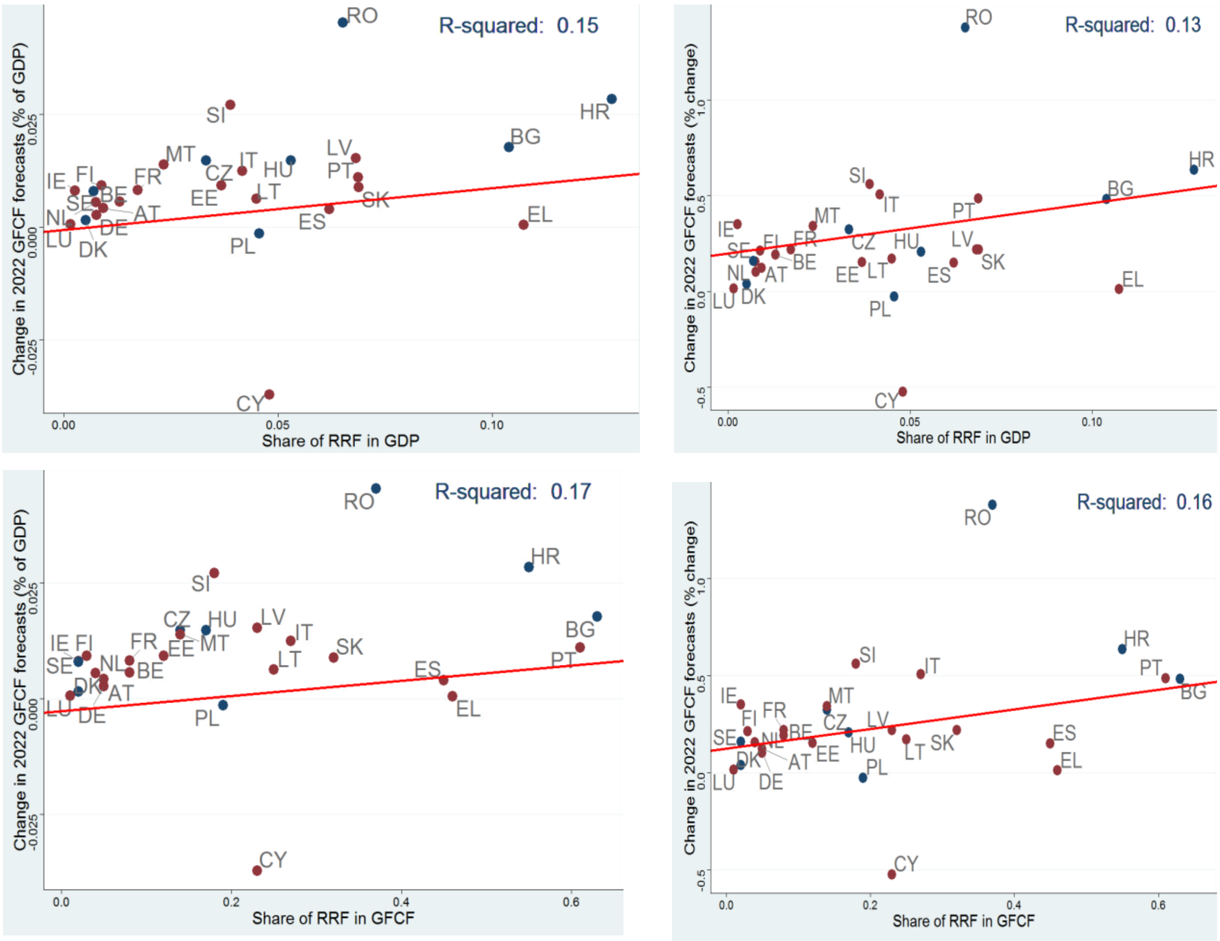
Source: Own elaboration based on Eurostat and European Commission data.

The expectation based on these figures – ceteris paribus – would be that EU countries with a higher RRF grant as percentage of GDP would see higher levels of acceleration of public investment as a result of the RRF.

Figure 7 shows a lack of correlation between the size of RRF (both as a share of GDP and as investment) and the acceleration in investments as measured by the differences between the 2019 and 2021 forecasts of public investments. Some of the countries receiving relatively large RRF allocations, such as Portugal, Croatia, or Italy, are estimated to accelerate the rate of their public investments compared to the 2019 baseline. However, there is no acceleration in investments discernible in other countries, for instance in Poland or Cyprus which also benefit from considerable RRF injections. Their estimated change in investments is virtually zero, or even negative. The analysis shows that the relative size of RRF allocations explains only a small percentage

(13-17%, depending on the exact variables used) of the variation in the acceleration of investments compared to the pre-crisis forecast of public investment spending. These results give a first indication that RRF grants are at least partly used by EU Member States to replace national investment spending.

Figure 7: Graphical outputs of the four regression models for public investments

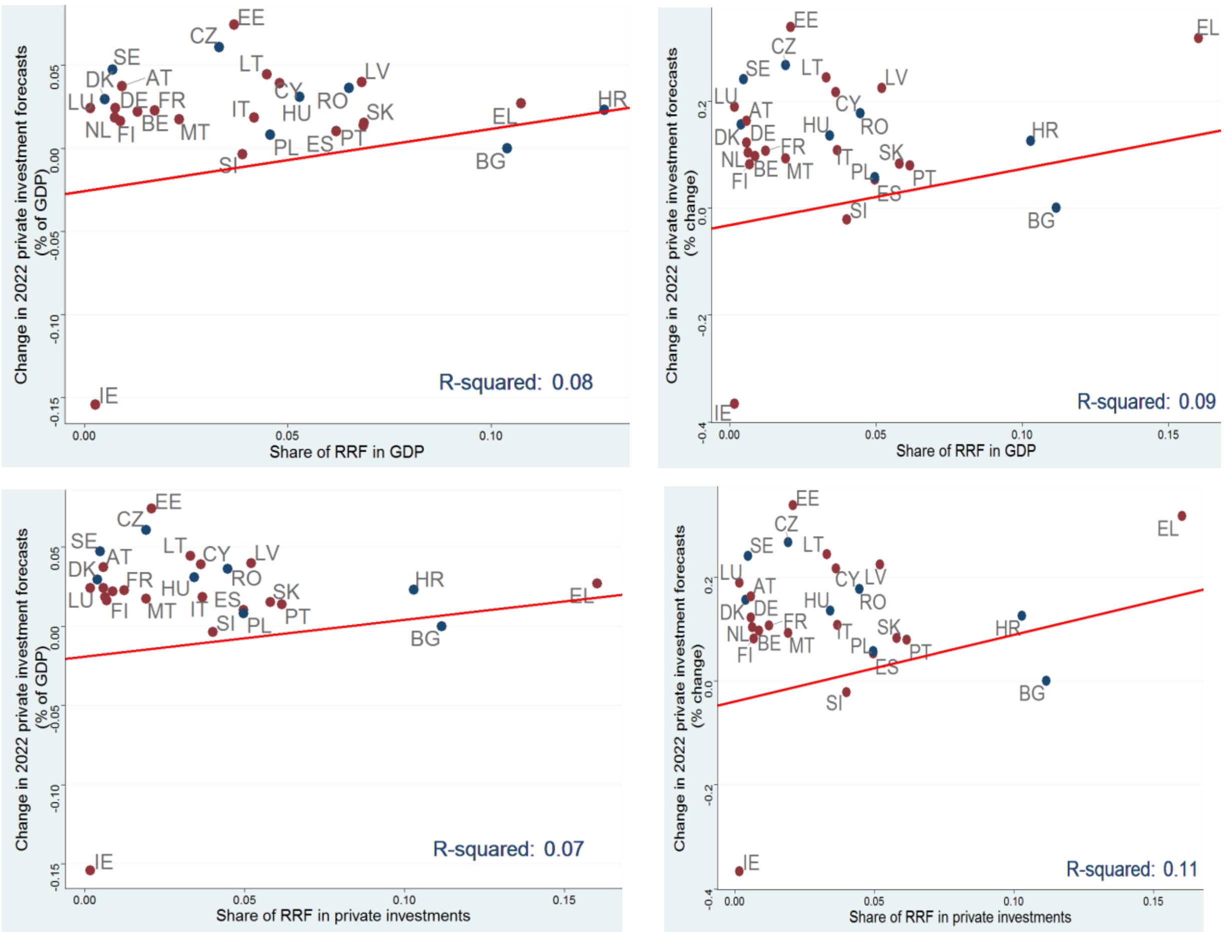


Graphical presentation of the four models: Models 1 and 2 have the share of RRF in GDP as explanatory variables (on the X axis) while Models 3 and 4 use the share of RRF in GFCF. Different colours mark eurozone and non-eurozone countries.

The lack of clearly discernible impacts might also be attributed to the diverse nature of needs in EU countries, as well as differences in investment gaps. Corti et al. (2021, 2022) argue that in the case of Central and Eastern Member States, they still suffer from infrastructure underdevelopment. By contrast, in the case of Southern Member States like Italy and Spain, it might be the need for structural reforms which hinders the efficient use of already existing (and often high-quality) infrastructure.

Figure 8 shows however that the explanatory power of RRF funding on the changes observed between the two forecasts (once again 2019 and 2021) for 2022 private investments is even lower than in the case of public investments. The two independent variables explain between 7 to 11 percent of the variation, and none of the models are significant at any conventional level. This remains true even if some clear outliers are removed (e.g., Ireland or Greece).

Figure 8: Graphical outputs of the four regression models for private investments



Graphical presentation of the four models: Models 5 and 6 have the share of RRF in GDP as explanatory variables (on the X axis), while Models 7 and 8 use the share of RRF in private investments Different colours mark eurozone and non-eurozone countries.

The investments included in NRRPs concern primarily the public sector. Nonetheless, private players play a critical role in the implementation of the plans. Therefore, RRF funds could theoretically act as a catalyst for an increase in private investments.[22] The results show that there are many factors at play in national economies that – despite

[22] Note that RRF funds can also be used for human capital investment, which is not captured by any statistical measure of public or private investment. This would imply that we underestimate the effect of RRF funds on private investment. However, human capital investment is marginal in the plans under consideration.

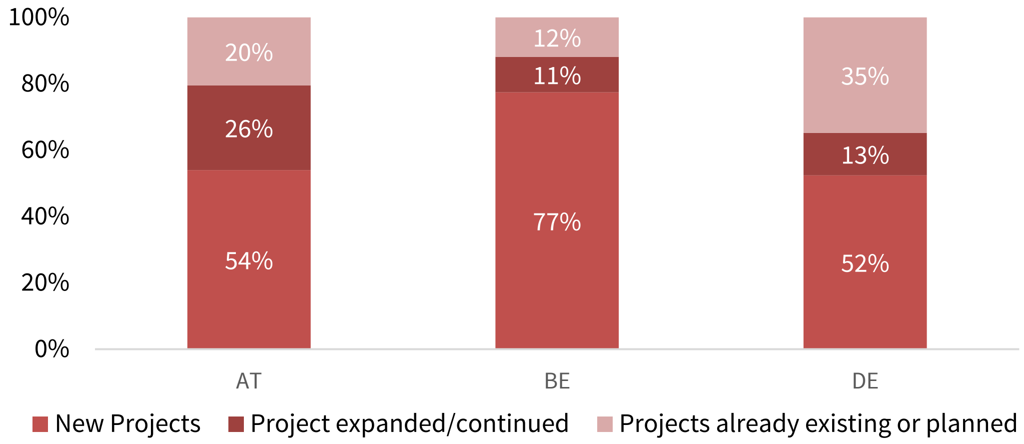
their considerable size – affect private investment levels far more than the availability of additional RRF funds.

3.2.2 Micro-level

While the macro-level analysis presented in the previous section indicates that EU Member States use the RRF allocations to partly substitute already planned national investment spending, this section takes a bottom-up approach and investigates the investment projects contained in the NRRPs of Austria, Belgium and Germany with respect to their additionality. Applying the methodology described in section 2.3.2, the outcome reached for the countries examined in this study varies considerably, implying an altogether different approach towards NRRPs across Member States. As shown in Figure 9, Belgium exhibits the highest share of new projects, with over three quarters of the NRRP investment volume allocated to projects classified as new and thus additional, while 11% was already budgeted and 12% is either a continuation or an extension of already existing projects. Conversely, projects already planned make up 35% of the German investment volume and 20% of the Austrian. 26% of the Austrian investments and 13% of the German investments are a continuation or an extension of an already existing project. In both countries, only half of the planned investments under the RRF are completely new.[23] Concerning Germany, the government constructed a Corona stimulus package (Konjunkturprogramm 2020) just before developing the NRRP. 12 out of the 40 RRF investment projects were part of this package and are thus not classified as additional. However, as the interviews revealed, this broad alignment stemmed from the time restriction given to create the RRF plan, as the stimulus package investments were already agreed within the budget and in consensus with the ministries. Moreover, some of the adopted stimulus package investments were increased in investment volume or substance, or extended in their timeframe. It is also worth noting that, as observed above, both Austria and Belgium will likely receive less funds than outlined in the plans. The interviews revealed that (at least in Austria) the difference will be financed by national funds. Hence, our figures might understate the positive impact of the actually allocated RRF funds on additional investment.

[23] The classification of the Austrian plan is particularly challenging due to a new government taking office in January 2020. Including the government program in the assessment leads to a substantially lower level of additionality (Dammerer et al. 2021), while the Austrian Budget Office finds a higher level (Budgetdienst 2021). Our assessment is between both classifications but closer to the Austrian Budget Office. The difference to the Austrian Budget Office arises from the classification of a project related to broadband expansion. The project is a prolongation of a previous broadband expansion program. It is difficult to assess if the RRF led to additional investment in this program, but following our methodology, we classify it as non-additional, while the Budget Office considers it additional.

Figure 9: Expected increase in (planned) general government GFCF as % of GDP in 2022 compared to 2019



Source: Own elaboration, based on NRRPs and stability and reform programmes (2020).

The results of the micro-analysis confirm our conclusions drawn from the macro analysis: the RRF money is fungible, and Member States can use it to finance projects either already planned or to extend the existing ones. As argued in Gros (2020), fungibility does not imply that the RRF is worthless but that its overall macroeconomic benefits cannot be measured by the additionality criterion studied in this report; rather, the additional fiscal space it creates for Member States. As put by Rana and Koch (2019) and Dijkstra and Whyte (2013): '*Aid does not pay for the item it is accounted for but for the marginal expenditure it makes possible*'.

This said, as we have also argued in Corti et al. (2021, 2022), caveats must be made regarding the interpretation of these results. They relate partly to the definition of additionality applied here, which is a relatively 'strict' one. By conducting semi-structured interviews, we were able to compare our interpretation with the experiences of Member State representatives responsible for drafting the plans.

First, planned investments could have been put on hold due to fiscal constraints – a likely scenario in a recession. This possibility has also been confirmed by the representatives of the Member States. Moreover, anecdotal evidence suggested that some of these projects have already featured in recurring government strategic documents and were rolled over from one year to the other. However, considering the structural nature of most non-additional investments, it is unlikely that their financial support would have been stopped in the absence of RRF funding. For example, Germany continues its financial support for electric vehicle purchases, which has been in place since 2015 and was extended in December 2020, as well as the financial support for energy-efficient renovation of residential buildings, established in 2019. Similarly, Austria continues to financially support the replacement of fossil fuel heating systems with biomass-based systems or heat pumps. The continuation of this programme was already announced before the RRF. These projects reflect long-term commitments and would have likely continued without RRF funding.

Second, the analysis does not (cannot) capture ‘incremental’ additionality: the scope of a project in a NRRP does not necessarily coincide with the version included in previous documents. The availability of additional funding might have led to the inclusion of new objectives and increased coverage. The representatives from the Member States have also stressed this possibility. For Austria – for example – it was a goal to substantially increase the scope of any project that was continued or expanded through RRF funding. As stated above, the representative of Germany stressed that some investments adopted from the stimulus package would have been implemented in smaller scope in the absence of the RRF. Hence, it is important to consider the funds spent on the continuation and expansion of existing projects as an intermediate category as done in this study. In some cases, they were mostly additional, in other cases, they might not have been. For the discussion on additionality, it is nonetheless important to consider why the original scope did not encompass the amendments made thanks to RRF funding.

Third, governments only had a short period to design and submit their RRF plans. As stressed by all our interviewees in the Member States, the time limit often impeded the inclusion of new investment projects. Planning and executing periods, indeed, can take years and therefore the time constraints imposed forced governments to focus on projects that had already reached a more advanced stage. Hence, Member States relied on existing programmes as blueprints for their plans. Time constraints might play a larger role in the countries covered in this report. Countries commonly at the receiving end of structural funds – such as East-Central or Southern Member States – can potentially be expected to be better prepared than others, which proportionately benefit far less from cohesion policy funding, such as Germany or Austria. For instance, new projects already in the ‘EU pipeline’ (projects not approved for spending at the national level) could have been included in the new RRF plan.

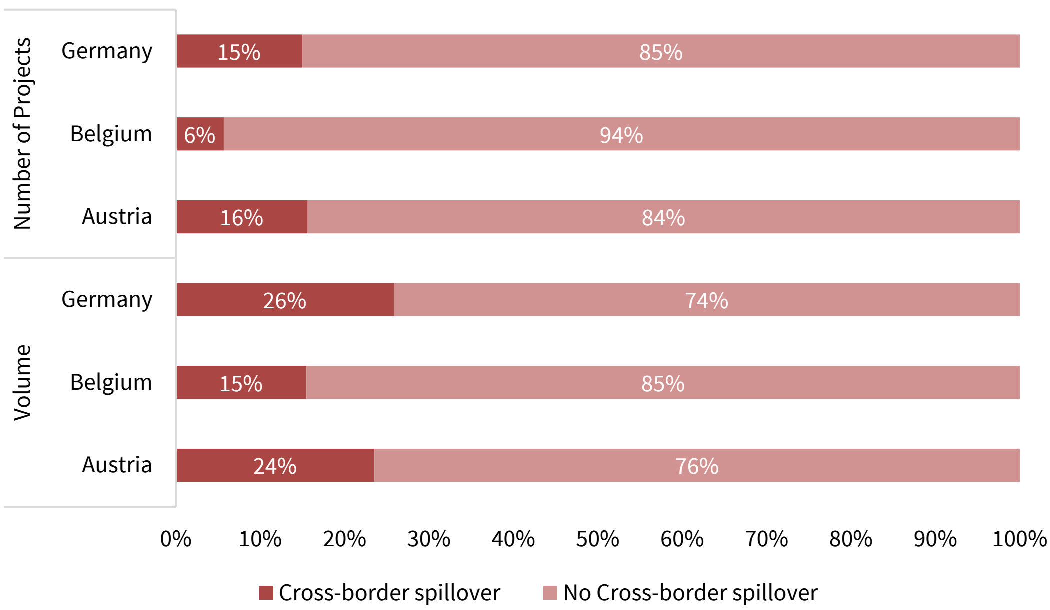
Finally, the countries covered in this study received a relatively small RRF funding compared to their GDP or total government spending. Our interviews revealed that this has also led to relatively little political interest in the NRRPs, notably in Austria and Germany. Hence, there were no politicians pushing for the inclusion of large, new projects. This might also explain the inclusion of existing and smaller-scale projects. On the other hand, our interviewees also mentioned that the requirement to include reforms and the political pressure of the Commission on this, led to the incorporation of new reforms into the plans, while – as stressed by the Commission itself – as long as the investments were eligible, it was deemed as not important if they were new or not.

3.3 Cross-country projects and spill-over effects

3.3.1 Share and volume of projects with spill-over effects

As outlined in section 2.4, we consider cross-border projects and projects contributing to freedom of movement or deepening of the single market as projects having the potential of spill-over effects. The results are summarised in Figure 10, which shows the cross-border impact of the German, Belgian, and Austrian plan. The German plan allocates about 26% of the RRF available volume to such projects. About 24% of the total volume of the Austrian plan is used for projects with substantial spill-over effects. Belgium has the lowest share, with 15% of the volume of the plan classified as likely leading to spill-over effects.[24]

Figure 10: Share of projects and volume used for projects with spill-over effects



Our analysis reveals that the investment projects with spill-over effects fall into three broad categories. First, measures contributing to the "important project of common European interest" (IPCEI) framework. IPCEIs are transnational funding projects from several members of the EU aimed at creating cross-border supply chains. Second, projects focused on improving cross-border bureaucracy. Third, projects that contribute to European goals such as freedom of movement or the development of the single market.

[24] The European Commission (2022) assesses that among all Member States, about 37 measures are relevant to green multi-country or cross-border projects, covering a total amount of more than EUR 271 billion.

All plans include funding for IPCEI projects focused on hydrogen. Both the Austrian and the German plan include additional funding for an IPCEI project on microelectronics. Furthermore, Germany also funds an IPCEI project on cloud Infrastructure and services. For Germany, the IPCEIs represent the most important cross-border projects. These projects started as a Franco-German initiative and other interested Member States joined later, implying considerable planning and coordination efforts with Member States. They also represent the cross-border project with the highest take-up. According to the European Commission (2022), 12 Member States contribute to the IPCEI project on Microelectronics, 8 to the hydrogen IPCEI and 6 to the IPCEI project on cloud Infrastructure and services.

The German plan also includes three measures that facilitate cross-border bureaucracy. First, a project that supports the development of a European identity ecosystem, available to all private and public European institutions, to establish and verify identities and personal documents online. Second, two measures that facilitate cross-border administration due to their connectivity to the European once-only principle: one project that digitalises public services and another that helps to connect the stored data from various German registers. Similarly, the Austrian plan includes one measure to digitalise public administration and bring it in line with European standards.

The largest project with spill-over effects in the Austrian plan focuses on the construction of a new railway line. It will be a part of the Baltic-Adriatic corridor in the Trans-European Transport Network (TEN-T). This will contribute to the free movement of goods and people within the EU. Similarly, the Belgian plan includes a project to modernise rail lines, for example, improving the performance of the Brussels-Luxemburg line. A project in the Belgian plan also focuses on the establishment of a green energy hub in the North Sea, improving the integration of energy networks with neighbouring countries.

The semi-structured interviews with the member state representatives have shown that there are four main reasons for the low level of cross-border projects. First, the time available to draft the plans was short and Member States struggled to finish in time. A cross-border project is even more complex and requires more time. Second, the implementation of cross-border projects is also more challenging, and it was difficult to devise projects that could have been implemented until 2026. Third, the funds available to the three countries were relatively small compared to total government spending. Hence, the focus was more on smaller, national projects instead of larger, cross-border projects. Fourth, the (cross-border) objective of the RRF was not set up clearly. There was no specific target defined for cross-border investments that the Member States should reach.

3.3.2 Missed opportunities for other cross-border projects

A key question is whether the RRF is a missed opportunity to pursue more cross-border projects and develop European public goods. On the one hand, one can argue that the governance of the RRF and the idea of NRRPs help to ensure national ownership of the projects and reforms pursued by the Member States. National ownership is important for the general acceptance of reforms and their subsequent implementation, and it has been argued that insufficient national ownership is one factor which might explain why there is often little or no progress in the implementation of country-specific recommendations as part of the European Semester (Alcidi and Gros 2019, Dolls et al. 2018).

On the other hand, a stronger role of the Commission helping Member States to coordinate and prioritise common cross-border projects would have been imaginable. A rationale for a stronger focus on cross-border projects is that these projects – like structural reforms – have the potential to create positive externalities for other Member States which are not internalised and therefore neglected by Member States acting alone (Grüner 2013, Dolls et al. 2018). In this sense, NRRPs with a stronger focus on cross-border projects could thus strengthen the European Single Market and lead to more substantive spill-over effects across countries than currently estimated (Pfeiffer et al. 2021). These spill-over effects are particularly relevant in the areas of the green transition and digitalisation. For instance, neighbouring countries benefit from investments in transport or digital infrastructure.

An additional area for coordination is the development of European public goods. Fuest and Pisani-Ferry (2019) define European public goods as "*policies and initiatives whose value to the citizens are higher when conducted at EU rather than at national level*". They propose various policy areas and initiatives, which arguably entail a European added value. A European added value arises if a policy measure entails a positive net benefit and if the net benefits of public spending at the European level are larger than those at the national level (Bertelsmann Foundation 2013). Fuest and Pisani-Ferry (2019) discuss how a European added value can be achieved in the following policy areas: 1) foreign economic relations, 2) climate change mitigation, 3) digital sovereignty, 4) research and development in large and risky projects, 5) development cooperation and financial assistance to third countries, 6) migration policy and the protection of refugees, 7) foreign policy and external representation, and 8) military procurement and defence.

Some of the investments in the NRRPs contribute to common European projects in the aforementioned categories, for instance, contributions to the Trans-European Transport Network or IPCEIs in digital technology. Even though there was no explicit coordination through the RRF, the existence of these overarching projects has led to some progress on European public goods in transportation and digital technology.

Nevertheless, we believe there have been missed opportunities for better cooperation and that some of the policy initiatives concerning the green transition and the digital transformation could have been bundled and coordinated at the European level as part of the RRF. For example, concerning the digital transformation, one could think of broadband expansion and 5G. Fuest and Pisani-Ferry (2019) discuss the need to develop and protect digital networks in Europe and propose to task a high-level group to make proposals for raising the effectiveness of European digital sovereignty, in particular in the field of cybersecurity. Cross-border initiatives in the areas of European Defence and health would have widened the scope of the RRF. The RRF could have been used to achieve the necessary mass of investment to make meaningful progress in these areas. Instead, some countries invested in those areas (e.g.: Belgium in cybersecurity), while others did not.

Our discussion of the cross-border dimension with Member State representatives suggests that without a concerted effort, progress in these areas will be slow. A more active role of the Commission in the coordination process between Member States might have helped Member States to identify (and agree on) common cross-border projects. In its guidance to Member States on how to prepare their plans, the Commission recommended Member States to invest in this kind of projects , as suggested in Art. 15(3)(cc) of the RRF regulation. Yetduring the RRPs' preparatory phase, but it didn't refer to any no explicit obligation or incentive to be fulfilled by the countries is envisaged in the regulation so the decision is left to the discretion of each country. Mandatoary quotas on a certain share of cross-border projects would have strengthened the commitment of Member States to prioritise these projects. Such quotas could have been accompanied by less strict timing requirements for (large) cross-border projects, which might take more time to develop and implement. With more coordination, larger cross-country projects could have played a bigger role and pushed forward the creation of European public goods. However, without such coordination and no explicit governance mechanism in place for cross-border projects, the NRRPs mainly consist of many smaller-scale projects focusing on national priorities. Moreover, if the objective of the RRF is to foster cross-border investments, it has to be clearly differentiated from European structural funds, which were established to finance such projects.

4 Conclusions

This paper conducts an in-depth analysis of the national recovery and resilience plans of Austria, Belgium, and Germany regarding their alignment with EU objectives, the additionality of the spending under the RRF, and their cross-border and spill-over effects. In all three countries, the largest share of the spending is addressed to projects primarily aimed at supporting the green transition and digital transformation objectives. Austria allocates 50% of the RRF grants to green projects and 38% to digital measures. The respective shares are 38%/52% (green transition) and 56%/22% (digital transformation) in Germany/Belgium.

Concerning the additionality of public investments, our macro-level analysis reveals that in the EU-27, there is no significant relationship between the share of RRF grants (in GDP or public investment) and the acceleration in public investment. The macro-level analysis hence suggests that RRF funds are at least partly used to finance existing investment projects.

Our micro-level analysis of the three recovery and resilience plans under investigation reveals that there is no clear overlap with other existing EU funding. In addition, the share of new investments projects – defined as projects planned after July 2020 when the Council agreed on NGEU – is smallest in Germany (52%) and highest in Belgium (77%). Austria ranks in the middle with 54%. Projects already planned before the creation of the RRF – but which started after 1 February 2020 so that they are eligible for funding through the RRF – make up 35% of German investment volume, 20% for Austria and 12% for Belgium. The rest of volume is dedicated to the continuation and expansion of existing projects. These projects constitute 11% of Belgian investment, 13% of German investment and 26% of Austrian investment. Our semi-structured interviews with representatives from the Member States indicate that due to time constraints with respect to the planning and executing periods, Member States, to a large extent, included existing projects in their NRRPs that had already reached a more advanced stage. This is in line with our finding of a significant share of – according to our classification – non-additional and continued investment projects. Moreover, the interviews with representatives from the European Commission confirm that the additionality criterion studied in this report, i.e., assessing whether projects were planned only after the RRF was set up, was not part of the Commission's assessment of the NRRPs.

Finally, our analysis shows that only a small share of projects has a cross-border impact. The German plan allocates about 26% of the volume to such projects, the Austrian one 24%, the Belgian only 15%. Our semi-structured interviews have revealed that the relatively small shares of cross-border projects can be explained by the governance of the RRF. The main focus of the RRF has been to support economic recovery in the EU Member States after the COVID-19 pandemic. A stronger focus on cross-border projects would have required more time for planning of cross-border projects and their implementation as well as a clear incentive mechanism for Member States to put a stronger emphasis on the cross-border dimension in their NRRPs.

Based on the findings of the analysis and the results of the semi-structured interviews, the following recommendations can be advanced:

1. To facilitate the alignment with the EU objectives, the earmarking exercise turned out to be of crucial importance to guarantee Member States' inclusion of green and digital investments. A similar approach could, in principle, be extended to other EU objectives, such as the social ones, or to incentivise cross-border projects.
2. Timing is of crucial importance both in the design and in the implementation of the plans. More time would allow Member States to identify and propose new investments and consult a larger number of stakeholders. A possible option in this respect could be changing the investments' timespan from six years to yearly. This would further allow Member States to adapt their plans to the actual needs.
3. A further complication that emerged in the drafting of the plans and that might affect the planning capacity of Member States is the change in the allocation key for the second tranche of the RRF, which increases planning uncertainty and will imply a change in the resources allocated. In this respect, the risk is that countries that cannot finance the difference with national funds might be forced to withdraw some planned projects.
4. To strengthen the creation of cross-border projects, better coordination at the EU level should be envisaged, with the Commission potentially acting as a centralised coordinator to support Member States identifying of projects with cross-border nature and with high potential positive spill-over effects.

References

Alcidi, C., Gros, D. (2017), *How to Further Strengthen the European Semester?* Provided at the request of the Economic and Monetary Affairs Committee, European Parliament, Available here.

Alcidi, C., Gros, D. and Corti, F. (2020), *Who will really benefit from the Next Generation EU funds?,* CEPS, Brussels. Available here.

Bertelsmann Foundation (2013), *The European Added Value of EU Spending: Can the EU Help its Member States to Save Money? Exploratory study,* Available here.

Budgetdienst (2021), Nationales Reformprogramm 2021 und Österreichischer Aufbau- und Resilienzplan 2020-2026. Available here.

Corti, F., Gros, D., Ruiz, T., Liscai, A., Kiss-Galfalvi, T., Gstrein, D., Herold, E. and Dolls, M. (2022), "The Recovery and Resilience Facility: A Springboard for a Renaissance of Public Investments in Europe". *Recovery and Resilience Reflection Paper No. 1,* CEPS, Brussels. Available here.

Corti, F., Gros, D., Ruiz, T., Liscai, A., Kiss-Galfalvi, T., Gstrein, D., Herold, E. and Dolls, M. (2021), "The Recovery and Resilience Facility: A Springboard for a Renaissance of Public Investments in Europe". *EconPol Policy Brief 40,* ifo Institute- Leibniz Institute for Economic Research at the University of Munich. Available here.

European Commission (2021) Staff Working Document- Guidance to Member States Recovery and Resilience Plan – Part 1 and 2. Available here.

Dammerer Q., Hehenberger A., Huber A., Muckenhuber M., Picek O., Tölgyes J. (2021), *EU–Wiederaufbauplan: Wenig wirklich Neues*. Studie 02/2021. Available here.

Del Bo, C. and Sirtori, E. (2015), 'Additionality and regional public finance – Evidence from Italy', *Environment and Planning C: Government and Policy,* Vol. 36 No 5, pp. 855-878. Available here.

Del Bo, C., Florio, M., Sirtori, E. and Vignetti, S. (2011), *Additionality and regional development: Are EU Structural Funds complements or substitutes of national public finance?,* CSIL Working Paper No. 01/2011, CSIL, Milan. Available here.

Dias, C., Grigaitė, K., Cunha, I. (2021), *Recovery and Resilience Plans - Thematic overview on cross-border projects*, In-Depth Analysis. Available here.

Dijkstra, G. and White, H. (2013), *Programme aid and development: Beyond conditionality*. Routledge. Available here.

Dolls, M., Fuest, C., Krolage, C., Neumeier, F., Stöhlker, D. (2018), *Convergence in EMU: What and How?* Provided at the Request of the Economic and Monetary Affairs Committee, European Parliament, Available here.

European Commission (2010), *Investing in Europe's future,* Fifth report on economic, social and territorial cohesion, Publication Office of the European Union, Luxembourg. Available here.

European Commission (2022), *Report From The Commission To The European Parliament And The Council on the implementation of the Recovery and Resilience Facility*, 1st March 2022, COM(2022) 75 final. Available here.

Fuest, C., and Pisani-Ferry, J. (2019), *A Primer on Developing European Public Goods*, EconPol Policy Report 16 2019. Available here.

Gros, D. (2020), *Europe and the Covid-19 crisis: The challenges ahead*, CEPS Policy Insights 11 Sep 2020. Available here.

Grüner, H. P. (2013), *The Political Economy of Structural Reform and Fiscal Consolidation Revisited*. European Economy Economic Papers 487, April 2013, Available here.

Halasz, A. (2018), Additionality of EU Funds in Central and Eastern European Countries- Recent Developments. Available here.

McAleavey, P. (1995), 'European Regional Development Fund Expenditure in the Uk: From Additionality to 'Subtractionality'', *The ERDF and additionality in the UK,* Vol. w, No 3, pp. 249-253. Available here.

Kaiser Moreiras, J. L. (2008), 'La política regional europea 2007-2013: principales novedades con respecto a 2000-2006', *Presupuesto y Gasto Público*, 52: 129-142. Available here.

Mohl, P. (2016), *Empirical Evidence on the Macroeconomics Effects of EU Cohesion Policy,* Springer Gabler, Wiesbaden. Available here.

OECD (2016), *OECD Economic Surveys: Euro Area 2016*, OECD Publishing, Paris. Available here.

Pfeiffer, P, J Varga and J in 't Veld (2021), *Quantifying Spillovers of NGEU investment*, European Economy Discussion Papers No. 144. Available here.

Rana, Z. and Koch, D.J. (2020), 'Is it time to 'decolonise' the fungibility debate?', *Third World Quarterly*, *41*(1), pp. 42-57. Available here.

Regulation (EU) 2021/241 of the European Parliament and the Council of 12 February 2021 establishing the Recovery and Resilience Facility. Available here.

Šlander, S. and Wostner, P. (2018), 'Additionality of European Cohesion Policy', *European Review,* Vol. 26, No 4, pp. 721-737. Available here.

Scharpf, W. F. (1988), 'The Joint-Decision Trap: Lessons from German federalism and European Integration', *Public Administration*, Vol. 66, No 3, pp. 239-278. Available here.

Tsemekidi-Tzeiranaki, S., Paci, D., Cuniberti, B., Economidou, M. and Bertoldi, P., *Analysis of the Annual Reports 2020 under the Energy Efficiency Directive*, EUR 30517 EN, Publications Office of the European Union, Luxembourg, 2020. Available here.

Varblane, U. (2016), 'EU Structural Funds in the Baltic Countries- Useful or Harmful?', *Estonian Discussions on Economic Policy,* Vol. 24, No 2, pp. 120-136. Available here.

Annex

Table 2: Alignment of reforms and investments with the CSRs – Austria

Austrian CSRs	Reforms own identification (component)	Investments own identification (component)	EC identification (component)
CSR 2019 (1)			
Ensure the sustainability of the health.	4A	4A	4A, 4B and 4D
Long-term care	4B	-	4A, 4B and 4D
Pension systems, including by adjusting the statutory retirement age in view of expected gains in life expectancy.	4D	-	4A, 4B and 4D (partially)
Simplify and rationalise fiscal relations and responsibilities across layers of government and align financing and spending responsibilities.	-	-	4D (partially)
CSR 2019 (2)			
Shift taxes away from labour to sources less detrimental to inclusive and sustainable growth	4D	-	4D
Support full-time employment among women, including by improving childcare services,	-	3C	3B and 4D
and boost labour market outcomes for the low skilled in continued cooperation with the social partners	3B	2B	3B, 4D and 2B
Raise the levels of basic skills for disadvantaged groups, including people with a migrant background.	3B	3B	-
CSR 2019 (3)			
Focus investment-related economic policy on research and development, innovation,	3A	3A	3A and 3D
Digitalisation,	2A, 2B, 2C, 2D and 3D	2A, 2B, 2C, 2D and 3D	2A, 2B, 2C, 2D and 3D
And sustainability, taking into account regional disparities.	1A, 1B, 1C, 1D, 3D, 4B and 4D.	1A, 1B, 1C, 1D, 3D, 4B and 4D.	1A, 1B, 1C, 1D, 3D, 4B and 4D.
Support productivity growth by stimulating digitalisation of businesses and company growth	-	2D	-
And by reducing regulatory barriers in the service sector.	2C	-	2C
CSR 2020 (1)			
In line with the general escape clause, take all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.	-	-	-

Improve the resilience of the health system by strengthening public health and primary care.	4A	4A	4A
CSR 2020 (2)			
Ensure equal access to education and increased digital learning	2B	2B	2B
CSR 2020 (3)			
Ensure an effective implementation of liquidity and support measures, in particular for small and medium-sized enterprises.	-	2D	-
and reduce administrative and regulatory burden	2C	-	2C
Front-load mature public investment projects and promote private investment to foster the economic recovery.	-	-	-
Focus investment on the green and digital transition	-	-	-
In particular on innovation, sustainable transport, clean and efficient production and use of energy	3A, 3D, 2A, 2B, 2C, 2D and 3D	3A, 3D, 2A, 2B, 2C, 2D and 3D	3A, 3D, 2A, 2B, 2C, 2D and 3D
Clean and efficient production	1A, 1B, 1C, 1D, 3D, 4B and 4D.	1A, 1B, 1C, 1D, 3D, 4B and 4D.	1A, 1B, 1C, 1D, 3D, 4B and 4D.
Use of energy	1A, 1B, 1C, 1D, 3D, 4B and 4D.	1A, 1B, 1C, 1D, 3D, 4B and 4D.	1A, 1B, 1C, 1D, 3D, 4B and 4D.
CSR 2020 (4)			
Make the tax mix more efficient and more supportive to inclusive and sustainable growth.	4D	-	4D

Source: Own elaboration and Commission staff working document Analysis of the recovery and resilience plan for Austria Accompanying the document Proposal for a Council Implementing Decision on the approval of the assessment of the recovery and resilience plan for Austria, available here.

Table 3: Alignment of reforms and investments with the CSRs – Belgium

Belgian CSRs	Reforms own identification (component)	Investments own identification (component)	EC identification (component)
CSR 2019 (1)			
Ensure that the nominal growth rate of net primary government expenditure does not exceed 1,6 % in 2020, corresponding to an annual structural adjustment of 0,6 % of GDP.	-	-	-
Use windfall gains to accelerate the reduction of the general government debt ratio.	-	-	-
Continue reforms to ensure the fiscal sustainability of the long-term care	-	-	-
and pension systems, including by limiting early exit possibilities from the labour market.	4.4	-	4.4
Improve the composition and efficiency of public spending, in particular through spending reviews,	6.1	-	6.1
and the coordination of fiscal policies by all levels of government to create room for public investment	-	-	-

CSR 2019 (2)			
Remove disincentives to work	5.1	5.1	5.1 (partially)
Strengthen the effectiveness of active labour market policies, in particular for the lowskilled, older workers and people with a migrant background.	4.2	4.2	4.2 and 5.1
Improve the performance and inclusiveness of the education and training systems	4.1	5.1	4.1
and address skills mismatches	4.1 and 5.1	4.2	4.1, 4.2 and 5.1
CSR 2019 (3)			
Focus investment-related economic policy on sustainable transport, including upgrading rail infrastructure,	3.2 and 3.3		3.1 and 3.3
the low carbon and energy transition	1.1 and 1.2	1.2	3.2 and 3.3
and research and innovation, in particular in digitalisation, taking into account regional disparities.	2.3, 5.2 and 5.3	2.3, 5.2 and 5.3	2.3, 3.2, 5.2 and C5.3
Tackle the growing mobility challenges, by reinforcing incentives and removing barriers to increase the supply and demand of collective and low emission transport.	3.2 and 3.3	3.2 and 3.3	3.2 and 3.3
CSR 2019 (4)			
Reduce the regulatory and administrative burden to incentivise entrepreneurship	2.2	2.2	2.2
and remove barriers to competition in services, particularly telecommunication, retail and professional services.	-	-	-
CSR 2020 (1)			
In line with the general escape clause, take all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery.	-	-	-
When medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.	-	-	-
Reinforce the overall resilience of the health system and ensure the supply of critical medical products.	-	2.2	-
CSR 2020 (2)			
Mitigate the employment and social impact of the crisis, notably by promoting effective active labour market measures	4.2 and 5.1	4.2 and 5.1	4.2 and 5.1
And fostering skills development.	4.2 and 5.1	4.2 and 5.1	4.1, 4.2 and 5.1
CSR 2020 (3)			
Ensure effective implementation of the measures to provide liquidity to assist small and medium-sized enterprises and the self-employed and improve the business environment.	-	-	-
Front-load mature public investment projects and promote private investment to foster the economic recovery.	-	-	-

Focus investment on the green and digital transition, in particular on	-	-	-
infrastructure for sustainable transport,	3.1 and 3.3	3.1 and 3.3	3.1 and 3.3
clean and efficient production and use of energy	1.1 and 1.2	1.1 and 1.2	1.1, 1.2, 1.3, 3.1, 3.2, 3.3 and 5.2
, digital infrastructure, such as 5G and Gigabit Networks	2.3	2.3	2.3
, and research and innovation.	2.3, 5.2 and 5.3	2.3, 5.2 and 5.3	2.3, 3.2, 5.2 and C5.3

Source: Own elaboration and Commission staff working document Analysis of the recovery and resilience plan of Belgium Accompanying the document Proposal for a COUNCIL IMPLEMENTING DECISION on the approval of the assessment of the recovery and resilience plan for Belgium, available here.

Table 4: Alignment of reforms and investments with the CSRs – Germany

German CSRs	Reforms own identification (component)	Investments own identification (component)	EC identification (component)
CSR 2019 (1)			
While respecting the medium-term budgetary objective, use fiscal and structural policies to achieve a sustained upward trend in private and public investment, in particular at regional and municipal level.	6.2	-	6.2
Focus investment-related economic policy on education	4.1	3.1	3.1 and 4.1
Research and innovation	2.1	-	2.1
Digitalisation and very-high capacity broadband	-	2.1	2.1, 2.2, 3.1, 5.1 and 6.1
Sustainable transport	1.2		1.1, 1.2 and 6.2
As well as energy networks	-	1.1, 1.2 and 1.3	1.1, 1.2 and 1.3
Affordable housing, taking into account regional disparities	-	-	1.3 and 6.2 (partially)
Shift taxes away from labour to sources less detrimental to inclusive and sustainable growth	4.1	-	4.1
Strenghten competition in business services and regulated professions	-	-	-
CSR 2019 (2)			
Reduce disincentives to work more hours	-	-	4.1
including the high tax wedge, in particular for low- wage [earners]	-	-	4.1
Second earners	-	-	4.1
Take measures to safeguard the long-term sustainability of the pension system, while preserving adequacy.	4.1	-	4.1
Strengthen the conditions that support higher wage growth, while respecting the role of the social partners.	4.1	-	3.1 and 4.1 (partially)
Improve educational outcomes and skills levels of disadvantaged groups.	3.1	4.1	3.1 and 4.1
CSR 2020 (1)			

In line with the general escape clause, take all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery.	-	-	-
When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment. Mobilise adequate resources and strengthen the resilience of the health system, including by deploying eHealth services.	5.1	-	5.1
CSR 2020 (2)			
Front-load mature public investment projects	-	-	-
Promote private investment to foster the economic recovery. Focus investment on the green and digital transition	6.2	-	6.2
sustainable transport	6.2	-	1.1, 1.2 and 6.2
Clean, efficient and integrated energy systems	-	1,1, 1,2 and 1,3	1,1, 1,2 and 1,3
Digital infrastructures and skills	-	2.1, 2.2, 3.1, 5.1 and 6.1	2.1, 2.2, 3.1, 5.1 and 6.1
Housing	-	-	1.3 and 6.2 (partially)
Education	3.1 and 4.1	3.1 and 4.1	3.1 and 4.1
Research and innovation	2.1	-	2.1
Improve digital public services across all levels	6.1	-	6.1
Foster the digitalisation in small and medium-sized enterprises.	-	2.1, 2.2, 3.1, 5.1 and 6.1	2.1, 2.2, 3.1, 5.1 and 6.1
Reduce the regulatory and administrative burden for businesses.	6.1	-	6.1

Source: Own elaboration and Commission staff working document Analysis of the recovery and resilience plan of Germany Accompanying the document Proposal for a COUNCIL IMPLEMENTING DECISION on the approval of the assessment of the recovery and resilience plan for Germany, available here.

List of Figures

List of Tables

Authors of this Issue

Francesco Corti

Francesco Corti is an Associate Research Fellow at CEPS, Adjunct Professor at the University of Milan where he teaches Economic and social governance of the EU, and Research Fellow at the European University Institute (EUI). He is expert in European social and employment policies, EU budget, EMU governance and Social InvestmentCorti holds a Ph.D. in Political Science from the University of Milan.

Contact: francesco.corti@ceps.eu

Daniel Gros

Daniel Gros serves as advisor to the European Parliament and was a member of the advisory scientific committee of the European Systemic Risk Board and the Euro 50 Group of eminent economists. From 2000 to 2020 Daniel has been the Director of CEPS. His main areas of expertise are the European monetary union, macroeconomic policy, public finance, banking, and financial markets. Gros holds a PhD in economics from the University of Chicago.

Contact: danielg@ceps.eu

Tomás Ruiz

Tomás Ruiz De La Ossa is a Research Assistant at the Economic Policy Unit at CEPS. He was part, inter alia, of the CEPS team conducting an assessment on the Recovery and Resilience Plans of Italy, Germany, Spain, France, Portugal, and Slovakia. Ruiz holds a Law degree from the University of Murcia and a Master’s degree in European Advanced Studies from the European College of Parma.

Contact: tomas.ruiz@ceps.eu

Alessandro Liscai

Alessandro Liscai is an Associate Research Assistant at CEPS.

Contact: alessandro.liscai@ceps.eu

Authors of this Issue

Tamas Kiss-Galfalvi

Tamás Kiss-Gálfalvi is a Researcher at CEPS. His focuses is on policy evaluations and better regulation. He has worked on several EU cohesion policy-related studies. Prior to joining CEPS, he was an economic and policy research consultant at Ecorys. Kiss-Galfalvi has an MSc in International Public Policy from University College London (UCL) and an MA in History from Eötvös Loránd University, Budapest.

Contact: tamas.kiss-galfalvi@ceps.eu

David Gstrein

David Gstrein is a doctoral student at the ifo Research Group for Taxation and Fiscal Policy and LMU Munich. His research interests are in empirical public economics with a focus on individual and business taxation. Before joining ifo he studied at the University of Innsbruck, Tilburg University and LMU Munich.

Contact: gstrein@ifo.de

Elena Herold

Elena Herold is a doctoral student at the ifo Research Group for Taxation and Fiscal Policy and LMU Munich. Her research focus is public economics and inequality studies, particularly gender economics. Prior to her doctoral studies, she worked as an intern for UN ESCAP and as a research assistant for CES. She received her MSc in Economics from the LMU Munich.

Contact: herold@ifo.de

Mathias Dolls

Mathias Dolls is Senior Economist and Deputy Director of the ifo Center for Macroeconomics and Surveys. He is Research Fellow at CESifo and at IZA Bonn, and Research Associate at ZEW Mannheim. His main area of research is public economics, with reference to taxation, social insurance, redistribution and inequality. Dolls got his Ph.D. in Economics from the University of Cologne in 2012.

Contact: dolls@ifo.de

Authors of this Issue

Clemens Fuest

Clemens Fuest is President of the ifo Institute, Director of the Center for Economic Studies (CES) and Professor for Economics and Public Finance at the Ludwig Maximilian University of Munich. His research areas are economic and fiscal policy, international taxation, taxation and transfers and European Integration. Before he was appointed ifo President in April 2016, Fuest was President of the Centre for European Economic Research (ZEW) in Mannheim and Professor at the Universities of Mannheim, Oxford and Cologne.

Contact: fuest@ifo.de