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Recovery and Resilience Plans in Belgium, Germany, France, Italy and Spain

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ABSTRACT

This article analyses the Recovery and Resilience Plans submitted by the four big euro area countries (Germany, France, Italy and Spain) and Belgium. These Plans describe the investments and reforms that they intend to carry out with a view to strengthening their economies. As required, the five countries considered will use the EU grants mainly to finance green and digital investment. Italy, Spain and France also intend to spend about 1/3 of the grants on other projects such as labour market, education and skills; R&D and innovation; cohesion; health;... In exchange for a higher share of grants, Italy and Spain have committed to more comprehensive reforms designed to effectively address their imbalances and structural weaknesses than Germany, France and Belgium. Italy and Spain have already implemented substantial reforms in 2021 before the first instalment of grants was requested. Others will follow as soon as in 2022. Going forward, actual implementation will be key. In Belgium, the EU grants should be an opportunity to help push through structural reforms supporting the green and digital transitions and enhancing the growth potential.

The Next Generation EU (NGEU) Recovery Plan adopted by the European Council and Parliament in 2020 provided a forceful response to the common and exogenous shock of the pandemic. As COVID-19 affected more some vulnerable economies and countries dependent on certain services such as travel and tourism, the support offered to the Member States from the Recovery and Resilience Facility – the main instrument of NGEU – took partly the form of grants on top of favourable loans.

Another form of solidarity was to be found in the allocation criteria of the Recovery and Resilience Facility (RRF) grants as they included the initial vulnerability (unemployment rate before the pandemic) and the economic loss in GDP caused by COVID-19. This allowed Italy and Spain to benefit from more RRF and NGEU funds than Germany, France and Belgium. Belgium was expected to receive only €5.9 billion (1.2 % of GDP) from the RRF and probably even less once the GDP figures for 2020 and 2021 will be set in the spring of 2022 as we illustrated in an article published in the previous edition of the *Revue Bancaire et Financière* (Bisciari *et al.*, 2022).

In exchange for RRF grants and loans, all countries had to submit National Recovery and Resilience Plans (NRRPs) describing the investment and reforms that they intended to carry out with a view to strengthening their economies both in the short term and in the medium and long run.

As a small open economy, Belgian GDP might benefit more from the spillover from the NRRPs implemented in the four main euro area countries (Germany, France, Italy and Spain) than from its own NRRP (Bisciari *et al.*, 2022). These five countries are also expected to receive more than half of the total amount of RFF grants and loans. The success of the NGEU therefore depends to a substantial extent on the content and implementation of the NRRPs of these countries, and in particular on those of Italy and Spain.

In this article, we present and compare the main reforms and investment of the NRRPs of Belgium, Germany, France, Italy and Spain. To this end, we highlight the main results found in an article (Bisciari *et al.*, 2021) published in November 2021 in the Economic Review of the National Bank of Belgium.
This article is organised as follows. In a first section, we describe the Belgian NRRP both in terms of expenditure and reforms, distinguishing what is undertaken by the federal government, the Flemish government and the other governments. In the second section, we briefly review the methodology for the comparison of the five countries under review, looking at expenditure in section 3 and at reforms in section 4. Section 5 concludes.

1. Belgium's Recovery and Resilience Plan

Belgium submitted its National Recovery and Resilience Plan (NRRP) on 30 April 2021 (Secretary of State for Economic Recovery and Strategic Investments, 2021) and it was the fruit of successful cooperation between the federal and regional governments. Belgium has not applied for the RRF loans and the RRF grants allocated to Belgium amount to maximum €5.9 billion. That amount has been distributed among government entities - Federal State, Flemish Community and other Communities and Regions (French and German-speaking Communities and Walloon and Brussels-Capital Regions) - as a result of political negotiations in the Concertation Committee. The expenditure financed by the RRF and included in the Belgian NRRP fits into a broader national recovery strategy, pursued at the federal and regional levels of government[1]. In this article, we will however focus on the NRRP. Ecofin adopted the Council Implementing Decisions on the approval of the national recovery and resilience plans of Belgium and 11 other countries on 13 July 2021 (Ecofin, 2021).

According to the official text of the Plan, the NRRP wants to accelerate Belgium's transition to more sustainable, smarter and more inclusive growth, while strengthening social, economic and climate resilience. It also supports the objective of raising public investment, by helping to make up for the structural gap in

[1] The Federal Plan for growth and transition, the Flemish *Plan Vlaamse Veerkracht* and the *Plan de relance* in Wallonia are worth citing among the most important elements.

public investment. The proposed measures in the Plan largely focus on climate objectives and the digital transition of the Belgian economy.

The Plan is structured around six strategic axes. Each axis has several components, 17 in all, which themselves contain different measures, consisting of investment projects and structural reforms. Expenditure is presented in a first subsection and reforms in a second subsection. A short assessment follows in subsection 1.3.

1.1. Expenditure

Based on the anticipated timing of the proposed measures, the planned expenditure under Belgium's NRRP can be divided over the calendar years 2021-2026. The Plan is front-loaded with most of the spending scheduled for the first four years.

The RRF grants can be spent either by the federal or the regional governments. In accordance with the distribution of the grants among the different government entities, most of the spending is expected from the Flemish Community (38 %), followed by the Walloon Region (25 %) and the Federal State (21 %). Projects by the Brussels-Capital Region, the French Community and the German-speaking Community make up the rest of the expenditure.

Table 1 gives a breakdown of the Belgian National Recovery and Resilience Plan both in terms of axis and components and in terms of the government entity in charge of its implementation. The allocation of spending by each different government is a political choice.

The first axis, **Climate, sustainability and innovation**, is the most important, representing over €2 billion, more than one-third of total expenditure under the NRRP. It aims to speed up the transition to a decarbonised, sustainable and climate-resilient economy. The first and the most important component proposes a renovation programme focused on improving the energy and resource efficiency of existing buildings, almost entirely at the regional level. This includes public and residential buildings. The spending is much higher in the Walloon and Brussels-Capital Region and the French and German-speaking Communities taken together than in the Flemish Community. A second component relates to measures concerning technological developments to support the energy transition and system integration to further reduce CO_2 emissions, with emphasis on industrial sectors. For this component, the planned spending is highest for the Federal State and includes, amongst other things, promotion of innovative hydrogen technologies, the construction of an offshore energy hub and a network for H_2 and CO_2 transport. Finally, the "climate and environment" component aims at conserving and restoring biodiversity, while strengthening adaptability and resilience to climate change. Environment is a regional matter and here the bulk of spending is situated in Flanders and focuses on the so-called Blue Deal, which seeks to improve water management and infrastructure in times of water scarcity and drought.

The second axis relates to **Digital transformation**. A first component, which is very limited in size and exclusively at federal level, aims to make Belgium more resilient to the risk of cyber threats. A second (and the most important) component aims to use digital technologies to make action at all levels of government more efficient, both in internal processes and interaction with citizens and businesses. Most of the spending is foreseen at the federal level and encompasses such initiatives as a digital platform for interaction between the social security authorities and citizens, as well as digital transformation at the Department of Justice. Finally, a third component is mainly targeted at improving connectivity by continuing the development of very high-speed fibre optic networks, but also developing 5G corridors that enable universal and affordable access to connectivity in urban and rural areas. This component also seeks to benefit from the development of new technologies, such as artificial intelligence, by ensuring that they have a positive social impact through tackling societal challenges like health and well-being, environment, mobility and energy. This kind of infrastructure spending is mainly in the Walloon Region where connectivity of schools and business parks is being improved.

Table 1 - The Belgian National Recovery and Resilience Plan is structured around six strategic axes
(in € million)

Axes	Components [1]	Planned expenditure			
		Total	Federal state	Flemish community	Other communities and regions [2]
1. Climate, sustainability and innovation	Total	2 020	256	783	981
	1.1 Renovation of buildings	1 012	11	298	703
	1.2 Emerging energy technologies	608	245	169	194
	1.3 Climate and environment	400	0	316	84
2. Digital transformation	Total	763	396	121	246
	2.1 Cyber security	79	79	0	0
	2.2 Public administration	585	318	121	146
	2.3 Optic fibre, 5G and new technologies	100	0	0	100
3. Mobility	Total	1 292	428	468	396
	3.1 Cycling and walking infrastructure	411	32	345	34
	3.2 Modal shift	672	365	0	307
	3.3 Greening road transport	209	32	122	55
4. Social and living together	Total	834	45	422	367
	4.1 Education 2.0	442	0	372	70
	4.2 Training and employment of vulnerable groups	165	45	50	70
	4.3 Social infrastructure	227	0	0	227
5. Economy of the future and productivity	Total	1 008	124	453	431
	5.1 Training and labour market	371	0	118	252
	5.2 Supporting economic activity	439	95	280	64
	5.3 Circular economy	198	29	55	114
6. Public finances	Total	8	0	8	0
	6.1 Spending reviews	8	0	8	0
Total RRP		5 925	1 250	2 255	2 420

Sources: Belgian National Recovery and Resilience Plan, own calculations.
1 Only components with an indicated expenditure in the Plan are mentioned.
2 Walloon Region, French Community, Brussels-Capital Region, German-speaking Community.

Mobility is the second most important axis of the Plan, representing almost €1.3 billion, more than 20 % of the total amount. It has the intention to improve mobility and better connect Belgian regions, while ensuring a modal shift in transport which benefits both the environment and the citizens. The first component of this axis focuses on the development of cycling and walking infrastructure, with most expenditure in Flanders. The second and most important component of this axis stimulates a modal shift in transport mainly by improving public transport services. EU grants will be used amongst others by the Federal State to invest in rail infrastructure and by the Walloon government to extend a tramway network in Liège and metro lines in Charleroi. For freight transport too, major works will be funded to support the modal shift from road to water and rail. The last component aims to accelerate the transition towards greener, mainly electric road transport by providing more electric buses for public transport (Flemish Community and Brussels-Capital Region) and accelerate the development of charging infrastructure (Federal State and Flemish Community).

A fourth axis, **Social and living together**, focuses on strengthening the social cohesion and at the same time ensuring effective and inclusive education systems by integrating the most vulnerable groups. A first component aims at making education systems more inclusive and at the same time improve their performance to ensure that the competences taught are better in line with those in demand in the labour market. The Flemish Community allocates more RRF grants towards developing digital skills than the other Regions and Communities. In particular, the so-called *Digisprong* intends to provide schools with digital instruments and tools and support them with the digitalisation of their teaching programmes. Under the second component, the social and labour market participation of so-called vulnerable groups (low-skilled, women, people with an immigrant background, people with disabilities, youngsters, prisoners, people with a risk of digital exclusion) is financed mostly in the Brussels-Capital Region by the NRRP. The proposed project aims to remove barriers to employment and strengthen activation policies and to improve performance and the inclusiveness of the support and training systems. The third component in this axis contains projects in the Walloon Region providing infrastructure for vulnerable groups. This concerns new social housing and the creation and renovation of childcare capacity.

The fifth axis, **Economy of the future and productivity**, contains measures to strengthen the foundations of the economy for smart and sustainable growth. A first component aims to boost the employment rate and at the same time ensure an inclusive labour market. The proposed, exclusively regional, measures are focused on the acquisition of skills relevant to current and future labour market needs. Most of the measures are proposed by the Walloon government and include setting up a centre for digital and technological innovation and education and the upgrading of leading-edge training infrastructure integrating techniques based on simulation and virtualisation. A second component will support research and innovation. In this regard, different federal and regional measures are proposed, the most important of which are a boost for R&D in Flanders (with special focus on digitalisation, sustainability and health) and the relocation of food and logistics platforms in Wallonia to promote the establishment of an agri-food system based on a short chain and the relocation of food production. The last component contains mainly regional measures that contribute to the development of a circular and low-carbon economy, most notably in Wallonia.

The last axis, Public finances, is limited to the financing of the spending review in the Flemish Community.

1.2. Reforms

This section gives a systematic overview of the reforms proposed in Belgium's NRRP based on the CSRs for the years 2019 and 2020 (EC, 2019; EC, 2020a)[2].

The first CSR for the year 2019 relates to **public finances**, in particular the budget path, evaluation of expenditure and coordination of fiscal policies at different levels of government. The NRRP commits to introduce the structural use of spending reviews at different government levels[3].

The same CSR also mentions the need for further reforms to ensure the fiscal sustainability of long-term care and pension systems, not least by limiting early labour market exit possibilities. An envisaged but still to be decided end of career and pension reform at federal level seeks to guarantee the financial sustainability of the social security and the public finances and to improve the adequacy and social fairness of the pension system. To achieve financial sustainability, authorities plan to achieve an employment rate of 80 %, which seems rather ambitious. The focus will be on retaining older workers on the labour market. Different measures are being considered to contribute to this objective, such as introduction of part-time pensions, introduction of a pension bonus and more investment in life-long learning[4].

The second CSR (for the years 2019 and 2020) deals with three aspects of the **labour market**: to remove disincentives to work, 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. Different reform proposals to address these recommendations are included in the NRRP under the training and employment of vulnerable groups, end of career and pensions and training and labour market components. Other proposed reforms concern measures to promote lifelong learning, to improve coaching for the unemployed and to counter discrimination in the labour market. The second CSR for the year 2019 also focuses on the performance and inclusiveness of education and training systems. Reforms under the component Education 2.0 are targeted on raising ICT literacy in education, better matching of education and demand in the corporate sector and reducing school drop-out rates.

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[2] Although also investment projects address the CSRs, this section is limited to the impact of the reforms. The 2020 country-specific recommendations related to support measures and liquidity assistance to combat the COVID-19 crisis are also not considered in this article.

[3] This elaborates on the experience with projects on expenditure control that had already been carried out in previous years, like a project for optimising public sector spending and improving the efficiency of public services at federal level and the targeted spending review in the service voucher sector in Flanders.

[4] The increase of the minimum pension, the increase in the wage or income ceiling taken into consideration for the calculation of the pension and the abolishment of the correction coefficient for the calculation of the pensions of independent workers has already been agreed upon in the first stage of the reform.

Table 2 - Proposed reforms in the NRRP and country challenges identified in the 2019 and 2020 country specific recommendations for Belgium

Country specific recommendation (CSR)	Proposed reform in the RRP	Axis / Component	Federal state	Flemish community	Other regions and communities[1]
Public finances / Fiscal sustainability of long-term care and pension systems (CSR #1 of 2019)					
	End of career and pensions	4.4	×	–	–
	Spending Reviews	6.1	×	×	FWB, RBC, WAL
Labour market / Education (CSR #2 of 2019 and 2020)					
	Digisprong	4.1	–	×	–
	Higher Education Advancement Fund	4.1	–	×	–
	Fight against school dropout	4.1	–	–	FWB
	Fight against discrimination in the labour market	4.2	×	–	–
	Skills qualification strategy	4.2	–	–	RBC
	More inclusive labour market	4.2	–	×	–
	Cumulative regime and mobility towards sectors with shortages	5.1	×	–	–
	Tax reform on labour[2]	5.1	×	–	–
	Learning account	5.1	×	–	–
	Training and labour market	5.1	–	×	–
	Support scheme for job seekers	5.1	–	–	WAL
Investment (CSR #3 of 2019 and 2020)					
	Improved energy subsidy scheme	1.1	–	×	GER, RBC
	Regulatory framework for H_2 and CO_2 markets	1.2	×	×	RBC, WAL
	Fiscal reform of fossil fuels[2]	1.2	×	–	–
	Introduction of 5G – National plan	2.3	×	–	–
	Performance contracts Infrabel / SNCB	3.2	×	–	–
	Mobility budget	3.2	×	–	–
	Zero-emission company cars	3.3	×	–	–
	Recharging infrastructure	3.3	–	–	RBC
	Durable mobility	3.3	–	–	WAL
	Stimulating zero-emission transport	3.3	–	×	–
	New approach on emission fraud	3.3	–	×	–
	Broadening Innovation Base	5.2	–	×	–
	Regional strategy for economic transition	5.3	–	–	RBC
	Governance Circular Flanders	5.3	–	×	–
Business climate (CSR#4 of 2019 and CSR #3 of 2020)					
	Simplification of administrative procedures: e-government for enterprises	2.2	×	–	–
	e-government: tendering procedure	2.2	×	–	–
	Faster permit and appeal processes	5.2	–	×	–

Sources: EC (2021b), Belgian National Recovery and Resilience Plan.

[1] Walloon Region (WAL), French Community (FWB), Brussels Capital Region (RBC) and German speaking community (GER).

[2] There are no milestones and targets for this reform.

The third CSR for the year 2020 recommends that Belgium front-loads mature **public** investment projects **and** promotes **private investment**. Investment should focus on the green and digital transition, in particular on infrastructure for sustainable transport, clean and efficient production and use of energy, digital infrastructure, such as 5G and gigabit networks, and research and innovation. This aligns mostly with the preferred investment domains in the third CSR for the year 2019. These recommendations are targeted by different reforms under the following components: renovation of buildings, emerging energy technologies, optic fibre, 5G & new technology, modal shift, greening road transport, supporting economic activity and circular economy. The reforms aim to improve energy subsidy schemes, make federal fiscality more climate friendly, promote further the mobility budget as an alternative for company cars and emission-free transport, promote the circular economy and remove obstacles to the introduction of 5G and a better internet accessibility.

The fourth CSR of the year 2019 and part of the third recommendation of the year 2020 are targeted at improving the **business climate**. More specifically, they intend to reduce the regulatory and administrative burden to encourage entrepreneurship and remove barriers to competition in services, particularly telecommunication, retail and professional services. Reforms under the public administration and supporting economic activity components aim to address this recommendation by simplifying administrative procedures through the digital transformation of government services and accelerating different procedures for enterprises and citizens.

1.3. Preliminary assessment

A Federal Planning Bureau's study (Federal Planning Bureau, 2021) on the macroeconomic impact of the RRF expenditure[5] concluded that the economic activity would be on average 0.14 % of real GDP higher over the period 2021-2026 than in a baseline scenario without a Recovery Plan, with a maximum impact of 0.21 % in 2022. This rather limited impact is found to be even lower than that estimated by the EC (Pfeiffer et al., 2021) as the FPB did not consider the spillover effects from the NRRPs of the other EU Member States[6].

The European Commission concluded in its assessment of the Plan that "taking into consideration all investments and reforms envisaged by Belgium, its Recovery and Resilience Plan represents to a large extent a comprehensive and adequately balanced response to the economic and social situation" (EC, 2021b). However, it also felt that the Plan could have been more ambitious in several areas and that the proposed reforms often lack detail.

[5] The economic impact of the structural reforms and of any possible interaction between these reforms and investments is neglected in both the FPB and EC studies.

[6] Other factors explain why the Commission found a higher economic impact of the NRRP than the FPB (2021). First, the Commission considers all expenditure as investments while FPB has used the expected economic breakdown of the spending, with 88 % of the NRRP's expenditure directly intended to increase the capital stock through public investment and aid to private investment. Second, the FPB has only considered the RRF while the Commission has also included the non-RRF items of the NGEU (such as React-EU, …).

2. Comparison with the other National Recovery and Resilience Plans

In this section, we explain the main assumptions made for our comparison of the National Recovery and Resilience Plans of Germany, France, Italy, Spain and Belgium. The comparison covers the contents of the Plans as accepted by the EC in June 2021 and endorsed by the (Ecofin) Council in July.

Taking the amounts set out in the recovery plans as approved by Ecofin implies that the grant figures are assumed to correspond to those set provisionally in the Autumn 2020.

Also, in our comparison, no consideration is taken of spending outside the NRRP under (separate) national recovery plans[7] or investment plans. In reality, Germany, France and Belgium and, to a lesser extent, Italy have devoted more own resources to recovery or investment plans than they have received in grants under the RRF.

- the German National Recovery and Resilience Plan (worth around €25 billion) finances part of the €50 billion "Future Package" (*Zukunftspaket*) which is itself part of a fiscal stimulus of €130 billion announced in June 2020.
- the France Relance programme unveiled in September 2020 officially involved some €100 billion and only €40 billion of that was financed by RRF grants.
- In Belgium, the regional governments have also planned substantial additional expenditure for recovery outside of the NRRP as their recovery plans are only financed partially by the RRF. The most important are the Recovery Plan of €7.6 billion initiated by the Walloon government, which is financed by the RRF only for an amount of €1.48 billion, and the Flemish government's €4.3 billion *Plan Vlaamse Veerkracht*, which is financed to the tune of €2.255 billion by the RRF.

On 12 October 2021, the French government (Gouvernement français, 2021b) announced the France 2030 investment plan: with its budget of €30 billion until 2025, it will back up *France Relance* and target further investment most notably in the energy sector, as well as the health and transport sectors. In Germany, the traffic-light coalition is envisaging an additional climate and digital investment plan (climate and transformation fund). In Belgium, the federal government has given its stamp of approval in October to a recovery and investment plan proposed by the State Secretary for Economic Recovery and Strategic Investments. In addition to the federal investment under the Belgian NRRP, this plan includes €328 million worth of federal-government-level investment already added in April 2021 plus another one billion worth of investment added through Belgium's plan for growth and transition in October 2021[8].

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7 The first report from the France Relance plan's assessment committee in October 2021 gives a comparison of the German, French, Italian, Spanish and UK national recovery plans in the broad sense (i.e. going beyond just the NRRPs).

8 Like in the NRRP, the supplementary federal projects mainly concern renovation of buildings, emerging technologies (hydrogen and offshore solar power), digitalisation of the public sector, cyber security, connection to 5G in underserved "white areas" and development of 6G, rail transport, reinforcing scientific research, as well as various initiatives under inclusion policies.

In the same vein, in Italy, the global recovery plan has a budget of €235 billion, but RRF funding accounts for €191 billion (including €69 billion in grants) and React-EU, another programme under the NGEU Recovery Plan, also rings in €13.5 billion. The Italian government has nevertheless planned to top all this up with national resources to the tune of €30 billion via a supplementary investment fund. In the 2022 budget, it has injected an additional fiscal stimulus of €30 billion, in the form of tax cuts, public investment and social spending.

Likewise, as far as the reforms are concerned, this article sticks to those set out in the milestones and targets in the Council Implementing Decisions for individual NRRPs, putting more emphasis on the milestones than the targets. Milestones consist of legislative, decree, regulatory measures or reform elements, while targets tend to represent quantified objectives in terms of results to be achieved.

Structural reforms could have been implemented before the NRRPs were adopted or can still be freely implemented by governments over the 2021-2026 period without having to be included in the milestones. Some governments have actually preferred to not be seen imposing any constraints in terms of schedules for sensitive reforms such as pension reform. This was most notably the case with the German government as it did not want to reveal anything about this type of reform, with the NRRP due to be approved by the Ecofin Council in July, too close to the general election scheduled for September.

3. Expenditure

3.1. Overview

Capital expenditure dominates in the National Recovery and Resilience Plans (NRRPs) of the five countries considered (AIReF, 2021; FPB, 2021). These expenditures comprise both public investment and transfers to the private sector (firms and households). Some current expenditure is however also part of the NRRPs.

All NRRPs are required to allocate at least 37 % to climate and 20 % to digital spending[9]. The EC's assessment shows that all countries meet those targets, sometimes spending substantially more than required on these issues (chart 1).

Belgium is allocating the highest share of RRF funds to **climate expenditure** (50 %), followed by France (46 %). Italy, in contrast, only just reaches its target with 37.5 % of climate spending. However, in countries for which the NRRP is only a small part of their overall recovery plan, like Germany and France, the share of climate spending in their NRRP overstates the actual share in their overall national recovery plans[10]. Indeed, these could easily allocate most of their climate spending to their NRRP and finance other types of spending themselves.

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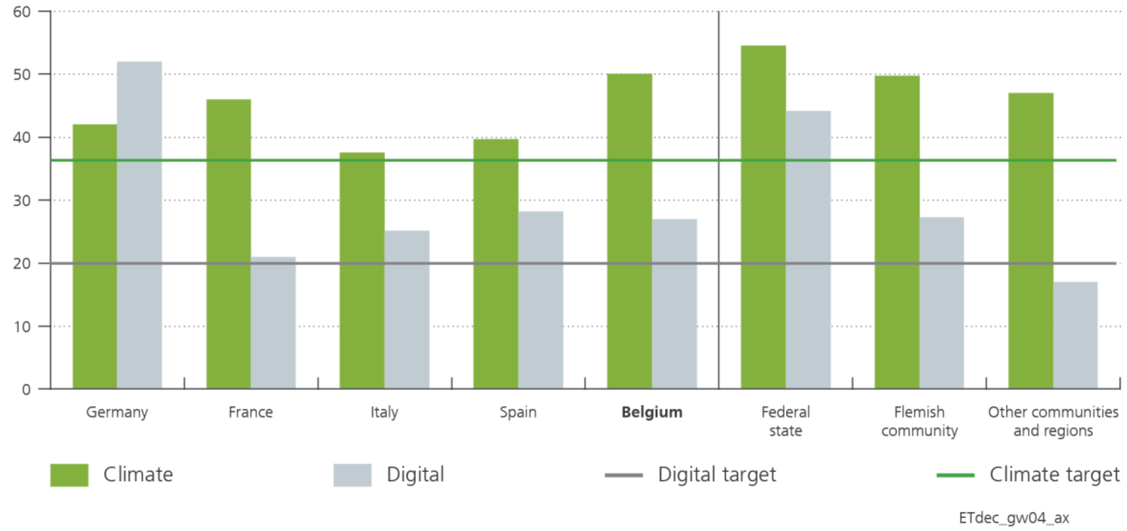
[9] The target only concerns spending on climate mitigation and adaptation. Below, we also discuss other aspects of the green transition. To calculate the share of climate and digital spending, the EC labels each investment as fully (100 %) or partially (40 %) climate or digital (Mahieu, 2021).

[10] The Green Recovery Tracker (2021) analyses the share of climate spending for the full recovery plans. Using a methodology similar to the EC's, but stricter in terms of classifying expenditure as "climate", it comes up with the following shares: France (19 %, against 29 % in the NRRP) and Germany (21 %, against 38 % in the NRRP).

The same caveat applies for the share of **digital expenditure** when comparing countries for which the NRPP is only a small part of their overall recovery plan with countries where the RRF finances most of their recovery plan. Keeping this in mind, the share of digital expenditure also differs between countries. In Germany, digitalisation (52 %) is the main objective financed in the NRRP. It is the sole Member State for which digital expenditure exceeds climate expenditure. Additional investment in digitalisation is warranted as Germany scores barely above the EU average in the Digital Economy and Society Index (EC, 2020c), lower than might be expected given its level of national income. In Belgium, the digital target is met by both the Federal and the Flemish governments but not by the other Communities and Regions considered as a whole.

In Italy, Spain and France, about one-third of RRF grants and loans go towards financing **other expenditure** which is neither green nor digital[11]. In Italy and Spain, the RRF grants and loans fund most of the recovery plan, which needs to be used to cover a wide set of priorities.

Chart 1 - The five countries considered have planned to allocate more than 37 % of their RRF grants (and loans) to climate spending and more than 20 % to digital spending



Sources: Ecofin (2021b), EC (2021b), own calculations.
"Other communities and regions" comprise the Walloon Region, French Community, Brussels-Capital Region and German-speaking Community.

[11] In the EC's assessment, climate and digital are not necessarily mutually exclusive. An investment can be counted, for example, as 100 % climate and 40 % digital. Nonetheless, this kind of overlap is rare and the share of "other spending" is close to the amount of non-digital and non-green spending.

Below, we analyse in detail what constitutes green, digital and other spending in these countries' plans. On the surface, the plans look similar since they all focus on the green and digital transition. However, within these topics, they sometimes focus on different issues, or on different approaches to address those issues. For these comparisons, we will rely on a classification of expenditure published by Bruegel (Darvas *et al.*, 2021)[12], which provides a detailed picture of what constitutes this green and digital spending.

3.2. Green transition

On top of climate change, green spending includes topics such as biodiversity and clean water and air. All countries spend most of the RRF grants (and loans) for the green transition on similar broad categories – mobility, energy and energy efficiency – but with significant differences in their approaches (chart 2).

Sustainable mobility is the most important green expenditure in all countries, ranging from 35 % (France) to 50 % (Germany) of overall green spending. This covers mostly into high-speed trains (40 %), electric mobility (33 %) and public transport (23 %)[13], albeit with differences between countries. In Italy, most mobility expenditure goes towards the development of high-speed rail lines. Germany and Spain, on the other hand, prioritise electric mobility. Belgium and France favour a variety of measures supporting public transport and soft mobility. In Belgium, the Federal State invests most in trains, Flanders in cycling infrastructure and Wallonia in other forms of public transport (tram, bus and metro).

Energy efficiency is the second most important category of green spending for all countries except Germany. Its share ranges from around 20 % of green spending for Germany, Italy and Spain to around 30 % for Belgium and France. Reaching the 2030 targets on energy efficiency of buildings will be a challenge, especially in Belgium. Indeed, Belgium will need to increase its annual rate of renovation of public and private buildings from 0.5 % to 3 % to reach its 2030 emissions reduction target (EC 2021b).

The approach to improve energy efficiency in buildings differs between countries. In Italy, for example, most of this spending will be devoted to tax deductions ("Ecobonus") to encourage energy improvements in private homes. in Wallonia and Brussels, funding goes mostly towards renovation of social housing and public buildings.

Energy is the third main category of green spending, with a share of around 20 % in the different countries, ranging from 10 % in France to 28 % in Germany. 78 % of his funding goes into renewable energy and hydrogen and 22 % into electricity grids. All countries devote funding to the development of hydrogen, which includes projects for the production, transport and use of hydrogen in hard-to-abate sectors. In Germany, most energy projects are hydrogen related. With respect to renewable energy, Belgium and France were two out of only three EU countries that were at a "severe risk" of failing to meet their targets for 2020 (EC, 2020b).

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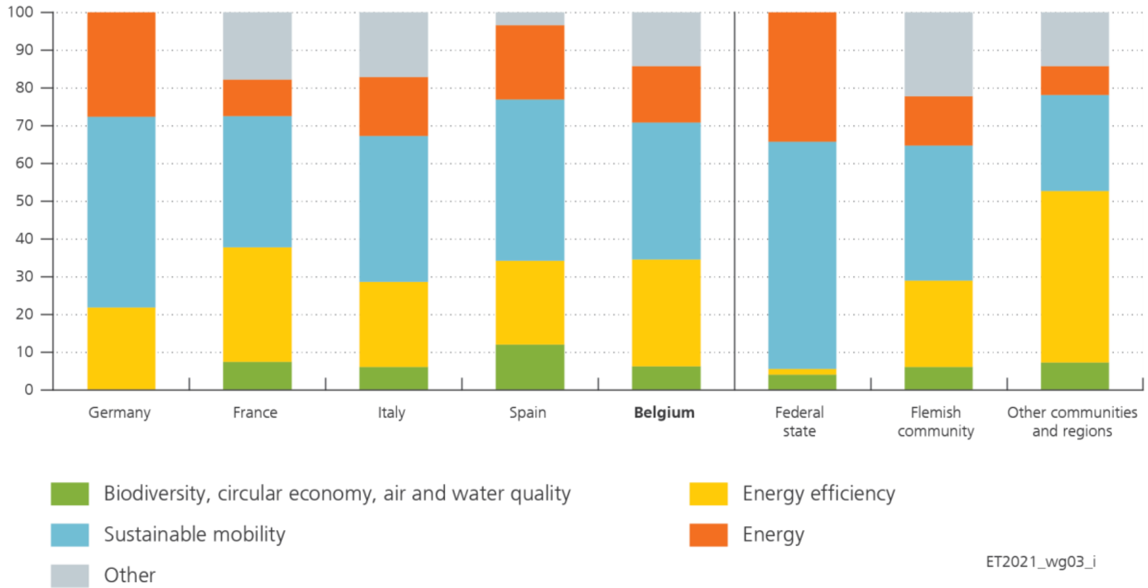
[12] Darvas *et al.* (2021) allocate to each spending item a "primary classification" which corresponds to its most important field of intervention. For example, the primary classification for a climate intervention with a digital component would be climate (and it would also receive a secondary classification as digital). We will use the primary classification of expenditure.

[13] Throughout this section, such overall shares of spending on categories refer to non-weighted shares of spending in the five countries considered.

Nonetheless, they also invest more RRF funds in the development of (green) hydrogen than in the expansion of renewables, though the Belgian plan does include support for offshore wind and networks for renewable heat.

Chart 2 - Breakdown of green spending in National Recovery and Resilience Plans
(share of green spending)

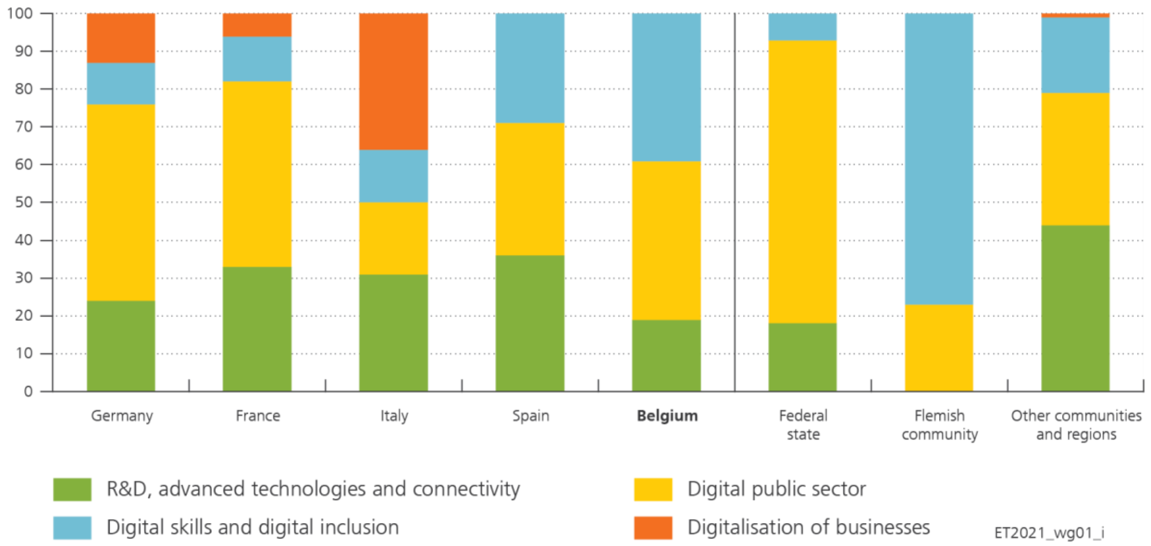


Sources: Darvas *et al.* (2021), Belgian National Recovery and Resilience Plan, own calculations.
The “Energy” category consists of hydrogen, renewable energy sources and electricity grids. The “Other” category covers climate change adaptation projects, green tech innovation and sustainable agriculture. “Other communities and regions” comprise the Walloon Region, French Community, Brussels-Capital Region and German-speaking Community.

3.3. Digital transition

Digital spending in the five countries covers four topics: digital public sector (31 %); digitalisation of business (22 %); digital skills and inclusion (16 %); and R&D, advanced technologies and connectivity (30 %). However, the different countries focus on different topics (chart 3).

Chart 3 - Breakdown of digital spending in National Recovery and Resilience Plans
(share of digital spending)



Sources: Darvas *et al.* (2021), Belgian National Recovery and Resilience Plan, own calculations.
The "R&D, advanced technologies and connectivity" category comprises "Digital-related investment in R&D", "Investment in digital capacities and deployment of advanced technologies (including cyber security)" and "Connectivity". "Other communities and regions" comprise the Walloon Region, French Community, Brussels-Capital Region and German-speaking Community.

Digitalisation of the public sector represents about half of all digital spending in Germany and France, 42 % in Belgium and 35 % in Spain, but only 20 % in Italy. Germany's focus on the public sector is understandable as it scores well below the EU average on an index of digital public services (20th out of 27 in the EU) according to the EC (2020c).

Digital skills and digital inclusion receive by far the most attention in Belgium (38 % of digital spending) and Spain (29 %). Belgium's plans consist, to a large extent, of Flemish investment in digital schools while Spain is aiming to improve digital skills in the general population, with a focus on SME employees.

Digitalisation of business is a priority for Italy (36 % of digital spending) and, to a lesser extent, in Germany (13 %). As in many areas of digitalisation, Italy is the worst performer among the five countries when it comes to businesses, ranking 21st out of 27 in the EU (EC, 2020c). The Italian NRRP aims to boost the uptake of digital technologies by businesses through a system of tax credits mostly for the acquisition of tangible and intangible assets. The German plan, by contrast, specifically supports the automotive industry in its digital transformation.

R&D, advanced technologies and connectivity plays a substantial role in the five NRRPs, ranging from 19 % of digital spending in Belgium to 36 % in Spain. Italy and Spain invest much of this funding in connectivity, both through broadband and 5G, with the objective of bringing fast internet to underserved households, hospitals and schools. In Belgium, the federal government invests in cyber security and Wallonia in connections for schools and business parks.

3.3. Other spending (neither green nor digital)

A variety of topics beyond the green and digital transition are covered by the plans: labour market, education and skills (23 % of the other spending); R&D and innovation (18 %); economic, social and territorial cohesion (18 %); health (16 %); and culture and tourism (10 %). Many of these domains also have a digital or green component, which has already been covered in the previous sections. Here, we focus on the non-digital and non-green aspects of these topics.

Italy, Spain and France spend about one-third on such other spending, against 16 % in Belgium and 7 % in Germany. Given the large size of Italy's and Spain's plans, they allocate important amounts of money on other spending (chart 4).

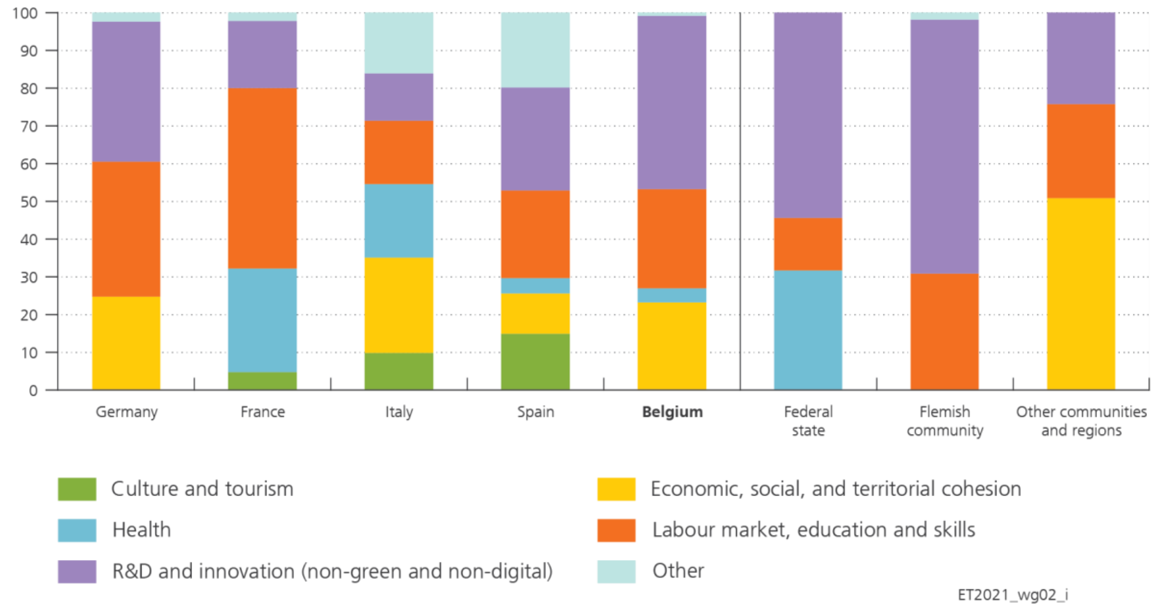
Much **R&D and innovation** in the plans is directed towards green and digital topics. But in other areas too, there is support for R&D, notably in Belgium (46 % of neither green nor digital spending) and Germany (37 %). Germany finances vaccine research. In Belgium, it includes support for the aerospace and space sector by the federal level, for an "EU Biotech School and health hub" in Wallonia, and for a variety of sectors in Flanders, with the focus on digitalisation, sustainability and health.

Spending classified as **economic, social and territorial cohesion** is highest in Italy (25 %), Germany (25 %) and Belgium (23 %). This category covers mostly projects that address social cohesion. In each of these countries, this involves investment in childcare, while Italy and Belgium (Wallonia) will also invest in social housing.

Health is an important aspect of the French (27 %) and Italian (19 %) NRRPs. On top of the efforts for further digitalisation of the health system, the French plan funds renovation and equipment for hospitals and care homes for the elderly. Italy invests in hospital infrastructure and technology as well, but also focuses on proximity in health services (telemedicine, …).

Spending in the **labour market, education and skills** (non-digital) is highest in France (48 %) and Germany (36 %). In France, this includes subsidies for hiring interns and trainings for people in short-term work schemes. Similarly, Germany will support apprenticeships by giving financial support to firms. Belgium funds several projects in this domain, including investments in higher education and life-long learning in Flanders, and in the integration of vulnerable people on the labour market in Brussels.

Chart 4 - Other spending (neither green nor digital) in National Recovery and Resilience Plans
(percentage of overall amount of other spending in the NRRP)



Sources: Darvas *et al.* (2021), Belgian National Recovery and Resilience Plan, own calculations.
The "Other" category contains spending on SMEs; sports; infrastructure; justice and combatting corruption; and crisis preparedness and resilience, as well as spending that could not be categorised. "Labour market, education and skills (non-digital)" combines education and skills (non-digital) with labour market and job creation. "Other communities and regions" comprise the Walloon Region, French Community, Brussels-Capital Region and German-speaking Community.

Both Spain (15 %) and Italy (10 %) use the RRF grants to support their **cultural and touristic** sectors. Most funding goes towards the latter, with an emphasis on the green and digital transition. Given the impact of COVID-19 on tourism, Spain will support its islands that are heavily reliant on this activity.

Finally, the "Other" category covers a wide variety of topics. In the case of Spain, it involves almost exclusively support to SMEs. For Italy, it consists of a mixture of spending on infrastructure, justice and combatting corruption, SMEs, sports, ...

4. Reforms

As Italy and Spain were facing more structural challenges – and more comprehensive ones – than Germany, France and Belgium. These were translated into more in-depth country-specific recommendations (CSR) for the years 2019 and 2020 compared to their peers. In this section, we first show that, in exchange for higher grants and loans, reforms are more numerous and deeper in Italy and Spain than in the other countries, then that both Southern European countries have responded in a satisfactory manner to a higher number of CSRs and, finally, that most major reforms are frontloaded in these countries.

4.1. Number and depth of reforms

In the case of Italy and Spain, the National Recovery and Resilience Plans contain more reforms and the Council Implementing Decisions refer to more targets and milestones than in the other three countries considered (Table 3).

Table 3 - More reforms are included in the Italian and Spanish National Recovery and Resilience Plans than in the Plans of the other countries

	DE	FR	IT	ES	BE
Reforms	15	21	58	102	35
Milestones and targets (covering reforms and investment)	129	175	527	416	210
of which:					
Milestones	54	70	213	169	126
Targets	75	105	314	247	84

Sources: EC (2021d), Ecofin (2021), Ministero dell'Economia e delle Finanze (2021).

The reforms envisaged in the NRRPs and translated into milestones in the Council Implementing Decisions are deeper and more comprehensive in Italy and Spain than in the other countries.

Germany is the country that has integrated the least reforms and milestones into its NRRP. The milestones to which the German government committed to are mostly enabling and sectoral reforms. The main German reforms seek to unlock long-standing investment bottlenecks thanks notably to a simplification of the planning and approval procedure for the transport sector. Digitalisation of the public sector and/or specific public services such as health is a reform that will be (at least partly) financed by the RRF grants in all countries under consideration.

In **Belgium**, the reforms are both more numerous and more diverse than in Germany. Several horizontal structural reforms are mentioned such as those related to pensions and end of career. They are notified as milestones but they remain at this stage largely unspecified. The introduction of spending reviews may also be considered as a tool for a horizontal structural reform. Such a tool is also mentioned in all countries considered but Germany. Enabling and sectoral reforms are also components of the Belgian NRRP.

In **France**, there are not many or any in-depth horizontal structural reforms in the NRRP and the related milestones are also few and far between. France may be distinguished from the other countries under consideration by its reform of the public finances' governance framework. This especially (re)establishes a multi-annual spending norm and reinforces the prerogatives of its fiscal council. The already approved reform of unemployment should encourage companies to offer more permanent contracts instead of fixed-term contracts. Health system reforms should make the careers of healthcare workers more attractive and facilitate the organisation of local care. Other reforms, notably the Law on the acceleration and simplification of public action, are helping to reduce the administrative and regulatory burden weighing on companies and citizens.

At the other extreme, **Italy and Spain** are countries where numerous substantial horizontal structural reforms are both planned and subject to milestones, besides enabling and sectoral reforms. In both countries, such reforms relate to active labour market policies, compulsory education and universities, health, tax administration and fight against tax evasion and fraud, public procurement and insolvency framework.

A comprehensive (mostly parametric) pension reform to be implemented in several steps is one component of the Spanish NRRP and these steps are translated into hard milestones[14]. The Italian NRRP does not include any such reform since the "quota 100" – a temporary mechanism allowing people to retire at 62 after 38 years of work introduced by the Conte I Government – was expected[15] to come to an end by the end of 2021.

The Spanish government is also more committed to labour market reforms than Italy. Such reforms are planned to:

- reduce the use of temporary contracts in both the private and the public sector;
- set up a new flexibility and stabilisation mechanism to provide internal flexibility for firms and stability for workers in the face of cyclical and structural shocks;
- move back partly from local to sectoral bargaining;
- align the rights of people working in subcontracting companies with those of employees in the contracting company.

[14] The final design of the Spanish pension reform has been left open, as it depends on the outcome of the social dialogue process. Nevertheless, it builds on the Toledo Pact recommendations, which benefit from a broad parliamentary consensus (EC, 2021a). It aims at striking the right balance between preserving adequacy and long-term sustainability. Some elements will raise pension expenditure in the medium to long term, in particular measures re-linking pensions to the consumer price index on a permanent basis and dissociating initial pension levels from changes in life expectancy. Other measures are expected to partially mitigate the impact of the reform on fiscal sustainability: measures seeking to bring the effective retirement age closer to the statutory retirement age, changing the tax base for the self-employed, widening the contribution period for the calculation of pension benefits and increasing the maximum contribution bases together with the corresponding pension benefit levels.

[15] In the Budget 2022, the Draghi government closed this opportunity for early retirement but allowed a last step with a "quota 102" in 2022, meaning that people aged 64 would be allowed to retire if they have contributed to the system for 38 years.

As for pension reforms, several of the labour market reforms in Spain are subject to the outcome of the social dialogue process and their final design is therefore yet to be determined. A deal concluded at the end of December (2021) has evacuated some controversial reform[16]. In particular, the reversal of the 2012 decentralisation of the wage bargaining has been canceled or at least softened.

In Italy, besides measures tackling undeclared work, the two main labour market reforms identified by Corti *et al.* (2021) are a national programme for employment guarantee and a national new skills plan.
Conv
ersely, contrary to Spain, Italy is implementing a comprehensive reform of both the public administration and justice. The Italian reform of the public administration encompasses several dimensions: public employment including hiring processes, simplification, career, skills and reduction of late payments to citizens and businesses. The main targets of the justice reform are the reduction in both the length of legal proceedings and the backlog of cases, while significant milestones comprise, on top of the reform of the insolvency framework and the digitalisation of justice, reforms of civil justice, criminal justice and tax courts.

Italy is also committed to competition reforms: competition laws (to be adopted each year over the 2021-2024 period) aim to remove barriers in various sectors, notably in utilities, waste management and transport (ports, etc.).

4.2. Coverage of country-specific recommendations

In its Council Implementing Decisions on the NRRPs of the five countries considered, the Ecofin Council (2021) expects the reforms undertaken by the five countries to contribute to effectively addressing a significant sub-set of the challenges identified in the relevant country-specific recommendations (CSR).

The share of CSRs with satisfactory coverage in the RRP (green cases[17] in table 4) is larger in countries like Italy and Spain that get a larger share of RRF grants in relation to the size of their economy and have had to face more challenges and more comprehensive recommendations.

Belgium[18] is the sole country considered where the CSRs are mostly only partially covered in the NRRP (orange cases). This has to be read in relation with a worse assessment by the EC and Ecofin (2021) on the "coherence" criterion. On the one hand, Ecofin (2021) notes in its Implementing Decision for Belgium that the plan displays a set of reforms and investments that support the objectives of recovery, green and digital transition and resilience, the individual measures are coherent with these objectives and the plan does not present any

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[16] The Ecofin Council (2021) noted that "these reforms should be part of a comprehensive approach that balances the need for flexibility and security in the labour market" and added that "this applies in particular to the flexibility and stabilisation mechanism and to the reform of collective bargaining".

[17] The best performer among our five-countries sample ranks only 11th out of 22 EU Member States in terms of the share of CSR with satisfactory coverage in the NRRP (Afman *et al.*, 2021).

[18] Belgium also appears as the EU Member States (out of 22) that has the lowest share of CSR with satisfactory coverage in the NRRP (Afman *et al.*, 2021).

inconsistencies or contradictions and some measures are mutually reinforcing and complementary also across government levels. On the other hand, it notes that "In some instances, the potential of some investments could have been further reinforced by more far-reaching complementary reforms. In particular, the measures to increase employment and improve labour market performance are not accompanied by concrete measures to reduce disincentives to work from the tax system". Lack of specification for the tax reform in energy and labour has been criticised. The lack of reform for competition in services has also been stressed by the EC and endorsed by Ecofin.

Table 4 - Italy and Spain are expected to meet more of their 2019 and 2020 Country-Specific Recommendations in the National Recovery and Resilience Plans than the other three countries

Broad Category	Policy areas	DE	FR	IT	ES	BE
Public finance and taxation	Fiscal policy and governance	dark green	light green	dark green	light green	light green
	Sustainability of public finances	orange	orange	orange	orange	orange
	Tax burden on labour	orange		orange		
	Broaden tax bases	light green	done	orange		
	Tax evasion, administration and avoidance			dark green		
Financial sector	Financial services		done	orange		dark green
	Housing market	orange				
	Access to finance		done	orange	orange	dark green
Labour market, education and social policies	Employment Protection Legislation and labour contracts		done	dark green	dark green	
	Unemployment benefits				dark green	
	Active labour market policies		dark green	dark green	dark green	orange
	Incentives to work, job creation and market participation	light green	dark green	dark green	orange	orange
	Wages and wage setting	dark green				
	Health and long-term care	dark green	dark green	light green	dark green	dark green
	Poverty reduction and social inclusion	orange	done		dark green	
	Education	dark green		dark green	dark green	orange
	Skills and life-long learning	dark green	dark green	dark green	dark green	orange
Structural policies	Research and innovation	dark green	dark green	dark green	dark green	light green
	Competition and regulatory framework	dark green			orange	
	Competition in services	red	orange	dark green	orange	orange
	Telecom, postal and local public services	dark green	dark green	dark green		orange
	Energy, resources and climate change	light green	light green	dark green	light green	light green
	Transport	dark green	dark green	dark green	dark green	light green
Public administration and business environment	Business environment	dark green	light green	dark green	dark green	orange
	Public administration	light green		light green	light green	
	Civil justice			dark green		
	Shadow economy and corruption			light green		

Sources: EC (2021c), own selection and presentation.
Dark green = fully satisfy the CSR; light green = significantly satisfy the CSR; orange = only partially satisfy the CSR; blank = there is no CSR in this matter; done = this CSR was satisfied before the NRRP was endorsed.

4.3. Timing of reforms

In all five countries, most milestones for reforms are expected to be reached by the end of 2023. The reforms are thus frontloaded. And with the exception of Germany where legislative elections took place in September 2021, very significant reforms were even expected by the end of 2021. In most countries, governments needed to put in place the governance framework for an as smooth as possible implementation of the Plan and to remove barriers and bottlenecks to investment.

The time pressure put on governments and parliaments to approve reforms has been very high especially in Spain as this country was expected to introduce the first request to receive RRF grants in 2021, which it did in November. The first list of structural reforms relates notably to the labour market, pensions, education, spending reviews, … However, most of these 52 milestones (of which 49 related to reforms) had already been met by July 2021 when the Ecofin Council approved the Spanish NRRP.

The Italian government has also worked very hard to reach the first list of 27 reform milestones to be met by the end of 2021. This included a range of issues including the entry into force of legislation for civil and criminal justice and insolvency framework, the entry into force of a simplified procurement system, the approval of Decrees on the two main labour market reforms, the reinforcement of the Economic and Finance Ministry in view of the spending reviews to come, a university reform, etc.

In Belgium, the milestones expected to be met by the end of 2021 for a first instalment to be received in the first half of 2022 include a submission for approval by the Council of Ministers of the federal government of the pension and end of career reform proposal, the federal decisions on the learning account, the mobility budget and the zero-emission company car reform, as well as a national plan for the introduction of 5G, the Walloon revision of the support scheme for job-seekers and the Flemish decisions on stimulating zero-emission transport.

Conclusion

The crisis that was triggered by the exogenous shock of the pandemic provided the motivation for the EU-wide Next Generation EU recovery plan that involved an aspect of solidarity. Italy and Spain will be the main beneficiaries of the grants, especially those from the main fund, the Recovery and Resilience Facility (RRF). Indeed, these countries were economically vulnerable before the COVID-19 hit the continent and the pandemic affected their economies badly.

In exchange for EU grants and favourable loans, all countries have submitted National Recovery and Resilience Plans (NRRPs) describing the investment and reforms that they intend to carry out with a view to strengthening their economies both in the short term and in the medium and long run. This article has analysed the NRRPs of the largest euro area Member States – Germany, France, Italy and Spain – as well as Belgium. Together, these countries account for more than half of all grants (and loans) from the EU Recovery and Resilience Facility.

According to these plans, grants (and loans) will be used mainly to finance green and digital investment as requested. Italy, Spain and France also intend to spend about one-third on projects other than green and digital ones, a much higher share than in Belgium and Germany. Given the large size of Italy's and Spain's NRRP, they are expected to spend significant amounts on these other projects. Reflecting the need to remedy existing economic vulnerabilities and their specialisation in tourism, Italy and Spain have diversified their spending across categories such as labour market, education and skills; R&D and innovation; economic, social and territorial cohesion; health; culture and tourism.

As expected, the countries that have received the biggest amount of grants are also found to be those that have committed to more comprehensive reforms designed to effectively address all or a significant sub-set of challenges related to their imbalances and structural weaknesses. As the RRF is a performance-based programme, the countries need to attain the agreed milestones to receive the grants according to a hump-shaped and frontloaded disbursement timeline. Italy and Spain were also planning to reach substantial reform milestones across a wide array of domains in a very short period of time. Substantial reforms, even horizontal ones, have already been implemented in 2021 before the first instalment of grants was requested.

Reforms to be implemented in 2022 and over the next few years are still significant, especially in Italy and Spain. Their governments seem to have fully understood that the RRF is a once-in-a-lifetime opportunity for the less resilient countries and/or those most affected by the COVID-19 crisis to help remedy their structural problems through investment and reform. Going forward, the success of the Next Generation EU Recovery Plan will depend on the actual implementation.

The analysis in this article also puts the Belgian investment projects and reforms into perspective. First, Belgium was expected to receive only €5.9 billion of RRF grants and not to request any loan. Once the effective GDP losses for 2020 and 2020-2021 will be known in the Spring of 2022, this amount of grants might be substantially lower. Second, in exchange for these grants, the reforms Belgium has committed to the EU are more limited in number and depth and less comprehensive than in the case of Italy and Spain. For Belgium too, this is a good opportunity to help push through structural reforms supporting the green and digital transitions and enhancing the growth potential of its economy in a sustainable way.

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