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Subject:	PART 2/2 COMMISSION STAFF WORKING DOCUMENT - EVALUATION Ex post evaluation of the European Regional Development Fund (ERDF) and the Cohesion Fund for the programming period 2014-2020
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Delegations will find attached document SWD(2025) 328 final (Part 2/2 - Annexes).

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PART 2/2

COMMISSION STAFF WORKING DOCUMENT

EVALUATION

***Ex post* evaluation of the European Regional Development Fund (ERDF) and the
Cohesion Fund for the programming period 2014-2020**

Annexes

{SWD(2025) 329 final}

Annex I. Procedural Information

The European Commission carried out the *ex post* evaluation of the European Regional Development Fund (ERDF) and the Cohesion Fund (CF), ('the funds') in the programming period 2014-2020 in line with articles 57 and 114 of the Regulation (EU) No 1303/2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund (Common Provisions Regulation, CPR).

The evaluation was led by the European Commission's Directorate-General for Regional and Urban Policy (DG REGIO).

The Decide planning entry for the evaluation is PLAN/2021/12948. The Call for evidence was published on 'Have your say' on 12 January 2022 for a four-week period until 9 February 2022 for stakeholders and the general public to provide feedback.

The evaluation was carried out in line with the procedural requirements of the Better Regulation guidelines¹ and no exceptions were required.

The *ex post* evaluation was articulated in a combination of cross-cutting and thematic work packages, mostly implemented via external contractors. The cross-cutting work packages include:

- WP1 'Synthesis', which accompanied the entire *ex post* evaluation to standardise work across the other work packages, and to identify main findings and emerging implications for the funds and their objectives;
- WP2 'Preparatory study on monitoring systems and data', which identified and clustered projects and beneficiaries supported into a database of projects/beneficiaries that provided the basis for the analysis in the other work packages;
- WP3 'Effect of funding and context', which combined macro-economic models (such as RHOMOLO) and other econometric analysis to provide an estimate of the effect of the funding provided under the ERDF / CF;
- WP12 'Crisis response', which investigated the instruments implemented under the funds in response to the COVID-19 pandemic and the negative consequences of Russia's unprovoked war of aggression against Ukraine;
- WP13 'Territorial instruments', which investigated the place-based approaches mainstreamed in 2014-2020 to promote the territorial development of specific areas in an integrated way.

The thematic work packages are organised along the thematic objectives of the period 2014-2020 and European territorial cooperation (Interreg):

- WP4 'Research, Technological Development and Innovation – RTDI', which covered investments under thematic objective 1 'Strengthening research, technological development and innovation';
- WP5 'Information and Communication Technologies – ICT', which covered investments under thematic objective 2 'Enhancing access to, and use and quality of information and communication technologies';
- WP6 'Support to small and medium-sized enterprises', which covered investments under thematic objective 3 'Enhancing the competitiveness of small and medium-sized enterprises (SMEs)';

¹ Better Regulation: guidelines and toolbox, [link](#).

- WP7 ‘European Green Deal’ (EGD), which covered investments under thematic objective 4 ‘Supporting the shift towards a low-carbon economy in all sectors’, thematic objective 5 ‘Promoting climate change adaptation, risk prevention and management’ and thematic objective 6 ‘Preserving and protecting the environment and promoting resource efficiency’;
- WP8 ‘Transport and energy network infrastructure’, which covered investments under thematic objective 7 ‘Promoting sustainable transport and removing bottlenecks in key network infrastructures’;
- WP9 ‘Employment, education and social cohesion’, which covered investments under thematic objective 8 ‘Promoting sustainable and quality employment and supporting labour mobility’, thematic objective 9 ‘Promoting social inclusion, combating poverty and any discrimination’ and thematic objective 10 ‘Investing in education, training and vocational training for skills and lifelong learning’;
- WP10 ‘Institutional capacity and reform’, which covered investments under thematic objective 11 ‘Enhancing institutional capacity of public authorities and stakeholders and efficient public administration’;
- WP11 ‘Interreg’, which covered investments under the European territorial cooperation goal.

An Interservice Steering Group (ISSG) was set up (see Ares(2021)664689) with all services that could contribute with horizontal or thematic competences on the evaluation: DG AGRI, DG BUDG, DG CLIMA, DG CNECT, DG COMP, DG DIGIT, DG EAC, DG ECFIN, DG EMPL, DG ENER, DG ENV, DG GROW, the JRC, DG JUST, DG MARE, DG MOVE, DG NEAR, DG REFORM, DG RTD, DG SANTE, SG and SG RECOVER. Given the articulation of the evaluation, the contribution of the ISSG was only sought in relation to the relevant work packages, as shown in the following table.

Table 1 – Commission services involved in the ISSG of the evaluation^(*)

DG	WP 1	WP3	WP4	WP5	WP6	WP7	WP8	WP9	WP10	WP11	WP12	WP13
	Synthesis	Effect of funding and context	RTDI	ICT	SME support	Climate and environment	Transport energy network infrastructure	Employment, education and social cohesion	Institutional capacity and reform	Interreg	Crisis response	Territorial instruments
AGRI												
BUDG												
CLIMA												
CNECT												
COMP												
DIGIT												
EAC												
ECFIN												
EMPL												
ENER												
ENV												
GROW												
JRC												
JUST												
MARE												
MOVE												
NEAR												
REFORM												
RTD												
SANTE												
SG												
SG RECOVER												

Source: European Commission.

^(*)WP2 ‘Preparatory study on monitoring systems and data’ was implemented before the other work packages and the ISSG was not consulted on it.

The ISSG helped ensure the representativity of the evidence considered, the validity of the analysis and the reliability of the conclusions. It was consulted on 72 occasions from 17 November 2021 until 18 February 2025, for discussion on the terms of reference, the interim and final deliverables of the work packages, in different compositions with the Commission services involved in each work package.

The evaluation examined the effectiveness, efficiency, relevance, coherence and EU added value of the funds and relied on several components:

1. Internal work of DG REGIO, consisting of an overview of progress based on the transmission of monitoring data by the MAs on financial implementation and achievements, a review of academic literature on the effects of cohesion policy, preparatory activities for running counterfactual analyses (see at the end of next point), and macroeconomic modelling, based on simulations carried out with an established spatial dynamic computable general equilibrium model (RHOMOLO) developed and maintained by the JRC in cooperation with DG REGIO.
2. External independent supporting studies:
 - WP1 ‘Synthesis’, started in May 2022 and ended in May 2025;
 - WP2 ‘Preparatory study on monitoring systems and data’, started in December 2020 and ended in February 2022;
 - WP4 ‘Research, Technological Development and Innovation – RTDI’, started in January 2023 and ended in July 2024;
 - WP5 ‘Information and Communication Technologies – ICT’, started in August 2022 and ended in March 2024;
 - WP6 ‘Support to small and medium-sized enterprises’, started in August 2022 and ended in April 2024;
 - WP7 ‘European Green Deal’, started in August 2022 and ended in May 2024;
 - WP8 ‘Transport and energy network infrastructure’, started in September 2022 and ended in May 2024;
 - WP9 ‘Employment, education and social cohesion’, started in September 2022 and ended in March 2024;
 - WP10 ‘Institutional capacity and reform’, started in May 2023 and ended in May 2024;
 - WP11 ‘Interreg’, started in October 2022 and ended in April 2024;
 - WP12 ‘Crisis response’, started in October 2023 and ended in November 2024;
 - WP13 ‘Territorial instruments’, started in November 2022 and ended in May 2024;
 - 5 dedicated counterfactual impact evaluation studies, started in October 2024 and ended in May 2025.
3. External work of the Evaluation Helpdesk², which collected, reviewed, assessed, summarised and aggregated evaluations carried out by the Member States on the operational programmes supported by the funds in 2014-2020.

For a discussion on the evidence considered, see Annex II. Annex V provides a full report of all consultation activities conducted.

The *ex post* evaluation of the ERDF and CF carried out by DG REGIO was selected for scrutiny by the Regulatory Scrutiny Board (‘RSB’). The RSB was consulted in an upstream meeting held on 20 December 2024 and was involved in the discussion of the SWD on 9 April 2025. The evaluation was then submitted to the RSB on 12 March 2025 and the review meeting was held on 9 April 2025. The RSB issued a positive opinion with reservations on 11 April 2024, providing recommendations for improvement.

² The Evaluation Helpdesk is a support service jointly established in 2015 by DG REGIO and DG EMPL, mainly aimed to summarise and assess the quality of evaluation findings in the Member States and to provide them with methodological support.

The table below summarises the main points raised by the RSB and how the SWD was subsequently revised.

Table 2 – Summary of RSB recommendations and subsequent follow-up in the *ex post* SWD

RSB recommendation	Changes in the SWD
Results of the macroeconomic modelling and counterfactual studies should be better contextualised and methodological limitations clarified.	The relevant parts of Section 4.1 (Effectiveness) have been completely redrafted providing better contextualisation and highlighting methodological limitations.
Key design features of the funds should be analysed.	A dedicated section has been added to cover key design features of the funds.
Analysis of effectiveness should be strengthened and broadened to also include analysis of potential unintended consequences.	A discussion on the impact of the funds on private investments has been added (notably, following the evidence, on crowding in rather than crowding out effects). The limited evidence on other unintended consequences has been integrated where available.
Internal coherence of the funds should be analysed in more detail, including the interplay of the intervention logics.	The section on internal coherence has been expanded and now also includes evidence on the coherence of intervention mixes.
Coherence of the funds with ESF and RRF should be strengthened. The analysis of institutional capacity and human capital needs should be further developed.	The coherence section has been redrafted and amended to include more information on coherence with ESF and the RRF. The analysis of coherence with the ESF has been expanded to include information on capacity issues related to complex operations implemented via a multi-fund approach.
The report should assess the validity of the assumptions regarding causal links in the intervention logic. Effectiveness of interventions should be better evaluated based on their intervention logic.	The report assesses the effectiveness of the funds on the basis of the intervention logic embedded in the Treaty and relevant regulations. For each type of intervention, the validity of the respective theories of change were tested in the dedicated supporting studies. The intervention logic, described in Annex VII, has been further integrated into the description of the effectiveness of the policy.
A better assessment of the impact on quality of life is needed.	Section 4.1 has been amended with a discussion on quality of life. This aspect is discussed in several places across the SWD, including in Section 3.1 and Annex IV (benefits).
The analysis of the monitoring system should draw lessons for methods and data needs in the future. These lessons should be reflected in the conclusions and lessons learned.	The analysis on the monitoring system has been expanded and lessons learned – namely, the need for micro- and beneficiary-level data and increased interoperability of national databases – have been introduced.
Indicators presented in the report should provide a representative picture of the progress on achieving all objectives.	The indicator table under Section 4.1 has been revised to give a more representative coverage of ERDF / CF objectives.

The evaluation should investigate the heterogeneous impact of cohesion policy and its underlying causes. The effectiveness of the funds should be better assessed across regions, including better analysis of divergence of some poorer regions and root causes.	The evaluation covers the policy's heterogeneous impact more explicitly now, with Section 4.1 in particular devoting considerable attention to the factors that magnify or hinder its impact. A reflection on the divergence of some poorer regions has also been added to the same section.
The efficiency analysis should be improved, in particular the cost-benefit analysis. All costs borne by relevant stakeholders should be presented. Limitations of the underlying study should be made explicit.	Both the description under Efficiency and Annex IV had been redrafted and amended following the RSB's recommendations on the presentation of the data, making the underlying assumptions and limitations more explicit.
Operational conclusions on opportunity for further simplification should be drawn.	The conclusions and lessons learned have been revised to be more operational on future simplification needs.
The assessment of continued relevance should be strengthened, including an analysis of the place-based approach.	The section has been expanded to clarify how the continued relevance of investments is ensured under shared management of the funds.
Conclusions and lessons learned should be refined to reflect the evidence in a balanced way.	The conclusions and the lessons learned were reviewed accordingly and clarifications on the limitations and reliability of the evidence were added in Annex II.

Source: European Commission.

Annex II. Methodology and Analytical models used

This annex describes the methodology of all the components that fed into the evaluation (internal work, external studies and external support service on evaluation), as reported in Annex I. All the components were based on a combination of qualitative and quantitative methods that were applied to the evidence that was analysed, either from existing material or newly created.

PREPARATORY STUDY

The evaluation work was informed by a preparatory study that collected, verified and corrected monitoring data for ERDF / CF projects and beneficiaries. This study provided as input to the *ex post* evaluation a newly created single database, composed of 3 interlinked datasets on: (i) the operations funded through the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) during the 2014-2020 programming period under all Thematic Objectives (TOs) and categories of expenditure, (ii) the related beneficiaries, and (iii) the common and programme-specific output indicators at the operation level. This database has four main strengths: high representativeness (98% of the operational programmes, almost 600 000 operations, more than 700 000 beneficiaries, around 700 000 common and 500 000 programme-specific output indicators, with a cut-off date at 31 December 2020)³, possibility to interlink the dataset through a unique identifier, comparability for aggregation at MS and EU level, scalability for matching with other external databases (e.g. using the beneficiaries' identifiers).

SUPPORTING STUDIES

The core of the analysis relied on the external independent supporting studies (see Annex I). To ensure consistency, all the thematic work packages⁴ and the one on territorial instruments (WP13) were designed from the start using a common approach on many aspects, including the structure of the tasks, the methodology, the organisation of the work and the set of deliverables. Also the evaluation questions included a core set of questions for all the supporting studies, with some adjustments to the policy areas, and a few more questions addressing specific issues relevant to the policy areas covered by the studies.

During contract implementation, specific support was provided under WP1 to ensure that the common approach, as further detailed in the technical offers and inception reports, would retain methodological consistency across the other supporting studies. This support entailed an ongoing assessment of the work done under the other supporting studies, proposals for improvement and systematic review of the deliverables.

In order to strengthen further the thematic and methodological approach, each of the supporting studies (WP4-WP13) was accompanied by its own advisory board, composed of 3 external experts, mainly academics, with in-depth knowledge of the policy areas covered by the studies or of evaluation methods. The external experts provided thematic and methodological input throughout the studies, commented the deliverables at the various stages of the studies and participated in the

³ For some programmes, the cut-off date was 31 March 2021.

⁴ WP4 'Research, Technological Development and Innovation – RTDI', WP5 'Information and Communication Technologies – ICT', WP6 'Support to small and medium-sized enterprises', WP7 'European Green Deal', WP8 'Transport and energy network infrastructure', WP9 'Employment, education and social cohesion', WP10 'Institutional capacity and reform', WP11 'Interreg', which covered investments under the European territorial cooperation goal.

validation seminars contributing to cross-verification of the evidence, thus improving the quality of the findings.

The supporting studies used a theory-based impact evaluation (TBIE) approach. The main benefit of this approach is the investigation of the mechanisms underlying the implementation of the funds and the analysis and testing of the causal links of the impact pathways. In fact, this approach was chosen to identify the main pre-conditions, enabling factors and risks associated with the investments supported by the funds, in their specific territorial context and for the different types of interventions implemented. In parallel to providing answers to the evaluation questions, organised around the main criteria of the Better Regulation Guidelines, this approach led to the compilation of a policy handbook of practices on the diverse policy instruments implemented with the support of the funds, which serves as reference for planning and implementing similar instruments in the future.

The theory-based approach started with the reconstruction of the theory of change (ToC) behind the public intervention, both at the level of the thematic area and for individual policy instruments. This process entailed identifying the articulated set of assumptions regarding how, why, when, for whom, to what extent, and under what conditions an intervention would lead or contribute to expected or unexpected, desired or undesired results within a given context. Subsequently, the initial theory that reflected the intentions and expectations (both explicit and implicit) of policymakers and programme designers was tested to determine whether the implementation details of the different support measures aligned with the *ex ante* rationale. The analysis also aimed to identify any possible unanticipated mechanisms through which the interventions achieved positive or negative unexpected results. Additionally, the ToC was tested to assess whether the policy instruments causally determined or at least contributed to the actual results.

The reconstruction of the initial ToC was based on various methods:

- an extensive literature review on the thematic areas, to establish a robust evaluation framework and capitalise on previous research and evaluations, including those carried out by the Member States;
- documentary analysis of programming and implementation documents, to gain a comprehensive understanding of programme rationales and the variety of policy instruments utilised in different contexts;
- interviews conducted with MAs and other regional and national stakeholders and beneficiaries, to gather factual evidence and opinions on the mechanisms activated by the policy in action, and to explore more extensively the rationale behind the policy intervention as well as its effects;
- data and text mining techniques, to extract information from external databases and sources through automated or semi-automated methods and merge them with the single database of ERDF / CF operations and beneficiaries, so as to enrich it at both micro and regional/country level;
- descriptive statistical analysis of data on operations and beneficiaries for ERDF / CF support, to build an accurate description of where ERDF expenditure was allocated.

The testing of the ToC and its mechanisms was then carried out based on more in-depth analysis, supported by case studies focused on the implementation of the policy instruments in selected Member States, where the mechanisms at play in different contexts were further investigated. The case studies relied on additional interviews and discussions with the stakeholders, field research, analysis of monitoring data, and review of project-related documents.

The findings were then triangulated with discussions in focus groups validation seminars. In the latter, both members of the ISSG and stakeholders were invited to discuss more in detail selected preliminary findings of the analysis to test their robustness.

The theory-based approach was complemented with further quantitative analysis, including counterfactual methods and macroeconomic modelling.

ANALYSIS OF MACROECONOMIC TRENDS

Initially, a contextual analysis of macroeconomic trends was carried out at the national and regional levels over the years 2013-2023, looking at key macroeconomic (GDP, GDP per capita), labour (employment, unemployment, labour productivity), and financial (government expenditure, government debt, inflation, interest rates, gross fixed capital formation) indicators. The analysis of regional trends was focused on regional groupings as defined for eligibility for cohesion policy funding, comparing growth rates or percentage point differences in indicators against national levels⁵.

COUNTERFACTUAL ANALYSIS

Specific counterfactual analyses were then used to estimate the impact of the policy on **key macroeconomic and sectorial outcomes**. After exploratory work carried out internally, DG REGIO commissioned five small supporting studies employing different and complementary approaches:

- a synthetic-control approach focusing on the macroeconomic impact (measured on variables such as GDP and employment);
- a regression discontinuity design (RDD) approach also focusing on macroeconomic and labour outcomes;
- a novel machine-learning control approach also focusing on macroeconomic and labour outcomes;
- an analysis of heterogeneity, seeking to explain significant differences in estimated effects;
- an RDD approach focusing on outcomes relevant for firm dynamics (e.g. firm births and exits, survival rates, number of fast-growing enterprises).

In parallel, counterfactual methods were used for a more refined analysis of the **effects of policy instruments at the firm level**, and two analyses were carried out on specific policy instruments when data on a suitable control group of companies was available⁶. Multivariate econometric analysis was used to detect the factors, either related to the beneficiary SMEs or the instrument or the context, associated with better results.

MACROECONOMIC MODELLING

In addition, the assessment of the policy impact at the macroeconomic level is based on simulations carried out with a **spatial dynamic computable general equilibrium model, RHOMOLO**, developed, maintained and operated by the JRC in cooperation with DG REGIO. The model allows capturing the direct and indirect effects of the interventions on the EU regions at NUTS 2 level, both in the short and in the long run⁷.

The economic foundations of RHOMOLO are based on the well-established literature on CGE models⁸. The model is calibrated to a set of integrated EU regional social accounting matrices (SAMs) for the year 2017, which include all the standard information of input-output tables on the production and use of goods and services, as well as information on the secondary distribution of income, detailing the roles of labour and households (see García Rodríguez et al., 2025). The calibration leads the model to reproduce exactly the data included in the base year SAMs.

⁵ Under WP1 ‘Synthesis’.

⁶ Under WP6 ‘Support to small and medium-sized enterprises’.

⁷ The details of this model-based analysis can be found in Casas et al. (2025b).

⁸ See Lecca et al. (2018) for a detailed description of the model.

The model economies are divided into ten economic sectors (based on the NACE Rev. 2 industrial classification). Households consume a fixed proportion of their income and firms are assumed to maximise profits and produce goods and services according to a constant elasticity of substitution production function. Governments collect revenue and spend it on public goods and transfers (both tax rates and transfers are exogenous in the simulations presented in this paper). Capital and labour are used as factors of production (public capital also enters the production function as an unpaid factor, following Barro, 1990, and Baxter and King, 1993, among others). Trade in goods and services - within and between regions - is modelled following Armington (1969) and is assumed to be costly, with transport costs increasing with distance (Krugman, 1991). The valuation of transport costs is based on a transport model by Persyn et al. (2020). Regional economies are typically more open than national economies due to their smaller size, and this is accounted for in the model thanks to regional trade flows and the relatively high elasticity of substitution between domestic and imported goods and services (Németh et al., 2011; Olekseyuk and Schürenberg-Frhosch, 2016).

The model captures the existence of interregional spillovers through trade flows and capital mobility, leading to endogenous firm location. Trade links imply that changes in economic activity in one region trigger changes in the regions of trading partners. The model also borrows from economic geography and incorporates a notion of spatial equilibrium, in which the balance between agglomeration forces (due to increasing returns to firms' technology) and dispersion forces (due to competition between rival varieties) determines the location of firms and workers. Policy shocks in a given region affect this equilibrium, leading to a redistribution of firms across space.

The base year is assumed to correspond to a steady state that does not change unless perturbed by the introduction of exogenous shocks. The interest rate is exogenous to the model and fixed at 4%. RHOMOLO is used for scenario analysis in the sense that shocks mimicking the effects of policies are introduced to perturb the initial steady state calibrated with the SAMs, resulting in different values for the model's endogenous variables such as GDP, employment, imports and exports, prices, and others. The model is solved in a recursively dynamic process, where a sequence of static equilibria is linked by the law of motion of the state variables. This implies that economic agents are not forward-looking, and their decisions are based solely on current and past information.

In order to simulate the impact of cohesion policy, interventions are grouped under six intervention fields, each associated with a set of model shocks designed to capture the economic transmission mechanisms activated by those interventions. One or more model shocks are used to simulate each of the six fields of intervention (each one containing several of the 123 spending categories of the policies defined by the legislation, see European Union, 2014). The model shocks can be divided into demand-side shocks (with temporary effects) and supply-side shocks (with more permanent structural effects on the economy). The relationship between the shocks and the intervention areas is as follows:

1. **RTD**: Investment in R&D is modelled as an increase in private investment via a reduction in the user cost of capital, which temporarily increases the stock of private capital (in the production function, the capital-labour elasticity of substitution is 0.4, in line with, among others, Chirinko, 2008, and Leon-Ledesma et al., 2010). Moreover, these investments are assumed to increase total factor productivity (TFP) according to an elasticity that ranges between 0.01 and 0.04 and depends on the regional R&D intensity (the estimates are in line with the existing literature, see Männasoo et al., 2018; Kancs and Siliverstovs, 2016; Bronzini and Piselli, 2009; and Griffith et al., 2004).
2. **AIS**: Aid to the private sector is modelled as an increase in private investment through a reduction in the user cost of capital, as for RTD investment, but with no impact on TFP.
3. **TRNSP**: Investment in transport infrastructure is assumed to have both demand-side and supply-side effects. Demand-side effects are generated by the temporary increase in government consumption, which accounts for the purchase of goods and services needed to

build the actual infrastructure. On the supply side, these investments are assumed to reduce transport costs, thereby lowering the prices of goods, and stimulating trade flows (Ignatov, 2023). The induced reduction is based on the estimates obtained with the full transport cost model by Persyn et al. (2020) for the 2014-2020 cohesion policy investments in transport infrastructure.

4. **INFR:** Investment in non-transport infrastructure, such as electricity networks, water treatment plants, and waste management facilities, is modelled as public investment when linked to industrial processes, and otherwise as government consumption (in the latter case there are only temporary demand-side effects). In addition to increasing demand, public investment also has supply-side effects, as it temporarily increases the stock of public capital and thus stimulates the production of goods and services. We set the output elasticity of public capital at 0.1, in line with Ramey (2020) and slightly below the average of 0.12 found in the meta-study by Bom and Lightart (2014)⁹. We set the congestion parameter of public capital to 0.5, which corresponds to a medium level of congestion (Alonso-Carrera et al., 2009; a value of zero would make public capital a pure public good).
5. **HC:** Investments in human capital are assumed to increase demand through government current expenditure. They are also assumed to have two alternative supply-side effects, depending on the nature of the interventions. On the one hand, the categories of expenditure related to human capital development, such as training, retraining, and upskilling, are assumed to increase labour productivity. The main assumption behind this effect is the increase in productivity caused by an additional year of training, which we take from the country-specific estimates of Psacharopoulos and Patrinos (2018) and is consistent with the evidence from Mincer (1974) type estimates in the literature (see also Card, 2001; De la Fuente and Ciccone, 2003; and Canton et al., 2018). The cost of one year of tertiary education per capita (source: OECD, 2018) is used to calculate the amount of training implied by the HC funds of cohesion policy. On the other hand, interventions aimed at promoting the socio-economic integration of marginalised communities, participation in the labour market or the modernisation of labour market institutions are assumed to generate an increase in aggregate labour supply (in this case, we use the cost of one year of secondary education as the cost per pupil for the calibration of the shock).
6. **TA:** Technical assistance is modelled as a demand-side shock increasing current public expenditure with no supply-side effects.

We also assume that all supply-side effects decay over time. Thus, changes in labour productivity, TFP, and transport costs are all assumed to decay at an annual rate of 5%. In addition, the stocks of private and public capital have a depreciation rate of 15% and 5%, respectively (a larger depreciation rate of private capital relative to public capital is a common assumption in the literature, see e.g. Bom, 2017). This implies that, in the absence of further investment, the structural effects associated with the policy gradually disappear and the economy returns to its initial steady state.

The model simulations take into account the fact that cohesion policy is financed by Member States' *pro rata* contribution to the EU budget, which is assumed to be proportional to the weight of their GDP in the EU GDP. The Member States' contribution to the part of the EU budget corresponding to cohesion policy is assumed to be financed by a lump-sum tax, which reduces the disposable income of households, thereby negatively affecting economic performance and partly offsetting the positive effects of the programmes.¹⁰ This implies that a larger share of Member

⁹ Foster et al. (2023) review the literature and highlight the uncertainty surrounding the magnitude of the output elasticity of public infrastructure investment.

¹⁰ This means that in the model, the EU regions are not constrained to run a balanced budget and can experience either deficits or surpluses. The EU budget is exogenously constrained to be balanced, as the

States' contributions to cohesion policy comes from the more developed parts of the EU, while the bulk of interventions take place in its less developed territories.

EVALUATIONS CARRIED OUT BY THE MEMBER STATES

The findings of the internal and external work managed by the Commission were further triangulated with evidence from evaluations carried out by the Member States, focused on national or regional effects. Starting from all the evaluations collected in the Evaluation Library and individually summarised¹¹, the Evaluation Helpdesk¹² carried out a specific review on evaluations of measures supported by the ERDF and the Cohesion Fund in the period 2014-2020¹³, which were concerned with assessing the Better Regulation criteria and the **impact of interventions**. The set used for the analysis only includes evaluations which were assessed as being reasonably reliable and with thematic findings that are relevant for the *ex post* evaluation. The reliability assessment is based on a structured assessment of several dimensions, including clarity and suitability of the evaluation design, appropriateness and correctness of the techniques applied, quality of the data used and overall validity of the findings in relation to the evidence used.

Of the 127 evaluations covered in the review, almost 98% used quantitative methods and/or modelling techniques and/or counterfactual impact evaluation approaches. In particular, 95% were, at least in parts, using quantitative methods, 10% used modelling techniques, and about 40% were counterfactual impact evaluations. However, as shown in the Table below, not all Member States (i.e. the national and regional MAs of the operational programmes) used all techniques equally. For example, of the 52 counterfactual impact evaluations included in the review, about 60% were undertaken in only 3 Member States: Poland (15 out of 44 evaluations), Czechia (8 out of 15), and Romania (8 out of 14).

Table 1 – Use of counterfactual impact evaluation approaches in the review of reasonably reliable impact evaluations in Member States of the EU for the 2014-2020 programming period

Member State	CIE	Other	Grand Total
Austria	1		1
Belgium		1	1
Bulgaria	1		1
Croatia	1	2	3
Czechia	8	7	15
Denmark		1	1
Finland		1	1
France	1	5	6
Germany	2	15	17
Greece	1		1
Italy	3	1	4
Latvia		2	2
Lithuania		1	1
Poland	15	29	44

amount of spending incurred by regions and which is financed through the programmes, is repaid with an equal amount of lump-sum transfers from the households.

¹¹ The Evaluation Library is available at: https://ec.europa.eu/regional_policy/policy/evaluations/member-states_en.

¹² The Evaluation Helpdesk is a support service jointly established in 2015 by DG REGIO and DG EMPL, mainly aimed to summarise and assess the quality of evaluation findings in the Member States and to provide them with methodological support.

¹³ Some evaluations cover measures that also benefit from support of the European Social Fund under multi-fund operational programmes.

Portugal	1	1	2
Romania	8	6	14
Slovakia	2	1	3
Slovenia	1		1
Spain	2	1	3
Sweden		1	1
United Kingdom	5		5
Grand Total	52	75	127

LIMITATIONS

The *ex post* evaluation was constrained by several limitations. **Recent regulatory changes postponed programmes' closure to February 2026.** Hence, Final Implementation Reports are not yet available, which means that only end-2022 indicator achievement data could be considered. Other data limitations also impacted the scope of the assessment. In addition, the diverse starts of the investments resulted in the observation of impacts at different times, particularly pronounced for those launched late in the programming period.

Operation-level and beneficiary data is not sufficiently standardised, this uneven micro-data availability was a limitation to carrying out robust quantitative causal analysis of effectiveness. Variations in data availability on beneficiaries led to reliance on different types of evidence, especially across the in-depth case studies. Because of this, it was not always possible to carry out robust quantitative causal analyses of effectiveness or to assess the heterogeneity of effects across contexts and types of beneficiaries. Mitigation strategies included triangulation of evidence from existing evaluations, implementation reports and other studies, and supplementing primary data gathered from interviews with stakeholders.

In addition, in some policy areas, **there is lack of systematic data on usage and take up,** as in the case of broadband infrastructure, and some types of transport interventions. During the evaluation, this was partly mitigated by focusing on operating networks and selling access wholesale to intermediaries, rather than on the provision of broadband access directly to end-users. However, in the period 2021-2027, common result indicators were introduced, also covering subscriptions to very high capacity networks and the use of transport infrastructures, with quantified targets to measure progress through regular and systematic collection of monitoring data.

The theory-based approach used in the supporting studies helped investigate the mechanisms underlying the implementation of the funds. Contribution of the funds for EU objective could be well established through the presented evaluation design, but **the attribution of the effects was challenging, as the funds support thematic areas frequently covered by several different funding sources.**

Finally, evaluating the policy soon after the implementation period means that long-term impacts can only be estimated through modelling. Cohesion policy is a long-term investment policy with the aim to achieve structural change. The majority of supported projects, especially large infrastructure projects, could not yet fully deliver results. Additional information on the limitation of the CIE analyses is included in the annexed studies.

Despite these limitations, the triangulation of data sources and extensive discussions with country experts, external academic experts and various types of stakeholders allowed to reach valid conclusions under all the evaluation criteria. Only findings considered as reasonably robust are reported in the SWD.

Annex III. Evaluation matrix, Details on answers to the evaluation questions by criterion

The evaluation matrix presented below follows the structure of the SWD, which aggregates and reports on evidence from five cross-cutting and eight thematic work packages. A detailed evaluation matrix for each work package, including replies to sector-specific evaluation questions, is instead included in each supporting study.

Criterion	Evaluation area	Judgment criteria	Indicators/descriptors	Data source
EFFECTIVENESS	Achievement of objectives	• Achievement of financial and output targets • Implementation progress compared to previous period(s) • Extent to which implementation was affected by external factors	• Financial data • Output indicators • Legislative changes • Programme amendments • Main factors affecting progress in implementation	• SFC and Cohesion Open Data Platform data • Data analysis in the thematic supporting studies
	Investment areas	• Achievement variations by policy area • Achievement variations by location of investments	• Sector-specific trends and factors • Country- and region-specific factors	• Analysis in the thematic supporting studies • Evaluations carried out in the Member States
	Macroeconomic effects	• Positive macroeconomic impact • Reduction of disparities between regions • Positive impact in the main thematic areas of intervention	• Analysis of the impact on macroeconomic outcomes and regional disparities • Causal analysis of the impact on macroeconomic and thematic variables and dispersion between-regions • Analysis of determinants of heterogeneous effects across regions and sectors	• Macroeconomic modelling, RHOMOLO simulations (internal) • Literature review on counterfactual analyses and broader econometric methods • Counterfactual impact evaluations on macroeconomic, labour and enterprises outcomes (supporting studies) • Analysis of heterogeneity of counterfactual outcomes (supporting study)

Criterion	Evaluation area	Judgment criteria	Indicators/descriptors	Data source
EFFICIENCY	Efficiency in implementation	- Reduction of gold-plating practices - More efficient public procurement and permitting rules - Increased consistency across governance levels - Efficient crisis measures	- Identification and analysis of concrete measures - Evidence of the measures' success - Stakeholder perception - Timeliness of legal and programme amendments	- Case studies (thematic supporting studies) - Stakeholder consultations (thematic supporting studies) - Study on administrative costs and burden 2014-2020 (2018) - Internal desk review - Supporting study on crisis response
	Simplification measures	- Increased take-up of financial instruments as share of budget envelope - Increased use of simplified costs options as share of budget envelope - Simplification measures led to a reduction of administrative burden	- Implementation data on financial instruments - Implementation data on simplified cost options - Stakeholder perception - Estimated change of administrative costs since 2007-2013	- SFC and Cohesion Open Data Platform data - Literature review, data analysis and case studies (thematic supporting studies) - Stakeholder consultations (thematic supporting studies) - Study on the use of new simplification provisions (2017) - Study on administrative costs and burden 2014-2020 (2018)
	Performance	- Bottlenecks from the previous period were addressed - The monitoring and performance system is fit for purpose	- Adequacy of the monitoring and performance system - Changes in the performance framework throughout 2014-2020 and especially during crises	- Internal desk review and analysis - Cohesion Open Data Platform - Supporting study on crisis response
	Administrative capacity support	- Success of capacity building exercises - Increased ability of MAs to programme, manage and evaluate interventions - Increased ability of beneficiaries and stakeholders to access and implement the funds	- Documentary evidence on capacity building - Identification and analysis of concrete actions - Stakeholder perception on the effects of administrative capacity support	- Supporting study on institutional capacity and reform - Stakeholder consultations (thematic supporting studies) - Internal desk review

Criterion	Evaluation area	Judgment criteria	Indicators/descriptors	Data source
COHERENCE	Coherence with national and regional strategies	- The intervention complements national and regional strategies - National and regional authorities integrate the evaluated funds in their planning	Sectorial analysis of RTDI, ICT, SME, e-Cohesion and EGD support	- Case studies (thematic supporting studies) - Literature review and programme analysis (thematic supporting studies)
	Coherence with other CPR and EU funds	- ERDF and CF investments contribute to wider EU objectives - Coordination and synergies are ensured with other EU funds	- Analysis of coherence with relevant EU funds by thematic area - Identification and analysis of concrete actions	- Data analysis (thematic supporting studies) - Literature review and programme analysis (thematic supporting studies)
	Coherence of crisis response with other EU and national interventions	- Crisis response was coherent with other EU initiatives - Crisis response was coherent with national crisis management	- Analysis of CRII/CRII+ - Analysis of REACT-EU - Interplay with NGEU instruments (e.g. RRF) - Analysis of national cases	- Supporting study on crisis response - Internal desk review and analysis
EU ADDED VALUE	Financial EU added value	- The funds have a redistributive effect between MS and regions and reduce regional disparities - Spillover effects ensure growth also in net-contributor regions - The policy leverages additional private investment - The intervention ensures targeting of specific fields and beneficiaries - EU financing is additional and doesn't substitute national investment	- Estimation of the macroeconomic impact of the policy, net of the cost of financing the policy - Causal analysis of the impact on macroeconomic and thematic variables and dispersion between-regions - Sectorial analysis of RTDI, EGD and SME support - Stakeholder perception of EU added value - Analysis of the effects of ex ante conditionalities and financial instruments - Evidence from Member State evaluations	- Macroeconomic modelling, RHOMOLO simulations (internal) - Counterfactual impact evaluations on macroeconomic, labour and enterprises outcomes (supporting studies) - SFC and Cohesion Open Data Platform data - Internal desk review and data analysis - Case studies (thematic supporting studies) - Stakeholder consultations (thematic supporting studies)

Criterion	Evaluation area	Judgment criteria	Indicators/descriptors	Data source
	Non-financial EU added value	- The continuity of cohesion policy spending supports long-term goals - The shared management model improves the outcomes - Common rules strengthen alignment with EU legislation - ERDF and CF support increases the scale and quality of projects - Improved market integration of companies	- Sectorial analysis of RTDI, EGD and SME support - Analysis of literature evidence on the policy delivery mechanism and market integration - Analysis of ex ante conditionalities and horizontal criteria - Stakeholder perception	- Internal desk review - Literature review and programme analysis (thematic supporting studies) - Stakeholder consultations (thematic supporting studies) - Case studies (thematic supporting studies) - Member State evaluations
	Positive externalities	- Existence of synergies with other sources - Provision of EU public goods - Improved administrative capacity reinforces the effectiveness of other public investment	- Sectorial analysis of EGD and SME support - Analysis of the spillover effects of administrative capacity building - Identification and analysis of concrete cases - Stakeholder perception	- Case studies (thematic supporting studies) - Internal desk review - Stakeholder consultations (thematic supporting studies)
RELEVANCE	CP investments' alignment with smart, sustainable and inclusive growth objectives	- Programmes concentrate expenditure on EU thematic priorities - Investments align with European Semester priorities	- Analysis of thematic concentration of expenditure - Analysis of correspondence between expenditure areas and Country Specific Recommendations - Stakeholder perception	- SFC and Cohesion Open Data Platform - Case studies (thematic supporting studies) - Stakeholder consultations (thematic supporting studies)
	Crisis response versus long-term objectives	- Cohesion policy ensured swift and effective adaption to crises - The flexibility did not come at the expense of long-term goals - Continued relevance for evolving needs and priorities	- Analysis of programme amendments with a focus on COVID-19 and REACT-EU - Analysis of the changes to intervention logics - Comparison of the thematic structure of expenditure with potential future needs	- SFC and Cohesion Open Data Platform - Data analysis and desk research (internal) 2023 JRC foresight report

Annex IV. Overview of benefits and costs, Table on simplification and burden reduction

1. Benefits of ERDF and CF

The ERDF and CF produce a range of benefits (see Section 4.1 – Effectiveness) for stakeholders in Member States. They can be grouped in the following categories:

1. Direct one-off benefits for Member States, citizens and businesses

The ERDF and CF support interventions with tangible outputs (quantifiable by indicator achievement data) across the 11 thematic objectives (see Section 2.1 for a discussion of the intervention logic). Indicator achievement data reflects the achievements of OPs as of end-2023. Final indicator achievement data will be available at the closure of programmes in February 2026, therefore there may be a slight change in figures.

2. Indirect, wider long-term economic benefits resulting from the implementation of cohesion policy funds

Estimation of the wider long-term economic benefits of the funds stems from a paper¹⁴ presenting the updated RHOMOLO impact assessment of 2014-2020 EU cohesion policy.

The paper used RHOMOLO, a dynamic general equilibrium model, to estimate the potential impact of the 2014-2020 programmes financed by the three main cohesion policy funds, the YEI, and REACT-EU. The results suggest that cohesion policy interventions have a positive impact on the EU economy. EU GDP is estimated to be up to +0.6% higher at the end of the policy period compared to a hypothetical scenario without the policy. In the long run, the policy investments generate positive returns, with a 25-year GDP multiplier of almost 3 (equivalent to an annual rate of return of around 4%). The impact of the policy is particularly high in the less developed regions of the EU, which are its main beneficiaries. It is lower in the more developed Member States and regions, but in the long run the impact is positive even in net contributors to the policy. This is partly due to the interregional spill-over effects of the policy, whereby measures implemented in one region also benefit other regions in the EU, especially those with strong trade links to the main beneficiaries. The GDP impacts and multipliers are greater in the less developed regions of the EU, which are the main target of the policy, with GDP in these regions being around +3.3% higher than the baseline at the end of the implementation period, compared to +0.7% and +0.2%, respectively, in transition and more developed regions. The interventions have contributed to reducing or limiting the increase in regional disparities, both at EU level and within most Member States.

¹⁴ Casas et al. (2025b).

2. Costs of ERDF and CF

1. Operational expenditure related to ERDF / CF

This is the main direct cost of the funds. Costs are ultimately incurred by EU Member States and citizens. This input allows for the generation of the benefits outlined in the table below.

2. Financial transfers between Member States contributing to the ERDF / CF budget

Cohesion policy redistributes income between Member States. Since national contributions to the EU budget are positively related to their GDP per head and the amounts received are inversely related, low-income MS receive more and contribute less, while the opposite is the case for high income countries. The contributions to the budget for the ERDF and CF are raised through the tax system in each MS. The economic cost is the expenditure foregone as a result, which is greater in countries that are net contributors to the EU Budget than in net recipients' ones. The contribution made to the ERDF and CF budget is based on the contribution of each MS to the overall EU budget for the 2014-2020 period, according to DG Budget data.

ETC (Interreg) programmes are not included because estimation of spill-over effects of the ERDF and CF budget, and the related net contributions and benefits, are less reliable for these.

3. Administrative costs of ERDF and CF to the EU public sector

Administrative costs for programme authorities were calculated on the basis of a 2018 study on ESIF administrative costs and burden¹⁵. At the moment of writing this *ex post* evaluation, there is a new ongoing study estimating administrative costs and burden for the 2021-27 period. This study, however, does not collect new information in relation to the evaluated period and therefore was not used for this analysis.

The sample of programme authorities covers 48% of ERDF authorities, 83% for CF, 56% for multi-fund programmes and 34% for Interreg (see p. 27 of the published study). The results are therefore deemed overall reliable.

The study's underlying dataset was used to calculate the total administrative costs associated with implementing the ERDF and CF. For the calculation of total costs, total eligible spending data was used as opposed to the 2018 study's use of allocations. In addition, the additional REACT-EU resources and focus on the costs associated with the evaluated funds¹⁶ were factored in. Therefore, the updated numbers presented here differ from the figures presented in the published study.

¹⁵ European Commission, Spatial Foresight & t33 (2018c).

¹⁶ The original study examined costs for all ESIF, and therefore the calculations included all funds. This evaluation only calculated costs for the evaluated funds.

The share of costs among programme authorities is shown in the table below¹⁷:

Fund	Programme preparation	MAs	Certifying Authorities and Paying Agencies	Audit Authorities and Certification Bodies
ERDF	4%	78%	5%	12%
CF	4%	78%	10%	8%
Interreg	3%	76%	9%	12%

Source: European Commission, Spatial Foresight & t33 (2018c).

Administrative costs associated with implementing the funds can be estimated to total EUR 8.7 billion, or approximately 2.3% of the total eligible spending. The lower cost of CF is due to OPs implemented under the fund typically being fewer and larger in financial volume. ‘Multi-fund’ programmes are composed of a combination of ERDF, CF and ESF funds (ERDF-CF, ERDF-CF-ESF and ERDF-ESF). The results were aggregated for simplicity.

The rate at which costs are incurred by programme authorities over the years of the programming period was not even and differed from the pace of spending. The latter is because some of the activities that result in workload for programme authorities, such as programming, setting up the management and control system, designation of authorities or ensuring enabling conditions had to be put in place before implementation could begin. The comparison of workload with total eligible spending shows how these start-up costs were incurred before spending could begin. Once again, as the estimated workload is based on a 2018 study, it does not take into account crisis response initiatives and additional resources through REACT-EU, which are likely to have added to the workload over the years between 2020-2023 as opposed to what is depicted in the figures below.

¹⁷ See p. 38 of the [published study](#) for monetised costs per million EUR spent.

Figure 1 - Share of yearly administrative costs (workload) and total eligible spending in the 2014-2020 period

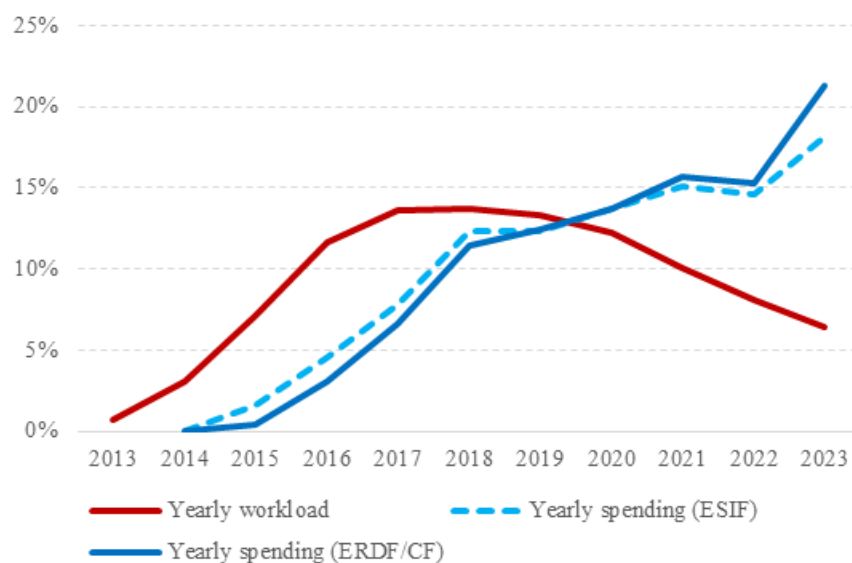
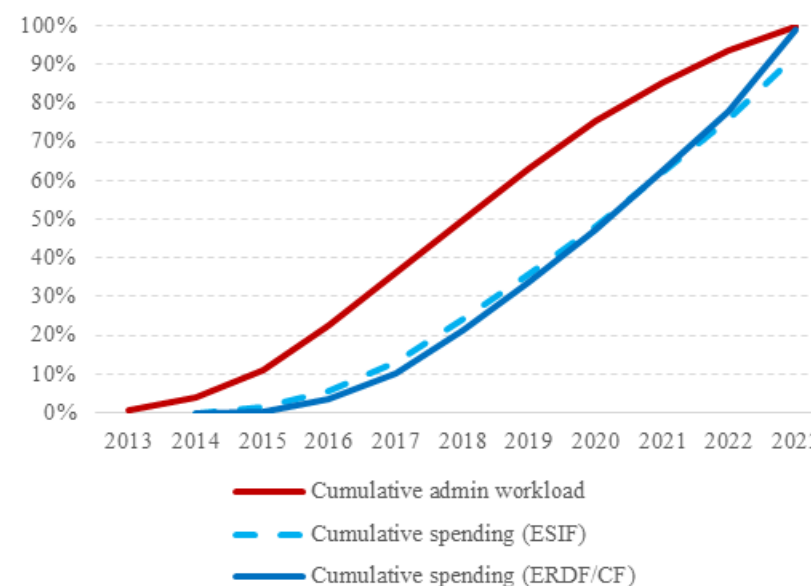


Figure 2 - Cumulative administrative costs (workload) and total eligible spending in the 2014-2020 period



Source: European Commission based on European Commission, *Spatial Foresight and t33* (2018c).

4. Administrative burden of ERDF and CF on beneficiaries

The sample for estimating the administrative burden on beneficiaries was small (ERDF N=82, CF N=29, Interreg N=20) and the variance is high. While the sample was constructed to cover several Member States, thematic objectives and funds, these limitations mean that, as noted by the original study, the estimated total burden on

beneficiaries presented below should be interpreted carefully and as indicative of the order of magnitude rather than precise estimates. Given the small sample and high variance, median values were used to aggregate values to avoid estimates being driven by outliers that may bias the results disproportionately. Note that this results in a conservative estimate of cost results based on the approximation of a ‘typical’ cost for applicants and beneficiaries. The underlying study also published median values. To provide a range of plausible values, aggregate total burden on beneficiaries based on the average values were also calculated. Importantly, support following the successive crises and response initiatives is likely to have resulted in different levels of burden associated with using the funds, which are not factored in.

5. Updating the figures of the 2018 study

The 2018 administrative cost and burden study on which the estimates are based had to be both updated and adjusted for the purposes of this *ex post* evaluation. The EUR 26 billion estimate of total administrative cost therefore differs from the estimated range presented in this SWD.

First, the scope of that study differed from the scope of this *ex post* evaluation, as it covered funds other than the ERDF and CF as well. Second, given all the methodological and conceptual uncertainty described above required a more cautious approach regarding the estimates of administrative costs on beneficiaries, as described above. Third, the total allocations for both funds have changed since 2018. The introduction of additional resources through REACT-EU in particular constituted a considerable change which required adjustments in the calculation of total costs. Fourth, while the 2018 study relied on allocations, at the end of the programming period, actual spending was used as a basis of the estimates.

Regarding points three and four, the estimates of the 2018 study on cost per EUR million spent were used to update the calculations. Total spent amounts were multiplied with the respective estimated cost per EUR million for each fund to derive aggregate cost estimates.

Table 1. Overview of costs and benefits identified in the evaluation							
		Member States and Citizens		Businesses		Administrations	
		Quantitative	Comment	Quantitative	Comment	Quantitative	Comment
I. BENEFITS							
Change in real GDP ¹⁸	Long-term	EU GDP is estimated to be 0.56% higher in 2023 as a result of cohesion policy.	Estimated by the RHOMOLO model as a result of cohesion policy funds. The model accounts for the cost of financing the policy via taxation, which means that benefits are net of initial costs.				
		This translated into a GDP multiplier of 0.69 in 2023, 1.75 in 2030, 2.97 in 2040 and 3.43 in 2045	The multiplier is the ratio of change to GDP to the policy injection. It can be interpreted as the return per euro spent.				
Change in employment	Long-term	Employment in the EU is estimated to be 0.91% higher in 2023 as a result of cohesion policy.	Estimated by the RHOMOLO model as a result of cohesion policy funds.				

¹⁸ Note that the model simulations also include the ESF+.

Reduction in territorial disparities	Long-term	The gap between the 20% top and the 20% bottom EU regions in terms of GDP per head is estimated to be more than 3.5% lower in 2023 as a result of cohesion policy. In 2023, GDP disparities¹⁹ are estimated to be lower both within (-2.11%) and between (-4.79%) Member States as a result of cohesion policy.	Estimated by the RHOMOLO model as a result of cohesion policy funds.				
Competitiveness of SMEs	One-off			2.5 million enterprises received support from the ERDF (non-refundable direct financial support, financial instruments or non-financial support such as consultancy)			

¹⁹ As measured by the Theil index.

				Thanks to ERDF support, 370 000 new direct jobs were created in the supported enterprises.			
Information and communication technologies	One-off	Close to 8 million additional households benefited from broadband internet connections.					
Environment	One-off	29 million people benefited from flood protection measures. 8.3 million people benefited from improved water supply. 9.2 million people gained access to improved					

		wastewater treatment.					
Research and innovation				73 000 researchers working in improved research infrastructure facilities. More than 75 000 enterprises cooperated with research institutions in R&D projects.			
Low-Carbon Economy		6 000 MW of additional capacity of renewable energy production was created (the equivalent of 6 large nuclear reactors or around 2 000 wind turbines). More than 560 000 households had their energy consumption					

		classification improved.					
Housing infrastructure		13 5000 housing units have been newly built or renovated.					
Wider social benefits, including improved well-being, health, gender equality, etc.	Long-term	Quantified (but not monetised) through output indicator values achieved by the end of 2023.	Social welfare benefits stemming from thematic objectives and funds.				
Other wider benefits, including climate change mitigation and adaptation, improved biodiversity and ecosystem services, connectivity, cross-border infrastructure and cooperation, increased administrative capacity to for public investment planning and implementation, etc.	Long-term	Quantified (but not monetised) through output indicator values achieved by the end of 2023.	Wider range of benefits stemming from thematic objectives and funds.				

II. COSTS							
		Member States and Citizens		Businesses		Administrations	
		Quantitative	Comment	Quantitative	Comment	Quantitative	Comment
Direct cost of ERDF / CF funding to EU Member States and citizens (Operational expenditure)	One-off	€376 billion (of which €304 bn corresponds to ERDF, and €72 bn CF).	Total certified expenditure (as of December 2024).				
Financial transfers between Member States	One-off	Total ERDF and CF budget: €282 040 million Gross contribution: Cohesion countries: €33 647 million Non-cohesion countries: €248 393 million	Based on DG BUDGET data.				
Total administrative costs of implementing			The costs of implementing the ERDF and CF are incurred by the public sector (programme authorities) but ultimately			€8.7 billion	Total administrative costs associated with the ERDF, CF and Interreg.

the ERDF and CF to the EU public sector			present a cost to EU Member States and citizens			Of which ERDF: €3.1 billion, CF: €67 million, Multi-fund: €4.75 billion, Interreg: €787 million,	Note that multi-fund programmes are composed of a combination of the ERDF, CF and ESF. ESF spending was taken out of the cost estimates which were adjusted proportionately. Part of the administrative costs are borne by Technical Assistance and part by national authorities.
Preparation	One-off					€361 million Of which: ERDF: €125.5 million CF: €2 million Multi-fund: €207.5 million	See note on multi-fund under total costs.

						Interreg: €26 million	
General management	Recurring					€1.33 billion Of which: ERDF: €511 million, CF: €20 million Multi-fund: €615 million Interreg: 182.5 million.	See note on multi-fund under total costs.
Financial management						€786 million Of which: ERDF: €303 million CF: €12 million Multi-fund: €407 million Interreg: €63.5 million	See note on multi-fund under total costs.
Project-related tasks						€2.12 billion	See note on multi-fund under total costs.

						Of which: ERDF: €760.5 million, CF: €14 million Multi-fund: €1.18 billion Interreg: €167 million.	
Reporting, monitoring and evaluation						€4.12 billion Of which: ERDF: €1.42 billion, CF: €20 million Multi-fund: €2.33 billion Interreg: €348 million	See note on multi-fund under total costs.
Application				€5.8 – €13.4 billion Of which: ERDF: €5.45 – 12.6 billion, CF: €165 - 582 million			Lower bound values represent aggregation through median values, while the upper bound is based on the average in the sample. See note on methodology and plausibility of values above this table.

				Interreg: €184 – 224 million	Both businesses and administrations can apply for funding, therefore these costs are considered together. Note that as opposed to administrative costs to programme authorities, ERDF and CF funds in multi-fund programmes are assessed here separately.
Project management				€15.6 – €22.3 billion Of which: ERDF: €14.5 – 21 billion, CF: €409 – 473 million Interreg: €617 – 670 million	Lower bound values represent aggregation through median values, while the upper bound is based on the average in the sample. See note on methodology and plausibility of values above this table. Both businesses and administrations can apply for funding, therefore these costs are considered together. Note that as opposed to administrative costs to programme authorities, ERDF and CF

					funds in multi-fund programmes are assessed here separately.
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Simplifications and burden reduction

The estimates of simplification and burden reduction are based on a dedicated study²⁰ titled ‘Use of new provisions on simplification during the early implementation phase of ESIF’. The estimation of the impact on administrative costs on programme authorities and burden on beneficiaries is based on interviews with MAs and experts (see more details below the table). The figures presented show impact as compared to the 2007-2013 baseline (in %).

²⁰ European Commission, Sweco, t33 & Spatial Foresight (2017a).

TABLE 2: Simplification and burden reduction (savings already achieved)

		Programme authorities			Beneficiaries		
		Most likely estimate	Conservative estimate	Comment	Most likely estimate	Conservative estimate	Comment
Total cost savings from simplification measures		-8.0%	-4.0%		-14.0%	-9.0%	
Direct compliance and enforcement cost savings:							
Compulsory simplification measures							
One-off	Partnership Agreements replace the NSRF and NSP (Art. 14-17 CPR)	negligible impact	negligible impact	The table shows that at the beginning of the period, e-government, new rules for revenue-generating projects and simplified cost options (SCOs) were shown to be the main sources of savings in administrative costs. According to the information provided by the thematic <i>ex post</i> evaluations (WPs), during the	no impact	no impact	Overall, the impact on the administrative burden was significant and proportionally larger than the impact on administrative costs. E-government and SCOs were the main sources of savings. During
One-off	Greater thematic concentration (Art. 9 CPR and Art. 5 ERDF, Art. 4 CF)	-0.3%	-0.1%		no impact	no impact	
Recurrent	Common indicators & enhanced monitoring framework (Art 27 (4) CPR)	negligible impact	0.3%		0.9%	1.5%	
Recurrent	Harmonisation of rules across ESI Funds (such as Art. 65, 67 and 68 CPR)	-1.1%	-0.7%		-1.1%	-0.7%	

Recurrent	Proportionate control/minimum level of on-the-spot checks (Art. 148 CPR)	-0.5%	-0.3%	implementation of the programmes the use of SCOs in ERDF and CF interventions turned out to be more difficult than expected, while e-government offered simplification and speed-up that were never expected. The COVID-19 pandemic posed an additional and unexpected challenge to implementation, which was successfully overcome with the support of e-government tools	-0.5%	-0.4%	implementation , SCOs showed a limited take-up compared to what was expected at the beginning of the period, which may have reduced the initially perceived savings.
Recurrent	E-cohesion/E-governance with beneficiaries (Art. 122(3) CPR)	-1.8%	-1.2%		-4.7%	-3.4%	
Recurrent	Simpler rules for revenue-generating projects (Art. 68 (5) CPR)	-1.4%	-0.8%		-2.1%	-1.3%	
Recurrent	Shorter retention period for documents (Art. 140(1) CPR)	-0.4%	-0.2%		-0.6%	-0.4%	
Recurrent	Simplified programme modification procedure (Art. 96(11) CPR)	-0.001%	negligible impact		no impact	no impact	
Recurrent	Simplification of the programme document	negligible impact	negligible impact		no impact	no impact	
	Direct compliance cost savings: Optional simplification measures						

Recurrent	Implementation of projects under CLLD (Art. 32-35 CPR)	negligible impact	0.1%		0.3%	0.4%	
Recurrent	Integrated territorial investment (Art. 36 CPR)	0.1%	0.2%		0.1%	0.2%	
Recurrent	Merger of managing and certifying authority (Art. 123(3) CPR)	-0.3%	-0.2%		no impact	no impact	
Recurrent	Grants and repayable assistance may take the form of SCO (Art. 67 of the CPR)	-1.8%	-1.2%		-6.1%	-4.4%	
One-off	Joint Action Plans (Art. 104-109 CPR)	negligible impact	negligible impact		-0.001	negligible impact	
Recurrent	Independent quality report for Major projects (Art. 102 CPR)	negligible impact	negligible impact		no impact	no impact	
	PART II: II <u>Potential</u> simplification and burden reduction (savings)						

	<i>NOTE: given that this is an ex post evaluation, all savings are expected to have been already incurred.</i>

Overall, the efforts to reduce administrative costs and the administrative burden paid off. The simplification measures were assessed to reduce administrative costs for ESI Funds by EUR 0.5 to 1.5 billion, i.e. 2 to 5% of administrative costs. Taking the 2007-2013 period as a baseline, the implementation of simplification measures is estimated to have reduced administrative costs to EUR 23- 24 billion, i.e. 4% of the ESI Funds budget.

In addition, simplification measures are estimated to have reduced the administrative burden for all ESI Funds by EUR 1 to 2 billion, or 9 to 15%. Taking the 2007-2013 period as a baseline, simplification reduced the burden to EUR 11 to 12 billion, i.e. 2% of the ESIF budget.

However, most of the reduction is from only 10 of the 21 simplification measures. The remaining 11 measures show a mixed picture.

- This study largely confirms the impact study of 2012, such as in the case of the ERDF / CF where the administrative cost reduction ranges between 4 and 8%, compared to 7% suggested by the impact study. The reduced administrative burden from simplification measures lies between 9% and 14% of the total administrative burden, which is below the 20% mentioned in the impact study.
- 110 persons were interviewed on administrative costs and the administrative burden covering 39 programmes and 17 Member States, 9 ERDF / CF, 4 ETC, 12 ESF, 8 EAFRD and 6 EMFF programmes.
- 47 persons were interviewed on gold plating and the role of national and sub-national administrations.
- 631 persons answered the online survey on administrative costs and the administrative burden, covering 398 programmes and all Member States and all types of programme bodies. Of these survey responses, 152 relate to ERDF / CF programmes, 98 ETC, 134 ESF, 114 EAFRD, 37 EMFF and 96 multi-fund programmes. Although with variations across the funds, the response rate was high for all ESI Funds which ensures the robustness of data extracted from the survey.
- 95 beneficiaries from different funds have responded to an online survey on gold plating.
- ERDF / CF: The simplifications measures imply a reduction of administrative costs of 4 to 8% and a reduction of administrative burden of 9 to 14%. The most important simplification measures are SCOs and e-cohesion, followed by simpler rules for revenue- generating projects and the harmonisation of rules.

Between the 2007-2013 period and the 2014-2020 period, the administrative costs of the ERDF and Cohesion Fund declined on average by around 20% in monetary terms but increased by 23% in terms of FTE person-years. This suggests that there has been a reduction in the costliest activities and/or an increase in staff employed in

countries with lower salaries. Tasks under the responsibility of MAs showed the largest reduction in monetary costs but an increase in person-years. Costs of tasks under the responsibility of audit and payment authorities increased in terms of person-years but remained almost unchanged in monetary terms. It should be noted that the 2014-2020 period saw both a strengthening of the audit system and a simplification of reimbursement checks, with standard cost options being widely introduced (though they encountered more implementation problems in ERDF and Cohesion Fund programmes than ESF ones). The introduction of Smart Specialisation and TO 11 generated new management needs. In addition, ICT support was extensively introduced in the management of OPs, but its impact on the productivity of MAs will probably take some time to become visible.

Annex V. Stakeholders consultation - Synopsis report

1. Overview of consultation activities

The synopsis report summarises the stakeholder consultations carried out for the *ex post* evaluation of the European Regional Development Fund (ERDF) and Cohesion Fund (CF) for the 2014-2020 period. The consultations were based on a strategy that combined the initial Call for Evidence and public consultation on the overall evaluation with more targeted consultations in the supporting studies²¹. The targeted consultations included: i) targeted interviews at EU and national level, ii) surveys, iii) thematic workshops and focus groups, and iv) validation seminars.

Table 1 - Overview of consultation strategy and methodology

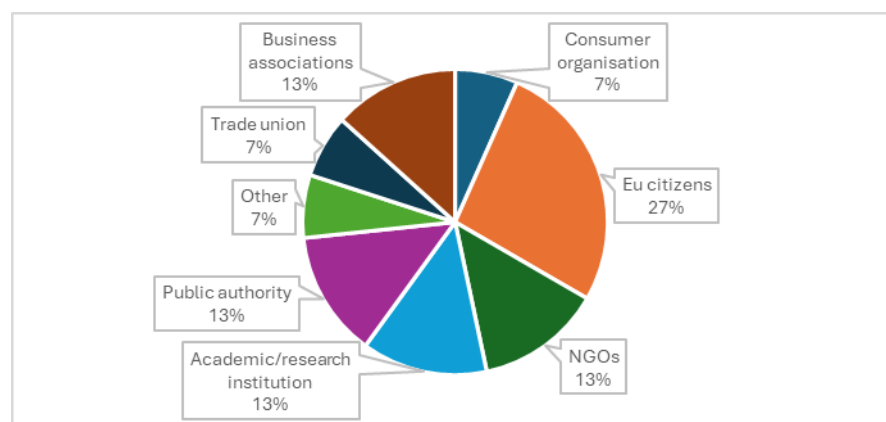
Activity	Stakeholders reached	Timing and responses
Call for evidence	Individual citizens, NGOs, consumer organisations, business organisations, MAs, public authorities, academic/research institutions, trade unions	12 January-9 February 2022, 15 responses
Public consultation	Individual citizens, experts, NGOs, Consumer organisations, Business organisations, public authorities, academic/research institutions, beneficiaries, stakeholders involved in project implementation	18 January-12 April 2023, 76 responses
Targeted surveys	Public authorities, implementing bodies, MAs, beneficiaries, stakeholders involved in project implementation	February-June 2023, 523 responses
Interviews	MAs, implementing bodies	January-August 2023, 662 people interviewed
Case-study interviews	Public authorities, MAs, implementing bodies, beneficiaries	January 2023-February 2024, 1 535 people interviewed
Seminars	NGOs, consumer organisations, business organisations, MAs, public authorities, academic/research institutions, external experts	November 2023-May 2024, 996 participants
Focus groups and thematic workshops	Public authorities, MAs, implementing bodies, beneficiaries	June 2023-January 2024, 167 participants

Source: *Have Your Say and supporting studies*.

²¹ These include: WP4 ‘Research, Technological Development and Innovation – RTDI’, WP5 ‘Information and Communication Technologies – ICT’, WP6 ‘Support to small and medium-sized enterprises’, WP7 ‘European Green Deal’, WP8 ‘Transport and energy network infrastructure’, WP9 ‘Employment, education and social cohesion’, WP10 ‘Institutional capacity and reform’, WP11 ‘Interreg’, which covered investments under the European territorial cooperation goal, WP12 ‘Crisis response’, WP13 ‘Territorial instruments’.

More in detail, the **Call for Evidence** was published on 12 January 2022 and was open for feedback until 9 February 2022. It received 15 unique pieces of feedback, from citizens (4), umbrella associations and trade unions (4)²², academic institutions and think tanks (3)²³, public authorities (2)²⁴ and NGOs (2)²⁵.

Figure 1 - Respondents to the Call for Evidence



Source: *Have Your Say – call for evidence*.

Portugal accounted for the highest number of contributions (3), followed by the UK, Germany, and Belgium, with 2 contributions each. Single responses were received from Sweden, Greece, France, Finland, Spain, and Czechia.

While the feedback received did not provide any additional evidence for the evaluation, it offered valuable perspectives on various aspects of the implementation of ERDF and CF, such as the need for more flexible and regionally adapted funding, the simplification of administrative processes, and the need for strengthened sustainability. Additionally, there is broad consensus on the importance of increasing public awareness of the benefits of EU funding and ensuring social and environmental responsibility in project implementation. More specifically, citizens, public authorities, and businesses organisations emphasised the need to reduce bureaucratic barriers and streamline administrative procedures. Citizens highlighted the risk of an asymmetric development – in line with the suggestions coming from a research institute – while public authorities emphasised the importance of decentralised decision-making to better align funding with local needs. NGOs stressed the necessity of both capacity building and urgent reforms to ensure that EU funds effectively support sustainability objectives. Sustainability is a priority for trade unions and consumer organisations too, both of which advocate for a stronger emphasis on sustainability in ERDF evaluations and closer alignment with the Green Deal objectives.

The **public consultation** on the results of the funds in the 2014-2020 period was run between 18 January 2023 and 12 April 2023. It received 76 valid responses²⁶, 51% of which (39 out of 76) came from Germany and Sweden, followed by Croatia (9 responses), Netherlands (6), Belgium and Romania (4 each), Bulgaria (3). Two replies from each came from Finland, Italy, Slovakia, and Spain, and one reply from each came from Austria, Denmark, France and Turkey. Most responses (63%, 48 out of 76) came from public authorities, while the rest was split between private

²² Deutscher Gewerkschaftsbund, European Association of Guarantees Institutions, INSULEUR, Fédération Internationale del Clubs de Motorhomes.

²³ Regional Studies Association, Masarykova Univerzita, GISAD.

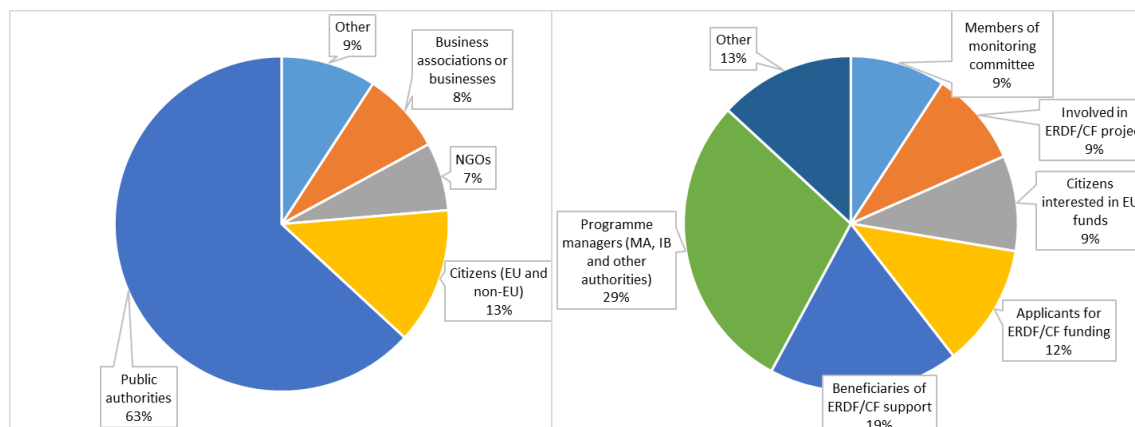
²⁴ North Sweden European Office, West Finland European Office.

²⁵ CEE Bankwatch Network, Housing Europe.

²⁶ Two questionnaires from different countries but from interlinked research organisations contained the same responses to open questions and to virtually all the closed questions. These are treated as a single response.

individuals (10 responses), business associations and private companies (6), NGOs (5), academics (4) and trade unions (3).

Figure 2 - Responses to the public consultation by type of organisation (left) and by role of respondents (right)



Source: *Have Your Say – public consultation.*

The large majority of respondents (57 out of 76) considered the ERDF and CF to be capable of achieving results in a reasonable time frame and in a cost-effective manner. The proportion was high above all for MAs, intermediate bodies and researchers working on ERDF / CF programmes (100%), stakeholders involved in ERDF / CF projects (86%) and beneficiaries (79%), while individuals and experts were less convinced (29% and 33%, respectively). Three key areas were identified as those most in need of simplification. Firstly, the management and implementation system, as highlighted predominantly by applicants for funding, beneficiaries, citizens, and researchers. Secondly, management and control systems emerged as an area requiring simplification, particularly signalled by members of monitoring committees and applicants. Thirdly, audit and control requirements were identified as necessitating simplification, with evaluation and technical experts, applicants, and programmes authorities emphasising the need for improvement.

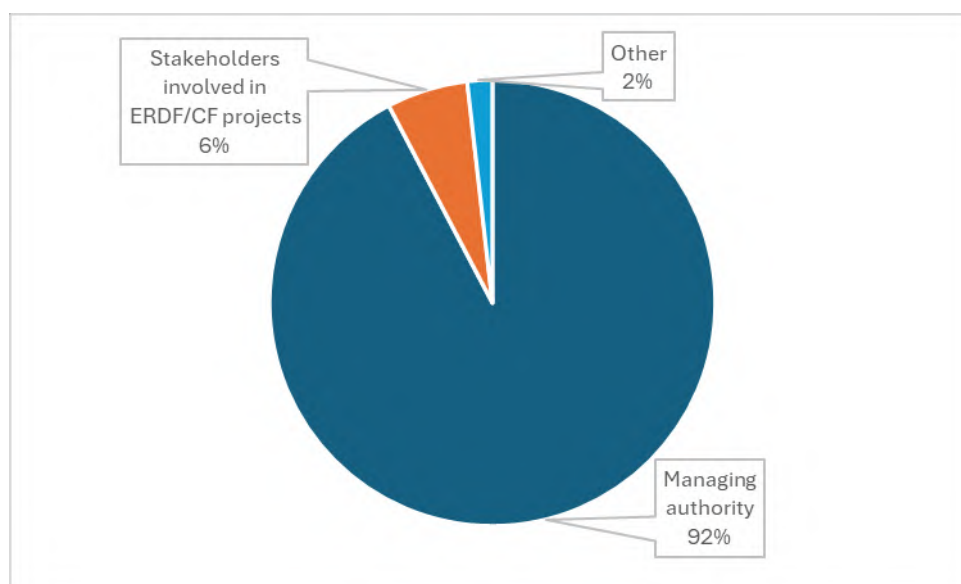
With regard to the role of ERDF / CF in addressing economic, social, and territorial needs, beneficiaries emphasised the importance of the funds at the local level. There was broad consensus among all respondents in recognising strong importance at the regional level, with MAs and intermediate bodies also highlighting importance at the national and city levels.

Multiple rounds of **structured or semi-structured interviews** covering a wide range of perspective and experience as regards ERDF and CF programmes were held with key stakeholders with almost 2 100 interviewees in total, mainly from 3 groups:

- EU-level stakeholders, mostly representatives of European institutions and organisations contributing to policy formulation and strategic oversight, whose insights provided a macro-level perspective of regulatory frameworks;
- national and regional stakeholders, who provided in-depth information on the implementation of operations at their respective levels, on navigating administrative procedures and on addressing region-specific challenges;
- panels of experts to complement institutional views, including academics and independent researchers specialising in regional development.

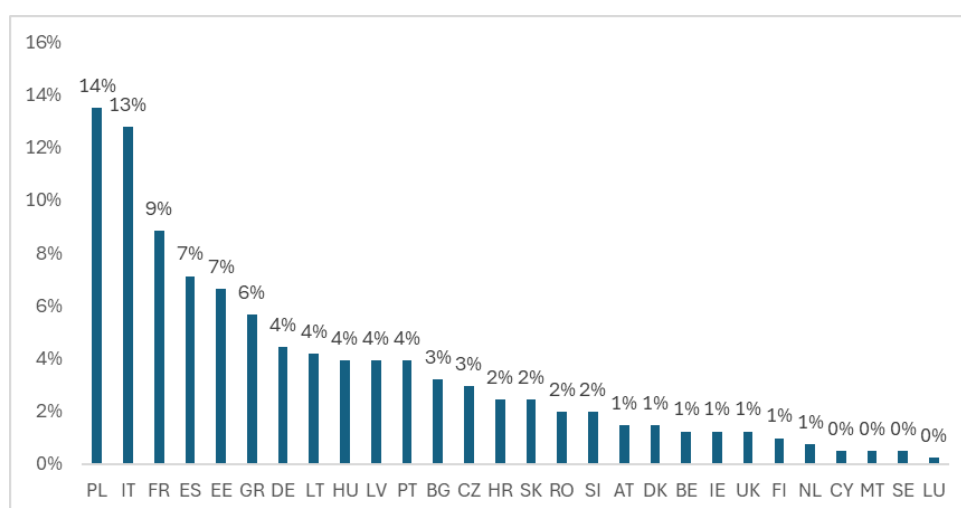
The interviews held in the initial part of the supporting studies, mostly involved MAs (92%), followed by other national and regional stakeholders (6%) and panels of experts, associations and NGOs (2%) (Figure 3). The majority of contributions came from Poland, Italy and France (Figure 4).

Figure 3 - Type of interviewee by role – initial interviews



Source: Supporting studies.

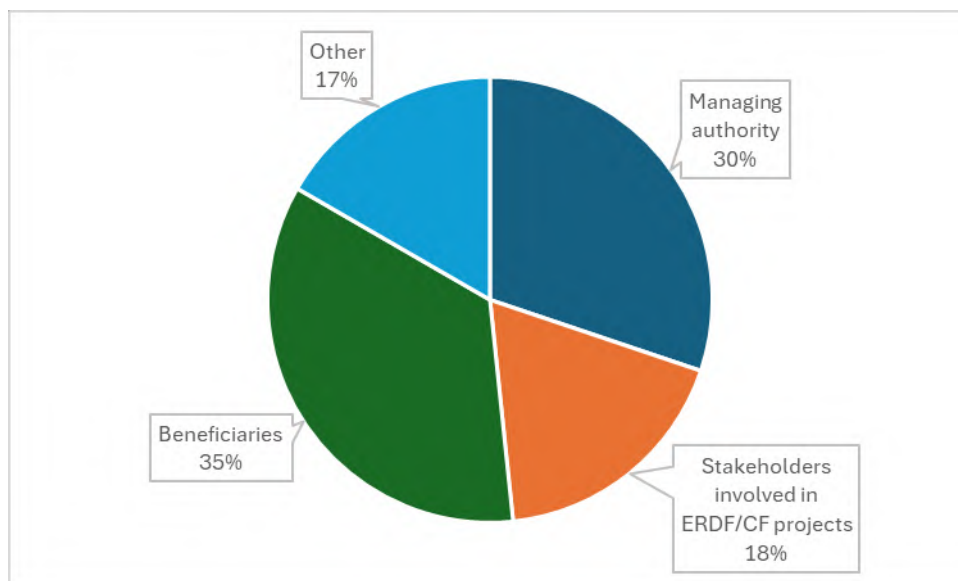
Figure 4 - Geographical coverage of initial interviews



Source: Supporting studies.

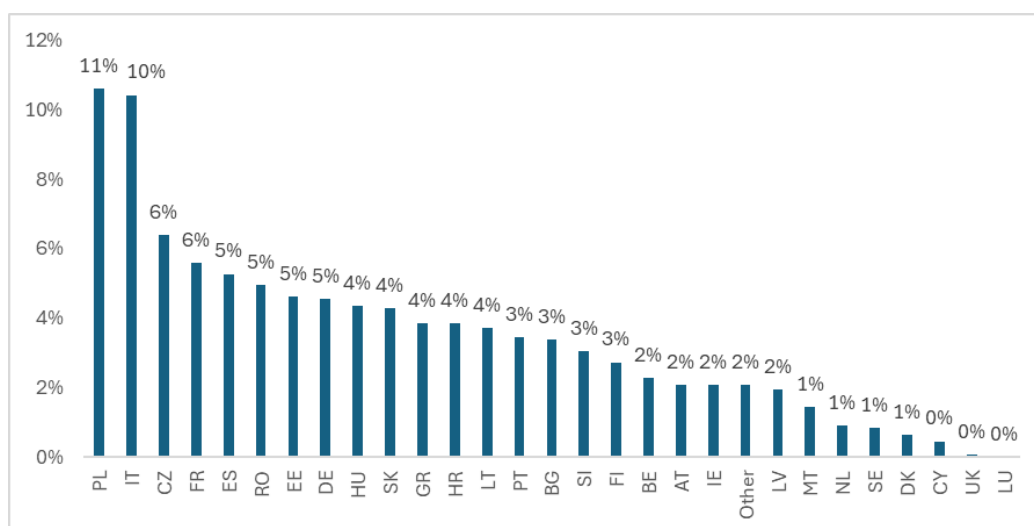
Multiple rounds of interviews were then conducted within the case studies. In this case, the largest group of respondents were beneficiaries, accounting for 35% of the interviewees (Figure 5). The remaining contributions came from MAs, other stakeholders involved in ERDF / CF projects, experts, think tanks and associations. The most represented countries were Poland (11%) and Italy (10%) (Figure 6).

Figure 5 - Type of interviewee by role – interviews under the case studies



Source: Supporting studies.

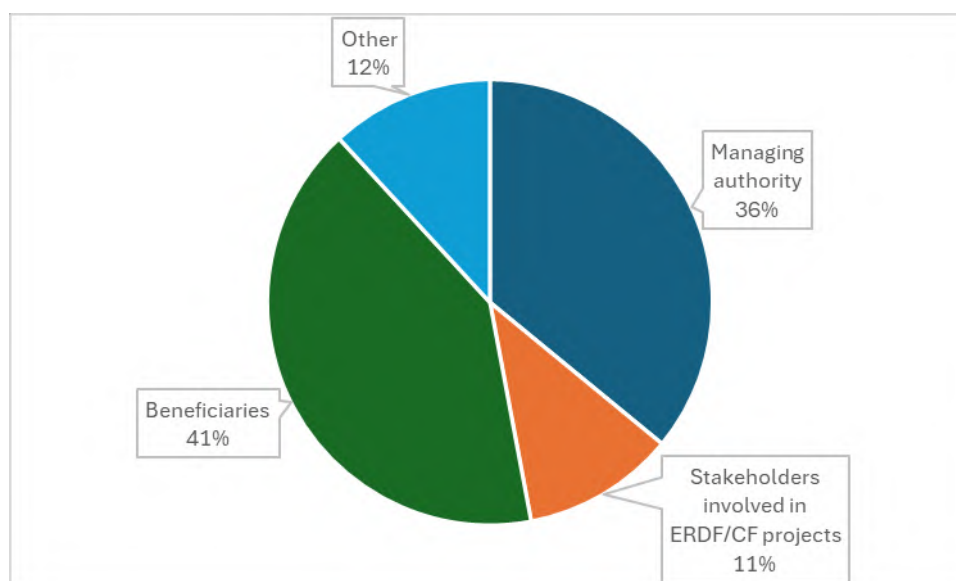
Figure 6 - Geographical coverage of interviews under the case studies



Source: Supporting studies.

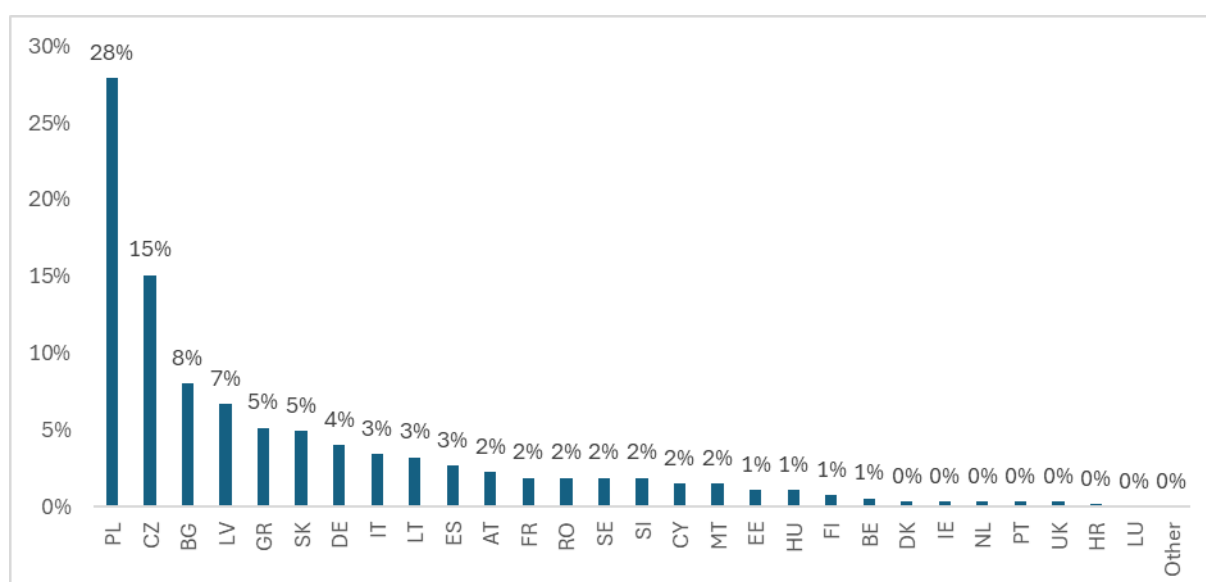
The interviews were complemented by the **surveys** carried out under some WPs, totalling 523 replies. The largest contributing group was project beneficiaries, accounting for more than 40% of the replies, followed by MAs at both regional and national level (36%), experts and researchers (12%) and other stakeholders involved in the implementation of the projects (11%) (Figure 7). Many of the responses to the surveys came from Poland (28%) and Czechia (15%), while most Member States accounted for less than 2% of the total responses (Figure 8).

Figure 7 - Type of respondents to the surveys by role



Source: Supporting studies.

Figure 8 - Geographical coverage of the contributions to the surveys

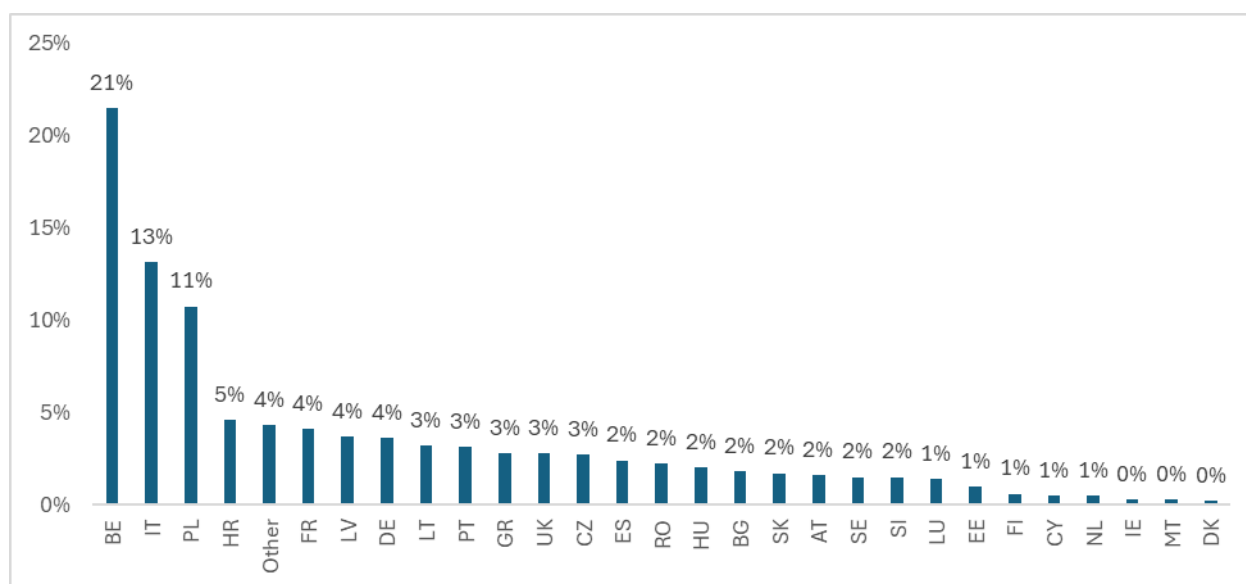


Source: Supporting studies.

Focus groups and technical workshops (19 in total) were organised during the evaluation work to discuss and test emerging findings, collect further input from experts and gather reflections on the issues identified and whether they had been or were likely to be addressed in the period 2021-2027.

Stakeholders' validation **seminars** were organised towards the end of the evaluation work under all the WPs to deepen and validate the preliminary findings from the studies, with representatives from MAs of the relevant programmes and thematic and evaluation experts as well as European Commission officials (10 seminars with 1 025 participants in total). Many of the participants in the seminars came from Belgium (21%, including several Commission officials), Italy (13%) and Poland (11%). Other Member States accounted for 5% or less (Figure 9). During the various seminars, the two most represented groups were, experts, academics, and researchers (47%), and regional and national MAs (31%).

Figure 9 - Geographical coverage of participants in the seminars



Source: Supporting studies.

2. Summary of the main positions on evaluation criteria

EFFECTIVENESS

Stakeholders reporting on effectiveness relayed a mixed picture, with impressive results referred to in some policy areas and problems in others. Under WP9, they highlighted the tangible improvements made to infrastructure and service provision in education, healthcare, and social inclusion through, ERDF-financed investment in the construction of new schools, hospitals, childcare facilities and community centres. Under WP6, they emphasised the contribution of the ERDF to the creation and expansion of SMEs.

Under WP4 and WP7, those consulted draw attention to the challenge of measuring effectiveness in respect of research and the green transition, the variety of indicators used in different Member States making it difficult to assess the actual impact of ERDF support on environmental and innovation goals. Under WP8, they reported that while energy infrastructure projects generally contributed to the modernisation of electricity grids and integration of renewable energy sources, the success of urban mobility projects was highly dependent on alignment with local policy and changes in public behaviour as regards the means of transport used, which varied significantly between regions.

Despite some under-performance in particular policy areas, such as in respect of environmental infrastructure projects covered by WP7, researchers highlighted that ERDF funding was generally considered to be effective in pursuing long-term regional development goals. However, the challenges noted in the measurement and reporting of outcomes suggested that future evaluations would benefit from a more standardised approach to indicators and tracking results.

The large majority of respondents to the public consultation (86%, 65 out of 76) reported that the ERDF / CF had been reasonably effective or very effective, especially those with experience of Investment Priorities under different Thematic Objectives. Judgments on effectiveness were fairly consistent across respondent countries of residence and types of organisation, though a relatively large number of respondents considering that the funds were effective were from Germany and Sweden and worked in public authorities.

EFFICIENCY

Efficiency in the management and allocation of ERDF funds was reported to vary according to the type of intervention and experience of MAs. Many of those consulted by WP4, WP6, WP8, and WP9 emphasised the importance of administrative capacity for ensuring the smooth implementation of projects, while those consulted by WP5 and WP8 stressed the need for experience in handling the complex processes of fund allocation and regulatory compliance. MAs in some cases also reported how issues with staff, including limited capacities and/or staff turnover, could affect successful programme implementation and, as emerged from WP4 and WP6 consultations, regions with less capacity tended to suffer from significant delays in implementation because of cumbersome procurement procedures and the difficulties of navigating State aid rules. Delays were considered to particularly problematic in the early stages of project implementation, since they tend to slow down the momentum of long-term collaborative efforts, especially in respect of SME development and research and innovation.

Consultations under WP5 and WP12 highlighted the tendency for certain forms of support, such as grants for early-stage innovation and loans for later-stage projects, to be more effective in ensuring positive project outcomes. However, it was reported under WP4 that, despite the apparent benefits of financial instruments, their take-up remained limited because of their complexity and the fact that many potential beneficiaries were unfamiliar with them. Those consulted by WP8 and WP10 emphasised that the administrative burden, including heavy reporting requirements and lack of flexibility some funding procedures, often led to inefficiencies. Those consulted by WP12, however, reported that the introduction of Simplified Cost Options (SCOs) and the adoption of digital platforms for project submission and monitoring contributed to increasing efficiency by reducing administrative overheads.

Consultations under WP7 reported that efficiency was adversely affected by the complexity of regulatory requirements, particularly in the form of Environmental Impact Assessments, and the slow pace of project selection and approval procedures. This was said to be worsened by delays in programming and coordination between EU and national authorities, resulting in extended project timelines.

Researchers, beneficiaries and MAs considered the ERDF / CF to be capable of achieving results in a reasonable time frame and in a cost-effective manner. However, individuals were less convinced about the efficiency of the funds than public authorities. In addition, 3 aspects, in particular, were identified as being in most need of simplification: a) the management and control system; b) the entire management and implementation system, and c) the audit and control requirements.

COHERENCE

The coherence of ERDF / CF with national, regional, and other EU policies seems to have been dependent in some degree on how the ERDF was managed. Where a single body was responsible for the coordination and management of funds, stronger synergies and better policy integration were observed. For example, in the consultation carried out under WP4, RTDI investments were reported to show close alignment with regional innovation strategies, especially in regions where MAs integrated EU funding with national innovation programmes. However, in areas with multiple agencies or fragmented governance, such as those considered by WP6 and WP7, respondents to consultations (mainly implementing bodies) pointed to a lack of coordination which often led to overlaps or gaps in support. This was particularly thought to be the case in respect of investment in broadband, SME support, and green transition projects, where insufficient coordination with regional policies led to potential synergies with ERDF financing and other EU instruments not being realised.

Consultations under WP5 raised similar issues in respect of the digital transition, where ERDF investments in broadband, e-health, and e-government projects were often considered not to be fully aligned with national digital strategies. This was reported to have led to gaps in support,

especially in regions where the digital literacy of SMEs or local authorities was insufficient to take full advantage of the funding available. Coherence challenges also came to light as regards investments in transport and energy networks, with multimodal transport projects facing delays because of a lack of integration between national, regional, and EU strategies and, accordingly, not achieving their potential impact.

Nevertheless, Interreg programmes also experienced challenges because of differences in policy between Member States, which, in some cases, led to fragmented implementation of measures. Greater harmonisation and more robust means of coordination across different EU funding streams were identified, especially by MAs and beneficiaries, as key areas for future improvement.

On a broader level, participants in the consultations reported ERDF / CF programmes to have been generally well coordinated with other EU funding sources. Beneficiaries and stakeholders involved in project implementation highlighted the strong coordination between the ERDF and the ESF, with beneficiaries expressing particular appreciation for coordination with Horizon 2020, too. Moreover, members of monitoring committees reported that coordination with the EAFRD and national and regional policies was generally satisfactory, reinforcing each other. However, a significant number of respondents reported that they had no opinion or did not know about the extent of coordination, presumably because they had little, or no experience of the funds concerned.

RELEVANCE

Relevance was considered a strong point for most ERDF / CF interventions, as funding tended to respond to the needs of the regions and sectors targeted by investments. Consultations under WP4, WP6, WP8, and WP9 all reported that the funds mostly were strategically deployed to tackle regional disparities and market failures, including gaps in infrastructure, deficiencies in innovation, and social exclusion. The majority of beneficiaries agreed with the fact that ERDF support was particularly relevant in addressing the needs of SMEs, providing loans and guarantees that were essential in regions with limited access to finance. Support for broadband expansion in rural and under-served regions was seen as crucial to ensuring equitable digital access. And support for investment in transport and energy networks was considered highly relevant to advancing the EU sustainability goals, especially in central and eastern and southern Europe where infrastructure was lacking.

However, while it emerged from the consultations carried out under WP4 and WP7 that investments financed were generally highly relevant, some views expressed that there were instances of missed opportunities. For example, some green transition projects were considered to have fallen short of addressing the full scope of environmental needs because of an overly narrow focus or insufficient integration with other EU policies. Similarly, the concentration of ERDF funding on R&D infrastructure in some regions without complementary support for commercialisation was held to have led to missed markets opportunities to fully exploit research outputs.

In addition, the shift in the allocation of funding in response to the COVID-19 pandemic, was considered in some regions to have diverted attention away from the pursuit of long-term development goals, as reported by the consultations held under WP6 and WP10.

There is consensus among stakeholders involved in project implementation, beneficiaries and MAs that the ERDF and CF were important in addressing economic, social and territorial needs, especially of regions and cities. In addition, almost all MAs interviewed considered the ERDF to be important and strategic in responding to the effects of the COVID-19 pandemic. NGO respondents judged the ERDF / CF to be important in addressing needs at all territorial levels, while companies and business associations considered the funds to have been especially important in helping to finance to the COVID-19 pandemic.

EU ADDED VALUE

Many stakeholders consulted by the WPs highlighted the EU added value generated by cohesion policy. They emphasised the strategic stability afforded by 7-year programming and, especially in the countries benefiting from the Cohesion Fund²⁷, that it allowed regions with limited resources to undertake large-scale infrastructure projects, such as energy or broadband network that were critical to bridge development gaps. Under WP9, it was reported that ERDF investments significantly enhanced health and education infrastructure by providing funding where national budgets fell short.

Under WP7 and WP11, the importance of EU monitoring and conditionalities was highlighted, in that it ensured that investments were in line with common EU goals, such as for smart specialisation and the green transition. It was considered that cohesion policy helped to ensure a more coordinated and coherent approach to regional development, fostered collaboration between Member States and strengthened cross-border cooperation, particularly in ETC programmes. Under WP12, it was held that the ERDF was important in building administrative capacity, which contributed to strengthening the long-term sustainability of local governments and institutions.

Under WP10 and WP13, it was noted that EU funding not only enabled essential projects to be financed but also supported policy learning and the exchange of know-how across regions, contributing to more effective governance and institutional capacity-building.

The majority of respondents to the public consultation (88%, 67 out of 76) acknowledged that the ERDF and CF generated effects that would not have materialised in the absence of funding, with 54% (41 out of 76) expressing strong agreement with this.

More specifically, the ERDF and CF were considered by 84% of respondents (64 out of 76) to have enabled the pursuit of EU objectives that would have otherwise been unattainable, and by 78% of respondent (59 out of 76) to have facilitated a higher level of investment than could have been achieved solely with national or local resources and to have reinforced a sense of belonging to the EU. Conversely, only a minority of respondents (37%, 28 out of 76) considered the facilitation of economic and social reforms to be among the principal benefits that funding had led to.

MAIN IMPLEMENTATION ISSUES

Several recurring issues emerged in the consultation activities across the WPs in relation to the implementation of the interventions supported by ERDF and CF. One of the main obstacles reported was the **administrative complexity and regulatory burden**, which affected most policy areas. For instance, for research and innovation projects (RTDI – those under TO1 covered in WP4), compliance with State aid regulations and public procurement procedures were reported to have created delays and inefficiencies, while for SME support (measures under TO3, covered in WP6), bureaucratic hurdles limited the accessibility of financial instruments. Similarly, for ICT projects (under TO2 and covered by WP5), overly rigid administrative requirements hindered broadband deployment and the take-up of digital solutions. In the public consultation, some respondents reported that both public authorities and beneficiaries lacked the necessary expertise to manage projects efficiently, leading to delays and problems for implementation.

Another issue reported was the **limited administrative and technical capacity of MAs**, which adversely affected project implementation. High staff turnover in both MAs and Implementing bodies (IBs), as noted under WP10 (on institutional capacity and reform), disrupted continuity and learning across programming periods and made it difficult to strengthen administrative capacity on a permanent basis. As regards territorial development mechanisms (considered by WP13), disparities in administrative capacity between regions affected the coherence and effectiveness of strategic investments. This was also evident in green transition projects (examined by WP7), on

²⁷ Cohesion Fund is aimed at Member States whose Gross National Income (GNI) per inhabitant is less than 90% of the EU average.

which local authorities struggled with the technical expertise required to implement complex environmental measures.

Financial sustainability and difficulties of accessing co-financing also posed challenges, particularly in projects requiring private sector involvement. SME support measures (WP6) encountered difficulties in mobilising private investment, as (non-repayable) financial instruments were often too complex or less attractive than traditional, non-repayable grants. For transport and energy infrastructure projects (examined by WP8), cost escalation and the uncertain availability of long-term maintenance funding created financial sustainability concerns. Similarly, crisis response instruments (examined by WP12) met difficulties in balancing the need for rapid disbursement of funding with ensuring the quality of projects and their long-term positive impact.

The difficulty of establishing effective **coordination between different funding mechanisms and governance levels** emerged as another major issue. Some RTDI projects (WP4) suffered from inconsistent synergies between the ERDF and the Horizon 2020 programme, while SME support measures (WP6) in some cases were not sufficiently integrated with national and regional policies. For social cohesion and education investments (WP9), ensuring coherence between the ERDF, the European Social Fund (ESF) and national programmes was sometimes challenging, and could lead to fragmented support. For transport infrastructure projects (WP8), misalignment between EU, national, and regional strategies in a number of cases gave rise to inefficiencies and delays.

Another key challenge reported was **the difficulty of monitoring and evaluating the impact of projects**. For support for investment in the green transition (WP7), inconsistencies in indicators and data limitations made it difficult to measure the effectiveness of interventions. For territorial development mechanisms, such as Integrated Territorial Instruments (WP13), defining standardised indicators to measure the social and institutional impact was problematic, making it hard to assess long-term effects. Similarly, for investments in ICT (WP5), members of municipalities and stakeholders involved in project implementation pointed out that the lack of reliable data on usage hindered evaluation of the effectiveness of the digital infrastructure installed.

External factors such as the COVID-19 pandemic and geopolitical uncertainties further complicated project implementation. RTDI initiatives (WP4) suffered from disruption to planned international collaboration, while large infrastructure projects (WP8) experienced cost increases due to supply chain disruptions. The rapid reallocation of funding under crisis response measures (WP12) created an administrative burden, and for social cohesion programmes (WP9), education and healthcare projects experienced staffing shortages in respect of infrastructure investments, so affecting their deployment.

Overall, these challenges emphasise the need for streamlined administrative procedures, enhanced capacity-building efforts, improved financial planning, better coordination across governance levels, and more effective monitoring and evaluation systems. Addressing these issues is critical to maximise the impact of future ERDF and CF programmes.

The seminars, however, confirmed that ERDF support contributed significantly to fostering innovation, digital transformation, and regional development, while innovative monitoring tools have improved project efficiency at all levels.

At the same time, MAs and beneficiaries gained experience over the period of project implementation, so strengthening their administrative capacity, while the discussions at the seminar were useful in facilitating knowledge sharing and exchange of good practice between stakeholders from different parts of the EU. Equally, the increasing availability of more detailed, results-based statistics was reported to help policymakers fine-tune strategies, and improving coordination across governance levels was also noted, with local and regional stakeholders having more say in decision-making. In this regard, as noted in the WP13 seminar, improved multi-level governance has enabled countries, such as Poland, Italy and Czechia, to develop more integrated strategies involving different administrative levels, leading to more efficient policy implementation.

In addition, it is worth noting that the feedback from participants in seminars and interviews highlighted the importance of taking explicit account of regional differences in project implementation and the underlying reasons for these, as well as the strategic reasoning behind these variations. While some Member States used ERDF and CF financing to reinforce their national policies effectively, others faced administrative obstacles in aligning their national and regional objectives with broader EU priorities.

Annex VI. REACT-EU

The Recovery assistance for cohesion and the territories of Europe (REACT-EU) was introduced in 2020 as part of the Next GenerationEU initiative (NGEU). It represented additional resources for Member States and regions and was designed to mitigate the economic and social impacts of the pandemic, while supporting the EU's green and digital transition objectives. In 2022, REACT-EU's scope was expanded to support the response to the Ukrainian refugee crisis, and in 2023, it was further extended to address the impacts of the energy crisis.

The REACT-EU Regulation²⁸ requires the European Commission to prepare an evaluation of the instrument. This annex contains a REACT-EU evaluation findings, building on the evidence gathered through the supporting study on crisis response.

REACT-EU was used by 114 programmes²⁹ to address the socio-economic impact of the pandemic and support recovery efforts and was later expanded to support efforts related to the refugee crisis. Funded through NGEU with a total budget of EUR 50.6 billion (EUR 30 billion under the ERDF), REACT-EU was the first occasion where additional resources were introduced mid-cycle into the cohesion policy framework. The initiative provided supplementary EU funding to Member States, complementing existing cohesion policy programmes and ensuring a seamless transition to the 2021–2027 programming period.

A substantial portion of REACT-EU resources under the ERDF was allocated to healthcare (25%) and SME measures (Generic productive investment – 18%). For investments contributing to the transition towards a digital and green economy most resources were allocated under intervention fields:

- Energy efficiency renovation of public infrastructure, demonstration projects and supporting measures (6.4%),
- e-Inclusion, e-Accessibility, e-Learning & e-Education (4.9%).

RELEVANCE

The pandemic created a considerable need for public investments in Member States' health systems and in various economic sectors, putting pressure on national budgets. The crises also created implementation challenges for cohesion policy programme authorities, and for beneficiaries. Public health measures introduced to curb the spread of the virus made it particularly difficult to reach some target groups, such as vulnerable groups and beneficiaries in remote rural areas. Additionally, the suspension of on-site work led to delays and the temporary shelving of several infrastructure projects. Disruptions to supply chains and border closures further complicated cross-border initiatives. The uncertain macroeconomic environment also likely dampened enthusiasm for engaging in longer-term projects, including cohesion policy-funded ones, further impacting implementation efforts.

Member States used REACT-EU resources in a diverse way and adapted their crisis response to evolving needs³⁰. For example, Greece, Hungary, Cyprus and Sweden allocated significant funds to the SME crisis, while Malta, Czechia, Luxembourg and Spain put more emphasis on funding for the health crisis. Slovakia used a substantial amount of REACT-EU funding to address the refugee crisis. Romania, Latvia and Denmark emphasised the energy crisis, although this was not the main focus. These examples show how REACT-EU could provide specific responses to different needs in each Member State.

²⁸ Article 2 of Regulation (EU) 2020/2221.

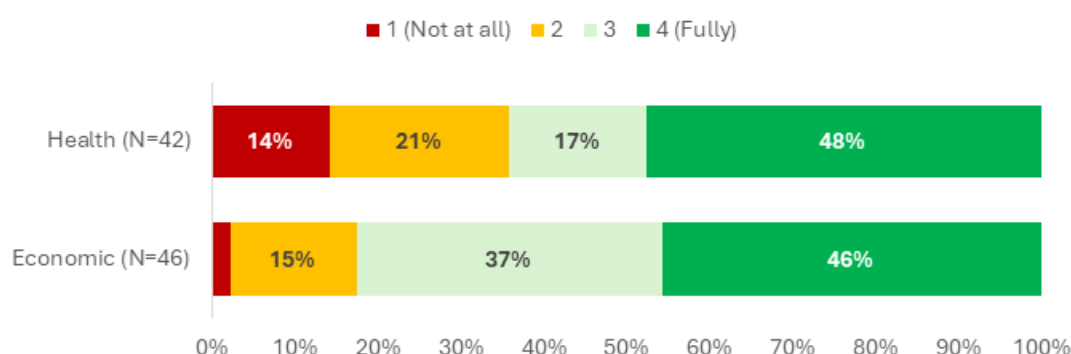
²⁹ Note the figure relates only to programmes led by DG REGIO.

³⁰ See also ECA special report 01/2023.

There is no clear link between the severity of the crisis and the ERDF resources mobilised³¹. This can be explained by the fact that cohesion policy funding constituted a relatively small share of the crisis response measures put in place by Member States. Most countries allocated the largest sums of ERDF reprogramming plus REACT-EU funds to the SME sector.

The large majority of survey responses to the supporting study - both concerning the economic and health crises – the changes and measures introduced by REACT-EU were either fully (almost half of the responses) or mostly aligned with the arising needs of the country/region. In the survey it was also specified by respondents that without the additional resources made available by REACT-EU entrepreneurs might have lost interest in implementing projects for which funding agreements had already been signed. Stakeholder perceptions of relevance are more positive in relation to the measures to address economic implications of the crisis than the health crisis itself. The results suggest a more heterogeneous level of satisfaction among Member States regarding the instrument's ability to address health crisis needs. This variation in perception may be attributed to the fact that interventions in the economic sector, particularly those addressing SMEs, were already well-established under the ERDF, benefiting from existing channels and expertise. In contrast, health-related expenditures are typically funded by Member States through other resources, which may have led to the instrument being perceived as less relevant in addressing health crisis needs.

Figure 1 - To what extent were the changes and measures introduced by REACT-EU in line with the arising needs of your country/region? – Survey replies related to REACT-EU measures for the health and economic crises



Source: European Commission based on Crisis response supporting study survey.

The flexibility offered under REACT-EU also allowed Member States to allocate larger amounts of resources to the territories most in need. For example, as highlighted during the interviews, the reallocation of REACT-EU funding led to significant changes in the initial distribution of resources in Finland, with funds directed to Southern and Western Finland, which were more severely affected by the pandemic. Furthermore, the increased REACT-EU prefinancing under CARE+ benefited less developed regions, helping to avoid further territorial disparities³².

The evidence collected by the crisis response supporting study suggests that REACT-EU successfully aligned recovery efforts with structural goals. Initially launched as an emergency response to COVID-19, it revitalised investments, particularly in the digital and green transitions, paving the way for the 2021-2027 strategic priorities (see also a more detailed discussion in coherence).

³¹ This analysis was conducted by the crisis response supporting study using several indicators to proxy the severity of the respective crises and reprogrammed amounts.

³² See relevant case study of the crisis response supporting study.

EFFECTIVENESS

The assessment of the effectiveness of REACT-EU relies on the analysis of indicator achievement, stakeholder feedback, and case study evidence gathered by the supporting study. Overall, REACT-EU was effective in addressing health and economic impacts of the COVID-19 crisis, particularly through investment in health infrastructure and support for SMEs. The additional resources from REACT-EU financed essential actions to support the sectors most in need, while preserving the resources allocated to the programme's originally planned actions³³. REACT-EU also supported the green transition and energy efficiency, particularly as the energy crisis worsened following the Russian war against Ukraine. The effect of REACT-EU on the refugee crisis was more limited³⁴.

When considering the analysis of indicators, there are two aspects that nuance the findings. Recent regulatory changes postponed programme closure to February 2026. As a result, only end-2022 indicator achievement data could be taken into account in the analysis. This covered only two out of the three relevant implementing years and limited the assessment of effectiveness. Moreover, during the uncertain environment of unfolding crises there were some difficulties in setting targets.

The analysis of selected common indicators was conducted focusing only the ones that align with the areas in focus of REACT-EU actions highlighted by the Regulation³⁵. The Recital identifies investment areas where the additional funding provided through REACT-EU could complement actions already supported under the ERDF. The table below links each area mentioned in the Regulation with relevant common indicators that considered in the analysis. Indicators used by less than 15% of programmes were excluded for lack of comparability.

Table 1 - Association between areas of investments of REACT-EU and selected common indicators

Objective	Indicator
Investments in products and services for health services, including cross-border, and institutional, community and family-based care	CO36
Support in the form of working capital or investment support to SMEs, including advisory support, in particular in the sectors most affected by the COVID-19 pandemic	CO01, CO02, CO03, CO06
Investments contributing to the transition towards a green and digital economy	CO32, CO34
Investments in infrastructure providing non-discriminatory basic services to citizens	CO35

Source: European Commission.

REACT-EU common indicators target achievement is considerably lower (see Table 2) than for the ERDF programmes overall. One reason is the shortness of the implementation period observed; as explained above, by the end of 2022, less than two years had passed since the adoption of REACT-EU (i.e. 23 December 2020), and even less, since the approval of programme amendments and funding decisions for beneficiaries.

Most of the analysed indicators (CO01, CO02, CO03, CO06) focus on SME support in the form of working capital, investment, and advisory services in the sectors most affected by the COVID-19 pandemic. These indicators demonstrated the highest achievement rates, confirming the significant

³³ See dedicated case studies of supporting study on SMEs and the health crisis.

³⁴ Idem.

³⁵ Taking Recital 11 of Regulation (EU) 2020/2221 as a basis.

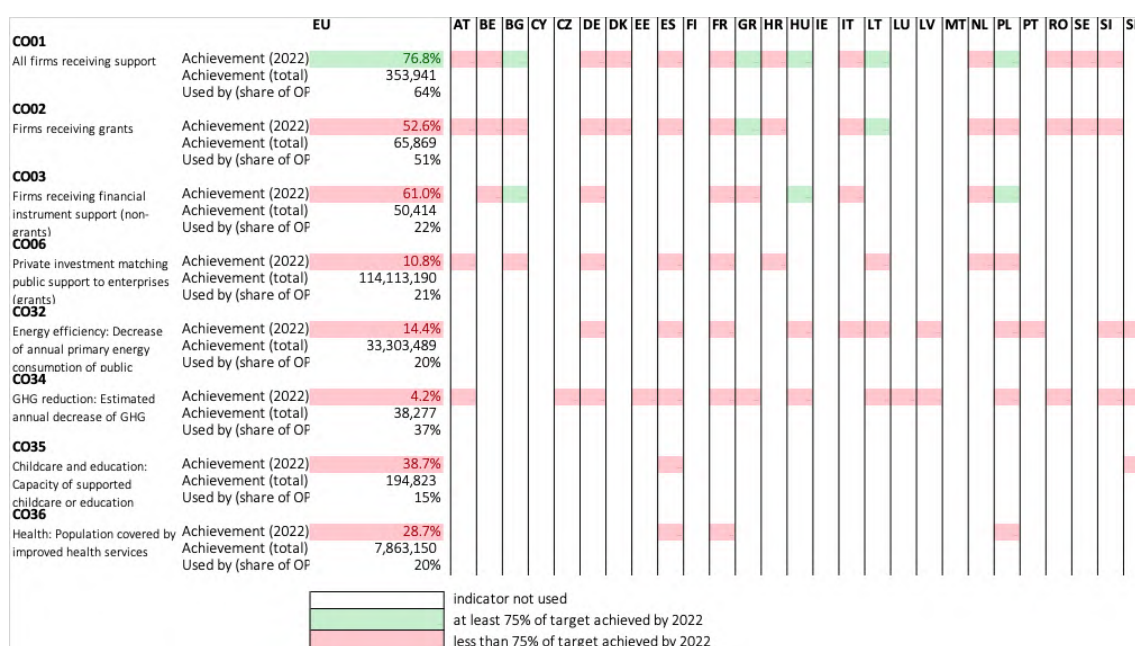
relevance of interventions linked to the economic crisis and support to SME sector. On the one hand this is also supported by the fact that these could rely on existing administrative delivery mechanism (e.g. grant support schemes) already used before the crisis. On the other hand, beneficiaries were already familiar with the process, making the implementation smoother and more effective. As a matter of fact, of the analysed common indicators only CO01 saw more than 75% of the target achieved by the end of 2022. Across the EU, 354 000 companies had received support via REACT-EU by the end of 2022. However, the situation was different across Member States, while for most countries the achievement was below 75%, for Belgium (88%), Greece (109%), Hungary (89%), Latvia (221%) and Poland (89) it was above. As demonstrated by CO02, 65 869 firms received grants, 53% of the aggregated targets. Only Greece (287%) and Lithuania (225%) achieved more than 75% of their targets. CO03 shows that 50 414 firms received financial instrument support (non-grants) by the end of 2022, 61% of the aggregated targets. Belgium (243%), Hungary (89%) and Poland (178%) achieved more than above 75% of their targets. For all other countries and selected indicators, the achievement was below 75%.

Other areas of investments were less performing:

- Investments in infrastructure that provide non-discriminatory basic services to citizens were represented by indicator CO35 (investment in education). As of 2022, 39% of the target was achieved. However, this indicator was implemented exclusively by Spain and Slovakia.
- Indicator CO36 relates to investments in products and services for healthcare. In this case, the level of implementation was also lower than expected. Notably, this indicator was adopted by only three Member States (Estonia, Greece, and Poland), suggesting that most investments in the healthcare sector were monitored using specific indicators.
- With regard to investments contributing to the transition towards a green and digital economy, the indicators most frequently used address interventions directly related to climate objectives, namely the reduction of energy consumption and GHG emissions (CO32, CO34). These indicators recorded the lowest levels of achievement among those analysed, reflecting the situation described above, where most REACT-EU resources were allocated to combat the economic and health crises and allocations to climate objectives, were lower than expected (20.6% compared to the target of 25%).

One reason for the difference between planned targets and actual achievements is the inherent difficulty in making accurate estimations. The REACT-EU evaluation for North-Rhine-Westphalia points at several reasons for this (in this case the issue was the overachievements - Haarich, N. et al., 2024). First, targets were difficult to estimate, especially for new types of measures, and are usually based on the funding available. Moreover, target group responsiveness is difficult to estimate accurately due to the extraordinarily short implementation period and needs evolving as the crisis unfolds. In this case it explains the conservative target estimates and the high achievement rates. In addition, most of the common indicators were used by a few programmes. Only CO01 and CO02 were used by more than half the programmes which implemented REACT-EU, by 64% and 51% respectively.

Figure 2 - REACT-EU Target achievement of selected common indicators, by end of 2022



Source: Cohesion Open Data.

An analysis of COVID-specific indicators³⁶ reveals general trends for Member State measures to address the economic and health crises resulting from the pandemic. The measures aimed to support the costs of vaccinations and related storage infrastructure as well as support for SMEs. In 2021, the indicator that reported the highest achievement was CV61 on vaccine refrigeration infrastructure which in 2022 significantly surpassed its target. CV20, which covers grant support to SMEs for working capital reported the highest achievement in 2022. Indicators with high achievements despite not reaching their targets, refer to vaccination costs (CV 60), number of SMEs with grants for working capital (CV22) and financial instrument support for SME working capital (CV21).

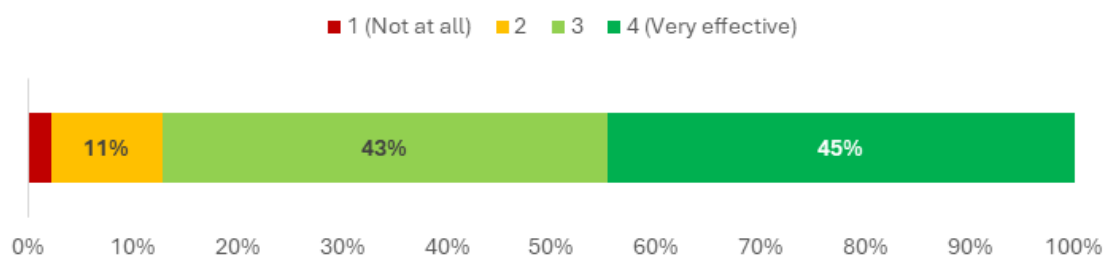
Table 2 - Common indicator achievement

REACT-EU	
Common COVID-specific indicators (2021-2022)	Achieved in 2021 (2022)
CV 61 COVID-19 vaccine refrigeration infrastructure	63% (108%)
CV 20 Grant support to SMEs for working capital (grants)	60% (114%)
CV 60 Value of all vaccination costs	45% (52%)
CV 22 Number of SMEs with grants for working capital	27% (68%)
CV 21 Financial Instrument support to SMEs for working capital	27% (65%)

³⁶ See explanation and caveats in the interpretation of these indicators in main report. Note that the use of these indicators was voluntary, and therefore provides only a partial picture of all actions across Member States.

Survey findings gathered by the crisis response case study show that the majority of respondents evaluated REACT-EU as highly or fully effective in addressing the crisis (see Figure 3 below).

Figure 3 - To what extent were the tools effective to respond to the respective crises they were meant to address? – Survey replies related to REACT-EU



Source: European Commission based on crisis response supporting study survey.

Survey results show that the majority of respondents rated the ability to mobilise additional financial resources to respond to the crises, thanks to REACT-EU, positively, with 43% of respondents indicating the highest score (fully). Respondents noted that REACT-EU provided significant help in relation to the unexpected and large-scale expenses due to the COVID-19 epidemic (e.g. procurement of COVID-19 vaccines, etc.). This was further confirmed by interviews. For instance, the ERDF Bavaria Operational Programme successfully used the additional ERDF funding from REACT-EU and was able to use the funds to finance projects with considerable importance, e.g. opening of the expansion of the safety laboratory for pandemic prevention. On the other hand, 15% of survey respondents indicated that they were not able to mobilise any additional financial resources to address the crisis through REACT-EU. Factors that hindered the mobilisation of REACT-EU resources included tight timelines and administrative challenges. Particularly due to the need to programme these resources simultaneously with RRF resources and those from the new programming period.

Looking more specifically into the distinct crises, REACT-EU was effective in addressing both health and economic impacts of the COVID-19 crisis, particularly through investment in health infrastructure and support for SMEs. On health, REACT-EU mobilised EUR 5.9 billion to address the need for modern equipment to diagnose, treat, and monitor COVID-19 patients including vaccine refrigeration infrastructure which was crucial for the vaccine roll-out. In Czechia, for example, REACT-EU funds were used to upgrade hospitals and equip laboratories for COVID-19 testing, strengthening the country's medical response capacity. Furthermore, in Bulgaria, investments made through REACT-EU have facilitated easier access for citizens to more accurate diagnostics, effective treatment, and monitoring of infectious diseases³⁷.

REACT-EU not only addressed the immediate needs highlighted by the crisis but also served as a trigger for more strategic and infrastructure investments. Some of these were directly linked to challenges exposed by the crisis (e.g. enhancing hospital capacity), while others aimed at strengthening the territorial health system beyond the crisis (e.g. support for research and development, high-level equipment). For instance, in France, the REACT-EU budget financed eight projects at Besançon hospital, totalling EUR 12 million, and the University Health Centre of La Réunion purchased a PET scanner, nearly doubling its diagnostic capacity.

Concerning the measures to address the economic impacts of crisis, REACT-EU provided working capital grants to SMEs to help them maintaining operations during the economic downturn caused by the pandemic. For example, in Greece, REACT-EU funds were used to provide working capital grants to the tourism and hospitality sectors, which were among the hardest hit by the crisis. The Galicia ERDF 2014-2020 Operational Programme used additional REACT-EU resources to

³⁷ See the three case studies of the crisis response supporting study on enterprises, the health and refugee crises for further evidence and discussion.

support SMEs, especially those operating in sectors more affected by the pandemic, such as audiovisual, culture, and hospitality. Similarly, in Portugal, REACT-EU provided support to businesses in various sectors affected by COVID-19 restrictions.

The effect of REACT-EU on the refugee crisis was more limited. While REACT-EU provided additional support to countries such as Poland and Romania to cope with the influx of people, pre-financing measures introduced under CARE+ were more effective in alleviating the immediate financial burden. This was also because other instruments, such as the Asylum, Migration and Integration Fund (AMIF), provided support to address short-term needs in the early phase of the crisis.

REACT-EU was also effective in relation to the green and digital transition. Programmes addressed the digital transformation of SMEs, including training and qualification measures to help businesses adapt to new digital technologies and support increased access to e-commerce platforms. In Finland, REACT-EU promoted the digitalisation of the economy funding projects aimed at renewing the production technology and processes of companies' business operations, developing expertise and capabilities (Nyman et al., 2024). Other examples include Spain's digital transformation initiatives through the 'Acelera Pyme' networks of digital transformation offices. REACT-EU supported the green transition, particularly as the energy crisis worsened following Russia's war of aggression against Ukraine. In Denmark, REACT-EU provided additional money to support measures that were already in the programme, in particular, in relation to the green transition and circular economy, where the original 2014-2020 programme already had money allocated but REACT-EU allowed to strengthen these investments. Thanks to the 'SME - Green' interventions, launched by the Danish Business Operational Programme, more than half of the participating companies reported being better equipped to work with standards or certifications in the future and to have gained a clearer understanding of their consumption and emissions (COWI, 2023). Countries such as Lithuania and Italy, instead, used REACT-EU funds to improve energy efficiency in public buildings and modernise energy networks. In Lithuania, for instance, REACT-EU funds were used to renovate state buildings and upgrade street lighting. However, while some regions used REACT-EU to fund energy efficiency projects, these were relatively small and most energy-related support came from national measures and the REPowerEU initiative.

EFFICIENCY

REACT-EU was set up primarily to provide additional funding to help Member States deal with the socio-economic impact of the pandemic and later the refugee crisis. This additional funding of EUR 30 billion for the ERDF was designed to support a rapid response, enabling regions to strengthen healthcare, protect jobs and support SMEs without straining national or regional budgets.

REACT-EU was adopted 288 days after the WHO had declared COVID-19 a pandemic, which is considerably slower than CRII/CRII+, as it was part of the NGEU instrument. However, as noted by the ECA, it was still in line with the average time for CPR amendments³⁸. Once REACT-EU was in place, it was used by the programmes and necessary programme amendments were made in less than 1/3 of the time an average amendment needed prior to the crisis, which shows significant efficiency of reprogramming. Concerning the programmes analysed³⁹, the 234 amendments with a REACT-EU component took an average of 32 days, covering 114 programmes in all Member States except Ireland.

³⁸ See ECA special report 01/2023 and table below.

³⁹ Programmes with ERDF as main component.

Table 3 - Programme amendments and required processing time until adoption⁴⁰

	REACT-EU	Pre-crisis until Feb. 2020	Total 2014-2020 programme period
Programme amendments adopted by the European Commission	234 ⁴¹	592	1254
Programmes	114	196	200
Member States	26	27	27
Average processing time	32 days	114 days	76 days

Source: Cohesion Open Data.

As of January 2021 (i.e. immediately after the adoption of the REACT-EU regulation), ERDF funding was already overcommitted. However, excluding already declared expenditure, a total of EUR 91 billion remained available and could be reprogrammed to address the ongoing crises.

The additional funding ensured that Member States had at sufficient resources at their disposal without having to divert funds from other priorities. In particular, REACT-EU was swift in mobilising significant funds for health, employment and SME support to counter the negative effects of the pandemic⁴². In countries such as Poland and Czechia, REACT-EU provided rapid support to health systems and SMEs, which were particularly vulnerable during the pandemic. However, the timeliness of the response varied from crisis to crisis⁴³. While the COVID-19 response was seen as rapid and well-targeted, the response to the refugee crisis was less so.

Regarding the refugee crisis, the reallocation of ERDF resources and REACT-EU through CARE / CARE+ made some funding available to cover specific expenditures. This included daily allowances, housing, education, and healthcare for refugees, as well as social inclusion and integration. Pre-financing measures were also introduced through CARE+ to help countries such as Poland and Romania cope with the refugee crisis, allowing them to draw on REACT-EU funds to provide immediate assistance to people arriving from Ukraine. Despite this, even highly exposed countries with large numbers of refugees relative to their population, and those bordering Ukraine, saw limited reprogramming or REACT-EU actions to address this crisis. Specifically, only 0.2% of ERDF and REACT-EU budgets were affected, largely due to Slovakian reprogramming efforts. In countries hosting the majority of refugees, particularly Poland, the use of cohesion policy funding was more limited.

In addition to providing additional funding, REACT-EU introduced important flexibilities and features that allowed Member States to tailor the funding to their specific needs. For example, interviews revealed that the option of 100% EU co-financing proved particularly beneficial for regions operating within tight budgetary constraints, thereby accelerating the implementation of critical actions during the crisis. Interviews also highlighted that 100% EU co-financing helped relieve the burden on the national budget and allowed for the use of additional funds for additional necessary activities. Other features included retroactive eligibility which covered expenditure incurred before programmes were adjusted. These flexibilities ensured that funds could be directed to where they were most needed, such as working capital grants for SMEs or health infrastructure. The flexibility measures introduced through REACT-EU were seen as efficient for programme authorities and were praised by national and regional governments.

⁴⁰ Excluding Territorial Cooperation and UK programmes.

⁴¹ 234 amendments have been adopted by the European Commission.

⁴² Also confirmed by European Court of Auditors' 2023 report.

⁴³ See supporting study on crisis response and its case studies.

While the additional funding and flexibility were crucial to ensuring a rapid response, some regions faced administrative challenges in reprogramming funds. Adjusting priorities and distributing the additional funds required significant administrative capacity, which in some cases led to delays. For example, Lithuania and Greece experienced difficulties in absorbing the additional funds due to the complexity of reprogramming. This burden was further exacerbated by the necessity to also prepare for the new programmes and the phasing of operations from the 2014-2020 to the 2021-2027 programming period.

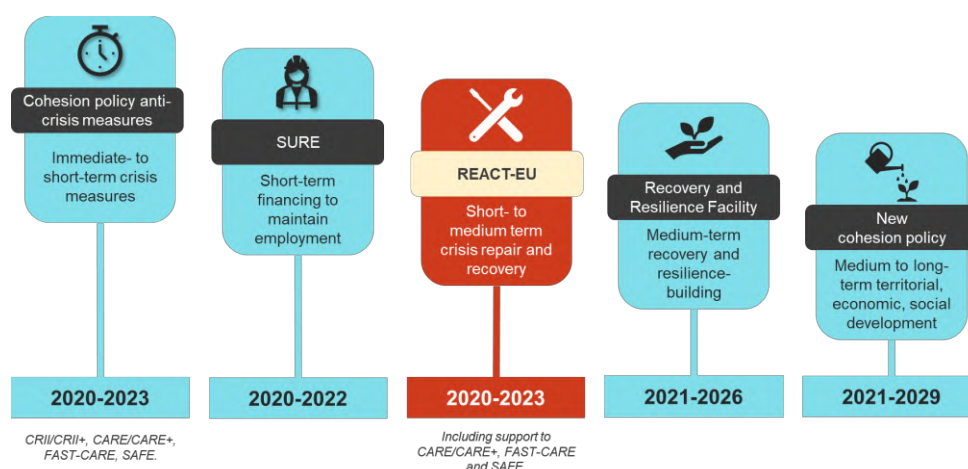
In addition, the implementation period was short, presenting a challenge to effectiveness. Project beneficiaries had to quickly prepare and build several project entities, reach target groups, introduce new research and innovation or other necessary infrastructure, and implement the necessary measures⁴⁴. This is underpinned by operation-level data, which suggest that REACT-EU projects tended to be shorter compared to others during the 2014-2020 period. This, of course, is also partly linked to the nature of certain interventions, for instance healthcare equipment or working capital for SMEs. Survey findings revealed that the short implementation deadline contributed to delays in many projects, with some ultimately cancelled due to successive crises. Respondents also highlighted difficulties in quickly selecting projects that aligned with the conditions and investment categories required under REACT-EU, increasing delays.

COHERENCE

Introducing REACT-EU formed part of a sequence of coordinated anti-crisis initiatives. The Coronavirus Response Investment Initiative (CRII/CRII+) was used in the early stages of the pandemic as part of a reorientation of resources from long-term structural investments to meet urgent crisis needs. REACT-EU was a continuation and expansion of anti-crisis measures introduced by CRII and CRII+, but with a significantly broader scope and ambition. It provided additional funding to support longer-term recovery efforts, including support for SMEs, health and employment. Some long-term structural investments were postponed due to the pandemic. However, additional funding from REACT-EU allowed more actions to be taken without changing the original logic of programmes, while making use of the programmes and structures in place.

REACT-EU also acted as a bridge between programming periods and played a crucial role in revitalising investment activities, particularly by aligning with the objectives of the digital and green transition. For instance, in Austria's Investments in Growth and Employment Operational Programme for the use of ERDF funds 2014-2020, REACT-EU served as a transitional mechanism, enabling the financing of green and digital transition initiatives.

Figure Sequence of EU fiscal anti-crisis measures



Source: European Commission.

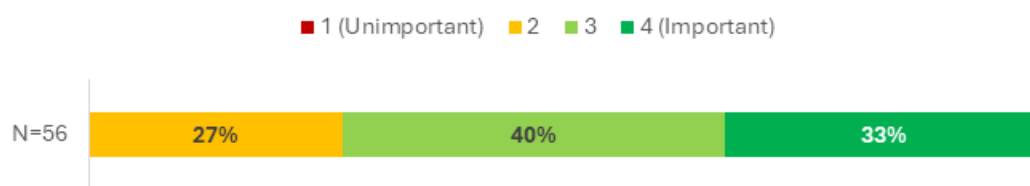
⁴⁴ Nyman et al., 2024.

Nonetheless, the rapid design and implementation of REACT-EU posed some challenges in terms of coherence with other EU instruments. RRF and REACT-EU both targeted similar sectors, such as the business environment and research carrying the risk of overlaps. For some programmes coordination with other ministries responsible for managing RRF funds was needed to clearly delineate different sources of financing, thus avoiding overlapping and double funding. While demarcation between the instruments was generally clear, coordination between REACT-EU and RRF was not always formal, resulting in some administrative burden for programme authorities. For example, in France, the managing authority of the Regional Council of Réunion stopped funding energy renovation projects under REACT-EU as soon as RRF was launched, to avoid overlaps.

Regarding coherence with overall EU strategic objectives, Recital 6 of the REACT-EU regulation explicitly notes that the instrument is ‘expected to contribute 25% of the overall financial envelope to climate objective’. This is higher than the 20% objective in the 2014-2020 MFF, but below the 30% of the 2021-27 objective⁴⁵. As of the end of 2023, 20.6% of REACT-EU resources were allocated to climate actions⁴⁶.

In relation to national policies, the findings of the crisis response supporting study indicate coherence with REACT-EU. As mentioned in the health case study, REACT-EU played a complementary role, given that its financial contribution was relatively small compared to the substantial national resources mobilised. Nevertheless, survey respondents recognised REACT-EU resources as an important element in the crisis response also in relation to national policies (see Figure 5 below).

Figure 5 - How important was cohesion policy as compared to regional or national response instruments to respond to the crises? – Survey replies related to REACT-EU



Source: European Commission based on crisis response supporting study survey.

At regional level, cohesion policy instruments were crucial in providing liquidity and flexibility, particularly for SME support and emergency measures, complementing national efforts. In general, interventions financed by ERDF did not overlap or displace national funds. In most cases, double financing was avoided by clearly delineating the use of different funding sources, allowing for complementary investments. For instance, in Finland, the coordination was based on the idea that the national measures addressed the immediate need for support and the cash flow crisis, while REACT-EU additional funding was directed towards more long-term measures and developmental initiatives.

The need for rapid decision-making created some internal coherence challenges. The speed of implementation led to mismatches between the reprogramming of objectives and actual operations. For example, some regions initially allocated funds to health-related projects, but later found that other sectors, such as education and employment required more urgent attention, leading to further reprogramming and delays (Ernst & Young, 2023).

Survey results presented below confirm this finding partially. The majority of respondents indicated that ERDF-funded operations between 2020 and 2023 remained, at least partially, coherent with the pre-crisis programme objectives. For instance, as emerged from the Swedish

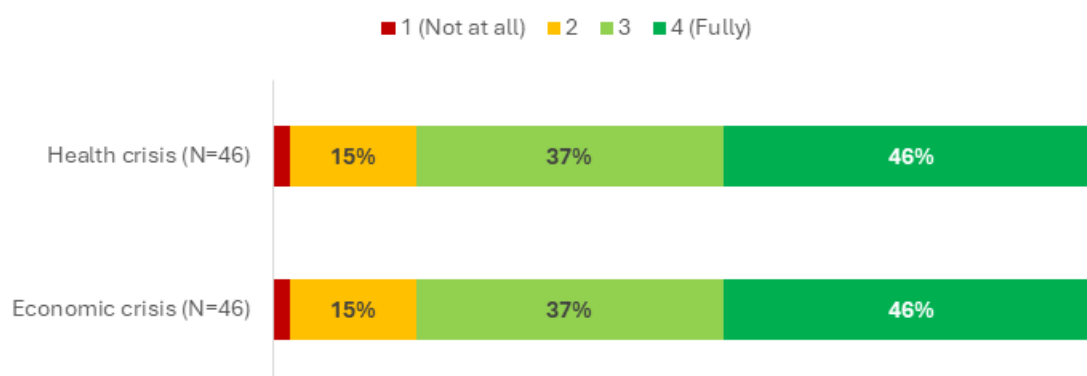
⁴⁵ See European Commission (2011a) and COM(2021) 366 final.

⁴⁶ Noted by Recital 6 of the REACT-EU Regulation.

evaluation of REACT-EU, the additional fundings were used to complement other forms of state business support, such as various forms of capital injections, while strengthening and maintaining the scope and focus of the traditional regional development initiatives, not differing much from the regional development work carried out before the pandemic (Henriksson and Iseborn, 2024).

A small share of survey respondents reported that new operations were not at all aligned with the original programmes objectives, reflecting the difficulty to maintain the balance between short-term crisis management and long-term cohesion policy goals.

Figure 6 - To what extent were ERDF-funded operations between 2020 and 2023 coherent with the pre-crisis programme objectives? – Survey replies related to REACT-EU



Source: European Commission based on crisis response supporting study survey.

Despite these challenges, REACT-EU remained consistent with the broader objectives of cohesion policy, in particular the focus on long-term recovery and regional development. Indeed, the instrument played a key role in supporting green transition initiatives by funding investments in energy efficiency, digitalisation and other sustainable projects. For example, projects in Finland focused on reforming production processes to support the green transition (Nyman et al., 2024), while Luxembourg financed electric buses, contributing to long-term sustainability (Spule and Toptsidou, 2024). The capacity of REACT EU to sustain the coherence of the program, particularly in maintaining a long-term perspective, can be seen as a dimension of coherence (refer to the previous section) and contributes to its added value (refer to the subsequent section).

EU ADDED VALUE

The evidence collected underlines that support through REACT-EU effectively contributed to the post-pandemic rebound. At the same time, the resources mobilised for cohesion policy anti-crisis measures, including REACT-EU funding, constituted a relatively small share of the overall crisis response put in place by Member States⁴⁷. However, the additional funding proved crucial for many regions and sectors.

An important added value of REACT-EU was that it channelled support to regions with limited financial resources and where national resources alone could not have delivered anti-crisis measures with the same scope. This was particularly evident in vulnerable regions where national resources were insufficient to cover the full crisis response. For example, in Poland and Romania, where national budgets were under significant strain, REACT-EU provided additional funding to help municipalities and local authorities cope with the impact of both the pandemic and the refugee crisis. This ensured that these regions could continue to address both immediate and long-term needs such as health infrastructure and social services. Other regions have also reported an

⁴⁷ Compared to REACT-EU's EUR 50.6 billion, national response to the SME crisis mobilised EUR 2.3 trillion across all Member States, 11 times the funds mobilised for the health crisis (EUR 202 billion) and four times those mobilised for the energy crisis (EUR 539 billion).

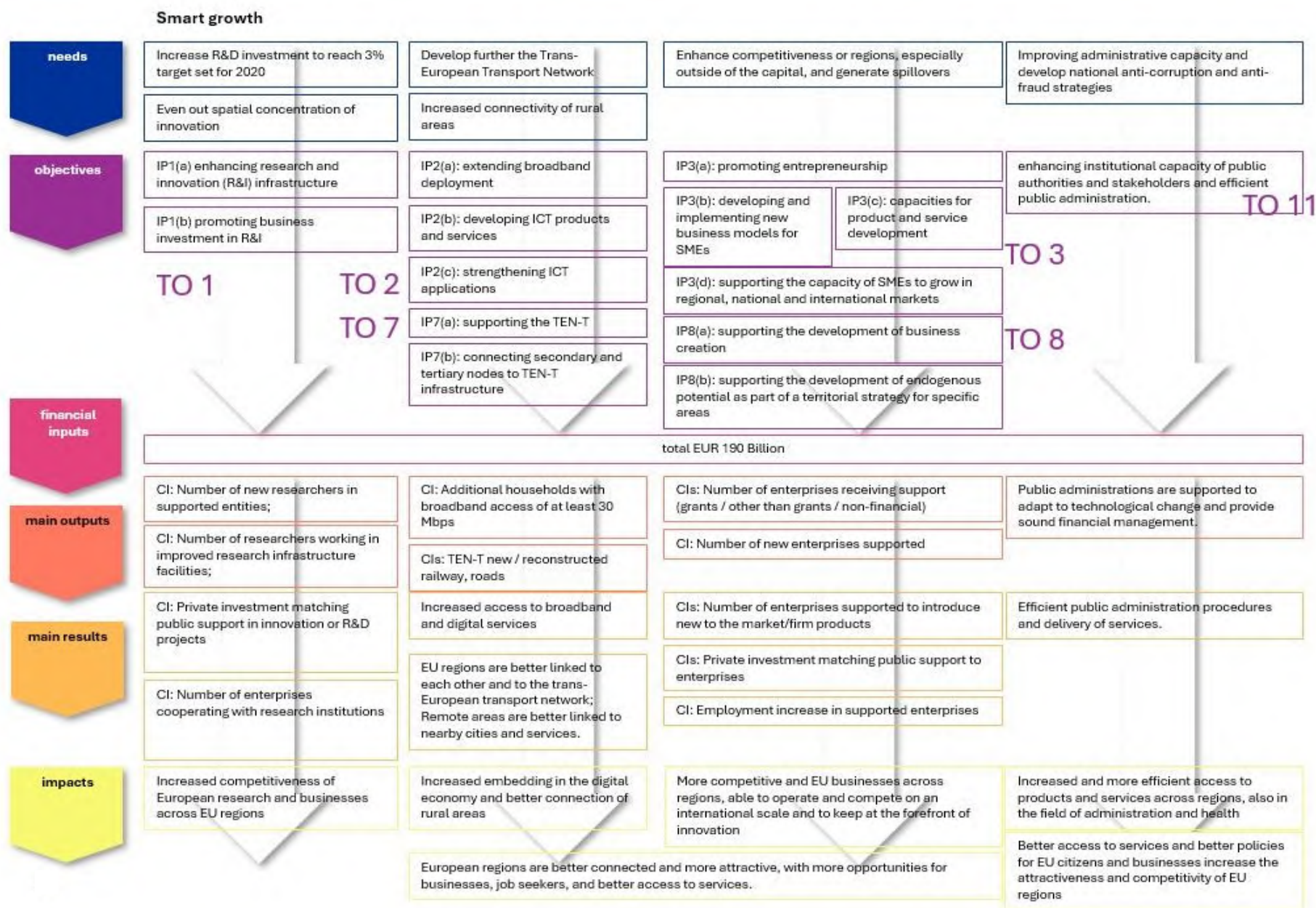
important added value of REACT-EU funds. For instance, interviews revealed that the South-Netherlands ERDF Operational Programme, would not have been able to promptly support private companies without REACT-EU funds. In Finland, without the REACT-EU funds, the scale of support would have been significantly smaller, and resources would not have been directed to Southern and Western Finland, which were the regions most affected by the COVID-19 pandemic. A similar situation was reported by the Réunion Conseil Régional 2014-2020 Operational Programme, which highlighted that without REACT-EU, the region's socio-economic situation would have been deteriorated significantly, particularly for enterprises that relied on EU financing to survive the crisis. This was further confirmed in the Swedish evaluation of REACT-EU (Henriksson and Iseborn, 2024), where it is mentioned that the support provided by REACT-EU significantly bolstered regional development efforts, which would likely have been less extensive without this initiative, given the limited alternatives for financing comparable support measures. In the case of Sweden, REACT-EU projects demonstrated a distinct focus and provided support that differed substantially from national business aid introduced during the pandemic, such as standard grants and loans with favourable terms.

The added value of REACT-EU was not only financial and economic but also institutional, as it contributed to preserving the governance structure and strengthening local and regional partnerships. REACT-EU helped to ensure that local and regional authorities remain involved in the responses, while many other response mechanisms were more centralised. While in certain countries, such as Italy and Spain most of the resources were managed at the national level, in the majority of countries, cohesion policy core principles and delivery systems limited centralisation in the implementation of REACT-EU, preserving the principles of multi-level governance⁴⁸. Regional programmes were provided with flexibility and resources to address specific challenges in their territories, supporting crisis responses independently of national provisions, with monitoring committees continuing to play their usual role in programming.

A further added value of REACT-EU, closely tied to its intrinsic cohesion policy characteristics, was its 'structural' type of support which goes beyond economic investments. In addition to responding to short-term crises, it also helped support long-term recovery. This aspect has already been explored as an element of coherence. The flexibility to support health infrastructure, social services and entrepreneurship contributed to prepare the regions for future challenges. According to stakeholder interviews, REACT-EU support was particularly effective in retrofitting hospitals with modern medical equipment, including replacing equipment that were overused. These upgrades not only enhanced the capacity to manage the immediate impacts of the COVID-19 pandemic (i.e. helping to catch up on delayed elective procedures) but also proved beneficial in subsequent crises. For instance, equipment purchased during the pandemic was instrumental in responding to the refugee crisis, as illustrated by Czechia, which accommodated 300 000 refugees from Ukraine, many of whom required medical care. Furthermore, funds were allocated to increasing the capacity and quality of care for treatments postponed during the pandemic, including cancer care. This support enabled the purchase of advanced technology and equipment, addressing the growing demand for cancer treatment since the pandemic (Ernst & Young, 2023).

⁴⁸ See supporting study on crisis response. This was in particular confirmed by the participants of the seminar organised by the supporting study team.

Annex VII.a Intervention logic of ERDF / CF



Smart growth aims to foster economic growth, based on innovation, digital transformation, and by measures improving competitiveness. The following short description summarises the main components of the Intervention Logic for smart growth investments of the ERDF and CF.

Needs

Research and innovation differences between regions and within Member States can have a major impact on long-term growth and be amplified by digitalisation. R&D expenditure and innovation in the EU have a strong regional dimension, with specific development needs.

Disparities in transport connectivity are observed between Member States and types of territories. Rural and scarcely populated areas, alongside geographically disadvantaged territories such as islands, outermost, mountain and border regions, pose significant obstacles in ensuring adequate transport connectivity. This is coupled with the need to reduce the negative externalities of the transport sector, in line with the necessary shift to a zero-emission mobility as underlined in the Green Deal. The transport sector is responsible for about a quarter of EU total greenhouse emissions, it is a source of air and noise pollution and can negatively impact biodiversity.

SME distribution across regions is varied, with microenterprises prevalent in rural and Southern regions and one-person enterprises in central urban areas. This impacts their performance patterns as their specific needs are different. SMEs are more exposed to barriers constraining their development potential. Obstacles faced by SMEs include limited access to resources, understood in both financial, information and human capital terms; organisational constraints, such as lack of time, quality and forward-looking ownership and management. These barriers can drive territorial disparities and push regions into development traps. The differences across SME performance tend to overlap with broader territorial disparities. There are clear North/South and East/West patterns across the EU. SMEs of the less developed regions in the EU tend to carry out their activities while facing relatively more unfavourable contexts.

Objectives

These investments aim at bridging innovation gaps between EU territories, promoting place-based development, industrial transformation and developing ‘smart specialisation’. ERDF investments in digital technologies have the objective to support innovative solutions that can promote create opportunities for people and businesses, modernise the public sector as well as enhance SME competitiveness.

In line with European Green Deal and Sustainable and Smart Mobility Strategy objectives, the EU strategy seeks to develop coherent, efficient, multimodal and high-quality transport infrastructure across regions. CF targets the completion of the TEN-T and improving connections to the network.

The digitalisation initiatives under EU Cohesion Policy focus on improving access to, the utilisation, and quality of information and communication technologies and enhancing the institutional capacity of public authorities and stakeholders for efficient public administration.

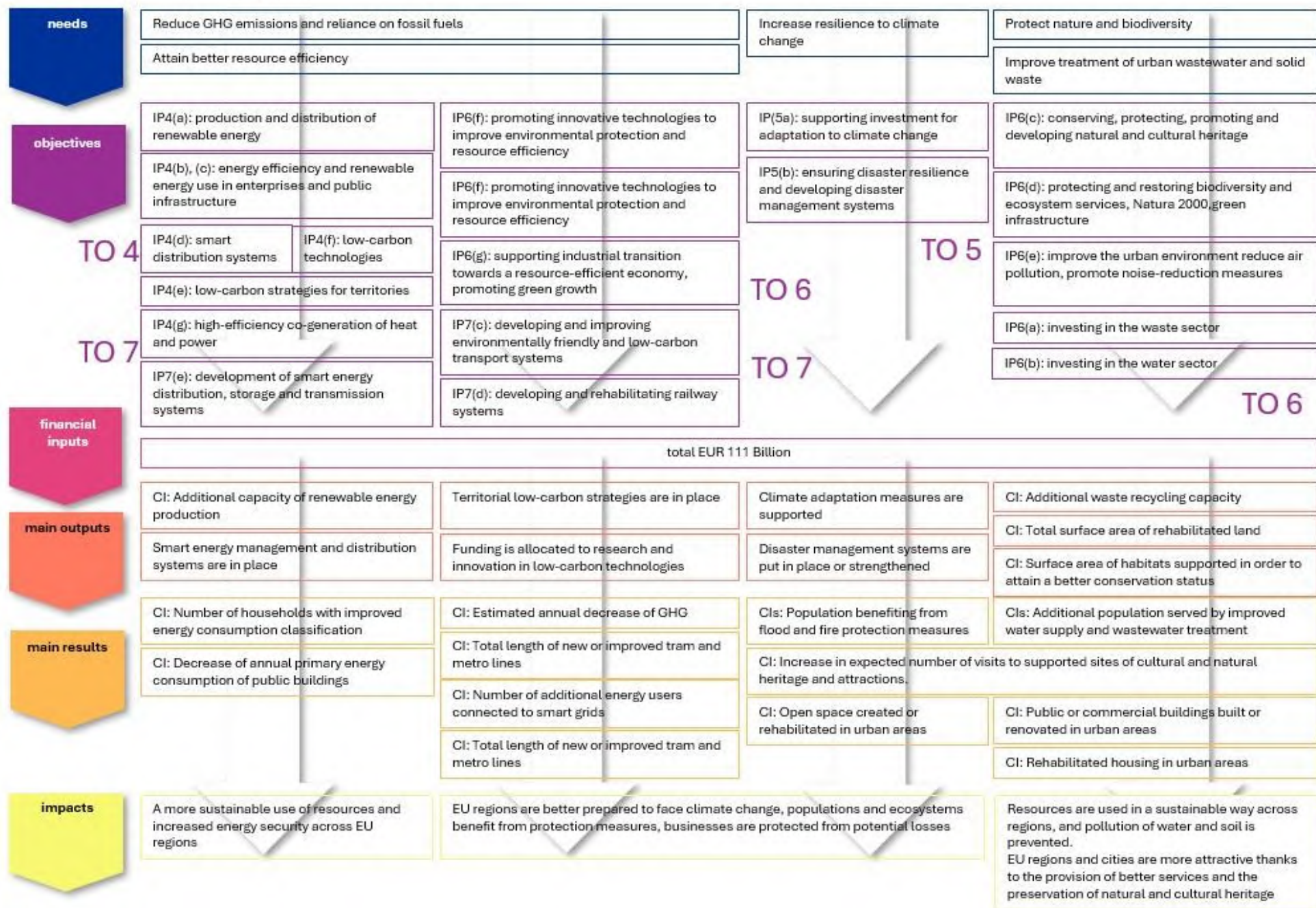
These above translate in terms of ESIF thematic objectives (TOs) into: TO1 - Strengthening research, technological development and innovation; TO 2 - Enhancing access to, and use and quality of information and communication technologies; TO3 - Enhancing the competitiveness of small and medium-sized enterprises; TO7 - Promoting sustainable transport and removing bottlenecks in key network infrastructures; TO8 - Promoting sustainable and quality employment and supporting labour mobility; TO11 - Enhancing the capability of public authorities and efficient public administration.

Inputs Combined investment for the smart growth objective adds up to a total of EUR 190 billion (EU allocations and national co-financing).

Achievements: outputs and results An overview of outputs and results is provided in Section 3.1.

Impacts These investments are expected to have diverse economic, social and environment and climate impacts. Most importantly, positive impact is expected for competitiveness of regions and sectors, better digital and transport connections of regions (especially rural and remote regions). Investments also improve the quality of public services. Ultimately these investments impact the quality of life in and attractiveness of regions.

Sustainable growth



Sustainable growth focuses on promoting a resource-efficient and more competitive economy while reducing environmental degradation. The following short description summarises the main components of the Intervention Logic for sustainable growth investments of the ERDF and CF.

Needs

Substantial investment is needed to reduce GHGs emissions by 55% by 2030, to promote renewable energy and energy efficiency as well as the ecological transition, to support EU regions to adapt to climate change, to address biodiversity loss and the degradation of ecosystems, to improve access to water, water quality and wastewater treatment, to promote waste management and circular economy as well as to reduce air pollution and to promote green infrastructure and sustainable multi-modal urban mobility.

The transition requires different solutions and approaches, taking into account local demographics, infrastructures, and economic specificities. Many regions are socio-economically weak, with lower GDP per capita and wages, but also have important manufacturing jobs that need to be transformed to become more sustainable. These regions need support to create new opportunities for growth, innovation, and employment.

However, needs vary and disparities in risks, costs and opportunities for the green transition are high between the 27 Member States and between different types of regions. This is why the evaluated funds need to play a key role in supporting regions to design and implement environmental and climate territorial policies tailored to their needs.

Objectives

The European Union aims to achieve net zero by 2050 through ambitious policies and EU funds. The European Green Deal sets out a roadmap to achieve climate neutrality in a fair and effective manner. The transition will affect EU territories and regions differently, with some regions needing more help than others. The transition to a low-carbon economy requires significant changes in various sectors, including energy, transportation, and industry. This will involve a shift away from fossil fuels and towards renewable energy sources, as well as improvements in energy efficiency and the adoption of new technologies.

The above objectives translate in terms of ESIF thematic objectives (TOs) into: TO4 - Supporting the shift towards a low-carbon economy; TO5 - Promoting climate change adaptation, risk prevention and management; TO6 - Preserving and protecting the environment and promoting resource efficiency; TO7 - Promoting sustainable transport and removing bottlenecks in key network infrastructures;

Inputs

Combined investment for the sustainable growth objective adds up to a total of EUR 111 billion (EU allocations and national co-financing).

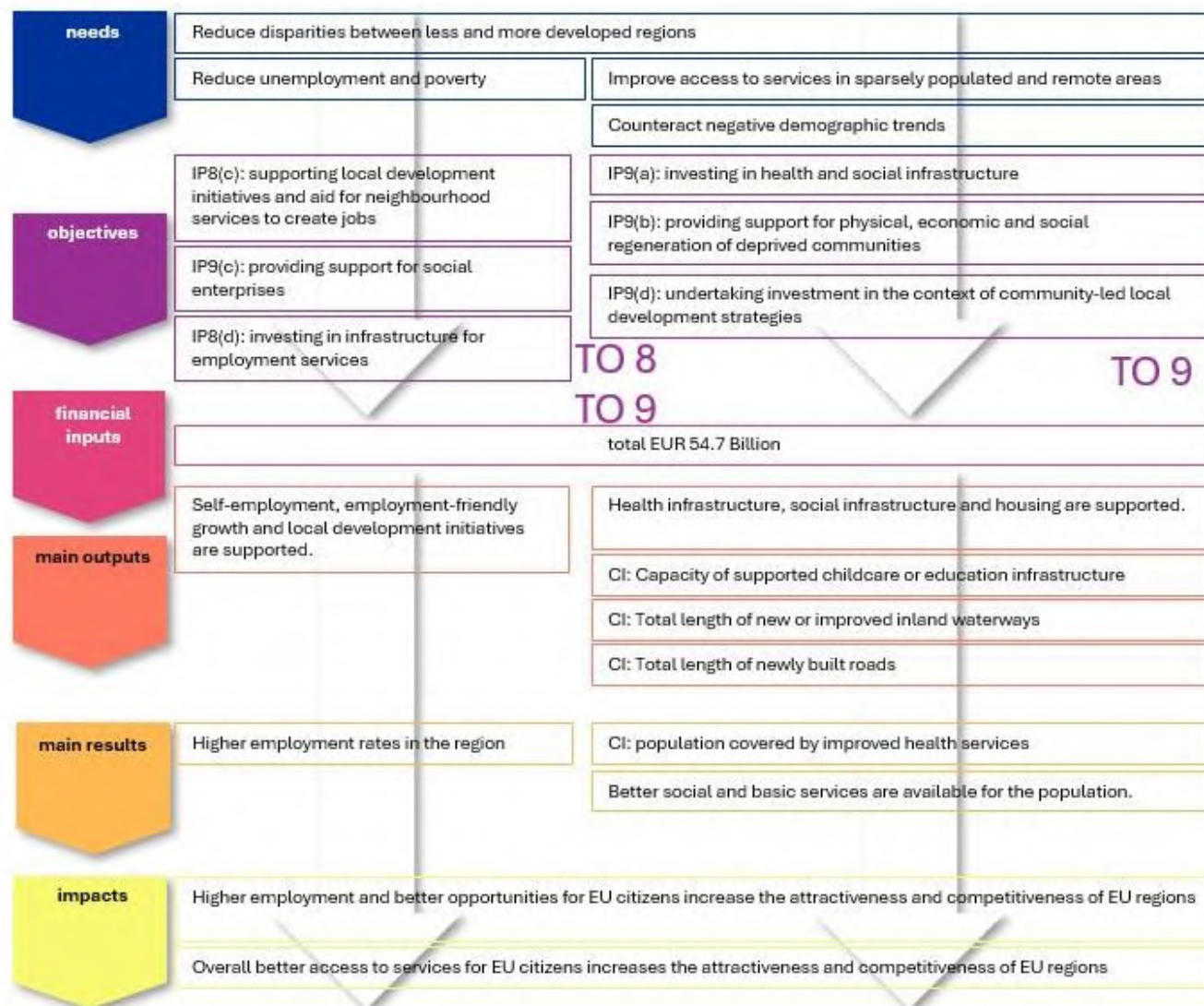
Achievements: outputs and results

An overview of outputs and results is provided in Section 3.1.

Impacts

Sustainable growth investments are designed to have diverse economic, social and environment and climate impacts. Most importantly, positive impacts are expected for energy security and improved energy efficiency. Investments will affect the preparedness of regions for climate change, and environmental and ecosystem services will be more protected. Ultimately these investments are expected to lead to more efficient resource use, reduction of pollution and preservation of natural resources.

Inclusive growth



Inclusive growth aims to ensure that economic development benefits all individuals and regions and reduces inequalities. The following short description summarises the main components of the Intervention Logic for inclusive growth investments of the ERDF and CF.

Needs

While economic and social disparities between Member States are decreasing, they are increasing within Member States. The digital and green transitions may further increase territorial disparities, especially between rural and urban areas. The poorest and most vulnerable are particularly affected by these changes.

Economic change, coupled with social disparities and demographic change, is leading to different needs, such as access to high-quality services, affordable housing, and healthcare. As these sectors undergo digital and green transformations, there is potential to foster long-term sustainability. The following short description summarises the main components of the Intervention Logic for sustainable growth investment of the ERDF and CF.

Objectives

Cohesion policy funds aim to turn the social inclusion objectives of the EU into reality by strengthening the resilience of social systems, promoting skills, increasing employability, improving the quality, labour market relevance and inclusiveness of education and training as well as facilitating access to affordable non-segregated social housing and accessible mainstream social, long-term care and health services. Three headline targets of the Europe 2020 Strategy are particularly relevant for the cohesion policy's inclusive growth objectives: 1) 75% of the population aged 20-64 should be employed; 2) the share of early school leavers should be under 10% and at least 40% of the younger generation should have a tertiary degree; 3) 20 million less people should be at risk of poverty.

The above objectives translate in terms of ERDF thematic objectives (TOs) into: TO8 - Promoting sustainable and quality employment and supporting labour mobility; TO9 - Promoting social inclusion, combating poverty and any discrimination; TO10 - Investing in education, training and vocational training for skills and lifelong learning.

Inputs: Combined investment for the smart growth objective adds up to a total EUR 55 billion (EU allocations and national co-financing).

Achievements: outputs and results

An overview of outputs and results is provided in Section 3.1.

Impacts

Inclusive growth investments are designed to have a positive impact on quality of life and services through investing in social infrastructure. Investments will have an effect in terms of the availability and quality of basic social, education and health services, housing and quality employment across regions. In addition, measures will contribute to reducing discrimination, and improve planning with regard to sustainable urban development, and territorial instruments.

Annex VII.b Intervention fields' allocation to the objectives of smart, sustainable and inclusive growth and Quality of life related allocation estimation

Intervention fields	Contribution to SMART growth	Contribution to SUSTAINABLE growth	Contribution to INCLUSIVE growth
001 - Generic productive investment in SMEs	yes	-	-
002 - Research and innovation processes in large enterprises	yes	-	-
003 - Productive invest. in large enterprises linked to LCE	yes	yes	-
004 - Coop. between large & SMEs in ICT products & services	yes	-	-
005 - Electricity (storage and transmission)	yes	-	-
006 - Electricity (TEN-E storage and transmission)	yes	-	-
007 - Natural gas	yes	-	-
008 - Natural gas (TEN-E)	yes	-	-
009 - Renewable energy: wind	yes	yes	-
010 - Renewable energy: solar	yes	yes	-
011 - Renewable energy: biomass	yes	yes	-
012 - Other renewable energy (hydro, geo, etc) & RE integration	yes	yes	-
013 - Energy efficiency renovation of public infra. & demo.	yes	yes	-
014 - Energy efficiency renovation of housing stock & demo	yes	yes	-
015 - Intelligent Energy Distrib. Systems (incl. smart grids)	yes	yes	-
016 - High efficiency co-generation and district heating	yes	yes	-
017 - Household waste mgmt. (incl. minimise, sort, recycle ...)	-	-	yes
018 - Household waste mgmt (incl. Mech, Bio, thermal & landfill)	-	-	yes
019 - Commercial, industrial or hazardous waste management	-	yes	-
020 - Water infrastructure for human consumption	-	-	yes
021 - Water management & drinking water conservation	-	yes	-

022 - Waste water treatment	-	yes	-
023 - Env. measures aimed to reduce/avoid GHG emissions	-	yes	-
024 - Railways (TEN-T Core)	-	yes	-
025 - Railways (TEN-T comprehensive)	-	yes	-
026 - Other Railways	-	yes	-
027 - Mobile rail assets	-	yes	-
028 - TEN-T motorways and roads - core network (new build)	yes	-	-
029 - TEN-T motorways & roads - comprehensive network (new)	yes	-	-
030 - Secondary road links to TEN-T road network (new build)	yes-	-	-
031 - Other national and regional roads (new build)	-	-	yes
032 - Local access roads (new build)	-	-	yes
033 - TEN-T reconstructed or improved road	yes	-	-
034 - Other reconstructed or improved road	-	-	yes
035 - Multimodal transport (TEN-T)	-	yes	-
036 - Multimodal transport	-	yes	-
037 - Airports (TEN-T)	yes	-	-
038 - Other airports ¹	-	-	yes
039 - Seaports (TEN-T)	-	yes	-
040 - Other seaports	-	yes	-
041 - Inland waterways and ports (TEN-T)	-	yes	-
042 - Inland waterways and ports (regional and local)	-	yes	-
043 - Clean urban transport infrastructure & promotion	yes	yes	-
044 - Intelligent transport systems	yes	yes	-
045 - ICT: Backbone/backhaul network	yes	-	-
046 - ICT: High-speed broadband (access/local loop; ≥ 30 Mbps)	yes	-	-
047 - ICT: V-high-speed broadband (access/local loop; >100 Mbps)	yes	-	-
048 - ICT: Other types of ICT infrastructure	yes	-	-
049 - Education infrastructure for tertiary education	-	-	yes

050 - Education infrastructure for VET & adult learning	-	-	yes
051 - Education infrastructure for primary & gen. Secondary	-	-	yes
052 - Infrastructure for early childhood education and care	-	-	yes
053 - Health infrastructure	-	-	yes
054 - Housing infrastructure	-	-	yes
055 - Other social infrastructure	-	-	yes
056 - Investment in SMEs directly linked to R+I activities	yes	-	-
057 - Invest. in large companies linked to R+I activities	yes	-	-
058 - Research and innovation infrastructure (public)	yes	-	-
059 - R+I infrastructure (private, incl. science parks)	yes	-	-
060 - R+I activities in public research centres	yes	-	-
061 - R+I activities in private research centres incl. Networks	yes	-	-
062 - Tech-transfer & university-SME cooperation	yes	-	-
063 - Cluster support & business networks (SMEs)	yes	-	-
064 - R+I processes in SMEs (vouchers, process, design .)	yes	-	-
065 - R+I processes, tech-transfer & cooperation in firms on LCE	yes	yes	-
066 - Advanced support services for SMEs	yes	-	-
067 - SME business development, entrepreneurship & incubation	yes	-	-
068 - Energy efficiency & demo. projects in SMEs	yes	yes	-
069 - Support to enviro-friendly production processes in SMEs	yes	yes	-
070 - Promotion of energy efficiency in large enterprises	yes	yes	-
071 - Firms specialised in LCE & climate service	yes	yes	-
072 - Business infra. for SMEs (incl. industrial parks & sites)	yes	-	-
073 - Support to social enterprises (SMEs)	yes	-	-
074 - Development and promotion of tourism assets in SMEs	yes	-	-

075 - Development and promotion of tourism services in or for SMEs	yes	-	-
076 - Dev. & promotion of cultural & creative assets in SMEs	yes	-	-
077 - Dev. & promotion of cultural & creative services in SMEs	yes	-	-
078 - e-Government services & applications	yes	-	yes
079 - Access to public sector info. (incl. E-tourism, e-culture)	yes	-	yes
080 - e-Inclusion, e-Accessibility, e-Learning & e-Education	yes	-	yes
081 - ICT solutions addressing healthy, active ageing & e-Health	yes	-	yes
082 - ICT Services & applications for SMEs	yes	-	-
083 - Air quality measures		yes	-
084 - Integrated pollution prevention and control (IPPC)	-	yes	-
085 - Biodiversity, nature protection & green infrastructure	-	yes	-
086 - Protect, restorat & sustainable use of Natura 2000 sites	-	yes	-
087 - Adapt to climate change & prevent & manage climate risks	-	yes	-
088 - Prevent & manage non-climate related natural risks	-	yes	-
089 - Rehabilitation of industrial sites and contaminated land	-	yes	-
090 - Cycle tracks and footpaths	-	yes	-
091 - Develop & promote tourism potential of natural areas	-	yes	-
092 - Protect, develop & promote public tourism assets	yes	-	-
093 - Development and promotion of public tourism services	yes	-	-
094 - Protect, develop & promote public cultural assets	yes	-	-
095 - Develop & promote public cultural & heritage services	yes	-	-
096 - Institutional capacity of public administrations (ERDF)	yes	-	-
097 - Community-led local development strategies (ERDF)	-	-	yes

098 - Outermost regions: compensation due to accessibility	-	-	yes
099 - Outermost regions: compensation costs due to market size	-	-	yes
100 - Outermost regions: compensation of climate conditions	-	-	yes
101 - Cross-financing under ERDF (support to ESF-type actions)	-	-	-
102 - Access to employment & labour mobility	-	-	yes
103 - Sustainable integration of youth into the labour market	-	-	yes
104 - Self-employment, entrepreneurship & business creation	-	-	yes
105 - Equality between men & women in all areas	-	-	yes
106 - Adapting of workers, enterprises & entrepreneurs to change	-	-	yes
107 - Active and healthy ageing	-	-	yes
108 - Modernisation of labour market institutions	-	-	yes
109 - Active inclusion	-	-	yes
110 - Integration of marginalised communities such as the Roma	-	-	yes
111 - Combating all forms of discrimination	-	-	yes
112 - Enhancing access to services	-	-	yes
113 - Promoting social entrepreneurship	-	-	yes
114 - Community-led local development strategies	-	-	yes
115 - Support to early-childhood, primary & secondary education	-	-	yes
116 - Access to tertiary & equivalent education	-	-	yes
117 - Enhancing equal access to lifelong learning	-	-	yes
118 - Strengthening vocational education & training	-	-	yes
119 - Investment in institutional capacity	yes	-	-
120 - Capacity building for ESF stakeholders	-	-	yes

121 - Preparation, implementation, monitoring and inspection	-	-	-
122 - Evaluation and studies	-	-	-
123 - Information and communication	-	-	-

Table 2 - Quality of Life related estimated allocations

Themes	EUR billion
Fostering crisis repair and resilience	30,3
Network Infra structures in Transport and Energy	66,59
Environment Protection & Resource Efficiency	39,95
Social Inclusion	17
Information & Communication Technologies	15,3
TA	9,7
Educational & Vocational Training	8,9
Climate Change Adaptation & Risk Prevention	50,9
Sustainable & Quality Employment	4,2
Efficient Public Administration	1,5
Total	244,34

Annex VIII. Evidence from earlier programming periods

A number of recent studies have focused the attention on the heterogeneous effects of cohesion policy in different parts of the EU across Member States. Crescenzi and Giua (2019), also using an RDD approach, in this case integrating spatial components, find that policy had a positive effect on the growth of regions in the EU as a whole over the period 2007-2015, in contrast to the Albanese et al. study. However, they also find that the effects vary markedly between countries. The effects are estimated to have been largest in Germany, while southern countries of the EU seem to have experienced the smallest effects. In Italy, for example, policy is found to have had positive effects on employment but not on GDP and only up until 2008-2009, while in Spain, a positive impact on growth is estimated for the years after the 2008-2009 crisis, but not on employment. The implication drawn is that institutional conditions and models of intervention at the national level might affect the impact even more than regional and local conditions. However, it should be noted that only selected regions in the EU are included in the analysis, which might limit the validity of the results, or, more specifically, the extent to which they can be generalised.

Di Caro and Fratesi (2021) suggest that the degree of effectiveness of the policy does not depend on the amount of funding received by regions, since there are regions where large amounts of funding over successive programming periods do not appear to have generated positive effects on growth, those in the south of the EU in particular. On the other hand, regions in Germany and France seem to show significant effects of funding, despite the small amounts involved. And in regions in central and eastern Europe, large amount of funding appears to have led to large effects on GDP.

As also stressed by Becker (2013) and Fratesi and Perucca (2018), the divergent regional impact of the policy can be attributed to various national and regional contextual factors, such as the level of national development, the institutional quality and the regional endowment of human capital. Therefore, in regions that have received large amounts of funding and were not able to benefit from them to a sufficient extent, there is a need to focus the efforts on improving governance and strengthening human capital to ensure the effective use of the Funds.

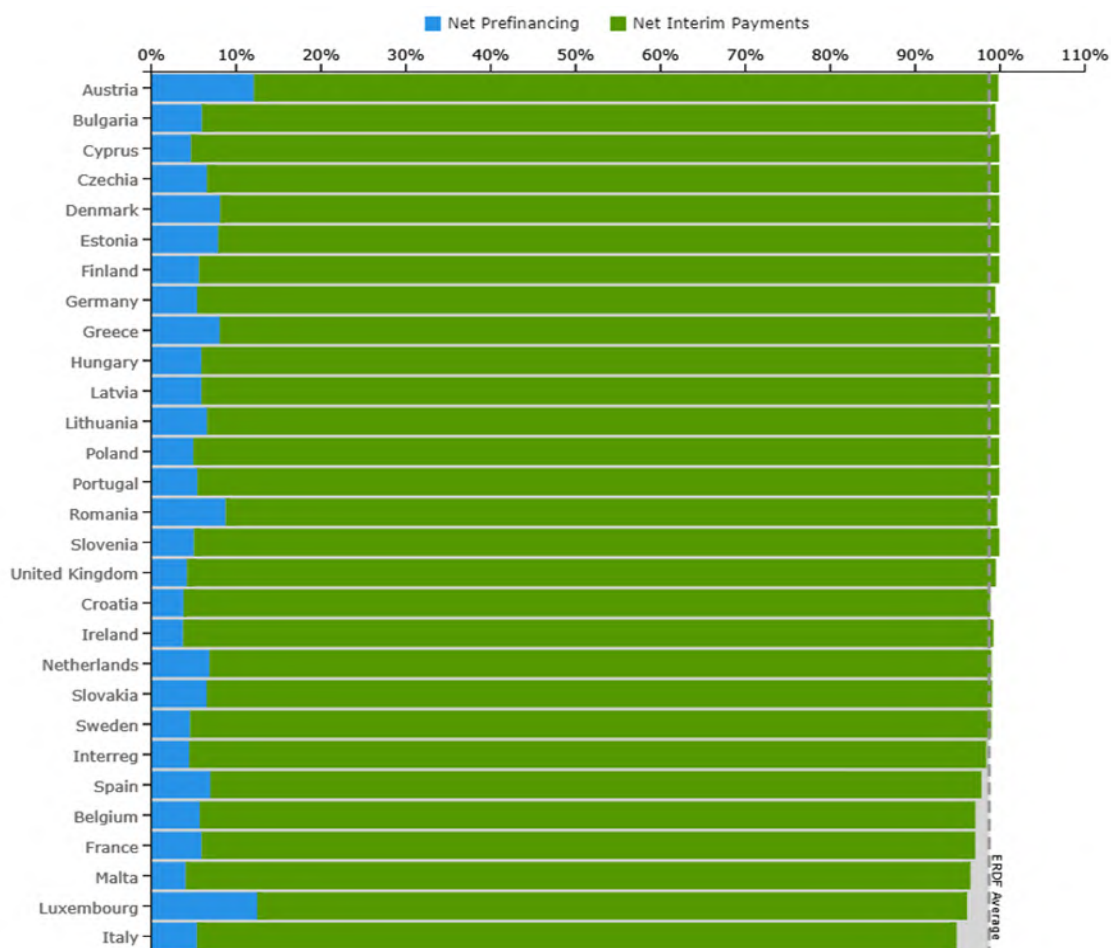
The differences in the effects of cohesion policy are further investigated by Védrine and Le Gallo (2021) over the 2000-2014 period. They find that the Structural Funds had positive effects on both regional disparities and overall economic growth of the EU. However, differences emerge when the 10 countries which joined the EU in 2004 (the EU10) and the other 15 Member States (the EU15) are examined separately. In the latter, cohesion policy is found to reduce regional disparities but to reduce overall growth. In the EU10 countries, by contrast, it is found to increase overall growth but to widen regional disparities.

A high degree of heterogeneity in the impact of cohesion policy on regional disparities is also found by Destefanis and Di Giacinto (2023), who use a spatial VAR econometric model for estimation purposes. They find positive effects for less developed regions, especially in Cohesion Fund countries, but very limited effects for more developed ones. The reason they suggest is that less developed regions are likely to have more under-utilised resources, a higher propensity to consume and larger investment in transport and communication infrastructure. The results are less clear for less developed regions not in Cohesion Fund countries, for which the effects seem to be more limited and spillover effects not significant, though the sample size analysed was too small to draw firm conclusions.

Annex IX. Additional evidence

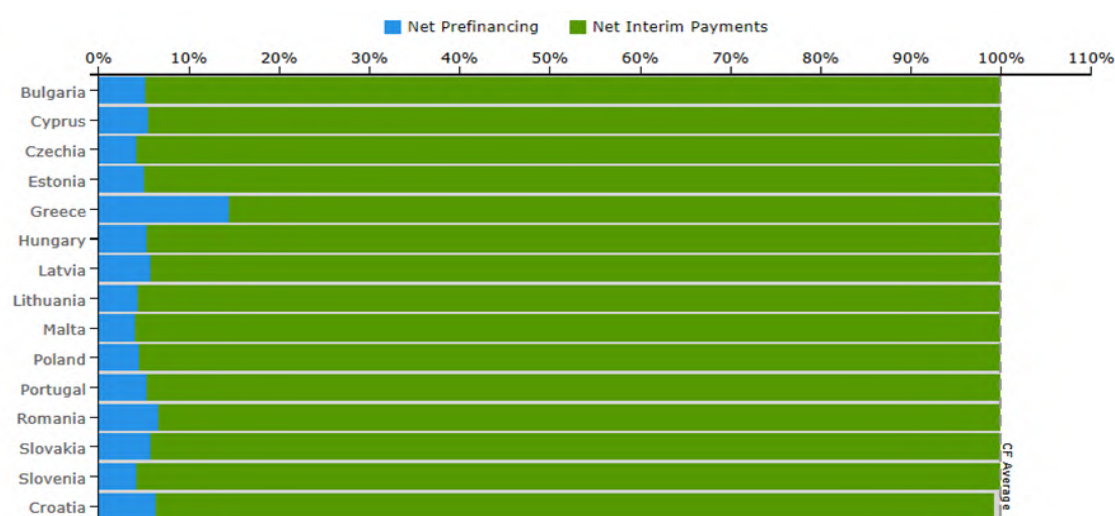
3.1 State of play

Figure 1 – 2014-2020 total cumulative EU payments by country: ERDF



Source: DG REGIO, Cohesion Open Data.

Figure 2 – 2014-2020 total cumulative EU payments by country: CF



Source: DG REGIO, Cohesion Open Data.

Operation-level analysis

Analysis by countries

Taking a closer look at operation-level information on operations funded by the ERDF and CF can reveal some patterns and approaches different Member States take in how funds were allocated and disbursed in the 2014-2020 programming period. The data below is harmonised and standardised data drawn originally from the lists of operations, which managing authorities are obliged to publish according to Article 115 and Annex XII of the 2014-2020 CPR. The way these obligations are phrased in the regulation allows the Managing Authorities some leeway in how certain data fields is expressed, such as the location and decision on whether to include policy objectives or priority axis assigned to a given operation. In addition, this data is published by the Managing Authorities primarily for information and communication purposes, and therefore do not have the same standard, which audited payments data has.

Additionally, not all values are necessarily available for all operations, due to either data quality issues with the lists, or issues inferring variables such as the thematic objective based on the limited provided data. However, the impact is somewhat limited, with around 20 000 out of 900 000 operations missing either geographic, thematic or financial information. Thematic objectives were not an obligatory data field in the 2014-2020 CPR and therefore had to be inferred based on available information, such as the co-financing rate based on the priority axis indicated. These were then mapped against the existing thematic objectives.

An additional limitation is presented from the geographic data indicated in the lists. Anecdotaly, some Managing Authorities place the location of the beneficiary as the operation location. This causes in some cases operations to be therefore mistakenly centralised in larger cities, even though the actual implementation would occur elsewhere. However, this occurs more often in ESF-based lists, mostly due to the large degree of mobile operations this fund entails, which is less of an issue in ERDF and CF-funded operations. This also allows the Managing Authority to better indicate the actual project location. In all cases, the provided location has been geocoded, so that a NUTS2 location could be derived in the majority of cases.

Keeping these limitations in mind, the data can still be valuable in shedding some light on how operations were funded. In total, Managing Authorities reported around 900 000 operations financed by the ERDF and CF, including Interreg programmes (listed below separately). Of these operations, some Member States seem to represent a much larger share than others. Italy, Spain, Portugal and

Greece each report more than 100 000 operations funded during the programming period, with Italy leading the group with a total of more than 160 000 ERDF and CF-funded operations.

Table 1 - Number of operations financed by ERDF and CF and median operation duration and cost, as reported by Managing Authorities in the lists of operations

Member State	Number of operations	Median duration of operation (in days)	Median cost of operation
Austria	1 425	608	456 959
Belgium	1 149	2 517	1 038 347
Bulgaria	36 520	559	5 100
Croatia	8 298	462	102 682
Cyprus	1 654	1 202	39 600
Czechia	29 963	550	153 799
Denmark	145	1 266	1 820 000
Estonia	13 155	214	5 745
Finland	8 366	634	93 600
France	2 0193	882	331 450
Germany	58 036	384	27 238
Greece	122 273	365	15 000
Hungary	29 889	456	122 974
Ireland	1 283	388	33 500
Italy	163 294	413	25 000
Latvia	1 800	760	648 648
Lithuania	13 666	664	9 139
Luxembourg	27	1 461	1 230 000
Malta	68	1 832	3 511 939
Netherlands	1 093	1 003	956 009
Poland	68 378	533	157 562
Portugal	145 524	181	8 722
Romania	10 435	1 096	612 122
Slovakia	13 370	396	210 096
Slovenia	6 452	730	62611
Spain	129 107	486	14520
Sweden	1 175	1 125	780 614
Interreg	14 198	1 095	1 402 835
EU	900 036	396	27 956

Source: DG REGIO, KOHESIO⁴⁹.

The main driver and reason why these Member States showcase such a high number of operations, apart from being large beneficiaries of Cohesion funds in general, seem to be the way these Managing

⁴⁹ For a full description of the methodology KOHESIO employs to retrieve and harmonise operation-level data, as well as full exports and limitations, see <https://kohesio.ec.europa.eu/en/faq>

Authorities particularly disburse smaller grants for SME support. This trend even exacerbated via the increased use of REACT-EU provisions. For example, of Portugal's 145 524 operations, more than 92 000 and therefore almost two-thirds (63%) are attributed to REACT measures. And even more so, almost all the REACT-related operations are classified as generic SME support. Naturally, this pattern of disbursement, which similarly occurred for example in Spain, Poland, Italy and Greece. The result is a large number of operations in these countries, with small monetary amounts attached per operation, predominantly as grants and ranging typically from between EUR 3 000 and EUR 10 000 in total cost. This approach can be contrasted for example with the approach in Ireland, where SME support is often not disbursed directly, but rather will be paid out to a *Local Enterprise Office* (LEO), which then further distributes the funding to the actual SMEs themselves.

Keeping these approaches in mind, it is also expected that Member States which disburse SME support (particularly REACT-related) in small grants directly to the companies in question, will exhibit many operations, with a short duration. Naturally, a grant is not an operation in a traditional sense, since the implementation effectively concludes with the fulfilment of the agreed-upon payment terms. In most cases, these durations are indicated by Managing Authorities to range between six months and a year in length. As such, the median length of an operation in Italy (413 days) is extremely close to the EU value of 396 days. Portugal, with its large number of REACT-funded SME support even undercuts the EU total significantly with only 196 days median duration. Countries such as France with a comparatively high overall cost and few operations conversely stand out with extremely long durations, in this case 882 days and more than double the EU average. This effect is most extreme in the small Member States, who often just declare a small number of operations, which carry typically a high-cost and long implementation time.

Interreg operations further stand out, as neither REACT or the accompanying generic SME support play a role in that case. The result is markedly different than for other Member States, as Interreg operations for example have a comparable number of operations to Estonia (around 14 000 compared to around 13 000), but the duration is more than five times longer.

The relationships laid out here further are reflected when considering cost. Direct disbursement of REACT-related SME support directly paid out by the Managing Authority leads to lower median costs per operation. Italy is emblematic of this, as it only showcases a median operation cost of EUR 25 000, making it comparable to a country with overall significantly lower funding, such Ireland for example (EUR 33 500).

Analysis by theme and location

To better ascertain the thematic distribution of projects and characteristics along geographic lines, the following analysis focuses on project characteristics by theme as well as per category of region (less developed, transition, more developed). In order to achieve this, projects were categorised based on the provided NUTS2 data according to a category of regions, and finally grouped by the assigned thematic objective. Cost data for operations with multiple thematic objectives and locations has been divided evenly amongst the several region categories or thematic objectives for simplification. Observations without data on either subject were not considered.

Looking at projects in *less developed* regions, across the EU, these regions show the most selected projects by far. Overall, there are almost half a million projects in these areas while the figures for transition and more developed regions (around 140 000 and 280 000 separately) are much lower. The lower figure of projects in transition areas can be easily explained by the fact that there are fewer transition regions than there are more and less developed ones.

Table 2 - Number of operations financed by ERDF and CF and median operation duration and cost in less developed regions, as reported by Managing Authorities in the lists of operations

Thematic objective	Number of operations	Median duration of operation (in days)	Median cost of operation
Research and innovation	55 691	760	111 624
Information and communication	15 443	364	10 500
Competitiveness of SMEs	202 686	365	7 500
Low-carbon economy	44 955	661	177 932
Climate change adaptation	4 467	727	269 772
Environmental protection	28 220	573	214 222
Network infrastructure	4 615	911	2 081 742
Sustainable employment	3 368	556	177 940
Social inclusion	22 290	731	188 357
Educational and vocational training	22 072	360	29 316
Efficient public administration	1 418	303	116 386
Technical assistance	6 918	396	59 800
REACT	65 119	180	7 500
EU	477 262	565	147 159

Source: DG REGIO, KOHESIO⁵⁰.

Less developed regions mainly seem to benefit from investments competitiveness of SMEs, which makes up almost half of the overall number of operations. Compared to the other categories of regions however, it seems that the overall median cost is considerably lower (EUR 7 500 in less developed regions, EUR 12 000 in transition regions, EUR 11 334 in more developed regions). This stays the case even though SME competitiveness accounts for the most operations amongst thematic objectives for other geographical categories as well. Network infrastructure accounts represent the highest median costs per operation in less developed regions (more than EUR 2 million per project). While this is expected due to the nature and high costs of infrastructure projects, it is interesting to compare this value to other categories of regions. In transition regions, even though the number of operations is comparable to less developed regions, the median cost is almost half. The same can be said for more developed regions. As such, it seems that infrastructure projects in less developed regions are far more demanding in terms of funding compared to the other regions. Similarly, these operations seem to be also the most complex out of all other regional categories, as the median duration is around 100 days longer than in transition regions and almost 250 days longer than in more developed ones.

Looking at *transition regions* in Table 3, particular investments in public administration seem to be more substantial than in other categories of regions. The median cost of operations in this case amounts to more than EUR 200 000. However, at the same time, there seem to be much fewer operations considering that theme in transition regions than there are in less or more developed ones. In the first case, only 315 operations are recorded, whereas the other categories, there are around five times as many. At the same time the duration is comparable across all three categories.

⁵⁰ For a full description of the methodology KOHESIO employs to retrieve and harmonise operation-level data, as well as full exports and limitations, see <https://kohesio.ec.europa.eu/en/faq>.

Table 3 - Number of operations financed by ERDF and CF and median operation duration and cost in transition regions, as reported by Managing Authorities in the lists of operations

Thematic objective	Number of operations	Median duration of operation (in days)	Median cost of operation
Research and innovation	37 547	832	78 704
Information and communication	6 325	711	4 104
Competitiveness of SMEs	53 773	364	12 000
Low-carbon economy	13 886	729	139 207
Climate change adaptation	1 645	760	250 000
Environmental protection	6 405	730	255 000
Network infrastructure	730	826	950 140
Sustainable employment	292	365	233 611
Social inclusion	2 741	698	348 964
Educational and vocational training	3 791	281	22 000
Efficient public administration	315	289	201 116
Technical assistance	2 419	2 003	10 588
REACT	11 985	180	8 917
EU	141 854	711	139 207

Source: DG REGIO, KOHESIO.

Turning to more developed regions in Table 4, investments in climate change adaptation stand out compared to other regional categories. In more developed regions, median cost of operations amounts to EUR 373 750 compared to around EUR 250 000 in other regions. Similar differences in characteristics across regional categories also hold for investments in low-carbon economy.

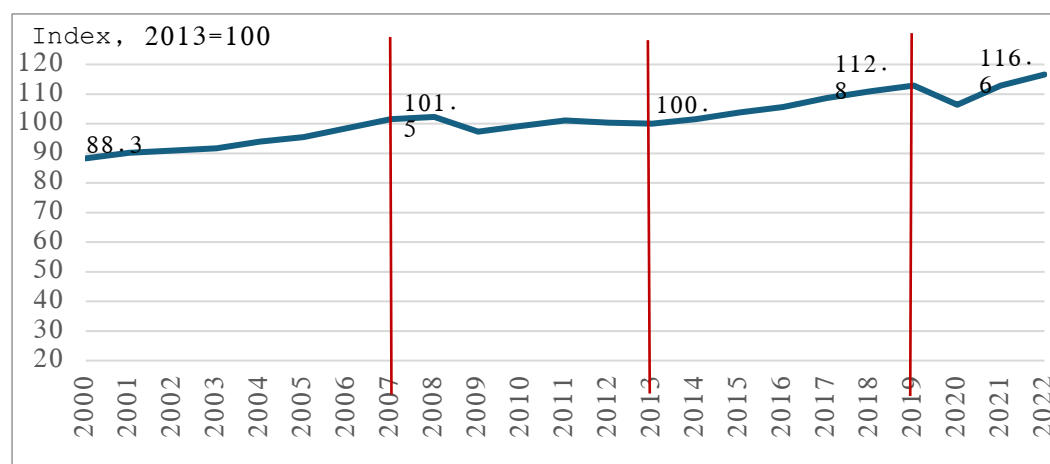
Table 4 - Number of operations financed by ERDF and CF and median operation duration and cost in more developed regions, as reported by Managing Authorities in the lists of operations

Thematic objective	Number of operations	Median duration of operation (in days)	Median cost of operation
Research and innovation	59 151	1 056	105 805
Information and communication	12 365	490	10 000
Competitiveness of SMEs	107 382	364	11 334
Low-carbon economy	22 433	743	133 600
Climate change adaptation	1 553	545	378 500
Environmental protection	6 976	492	373 750
Network infrastructure	1 481	672	1 107 285
Sustainable employment	375	364	373 327
Social inclusion	4 568	730	273 538
Educational and vocational training	16 454	254	18 500
Efficient public administration	1 512	304	182 049
Technical assistance	8 401	439	93 114
REACT	42 820	181	13 387
EU	285 471	490	133 600

Source: DG REGIO, KOHESIO.

In general, it seems that across all thematic fields operations in developed regions showcase the shortest medium duration overall, while also having the lowest median costs.

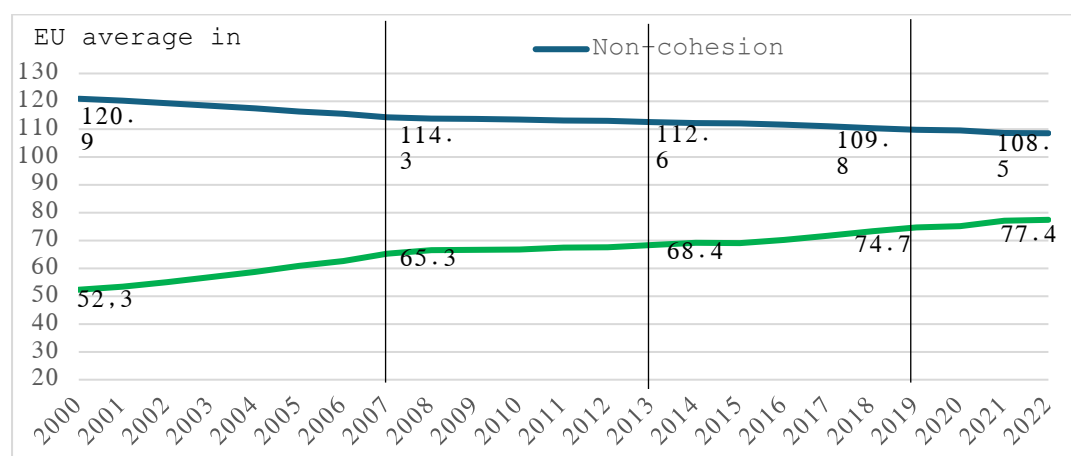
Figure 3 - GDP per head in the EU, 2000-2023 (at constant prices, 2013=100)



Note: The vertical red bars indicate years when there was a change in trend – 2007, the year before the global recession began to affect growth in the EU, 2013, the year before sustained recovered from the recession began, 2019, the year before the COVID-19 pandemic hit.

Source: Eurostat, national accounts data. Based on supporting study.

Figure 4 - Growth of GDP per head in cohesion and non-cohesion countries relative to EU average, 2000-2023 (at constant prices, EU average in PPS terms=100)



Note: Figures for each year are generated by applying the year-to-year % change in GDP per head at constant prices to the figures for GDP per head at PPS in 2019. The vertical lines denote the same sub-periods as in Figure 1.

Source: Eurostat National accounts and AMECO database. Based on supporting study.

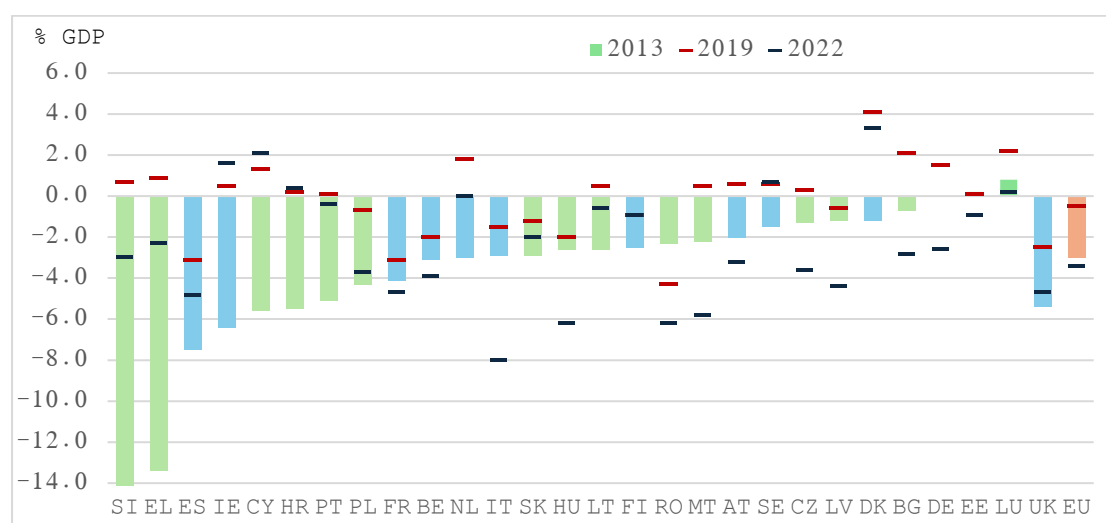
Table 5 - Growth of GDP, labour productivity and employment, annual average % change

	EU27			Cohesion MS			Other MS		
	GDP	Prodty	Empl	GDP	Prodty	Empl	GDP	Prodty	Empl
2000-2007	2.1	1.2	0.9	5.0	4.4	0.6	2.0	0.8	1.1
2007-2013	-0.1	0.3	-0.4	0.0	1.0	-1.0	-0.1	0.1	-0.2
2013-2019	2.1	0.9	1.2	3.6	2.4	1.2	1.8	0.6	1.2
2019-2022	1.0	0.3	0.7	2.1	1.5	0.6	0.6	-0.1	0.8
2013-2022	1.7	0.7	1.1	3.1	2.1	1.0	1.4	0.3	1.1

Note: The change in GDP is measured in constant price terms, labour productivity as GDP relative to the number employed, employment as the number employed.

Source: Eurostat and AMECO database.

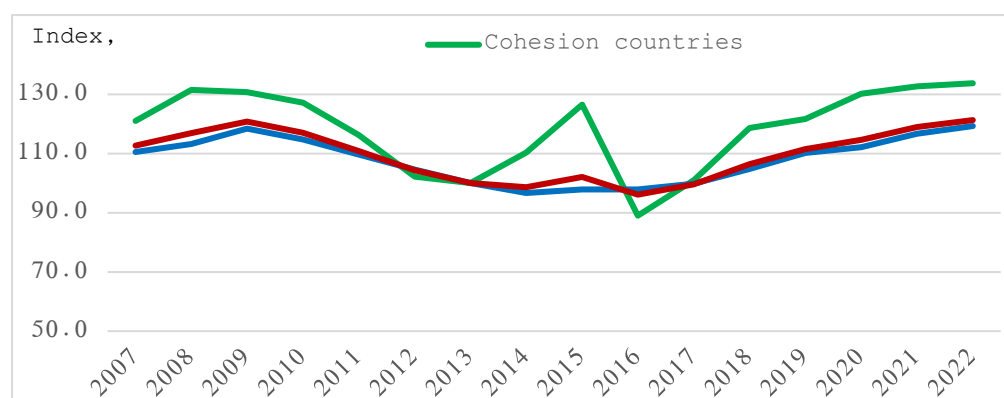
Figure 5 - General Government budget balance in EU Member States, 2013, 2019 and 2022



Note: Countries order by the size of the budget deficit relative to GDP in 2013. The bars relate to the budget balance in 2013. Bars for the cohesion countries are coloured in green, those for the other countries in blue. The figures for the EU are the (weighted) averages of the figures for the Member States.

Source: Eurostat, Government finances. Based on supporting study.

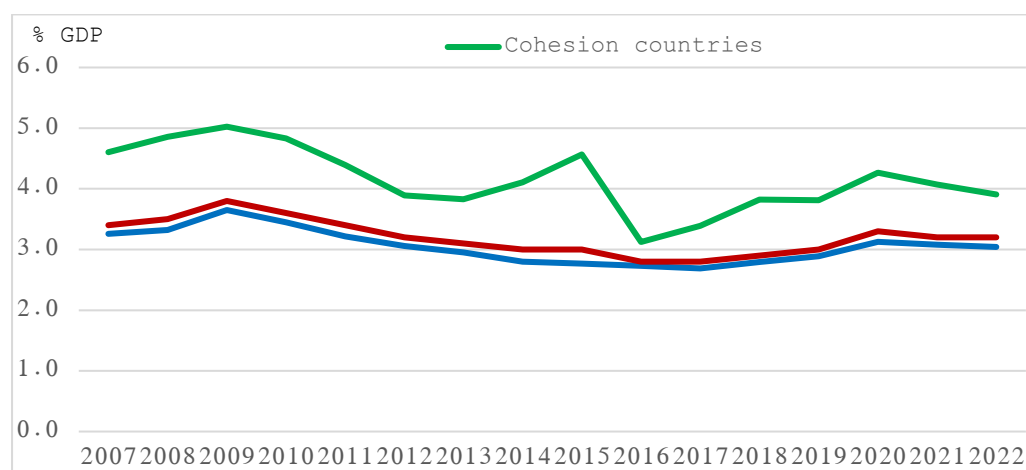
Figure 6 - General government expenditure on gross fixed capital formation in real terms the EU27, cohesion countries and other Member States, 2007-2022



Note: General government expenditure on gross fixed capital formation in nominal terms is converted to real terms by using the GDP deflator. The spike in investment in cohesion countries in 2015 is difficult to explain. It is common to a number of countries and does not seem to be a consequence of a break in the series (it is not indicated as such in the Eurostat database).

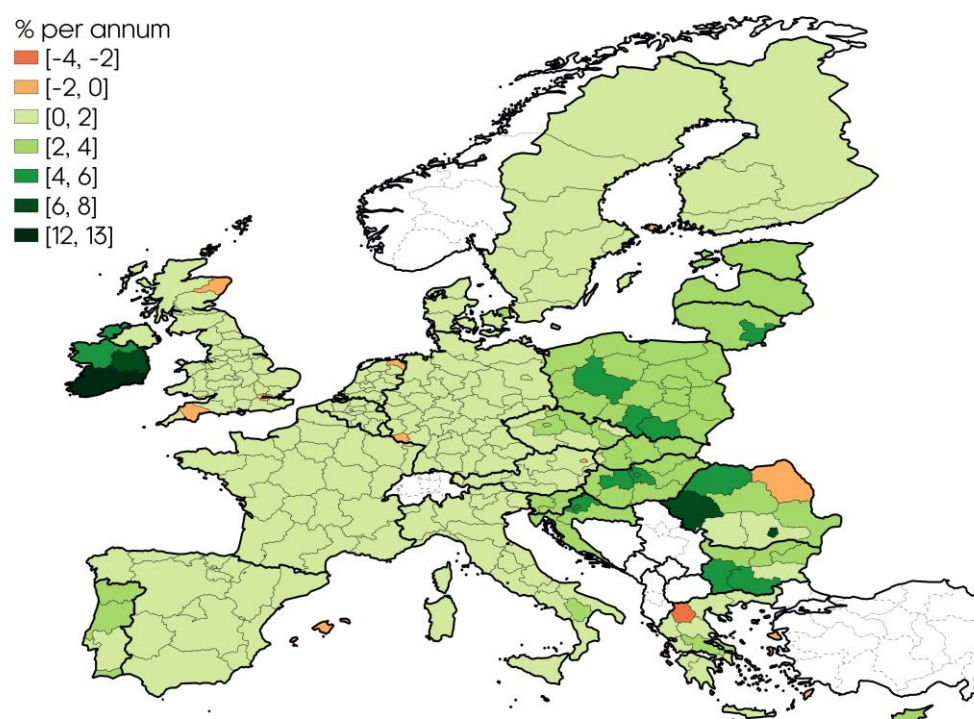
Source: Eurostat, Government statistics and national accounts.

Figure 7 - General Government expenditure on gross fixed capital formation in the EU27, cohesion countries and other Member States, 2007-2022



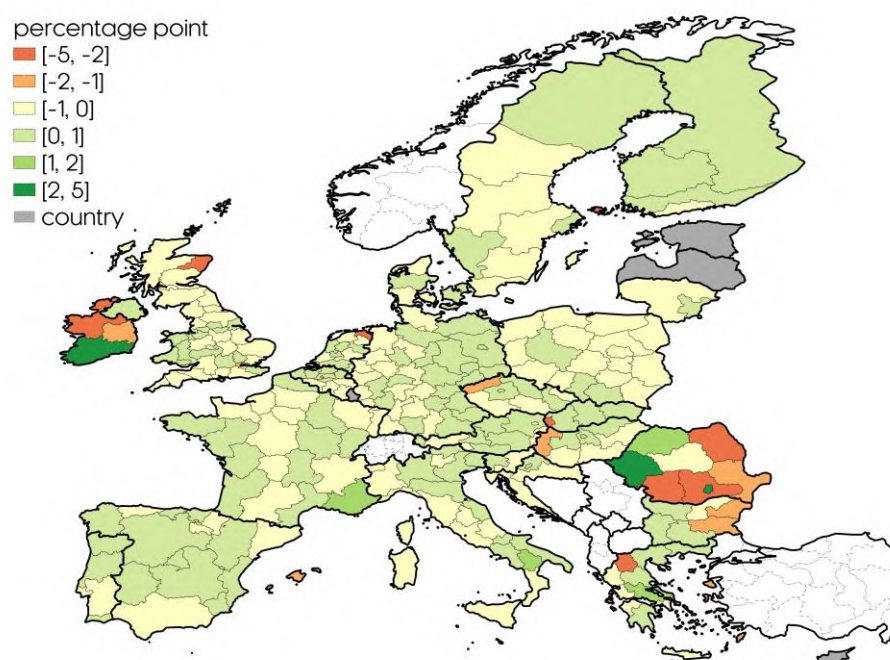
Source: Eurostat government statistics and national accounts. Based on WP1.

Figure 8 – GVA per capita growth over 2013-2022



Source: Eurostat data and Office for National Statistics data for the UK. Based on WP1.

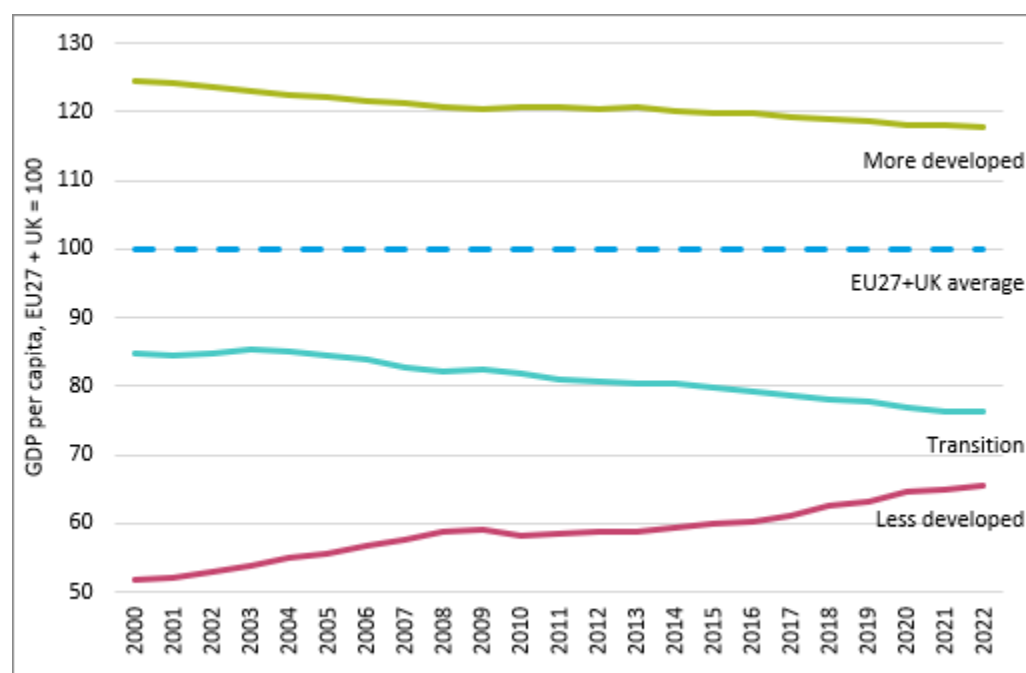
Figure 9 – Net regional growth in GVA per capita over 2013-2022



Note(s): Calculated as the difference between regional growth in GVA per capita and the corresponding national average. Cyprus, Estonia, Latvia, Luxembourg, and Malta only have one NUTS2 region. The treatment of earnings of foreign companies in Ireland causes a jump in 2014-15.

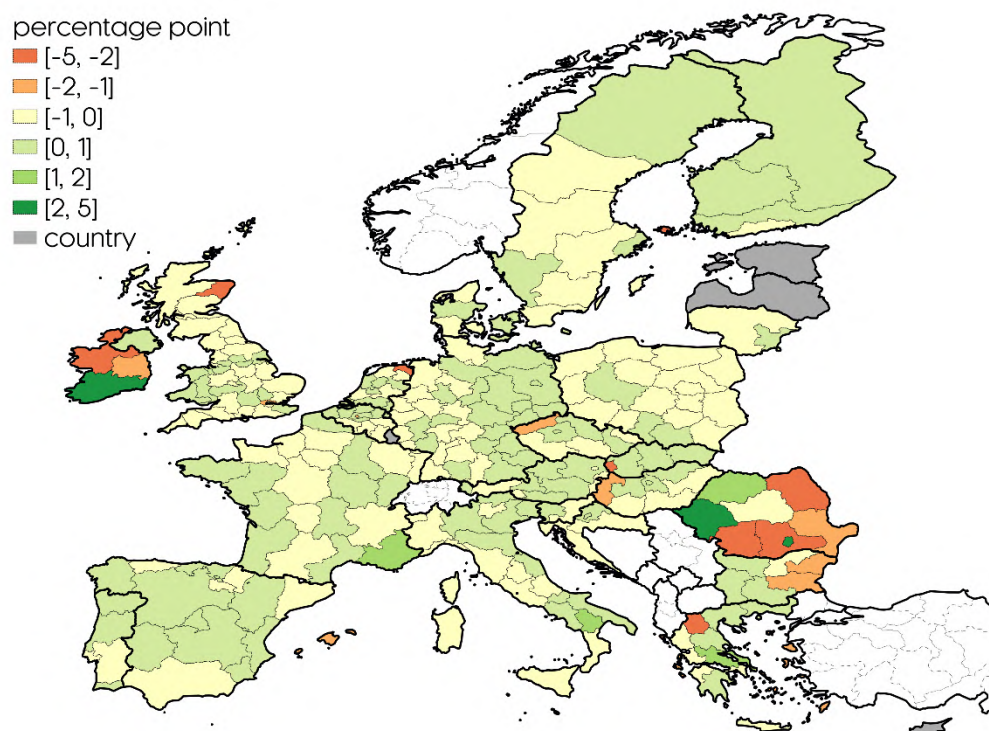
Source: Eurostat data and Office for National Statistics data for the UK. Based on WP1.

Figure 10 – GDP per capita, EU27+UK = 100.



Source: ARDECO data. Based on supporting study.

Figure 11 – Net regional growth in GVA per capita over 2013-2022



Source: ARDECO data. Based on supporting study.

3.2 Cohesion policy regulatory changes and programme amendments

Table 6 - Changes to the CPR related to the ERDF and CF concerning the 2014-2020 period

Short name	Adoption reference	and	Main Objective	Key measures introduced
Specific measures for Greece	14 Oct 2015		To address liquidity shortages and a lack of public funds available for public investments in Greece.	Introduced specific measures for Greece, including additional pre-financing, an increased payment ceiling, 100% EU co-financing rate and a requirement to establish a mechanism ensure that the resources thus made available are effectively used for the financing of investments on the ground.
	Regulation (EU) 2015/1839			
Financial management for MS with serious difficulties related to financial stability	23 Nov 2016		To provide financial relief to Member States facing temporary budgetary difficulties.	Allowed for increased interim payments for Member States experiencing or threatened by serious financial difficulties, with interim payments increased by 10 percentage points above the co-financing rate applicable to each priority. The increased rate could be applied until 30 June 2016.
	Regulation (EU) 2016/2135			
Establishment of the Structural Reform Support Programme	17 May 2017		Strengthening the capacity of MS to prepare and implement growth-enhancing administrative and structural reforms, including through the efficient and effective use of EU funds.	Allowed for transfer of resources to technical assistance under the Structural Reform Support Programme at the initiative of the Commission.
	Regulation (EU) 2017/825			

Assistance to MS affected by natural disasters	4 Jul 2017	To provide additional assistance to Member States affected by natural disasters.	Up to 95% EU co-financing under a dedicated priority axis and retroactive eligibility
	Regulation (EU) 2017/1199		
Changes to resources for economic, social and territorial cohesion	12 Dec 2017	To adjust the resources allocated for economic, social, and territorial cohesion.	Amended the resources available for economic, social, and territorial cohesion for 2014-2020, including an adjustment (net increase) of the allocations under the 'Investment for growth and jobs' goal among less developed, transition, and more developed regions, Member States supported by the Cohesion Fund, and outermost regions.
	Regulation (EU) 2017/2305		
Revised Financial Regulation ('Omnibus' regulation)	18 Jul 2018	To update financial regulations and ensure sound financial management.	Amended various articles of the CPR to align them with the new financial rules, including on financial instruments, extension of the use of SCOs and the principles of transparency, proportionality, equal treatment and non-discrimination.
	Regulation (EU, Euratom) 2018/1046		
Changes to resources for economic, social and territorial cohesion	14 Nov 2018	To adjust the resources allocated for economic, social, and territorial cohesion.	Amended the resources available for economic, social, and territorial cohesion for 2014-2020, including an adjustment of the allocations under the 'Investment for growth and jobs' goal among less developed, transition, and more developed regions, Member States supported by the Cohesion Fund, and outermost regions.
	Regulation (EU) 2018/1719		
Coronavirus Response Investment Initiative – CRII	30 March 2020	To provide exceptional flexibility in the use of funds in response to the COVID-19 outbreak.	Introduced a simplification, liquidity and flexibility measures to allow Member States to respond to urgent needs in the healthcare sector and for SMEs.
	Regulation (EU) 2020/460		
Coronavirus Response Investment Initiative Plus – CRII+	23 April 2020	Extend exceptional flexibility in the use of funds in response to the COVID-19 outbreak.	Building on CRII, further simplified program implementation and introduced more flexibility measures. 100% EU co-financing for one year.
	Regulation (EU) 2020/558		
Adjustment of annual pre-financing for 2021 to 2023	21 Oct 2020	To ease the pressure on payment appropriations in the EU budget by decreasing annual pre-financing.	Decreases the rate of annual pre-financing for the years 2021 to 2023 from 3% to 2%.
	Regulation (EU) 2020/1542		
REACT-EU	23 Dec 2020	To provide additional resources for crisis repair and recovery following the COVID-19 pandemic.	Introduced additional resources of up to €47.5 billion (in 2018 prices) for 2021 and 2022. Added new articles to the CPR concerning REACT-EU resources, which outline the

	Regulation (EU) 2020/2221		allocation of funds and how they should be used.
Cohesion's Action for Refugees in Europe (CARE)	6 Apr 2022	Help Member States to provide emergency support covering the basic needs of people fleeing the Russian invasion of Ukraine.	Allowed 100% co-financing rate for the accounting year 2021/2022, retroactive eligibility of relevant operations, the possibility for the creation of a dedicated priority axis and introduced simplified reporting requirements.
	Regulation (EU) 2022/562		
CARE+	12 April 2022	Complement CARE, provide rapid relief to public budgets and enable additional payments to be made to operational programs.	Introduced measures for increased pre-financing from REACT-EU resources and established a unit cost.
	Regulation (EU) 2022/613		
Flexible Assistance for Territories (FAST-CARE)	19 Oct 2022	To provide additional flexibility to address the consequences of the military aggression of the Russian Federation.	Cross-financing and transfer of financial allocations between TOs within the same priority of the same fund and category of region of the same programme. Increased unit cost of CARE+, widened eligibility of relevant operations.
	Regulation (EU) 2022/2039		
Supporting Affordable Energy (SAFE) as part of REPowerEU	27 Feb 2023	To address the energy crisis resulting from the impact of Russia's war of aggression against Ukraine.	Allowed for an EU co-financing rate of 100% for operations addressing the energy crisis, retroactive and widened eligibility of relevant operations. Possibility of a dedicated priority axis.
	Regulation (EU) 2023/435		
Strategic Technologies for Europe Platform (STEP)	29 Feb 2024	To establish the Strategic Technologies for Europe Platform (STEP) and support investments in strategic technologies.	Extension of the possibility to apply EU co-financing rate of 100% to cohesion programmes retroactively provided for the final accounting year 2023/2024. Extended the deadline for the submission of the final payment application by 12 months.

3.3 Key features of cohesion policy

Territoriality – tools and instruments

- **Design of the intervention logic:** Partnership Agreements provide the basis to build the intervention logic of programmes. Analysing regional challenges are solicited by the CPR as compulsory elements to define development needs for each MS. Partners contribute to the socio-economic analyses that inform programme design, ensuring that local needs are considered.
- **Place-based design and implementation:** Interventions take into account unique sub-regional challenges and opportunities, and the specific context (urban, rural, peripheral etc.).
- **Sustainable Urban Development:** minimum share of the ERDF allocation (5% in 2024-2020) needs to be allocated to support sustainable urban development through territorial strategies that set out integrated actions in urban areas, with special attention to tackling environmental and climate challenges, notably the transition towards a

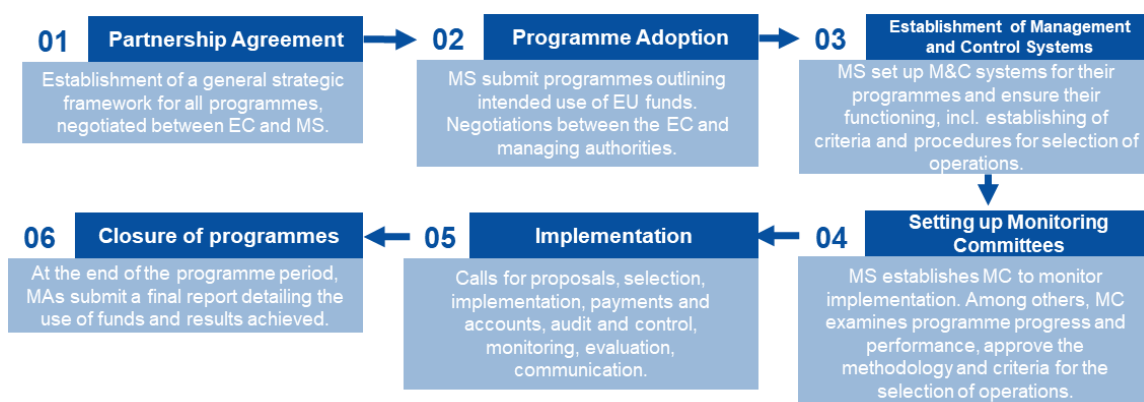
climate-neutral economy. Urban authorities have to be involved at least in the selection of operations.

- **Macro-regional strategies:** These strategies for large territories (e.g. Danube, Alpine, Baltic regions) coordinate efforts across regions and MS.
- **Territorial cooperation:** Regions, including cross-border regions, are encouraged to collaborate on projects that address shared issues.
- **Integrated Territorial investment (ITIs):** The ITI is a programming tool for integrated territorial development to link at least two programme priorities, and possibly multiple policy objectives, programmes, or funds. All ITI interventions must respect the minimum requirements, be based on territorial strategies, and governance arrangements to involve the relevant territorial authorities or bodies in the selection of operations supported from the programmes.
- **Community-lead local development (CLLD):** CLLD is a joint participatory local development method, with the following principles defined in the CPR: bottom-up approach, area-based local development strategies, partnership, social innovation, an integrated and multi-sectoral approach, networking and cooperation. The method supports involvement of local communities in decision on EU funds spending.
- **Smart Specialisation Strategy (3S):** Aims at innovation-driven growth where regions identify and develop their own competitive strength and potentials. National or regional innovation strategies which set priorities in order to build competitive advantage by developing and matching research and innovation own strengths to business needs in order to address emerging opportunities and market developments in a coherent manner, while avoiding duplication and fragmentation of efforts. Article 19 and Annex XI of the CPR make having 3S an ex-ante conditionality for investment under TO1.

Programming and implementation

The programming period of cohesion policy is a multi-phase cycle designed to ensure that resources are used effectively and in line with EU objectives. The figure below provides a schematic overview of these phases. Important to note however that, some stages are often running in parallel and are dependent on the specific arrangements within the Member States.

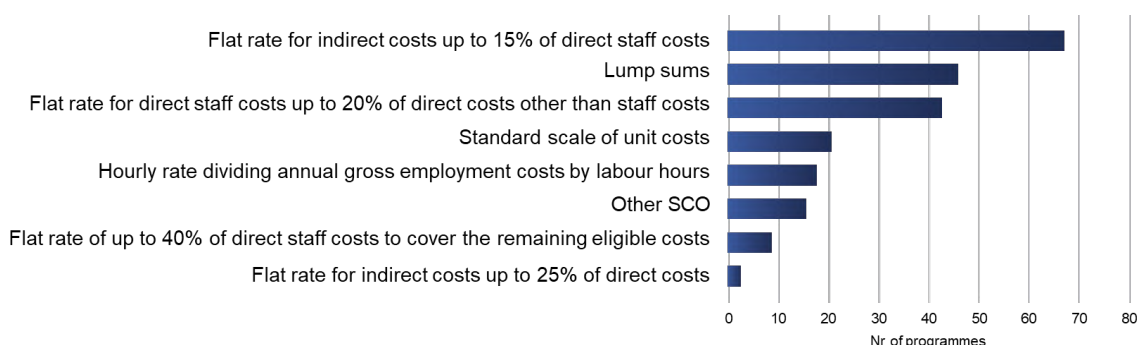
Figure 12 - Programming period cycle: a brief overview



Source: European Commission.

4.2 Efficiency

Figure 13 – Use of different types of SCOs in ETC, 2014-2020



Source: Supporting study on european territorial cooperation, based on Interact.eu data.

4.3 Coherence

Table 7 – overview of ex ante conditionalities related to environmental, energy and climate legislation

Ex ante conditionality		Category	PI	Fulfilled at time of adoption	AP complete by Sep 2017	Share of Ops where applicable
04.1 Energy efficiency	Promotion of investments in energy efficiency when contracting or renovating buildings in relation to Directives 2006/32/EC, 2010/31/EU, 2012/27/EU	Regulatory	EE: buildings EE: enterprises	< 45%	14	70%
04.2 Co-generation	Promotion of efficient co-generation of heat and power in relation to Directive 2004/8/EC	Regulatory	EE: buildings EE: enterprises Sustainable energy	< 100%	1	19%
04.3 Renewable energy	Promotion of the production and distribution of renewable energy sources in relation to Directive 2009/28/EC	Regulatory/ Strategic	Sustainable energy	< 100%	20	41%
05.1 Risk assessment	Presence of national/regional risk assessment	Strategic	Adaptation and risk management	< 80%	13	32%
06.1 Water	Water sector: the existence of a water pricing policy in relation to Directive 2000/60/EC	Regulatory/ Strategic	Wastewater	< 5%	16 (19 not completed)	32%
06.2 Waste	Waste sector: Promoting economically and environmentally sustainable investments in the waste sector in relation to Directive 2008/98/EC	Regulatory/ Strategic	Waste	< 5%	49 (4 not completed)	28%

Source: Supporting study on the European Green Deal.

Table 8 – Synergies between ERDF / CF and CEF investments

Investment areas		Synergies between the ERDF / CF and the CEF
Electricity infrastructures	network	The CEF focused on the development of offshore grids, while the ERDF / CF was utilised to a larger extent to develop onshore grids (esp. high voltage overhead transmission lines).
Gas infrastructures	network	The CEF focused on cross-border renewable energy projects, interoperability of networks and improving the integration of the internal energy markets. ERDF / CF spending aimed at constructing LNG regasification terminals and increasing gas storage capacity providing buffer against supply disruptions. The funds together contributed to increased security of supply in the EU through diversification (strengthened cross-border connections financed by the CEF, and storage capacity facilitated by the ERDF / CF). TYNDPs provided an umbrella for coordinating investments funded by different instruments and both funds focused on PCIs.
Road infrastructures		The ERDF / CF worked together with the CEF to deliver results via complementary projects targeting the same O/D pairs, envisaged to result in completely modernised infrastructure between them. The relative role of the ERDF / CF was larger in developing TEN-T roads compared to the CEF in the EU13 in the 2014-2020 programming period. This is because the CEF focuses on bottlenecks and cross-border sections on roads, the comparatively higher co-financing rate for the ERDF / CF, and remaining needs to build or modernise intra-country sections in less developed regions that are not eligible for CEF funding.
(TEN-T) infrastructures	railway	The CEF was prioritised to a larger extent towards completing TEN-T rail networks than towards completing roads. The ERDF / CF and CEF contributed to modernising infrastructure together when relevant O/D pairs that are located in different types of regions (e.g. in Poland and Hungary). The effects of funds reinforced each other when targeting different needs on the same section of infrastructure, e.g. rolling stock purchase was financed by the CEF and trackside development was supported by the ERDF / CF in Hungary on the Budapest-Esztergom railway line.
Seaport infrastructures		ERDF / CF projects focused on increasing the capacity and navigability of ports, while CEF was used to a greater extent to increase multimodal connections in seaports. The CEF complemented ERDF / CF support aiming at accommodating for larger volumes of freight handled at ports through establishing facilities and connections to railways and roads and thus ensuring the preconditions for inland freight transport.
Inland waterway (IWW) infrastructures		The CEF concentrated on the cross-border sections of IWW infrastructure while the ERDF / CF was used to improve navigation conditions in national sections.
Intelligent systems	transport	The CEF financed investments on TEN-T corridors whereas ERDF / CF funds were primarily concentrated on municipality level (except for Czechia where nation-wide implementation was financed exclusively by the ERDF / CF).

Source: Supporting study on transport and energy network infrastructures.

Table 9 - RRF and cohesion policy: main distinguishing strengths

Recovery and Resilience Facility		Cohesion policy	
	✓ Incentivises reforms and the implementation of CSRs. ✓ Introduces an external constraint to keep reforms on track;	✓ Territorial, addressing the development needs of each region, while also pursuing EU objectives;	
	✓ Perceived as performance-based, as payments are linked to the achievement of milestones and targets. Encourages a cultural shift from payments based on costs towards deliverables;	✓ Rooted in partnership and multi-level governance, with a solid sense of ownership below the national level;	
	✓ Enables discretion over the payment profile and payments based on implementation steps, allowing Member States to access funding earlier;	✓ Has a solid monitoring system based on common and programme specific indicators as well as categorisation data – ensuring a good overview of what is achieved with EU funding;	
	✓ Includes high-level and visible political commitments yielding considerable political and media attention, and in many cases bolstering national ownership.	✓ Flexible in crises, as delays or price increases do not necessarily entail immediate need for programme modifications and payments can continue uninterrupted.	

Source: European Commission based on RRF mid-term evaluation SWD and its supporting study, ECA Review 01/2023, Special report 26/2023 and Special report 21/2022

Annex X. Assessing the impact of cohesion policy: Key findings of the literature

The assessment of the impact of cohesion policy has interested policymakers and academics since the early days of the policy, partly in reaction to the its importance in the overall budget of the European Union. This interest has triggered an extensive body of academic literature, which has evolved over the years in adopting a broad range of techniques. A series of recent contributions (Bandeira Morais, 2025; Berkowitz et al., 2025; European Commission, 2024a) have provided an overview of the empirical literature.

Earlier research produced mixed findings, ranging from the mildly positive, to no impact, to even negative effects. In particular, the strand of the econometric literature based on the neoclassical growth framework and on estimating cross-country or cross-regional growth regressions augmented with cohesion policy variables is rather inconclusive as regards the impact of the policy. Dall’Erba and Fang (2015) provide a meta-analysis of the impact of the European Structural and Investment Funds (ESIF) on regional growth, using the results of 17 different econometric studies published between 1996 and 2013. The estimated policy impact ranges from negative to positive, sometimes not significantly different from zero. One of the main findings of this meta-analysis is the presence of learning effects suggesting that cohesion policy has become more effective over time.

Mixed results on the impact of cohesion policy on growth are also highlighted by the surveys of Mohl (2016) and Berkowitz and Pieńkowski (2016) who similarly focus on econometric evidence based on neoclassical growth models. This wide variations in the results obtained in the studies reviewed is linked to a number of methodological drawbacks such as specification issues (including omitted variable bias), spatial correlation across geographical areas, noise and measurement errors in the controls used, and the lack of proper treatment of endogeneity.

A key problem is that the decision to invest in certain regions depends on the GDP levels and growth rates of the regions themselves, which by design makes the policy variable negatively correlated with the dependent variable of the growth regressions, thereby undermining the robustness of the results (Brasili et al., 2023; Berkowitz et al., 2020).

More recent contributions to the literature rely on counterfactual methods, which allow more a more precise estimation of the impact. These results stem from a variety of methodological approaches and often relies on the use of micro-econometric techniques, which build on the literature of difference-in-differences⁵¹. This quasi-experimental approach relies on the observation of two groups, one exposed to a given external factor (in our case, cohesion policy funds), and the other not⁵², and the impact is computed as the difference in the outcome variable across these two groups over time. A general difficulty in the application of these techniques to cohesion policy is the identification of a suitable control group, as in practice virtually all the EU regions receive at least some funding.

⁵¹ In order for CIEs to provide reliable estimates of the impact of a policy intervention, a number of assumptions have to be met: these includes for instance the absence of unobserved confounding factors, the exogeneity of the intervention to the outcome variable under analysis, the absence of spillover effects across regions, among others. In order to meet these assumptions, CIEs have to rely to specific, often complex, econometric techniques, which makes the design and implementation of this family of methods challenging.

⁵² They are labelled ‘treatment’ and ‘control’ group.

Among the techniques applied, the Regression Discontinuity Design (RDD) exploits the existence of categories of regions for whom the policy injection differs significantly although they could otherwise be considered relatively similar. The evidence arising from this literature generally indicates a significant and positive impact of cohesion policy, albeit heterogeneously distributed across the EU territories (Crescenzi and Giua, 2020; Cerqua and Pellegrini, 2018; Gagliardi and Percoco, 2017; Ferrara et al., 2017; Percoco, 2017; European Commission, 2016; Pellegrini et al., 2013; and Becker et al. 2010).

Huber et al. (2025), a work commissioned for this evaluation, uses RDD approach to estimate the impact of cohesion policy focusing on the 2014-2020 programming period. The authors find that in the specific context at hand (e.g. given the limitation to a single programming period and aggregate NUTS 2 level data, yielding overall too few observations), the RDD approach is not applicable in this specific context as it fails to yield a ‘credible basis to identify causal effects’ (Huber et al. (2025)⁵³.

This result can be explained by the fact that a central underlying assumption – a statistically significant jump of the treatment variable at a designated cutoff point – is not met in the present case. The authors explore why in the given specific context the RDD approach turned out not to be applicable to yield reliable results. Past applications of the RDD approached tended to analyse multiple programming periods collectively (e.g. Bachtrögl (2016), Becker et al. (2018), Cerqua & Pellegrini (2022), and Lang et al. (2023) instead of just on one programming period, focused on NUTS 3 level data (e.g. Gagliardi & Percoco (2016) instead of NUTS 2 level data, or undertook the assessment a longer time since the intervention took place. This implies that Huber et al. faced the challenge of a smaller number of observations which could be included in the analysis while also observing limited post-treatment data points. In addition, prevalent convergence trends as described in European Commission (2023d) may have contributed to ‘a reduced ‘sharpness’ of policy thresholds during the 2014 - 2020 period’ further aggravating the difficulties induced by (too) few observations around the cutoff.

The results of Huber et al. points to a central issue in the empirical assessment of the impact of cohesion policy, namely the difficulty of identifying a (suitable) counterfactual in a context in which all the regions receive at least some financial support. Two of the approaches in the studies which were contracted for this evaluation rely on innovative techniques for the establishment of such counterfactuals: a synthetic control approach and a machine learning approach. Both methodologies start out by addressing the special evaluation context of the absence of a group of regions which did not receive funds, i.e. the methodological challenge of the absence of a directly observable control group. To do this, both methods estimate a control group based on observed data, which then allows the authors to apply more standard inference techniques such a difference in differences approach in order to assess the impact of the policy on regional outcomes.

Spruk (2025)⁵⁴ applies a synthetic control approach to the estimation of the impact of ESI funds on economic growth, labour productivity, sectoral employment, and unemployment of recipient regions. The synthetic control method compared each beneficiary region against a counterfactual scenario on the basis of a weighted combination of similar regions that did not receive funding. A traditional difference-in-differences is then applied on the resulting data set which allows for the estimation of the average treatment effect. Unlike in the case of Huber et al., the number of observations used in the

⁵³ For the 2014 – 2020 period a similar conclusion is also derived in Huber et al. (2025). They apply a wide range of relevant robustness checks which confirms that the RDD approach is not suitable to provide reliable results given the fact that aid intensity is not sufficiently different in the neighbourhood of the 75% threshold.

⁵⁴ Spruk (2025).

analysis allow for identification of statistically sound results also for subgroups, such as specific (sub-) analyses for the different categories of region.

Following Spruk's analysis, the synthetic control approach suggests overall that the cohesion policy intervention yields a positive, significant, and sustained impact. Concerning the short run impact, Spruk finds that for the EU as a whole, a 10% increase in cohesion policy investments yields a 0.2 percentage point increase in GDP per capita in the recipient regions relative to the non-recipient (synthetic control) regions. Further, the impact increases over time: Spruk finds that by the end of the programming period the impact reaches an increase of 0.7 percentage points in per capita GDP, i.e. the long run fiscal multiplier is 3.5 times larger than the short run fiscal multiplier. This suggests a durable improvement of the EU's growth trajectory in response to the cohesion policy intervention.

The results on regional GDP per capita reveal notable divergences across the different categories of regions. In particular, in less developed regions the fiscal multipliers are markedly higher. In the short run, the same 10% increase in expenditures is associated with a 0.4 percentage point expansion of GDP per capita in treated regions relative to the control group while in the long run the value is 2.3 percentage points. This implies a ratio of 5.75, underscoring the high and sustained impact of the policy on the GDP per capita in the less developed regions. The high ratio also highlights the policy's contribution to (economic) convergence by showcasing the relatively more positive impact on GDP vis-à-vis other categories of region. In particular, both in transition and more developed regions, the reported multipliers are very close to (and in parts indistinguishably different from) zero.

Further, also the labour market analyses hint towards regionally differentiated results. When analysing the impact of cohesion policy interventions on gains in the employment share of high-skilled services, Spruk reports a positive, significant, and lasting impact of the policy. However, whilst the positive results concerning GDP were most pronounced in less developed regions, these positive labour market impacts are driven by positive results in more developed regions.

Overall, Spruk (2025) suggests that the 2014-2020 cohesion policy cycle succeeded in promoting convergence in many parts of the Union, particularly in less developed regions. However, given the spatial heterogeneity of the impacts, the results suggest a need for greater strategic differentiation, institutional alignment, and functional targeting in future programming.

Cerqua and Letta (2025)⁵⁵ apply a machine-learning approach ('machine learning control method; MLCM) in order to build a counterfactual scenario based on historical data. In particular, the study uses data from previous programming periods (pre-2000, 2000-2006, and 2007-2013) to forecast the counterfactual scenario for the 2014-2020 period; it then applies a difference-in-differences approach to estimate the effect of each of the regions, from which the average treatment effect is then computed⁵⁶. The study finds that the funding provided under the 2014-2020 programming period increased GDP per capita over the period 2014-2023 by approximately 5.3% compared to what GDP per capita would have been without the additional funding from this programming period. This is 6.4% in less developed regions, and 2.9% in other regions. In turn, total employment increased cumulatively by approximately 3%, reaching 4.2% in less developed regions. Finally, labour productivity, measured as dividing GDP at constant prices by the number of hours worked, increased by 5.3% (5.6% in less developed regions, 4.6% in other regions).

⁵⁵ Cerqua and Letta (2025).

⁵⁶ See Cerqua et al. (2024) for an elaboration of the methodology.

Beyond aggregate average effects, Cerqua and Letta (2025) also analyses the heterogeneity of the findings across EU regions. The study finds that, on average, the regions that benefited most from EU funds in terms of regional growth are located in central and eastern Europe, whereas the impact appears smaller for regions in southern Europe. Substantial within-country differences also emerge, by which the amount of support does not translate into a proportional increase in growth. In fact, regions which benefited substantially from the policy in terms of funding intensity do not necessarily correspond to those experiencing the largest impacts, and, conversely, net contributors to the policy appear to benefit from it. This is consistent with the finding, well-established in the literature, that the impact of cohesion funds is conditional on the economic, institutional, and administrative characteristics of the recipient regions⁵⁷.

Amendolagine et al. (2024) consider several programming periods but also include recent data from 2014 to 2018. They use a heterogeneous spatial autoregressive model to examine and adopt a novel approach for considering region-specific spatial spillovers. This paper takes account of the highly diversified setting in which the policy was implemented and applying theory-based spatial weights to the connections between regions to represent the value chains/trade linkages and the direct investment involved. The analysis recognises that spatial spillover effects are not limited to neighbouring regions and geographical distance is not necessarily the main determinant of their size. This evidence also finds a positive impact of cohesion policy on regional GDP overall.

Bourdin et al. (2024) examine the heterogeneous impact of cohesion policy over the period 2000-2018 in fostering regional productivity and employment, using a multi-input multi-output transformation function approach to explore the differing impacts of the policy on GDP per employee and employment rate. They conclude that ERDF tends to enhance productivity, whereas the ESF favours employment over productivity, which is consistent with the main objectives of the different funds. The CF is also found to effectively promote regional growth in lagging regions is confirmed. A significant part of the literature has convincingly argued that there may be key factors that condition the impact of cohesion policy on economic growth (Fratesi and Wislade, 2017), such as the quality of institutions (Becker et al., 2013; Rodríguez-Pose and Garcilazo, 2015; Aiello et al., 2019; Albanese et al., 2021; Incaltarau et al., 2020; Bachtler and Mendez, 2024), fiscal decentralisation (Bähr, 2008), openness to trade (Ederveen et al., 2006), or the presence of certain assets and endowments (Pinho et al., 2015). As stressed by Bandeira Morais (2025), the main factors identified by the literature explaining that the impacts of the policy are highly heterogeneous and conditional are the institutional quality and governance which seems to be pivotal to success; the stock of human capital, urban proximity, and existing regional assets; the existence of diminishing returns in the scale of support, suggesting overfunding can be counterproductive; or the composition of funding – especially combining hard (infrastructure) and soft (innovation, R&D) investments – which critically affects efficiency. Another strand of the literature relied on macro-economic model simulations to gauge the potential impact of cohesion policy, under certain assumptions. Results from this strand of the literature mostly point to positive impact of the policy, at the EU or national level, using different models such as GIMF (Allard et al., 2008) or QUEST (Varga and in 't Veld, 2011a and 2011b; and Monfort et al., 2017). At the regional level, a few contributions have looked at the impact of the policy on a single-region or the regions of a single-country. For example, De la Fuente (2002) assesses the impact of policy on growth and convergence in Spanish regions using a supply-side model estimated with regional panel data over a 30-year period. Sosvilla-Rivero et al. (2006) use the HERMIN model to analyse the impact of structural funds in the Spanish region of Castilla la Mancha, Fortuna et al. (2016) use a CGE model to analyse the impact of

⁵⁷ See for instance Becker et al. (2013).

cohesion investments in the Portuguese Azores, Garau and Lecca (2015) use a CGE model to study the impact of research and development (R&D) structural funds in the Italian region of Sardinia, while Arcalean et al. (2012) calibrate a two-region endogenous growth model for Portugal. Multi-regional general equilibrium models have also been used to assess the impact of the policy across the whole set of EU regions. Such multi-regional models include the CGE model used by Bröcker and Korzhenevych (2020) to study the ESIF impact in Poland and the Baltic EU Member States, the model used by Mogila et al. (2022) to study the impact of cohesion policy on intra-country disparities in Romania, Czechia, and Poland (this is a version of the HERMIN model, see Bradley and Untiedt, 2009), the GMR model used by Varga et al. (2020) to study the impact of Smart Specialisation in Hungary, and the general equilibrium model used by Blouri and von Ehrlich (2020) to study the impact of 2007-2013 cohesion policy investments. The RHOMOLO model has also been used to study the impact of cohesion policy programmes on all NUTS 2 regions in the EU over many programming periods. Di Comite et al. (2018) and Crucitti et al. (2022) focus on the 2007-2013 and 2014-2020 investments respectively, while more recently Christou et al. (2023) provided an impact assessment of the planned 2021-2027 interventions. The same model has been used for more specific cohesion-related analyses focusing on the equity-efficiency trade-off of the policy (Barbero et al., 2024a), the impact on EU regional disparities (Crucitti et al., 2024), Smart Specialisation (Gianelle et al., 2024; Barbero et al., 2024b; and Barbero et al., 2022), the magnitude of regional and international spillovers (Lecca et al., 2020; Crucitti et al., 2023), the influence of the quality of institutions (Barbero et al., 2023), and the long-run effects of transport infrastructure investment (Persyn et al., 2023). Bandeira Morais (2025) summarises the main findings of the recent literature as follows: Economic Growth: Most recent studies show significant gains, particularly in regions with stronger institutions and human capital. Model simulations also support positive long-term effects and spillovers beyond targeted regions. Employment: Evidence is more mixed. Some studies identify only modest or temporary employment gains, while others find stronger effects when funds are combined across sectors or directed toward human capital. Resilience: During crises (e.g. the Great Recession, COVID-19), cohesion policy helped stabilise employment and mitigate export shocks, especially in Southern Europe. However, long-term transformation was often lacking, with temporary gains dissipating once funding ended. One of the main take-aways from the recent literature is that to be effective, the EU cohesion policy must be tailored to regional contexts, supported by high-quality governance, and balanced in investment types.