

ANNEX: EU RECOVERY SCOREBOARD – ADDITIONAL TECHNICAL NOTES

A. General comments

To ensure that the EU's Recovery and Resilience Facility increases Europe's long term sustainable growth and competitiveness as well as accelerates the EU's Green and Digital transitions, it is vital to evaluate the impact of the investments and reforms financed by the fund. The scoreboard would also improve the possibility of benchmarking and the development of future policies in the EU area, on both a national and on a Union level.

The difficulties of isolating and measuring the impact of investments financed by the fund on all other investments should not be a reason for not doing it. Measurements, and the possibility of benchmarking, are important elements in ensuring efficiency and transparency. Many of the essential elements for an EU Recovery Scoreboard can already be found in other existing EU scoreboards and competitiveness rankings. The further the EU Recovery Scoreboard can be linked to these existing indicators, the quicker and easier its implementation.

In the text below, we indicate a number of important existing indicators that could be deployed.

As the principal ambition of the Next Generation EU is to increase Europe's sustainable competitiveness and growth, it is important to compare developments within the Union to those in other regions. The best way to achieve this would be to include indicators available in OECD publications and analysis. In particular, this is the case for educational measures.

Given the ongoing restructuring of our economies and the rapid rate of technological change, it is also important to stress that the Recovery Scoreboard – and the choice of inputs it uses – must remain flexible. Initially, it could consist only of indices that are currently available. Over time, new measures / target variables can be introduced gradually.

The scoreboard could rely on three types of checks and measurements.

Direct checks that the reforms:

- are itemised separately in the national budgets;
- address the specified years (2021 – 2026).

In addition, that:

- Both short-term and long-term impact assessments have been undertaken;
- The impact of red tape has been assessed, particularly for SMEs;
- An assessment has been undertaken to determine that reforms are not 'hindering' competition regarding domestic/foreign or public/private companies.

A. Input measures

Input measures are often more easily available; on the other hand, however, they reveal less about the actual impacts. Input targets could, for example, use



the proportion of the investments referring to the Green Transition or digital investments. Input measurements should, of course, be used where already specified in the Recovery Fund Agreement (the proportion of funding used on green investments and digital investments in general), but otherwise they should be relied upon primarily where output measures are unavailable.

B. Output measures

With output targets, any reforms undertaken should have a demonstrable impact on important target variables; this is why they also provide the basis for benchmarking between measures. Output goals are more clearly and directly linked to actual impacts.

B. More specific comments and proposals

The Recovery and Resilience Fund is structured around six pillars:

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

In order to simplify and accelerate the creation of such a Recovery Scoreboard, below we discuss five principle areas essential to the Union's long-term sustainable competitiveness and growth that the scoreboard must cover. We also propose a number of existing measurements that could be used in the Scoreboard, as well as providing proposals for improving existing EU scoreboards.

The five essential areas for scoreboarding and benchmarking are:

- a) the Green Transition;
- b) the Digital Transition;
- c) innovation and education;
- d) competitiveness and jobs;
- e) improving the internal market.

These five areas are closely connected to the six pillars but in some cases more concrete and definable. Area a) and b) being the same as pillar 1 and 2; area c) closely connected to pillar 6, area d) to pillar 3, 4 and 5 and area e) connected to pillar 5.

The Green Transition

Concerning measurements for the Green Transition, there are some interesting target variables in the EU resource efficiency scoreboard, such as:

- greenhouse gas emissions per capita;
- greenhouse gas emissions per GDP;
- energy productivity;
- share of non-fossil energy in gross final energy consumption.

Unfortunately the latest available version of the Resource Efficiency Scoreboard dates from 2015. We therefore urge the EU Commission to allocate further resources to this, which would strengthen both the Green Transition benchmark and the national recovery plans in the EU Member States.

The Scoreboard should also include the individual Member State targets for renewable energy, energy efficiency and CO₂ reduction. This way, Member States could be ranked according to how well they fulfil their respective national targets, while avoiding punishing them with ambitious national targets. Other potential scoreboard goals are the share of fossil-free energy in final electricity consumption, the proportion of fossil-free heating supplied through district heating (district heating has a huge potential in delivering the Green Transition) and the share of fossil-free transport, divided into different modes of transport.

To facilitate the Recovery Fund's contribution to the EU's renovation wave, the scoreboard could also include indicators of energy for heating per square metre of buildings / residences and the rate of renovation of existing building stock (percentage of building stock renovated per year). Other important measures regarding the Green Transition would be the number of start-ups and company growth within the green sector (see also the section on 'Innovation').

Overall, it is important to underline that the measurements on the Green Transition are not restricted by the technical criteria and definitions in the EU Taxonomy for sustainable activities, as these remain incomplete and untested. For example, technology neutrality is essential for a cost-efficient path to carbon neutrality and well-functioning markets. Yet the fact that different methods of zero-emission electricity production are not treated in the same way means that the proposition is not technology-neutral. It is therefore important that Recovery Fund investments are not blocked by the taxonomy.

The Digital Transition

The existing "Digital Economy and Society Index (DESI)" summarises the relevant indicators of Europe's digital performance and is updated on an annual basis. It tracks the evolution of EU Member States in five namely domains:

1. Connectivity;
2. Human Capital;
3. Use of the internet;
4. Integration of Digital Technology;
5. Digital Public Services.

Based on these indicators, it should be possible to rely on existing relevant measures, potentially supplemented with some AI measurement. Other available sources that will be important for monitoring include the OECD's Digital Government Index and Oxford's Insights Government AI Readiness Index. In addition, there is also an EU 5G observatory scoreboard.

It is important that DESI ranks EU Member States according to supply of - as well as demand for and usage of - digital solutions. The degree of digitalisation depends not only on the funds invested in digital infrastructure but also on how and to what extent

digital solutions are put into practice in the business community, educational institutions and public administration.

There are three aspects of the Digital Transition that are particularly important to monitor. These are:

- Digital use and digital 'knowledge' within SMEs.
- Digital use in education, not least in shorter-term further education and retraining.
- Digital use in public administration, social services and health care, not least as a necessary means to improve productivity

Other relevant indicators can be found in the Innovation Scoreboard. Among these are enterprises providing training to develop or upgrade ICT skills in their staff. The relevant indicator should be divided into different sectors and groups based on company size.

Concerning the digitalisation of society, as previously mentioned it is essential that the fund is used to expand digital infrastructure - in the form of fast broadband and 5G - is a prerequisite for a digital transformation. One important indicator is to track the share of those households and companies with access to broadband with speeds of at least 100 Mbps and those with access to fast broadband with speeds of at least 1 Gbps.

As BusinessEurope has shown, Europe lags the USA and China in terms of start-ups, growth and valuation of its high-tech companies. These companies are playing a major role in the societal transition, therefore the Scoreboard should have a special emphasis on following the development of the high-tech sectors in EU.

Innovation and education

Regarding innovation and investments in R&D, these could be - as with most other R&D measurements - input-based. Within the Resource Efficiency Scoreboard, there is an index entitled 'Supporting research and innovation - Eco-innovation index', which could provide a starting point. Currently, however, the Eco-innovation indicators only include R&D on environment and energy. They do not cover the Green Transition more broadly in, for example, agriculture or forestry. Perhaps more importantly, R&D at universities should be included in the scoreboard, given that so much of this activity takes place in academia.

In the existing Innovation Scoreboard, there a number of interesting indicators are available. The most relevant from a Recovery Scoreboard point of view are:

- R&D expenditure in the public sector;
- venture capital expenditure;
- R&D expenditure in the business sector;
- non-R&D innovation expenditures;
- SMEs with product or process innovations;
- SMEs with marketing or organisational innovations;
- SMEs innovating in-house; innovative SMEs collaborating with others;
- PCT patent applications;
- trademark applications;
- design applications.

Another new and interesting indicator could be the level of self-generated intangible assets, as reported in business annual reports.

Based on the Commission study on an Updates Scoreboard for the internal market (see below), relevant indicators would be:

- Innovative products (goods and services) - the proportion of innovative products exported compared to the whole.
- Capital mobility - many start-ups are leaving Europe for the US, due to problems accessing the capital market. Some measures for financing of new high-tech business are therefore needed.

Investment in technical and digital educations is needed for the Green and Digital Transitions, as well in sustainable competitiveness generally. Also, it is important that Member States invest in in-service training and education in order to continuously re- and upskill the labour force in line with the Green and Digital Transitions. One general input indicator is public investment in education as a share of GDP. Regarding educational levels, PISA measurements are central. As well as these, other relevant indicators from the OECD's 'Education at a Glance' and from Cedefop (the European Centre for the Development of Vocational Training) include:

- transnational learning mobility;
- proportion of early school leavers;
- proportion of pupils in upper secondary education;
- adults with low education (upskilling, integration);
- proportion of young people (18-24) in employment;
- company investments in retraining.

Employment and GDP

It is also necessary to measure the **effects on employment and GDP**, both in structural terms and in the short term. It is particularly important to follow the structural reforms that can increase the individual countries' GDP potential and thus increase prosperity in the EU as a whole. In order to simplify the process, countries should use their own models with fiscal effects and elasticities. The indicator and the measured effects would then be aligned when Member States report to the European Commission regarding the Stability and Convergence programmes. The labour markets (and education systems) should be able to adapt and allocate labour resources to areas in growth and away from areas in decline.

Concerning the short-term impact, the level to which discretionary initiatives are estimated to impact GDP (as a percentage of total GDP) and actual employment (as a percent of total labour supply) should be included in the Scoreboard.

Regarding the long-term impact, the extent to which discretionary initiatives are estimated to impact potential GDP and structural employment (in, for example, 2030) should be included in the Scoreboard. The Scoreboard should be linked to or contain indicators from the Social Scoreboard in the European Semester.

Other potential important indicators would include:

- employment shares / hours worked;
- long term and structural unemployment;
- business start-ups;
- GDP gap;
- women's participation in the labour market;
- senior workers in the labour market;

- making the link between employment and lower risk of poverty;
- job turnovers and flexibility on the labour market.

In order to measure the transformation of the economy, indicators such as the following will be required for the Innovation scoreboard:

- Employment in knowledge-intensive activities (and in the green sector).
- Employment in fast-growing enterprises in innovative sectors.
- Medium and high-tech product exports (green exports).
- Knowledge-intensive services exports.
- Sales of new-to-market and new-to-firm product innovations.

Improving the internal market

As previously noted, it is of the utmost importance that the use of fund resources does not distort competition. Instead, they should create win-win situations for the entire Union by improving the internal market. It is therefore vital to check the use of state aids. In this context we propose the use of indicators such as:

- The amount of State Aid actually paid out;
- The share of Recovery Fund investment that legally constitutes State Aid;
- State Aid paid according to purpose of the Recovery Fund measures.

The trade in services is one of the keys for realising sustainable growth and competitiveness in Europe and thus that of the full potential of the internal market. The scoreboard should aim to highlight/identify the most serious obstacles by focusing on areas prioritised in Next Generation EU. This could be achieved using country-by-country comparisons or by analysing complaints both from a business and a consumer perspective. Another important indicator will be the implementation of EU law in relevant areas.

The Commission's study of an Upgraded Single Market Scoreboard as a Governance Tool for the Single Market has many interesting proposals that would

fit into a Recovery Scoreboard and the focus on sustainability and growth. Among these are:

- A measure of regulation in a life cycle perspective;
- A better-functioning digital single market is also important from a Digital Transition perspective; the indicator could be the increase in the number of digital commerce companies.

The Commission's TED ('Tenders Electronic Daily') database provides information on all EU tenders. However, there is no requirement in the EU's Public Procurement Directive to register contracts that fall below the TED threshold values. The Commission should oblige Member States to report those contracts financed via the Recovery and Resilience Facility.

Other important possible measures / goals are the proportion of investment / procurement that take place via 'EU tenders' compared to those restricted to local / national companies. This should be quantifiable.

C. Presentation and reporting

In terms of presenting the results, much of the existing methodology in the Single Market Scoreboard should be adopted. Such an approach should be feasible for the Recovery Scoreboard, where the governance tools can include public investment, procurement, tax reductions and training support, etc. Policy Areas can be divided into the Green Transition, digitalisation, competitiveness, etc.

It is important that there is the capacity to report and evaluate all government projects separately in the scoreboard.

When reporting a project during the planning phase, a Member State should be able to report which policy area(s) the project covers and then report how the project is expected to affect the relevant target measures relating to the selected area(s).

Where the project is ongoing, it is important that the effects of the project are continuously supervised and evaluated in a different part of the Scoreboard, rather than the ex-ante effects, as mentioned above.