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AN EMPIRICAL ANALYSIS OF THE DETERMINANTS THAT CAN BOOST NEXT GENERATION EU'S EFFECTIVENESS

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ABSTRACT

The use of Next Generation EU can become one of the main determinants of Spanish economic developments in the coming years. This article analyses the economic impact of the European Regional Development Fund over the last 20 years, on account of the similarity between its goals and those of Next Generation EU and the available information. The findings suggest that those structural reforms that reduce barriers to competition in the product market and some labour market rigidities can scale up the European funds' expansionary effect (fiscal multiplier) in the medium and long term.

Keywords: European funds, NGEU, fiscal multipliers, regulation, labour market, product market.

JEL classification: E02, E62, H30, R11.

AN EMPIRICAL ANALYSIS OF THE DETERMINANTS THAT CAN BOOST NEXT GENERATION EU'S EFFECTIVENESS

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Introduction

In July 2020, the European Council approved the creation of Next Generation EU (NGEU), a temporary fund with an envelope that could total up to 6.1% of GDP in 2020 (exceeding €800 billion) for the European Union (EU) as a whole. In the case of Spain, the NGEU funds could represent up to 13.8% of GDP in 2020.[1]

Over the coming years this fund will finance a stimulus coordinated at European level with a dual objective. First, to support demand in the short term, thereby helping alleviate the fallout from the pandemic. Second, in the medium term, to help drive the structural transformations under way and, in particular, quicken the digital and ecological transitions.[2] To achieve these goals, NGEU will mainly finance investment projects, which in many cases entail structural reforms.

Assessing the economic impact of NGEU is extremely complex and involves a high degree of uncertainty. This is because in addition to the factors that typically fuel the debate on the size of fiscal multipliers,[3] we must also consider others stemming from these funds' specific characteristics. While the presentation of the Recovery and Resilience Plans (RRPs)[4] allayed this uncertainty, some questions remain unanswered. These include those concerning the highly demanding schedule for project implementation, the relationship between the schedule and the timeframes for disbursement of the funds, and the scope of the structural reforms included in the various national programmes.

Unlike other analyses estimating the effects of NGEU on output,[5] this article focuses on the latter of the above-mentioned aspects. Specifically, it investigates the extent of the changes in the effects of NGEU-related expenditure on economic activity were it to be accompanied by structural reforms.[6] Given that the bulk of the NGEU

1 For further details on their distribution, see Banco de España (2020a).

2 Verwey, Langedijk and Kuenzel (2020) describe in detail the rationale for creating the programme.

3 The literature distinguishes between different structural, cyclical and instrumental factors that potentially impact the size of multipliers, both theoretically and empirically. See IMF (2014); Hernández de Cos and Moral-Benito (2016); and Alesina, Favero and Giavazzi (2019).

4 Spain's RRP is called the Recovery, Transformation and Resilience Plan.

5 See Banco de España (2020b) for a preliminary assessment, under different alternative scenarios, conducted when several of the programme's details remained unknown.

6 These reforms are generally aligned with recommendations by different international organisations, such as the European Commission, as part of the European Semester, and the IMF (see IMF (2020)).

funds are yet to be absorbed, the approach used in this article is based on estimating the fiscal impulse stemming from past projects implemented using European Regional Development Fund (ERDF) financing.

Indeed, the available evidence suggests that the economic impact associated with the ERDF has been substantial in the past, with average medium-term fiscal multipliers standing at around unity or slightly above it. At the same time, this impact has been characterised by high regional heterogeneity. In this regard, recent estimates[7] suggest that while the ERDF's multipliers on gross value added and employment are positive in many countries, in some regions this situation could even have reversed, with negative values estimated for both gross value added and employment.

Prior analyses point to one of the possible sources of heterogeneity among multipliers being countries' or regions' different degrees of institutional quality.[8] In this context, this article examines the extent to which differences in the level of labour and product market rigidity are behind part of that heterogeneity and, therefore, the potential of structural reforms in those markets to increase the fiscal multiplier. For example, in a labour market that restricts labour mobility within a firm or between firms, more time will be needed to fill the vacancies, particularly for skilled workers, that a new investment project requires. Further, in a product market that bars new firms from entering to compete, the established firms will tend to widen profit margins at the consumer's expense and will have fewer incentives for business innovation when implementing certain investment projects.

These matters are particularly important in the current setting, with the economy undergoing significant structural transformations (in some cases expedited by the pandemic) that NGEU intends to drive. However, reducing certain market rigidities often incurs short-term costs, while the net benefits can only be discerned in the medium and long term. Against this backdrop, an expansionary fiscal stance can help lower those costs.[9] Furthermore, according to the literature the expansionary effects of a fiscal impulse are more powerful when markets function with greater efficiency.[10] Lastly, there is evidence to suggest that the synergies between structural reforms and fiscal impulses are greater in a setting such as the current one, where monetary policy conduct is constrained because interest rates are close to their effective lower bound.[11]

Data and empirical strategy

Due to the similarity of their goals, ERDF's fiscal impulse is a good proxy for NGEU's potential one. These goals notably include the momentum given to R&D&I, the transition

7 See Canova and Pappa (2021).

8 See Avellán, Galindo and León-Díaz (2020).

9 See Papageorgiou and Vourvachaki (2015).

10 See Cacciatore et al. (2021).

11 See Arce, Hurtado and Thomas (2016) and Fernández-Villaverde, Guerrón-Quintana and Rubio-Ramírez (2014).

to a low-carbon economy and social and territorial cohesion. With regard to their scale, Spain's spending commitments under the RRF and REACT-EU, which make up the bulk of NGEU, amount, in 2021 alone, to around €32 billion (2.7% of GDP in 2020), a figure comparable to cumulative ERDF disbursements between 2013 and 2020.

In light of these considerations, this article harnesses a dataset with detailed information on the ERDF funds absorbed in 235 regions of the 27 EU Member States over the period 2000-2018. Like the other European Structural and Investment Funds, the ERDF is linked to the EU's Multiannual Financial Frameworks.[12] This means that the payments from the EU to the Member States usually arise after the funds have been used in investment projects. In this regard, unlike most of the prior analyses, which, owing mainly to data limitations, are based on the EU payment calendars, this article considers the actual timing of the spending, on account of it being more relevant to estimating the fiscal multiplier.

The empirical strategy followed establishes the relationship between each region's real GDP growth and ERDF spending (as a percentage of GDP) as a metric for assessing the latter's economic impact.[13] Specifically, the variable of interest is the five-year cumulative change in real GDP,[14] used in this case as a proxy for long-term growth. In addition, the estimation of the panel of EU regions includes an interaction term of ERDF spending with two alternative variables that proxy the effectiveness of the regulatory framework in terms of its suitability for efficiently reallocating productive resources. As mentioned above, the two relevant dimensions in this regard are the labour market and product market regulations. In particular, a sub-component of the indicators of employment protection legislation (EPL) and of product market regulation (PMR) that the OECD regularly produces was considered in each case. Since they are only available at national level, these variables' values are identical for all regions of the same country.[15] By way of example, the interaction between ERDF spending and PMR captures the differential effect of the European fund's fiscal multiplier vis-à-vis changes in product market flexibility in each country.

12 For more details, see Forte and Rojas (2021).

13 ERDF projects are co-financed with funds from national budgets. Given that more budgetary funds are likely available at the peak of the cycle, it is possible that implementation of ERDF projects is procyclical, which would invalidate econometric analysis. Consequently, an econometric analysis filtering out the cyclical conditions common to the euro area was used, in line with the approach of Canova and Pappa (2021). For more details, see Albrizio and Geli (2021).

14 The panel is estimated for each time horizon with the 1-5 year cumulative variables via the local projection estimator (see Jordà (2005)). The five-year horizon was used as a medium-term reference. For further information, see Albrizio and Geli (2021).

15 These indicators are produced by the OECD. In the case of the EPL, the component measuring the strictness of regulation for workers on regular contracts was selected. This indicator was chosen on the grounds of the labour market duality in southern European countries between workers on temporary and regular contracts, caused, among other factors, by the high relative rigidity of the regulation of the latter type of contract (see, for example, Bentolila, Dolado and Jimeno (2019)). In the case of the PMR, Network Sector PMR indicators were used on account of their longer time series. There is a 0.8 correlation between this indicator and the general interpolated PMR, meaning the former can be considered a good proxy for the latter. While these indicators have some limitations (as a proxy for the regulatory framework) due to their partial nature, they capture the fundamental differences, in relative terms, from both an international and a temporal perspective.

Table 1
IMPACT ON FIVE-YEAR CUMULATIVE ECONOMIC GROWTH

Y = economic growth	(1)	(2)
Fiscal impulse	6.49*	5.89***
EPL fiscal impulse	-1.94*	
PMR fiscal impulse		-1.98***
# obs	2,921	2,921
R^2	43%	44%
Fixed effects	Yes	Yes
Controls	Yes	Yes

SOURCE: Banco de España.
NOTE: *,** and *** indicate significance at the 10%, 5% and 1% levels, respectively. The table presents the results of the estimation of the ERDF's fiscal impulse (average effect) on economic growth (five-year cumulative change in GDP) and, furthermore, the additional effect that the impulse has had in more flexible labour markets (interaction, column 1) and in less rigid product markets (interaction, column 2). The estimation controls for the same indicator (EPL and PMR, respectively) and for the regressive component, and includes fixed effects for region and for year. A decrease in the indicator means the regulations are eased.

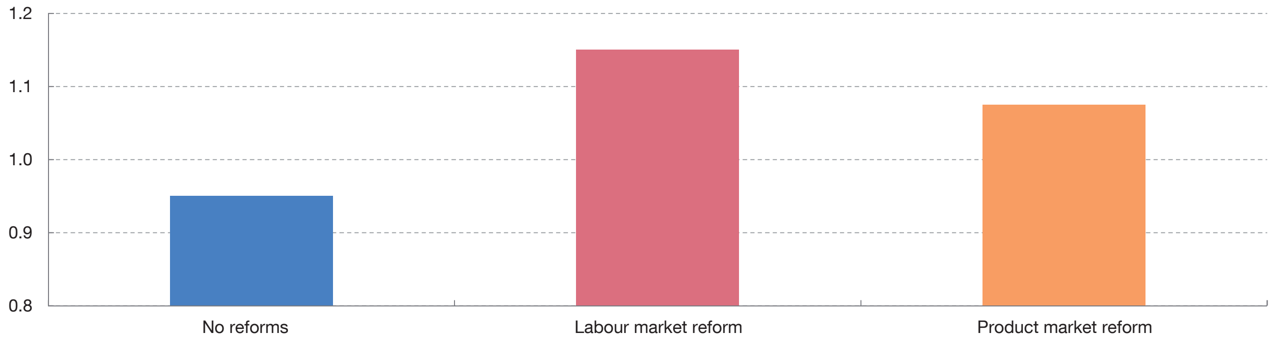
Findings

This section presents the findings of two different exercises analysing, respectively, the change in the fiscal multiplier associated with the ERDF in response to changes in the level of rigidity in the labour and product markets. Table 1 summarises the coefficients estimated for each exercise. In both cases, a decline in the indicator denotes less rigidity. The first thing to note is that, both in the labour market and in the product market, the coefficient for interaction between the fiscal impulse associated with the ERDF and the variable proxying the level of regulatory rigidity is negative.[16] This suggests that a lower level of rigidity is associated, on average, with a higher long-term fiscal multiplier, which could result in an increase in the economy's potential growth. In other words, those countries that have implemented structural reforms alongside investment projects under the ERDF have exhibited a greater increase in their long-term economic growth.

Based on these findings, two illustrative exercises are proposed to estimate the size of the impact that a hypothetical reform could have on the ERDF multiplier. Specifically, the impact of a reduction in institutional rigidity compared with the latest value recorded in 2018 is estimated. For Spain, this hypothetical reform is calibrated as an easing (i.e. a decrease in the indicator) of 25% compared with the latest available figure. For example, in the case of the labour market, the change calibrated in the EPL indicators would be comparable in size to that observed during the reforms implemented in the period 2010-2012.

16 The PMR and EPL indicators have data for 20 and 22 countries, respectively.

Chart 1
(ANNUALISED) EFFECT OF THE REFORMS ON THE ERDF FISCAL MULTIPLIER AFTER FIVE YEARS



SOURCE: Banco de España.
NOTE: The chart depicts the impact, in annualised terms, on the medium-term fiscal multiplier after reforms are implemented in the labour market (red bar) and in the product market (orange bar). The no-reform fiscal multiplier (blue bar) is around unity, in line with the literature and that used in the Banco de España macroeconomic projections in the case of the NGEU funds.

Once the change in the indicator has been estimated, the differential impact on the multiplier is estimated based on the coefficients presented in Table 1. With regard to the Spanish labour market, the findings suggest that the long-term fiscal multiplier would increase by around 0.2 pp after the reform. A reform affording greater flexibility to the product market would also have a positive, albeit slightly smaller, impact on the multiplier. In this case, the approximate effect would be a further 0.1 pp per year. Lastly, to proxy the total value of the long-term fiscal multiplier in the presence of reforms, these findings are combined with a hypothetical “no-reform” long-term multiplier (see Chart 1). For this exercise, an average no-reform multiplier of around one was used, in line with the above-mentioned literature and similar to that used in the Banco de España macroeconomic projections in the case of the NGEU funds.[17]

The findings suggest that the regulatory framework at least partly determines the size of the European funds’ fiscal multiplier. Specifically, more flexible labour and product market regulation could continuously increase the size of the multiplier. However, it is important to highlight some of the limitations of the empirical strategy considered. First, while the regulatory framework indicators act as a guide vis-à-vis its effects on the multipliers and enable the performance of sensitivity analyses such as that proposed above, when designing the structural reforms, it is essential to consider the product and labour market characteristics specific to each region. Second, it should be highlighted that NGEU’s fiscal impulse represents an unprecedented quantum leap with regard to the size of the ERDF. In this regard,

17 See Banco de España (2020c).

neither does this analysis factor in the possible spillover effects, which will boost the macroeconomic impact of the NGEU funds, in a setting where the related projects will be implemented simultaneously throughout the EU.[18]

14.10.2021.

18 European Commission staff estimate that, in the medium term, the spillovers could help boost Spanish GDP growth by up to 0.4 pp per year. However, this effect tends to disappear as the time horizon lengthens. See European Commission (2021).

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