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PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

on the 8th Cohesion Report: Cohesion in Europe towards 2050

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Chapter 8 NATIONAL INVESTMENTS AND COHESION

Highlights

- In the 2014-2020 programming period, cohesion policy funding made a major contribution to sustaining public investment in the EU in the context of fiscal consolidation following the economic and financial crisis; this was especially so in Cohesion countries.
- While EU Member States in many cases have significant nationally-financed policies to tackle regional disparities, cohesion policy is the main source of financing for regional development policies in less developed countries.
- Public investment, whether from the EU or national sources, is essential for regional development especially when it triggers additional private investment to reinforce the process.
- Policies that shift economic activity into higher value-added sectors and improve productivity and competitiveness, together with investment in human capital, transport infrastructure and improved governance, seem most effective in reducing regional disparities.
- Public finances improved steadily across the EU from the aftermath of the economic crisis up until 2019. However, the restrictions imposed to control the COVID-19 pandemic necessitated extraordinary policy measures to counter the economic downturn induced and to safeguard jobs, worsening the budget balance in all countries.
- At the onset of the COVID-19 crisis, public investment in the EU was lower than before the financial crisis of 2008-2009, particularly in many Cohesion countries, raising concerns about the effect on their long-term growth potential and convergence towards GDP per head in the rest of the EU.
- Regional and local authorities executed almost a third of the total general government expenditure and the majority of public investment in the EU (58% in 2019), though there are marked differences between Member States.
- Regional and local autonomy indicators suggest that spending and investment decisions are more centralised in Cohesion countries than in the rest of the EU. Although the difference narrowed between 1990 and 2010, it has widened again over the past decade.

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8.1 Introduction

This chapter examines nationally-financed policies to tackle territorial disparities in a subset of Member States. It then overviews national and sub-national public finances across the EU, focusing on government expenditure and investment trends over recent years and the differences between countries.

Section 8.2 starts by indicating the importance of cohesion policy in supporting public investment, especially in the less developed parts of the EU. It then presents the results of a study that analyses nationally-financed policies to tackle territorial disparities, which complement cohesion policy interventions.

Section 8.3 examines national public finances. It overviews trends in general government budget balances and debt, expenditure and revenue, focusing on developments in public investment and the functional categories of spending, including the apparent effects of the COVID pandemic and the response to this.

Section 8.4 focuses on sub-national public finances and examines expenditure and investment undertaken by state, regional and local governments in relation to the differing levels of decentralisation which exist across the EU.

Section 8.5 finally provides a summary of the main conclusions.

8.2 Cohesion policy, investment and national policies addressing territorial disparities

8.2.1 Cohesion policy and government capital investment

Cohesion policy is the EU's main investment policy, providing funding equivalent to 14% of government capital investment (from both national and EU sources) in the EU-27 over the period 2014-2020. Although not all cohesion policy funding goes to capital investment, particularly as regards the ESF and the YEI, the figure gives a rough indication of the importance of cohesion policy for Member States, especially the less developed ones. In Non-Cohesion countries, the figure was lower (just under 6%), but in Cohesion countries it was over 50%. The importance of cohesion policy increased between the 2007-2013 and the 2014-2020 programming periods, with most of the increase occurring in Cohesion countries (Figure 8.1).¹

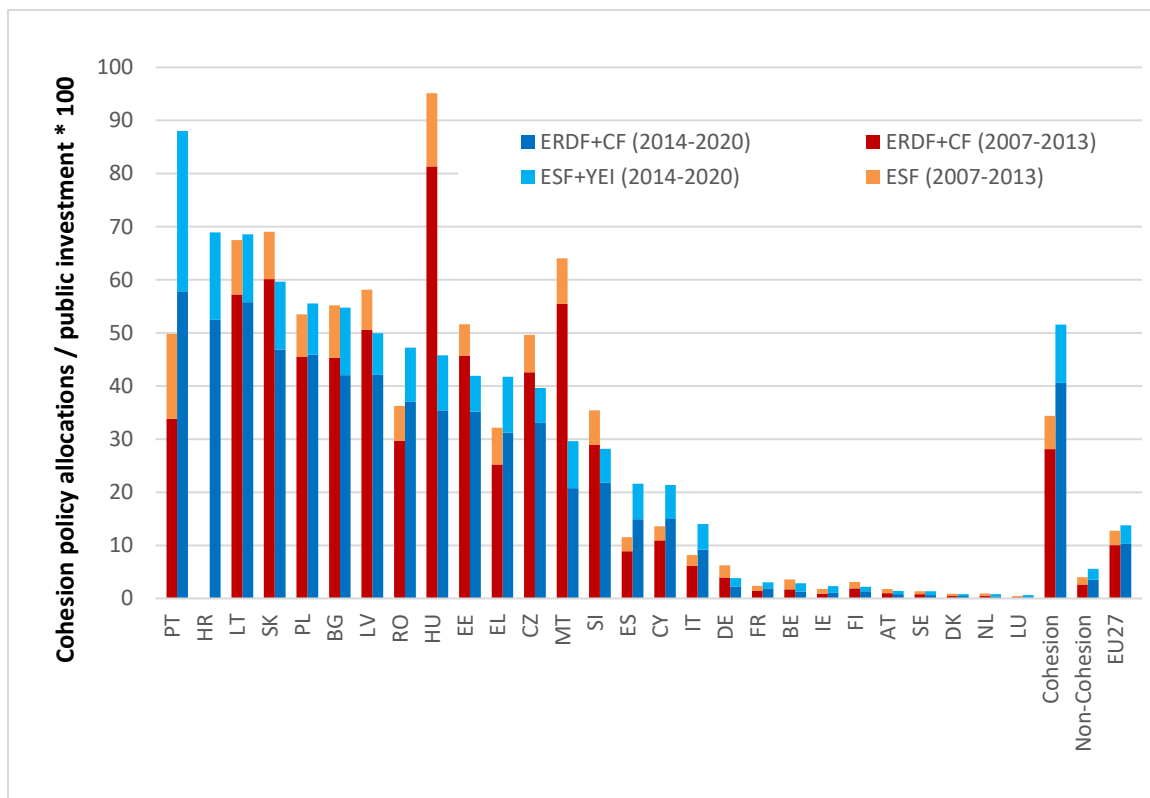
Restricting the comparison to the ERDF and CF, which mainly go to financing investment gives a more realistic view of the weight of cohesion policy in funding government investment in Member States – though some of the ERDF goes to financing businesses rather than public investment. This shows that the ERDF and CF in 2014-2020 amounted to around 10% of the total public investment carried out across the EU. The ERDF and CF jointly allocated a level of financing equivalent to about 3.6% of

¹ Note that, unless otherwise specified, the cut-off date for the Eurostat data used in this chapter was November the 30th 2021.

total public investment in Non-Cohesion countries and 40.6% in Cohesion countries, up 1 pp from the previous period for the former, and up more than 12 pp for the latter.

These figures suggest that cohesion policy has made a major contribution to sustaining public investment in the EU after it was reduced in the aftermath of the Great Recession of 2008-2009 and the sovereign debt crisis of 2011 (between 2008 and 2012, public investment declined by 20% in Cohesion countries and by 9% in Non-Cohesion countries).

Figure 8.1 Cohesion policy funding relative to government investment in Member State in the 2007-2013 and 2014-2020 programming periods [Y-axis label: % of government investment]



Source: Eurostat gov_10a_main, and <https://cohesiondata.ec.europa.eu>

8.2.2 National policies addressing territorial disparities

A study carried out by the European Commission in 2019² analysed policies entirely financed by national resources to tackle territorial disparities in 11 Member States, all except Italy and Spain,

² European Commission (2019), *Study on National Policies and Cohesion - Final Report Contract No 2017CE16BAT125*, Luxembourg: Publications Office of the European Union. The study is available at this link: https://ec.europa.eu/regional_policy/en/information/publications/studies/2020/study-on-national-policies-and-cohesion. It

Cohesion countries.³ Around 60 measures were identified, involving a range of policy instruments targeted at different aspects of development, such as urbanisation, connectivity, labour force skills, mobility, trade, innovation, and the business environment. The most common types of measure were direct support to business development and innovation, transport infrastructure projects, and tax incentive schemes to support trade and improve the business environment.

The vast majority of the nationally-financed policies concerned have an explicit spatial focus, targeting regions with particular economic problems, such as high unemployment. Most measures, however, are designed and implemented at national level, with limited involvement of regional authorities. This is especially the case in countries where sub-national authorities execute only a small share of public expenditure (as in Bulgaria, Croatia, Hungary, Portugal, Romania and Slovenia).

In the countries covered, cohesion policy is by far the main source of financing for territorial policies. Only Romania and Italy have a significant budget for national policies for regional development, but then only equivalent to slightly over a third of the total funding available to cohesion policy programmes. In the other Member States covered, the corresponding figure is below 10%.

There are two main ways in which nationally-funded measures complement the ESIF. They either provide additional funding in national priority areas where cohesion policy funding is considered insufficient or they support activities that are not eligible for EU funding.⁴

The study shows that policies to improve productivity in general and to shift the structure of economic activity away from low value-added sectors appear to be effective in reducing regional disparities. Investment in human capital, transport infrastructure, and in building up administrative capacity and skills to improve governance is found to be an essential part of measures aimed at bringing about such a shift.

8.3 Developments of national public finances

8.3.1 Public finances improved steadily until 2019, but the COVID-19 crisis reversed the trend

The Seventh Cohesion Report⁵ described a significant improvement in Member State public finances in the years following the Great Recession of 2008-2009 and the sovereign debt crisis of 2011. Gradual fiscal consolidation, aided by economic recovery from 2015 was responsible for this. However, this trend was reversed abruptly in 2020 because of the COVID-19 pandemic and the measures taken in response to it (Figure 8.2).

was carried out by a consortium of Prognos AG (lead), Politecnico di Milano and Technopolis Group SPRL. It is based on a combined analysis of statistical data, case studies, and stakeholder interviews.

³ The other 9 countries were Bulgaria, Croatia, Czechia, Hungary, Poland, Portugal, Romania, Slovakia and Slovenia.

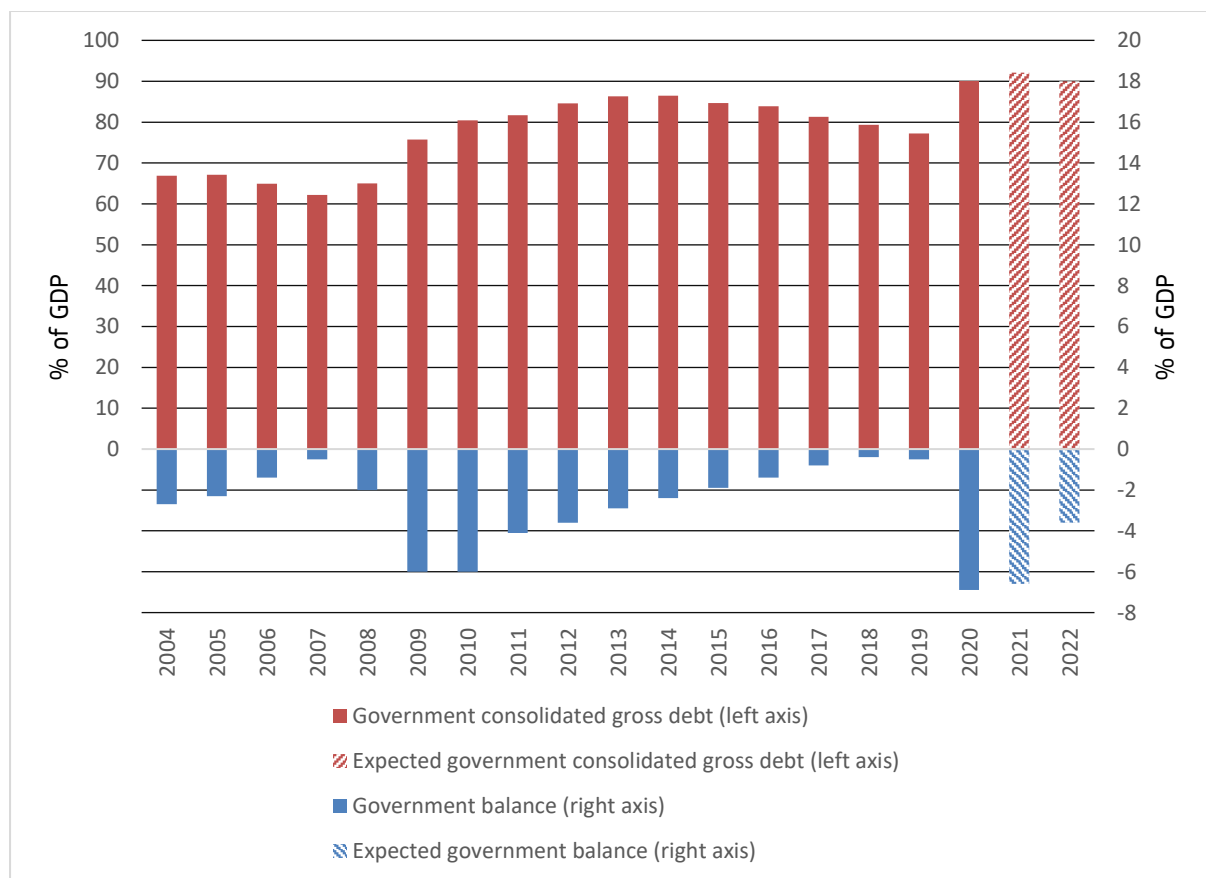
⁴ The study also found that effective implementation of territorial cohesion policies at both national and regional level is frequently undermined by a lack of adequate monitoring systems, or by a failure to use the systems that do exist.

⁵ Available at this link: https://ec.europa.eu/regional_policy/en/information/cohesion-report/.

After peaking at 6% of GDP in 2009 and 2010, the government deficit in the EU-27 fell to 2.4% in 2014 and further to 0.5% in 2019, the same level as in 2007. In 2020, the deficit increased sharply to 6.9% of GDP, as a consequence of both the extraordinary fiscal measures taken by Member States in response to the economic downturn induced by the pandemic and the automatic stabilisers it triggered.⁶ The deficit is estimated to decline slightly to 6.6% in 2021 and is expected to fall further to 3.6% in 2022.⁷

A similar counter-cyclical pattern is evident for public debt. The government consolidated gross debt of the EU-27 rose from 62.2% of GDP in 2007 to 86.5% in 2014 before falling gradually to 77.2% in 2019. In 2020, it increased markedly to 90.1% and is estimated to reach a new high in 2021, before declining again in 2022.

Figure 8.2 General government balance and debt, EU-27, 2004-2022



Source: Eurostat gov_10dd_edpt1 for 2004-2020, and European Commission’s 2021 Autumn Economic Forecast for 2021-2022

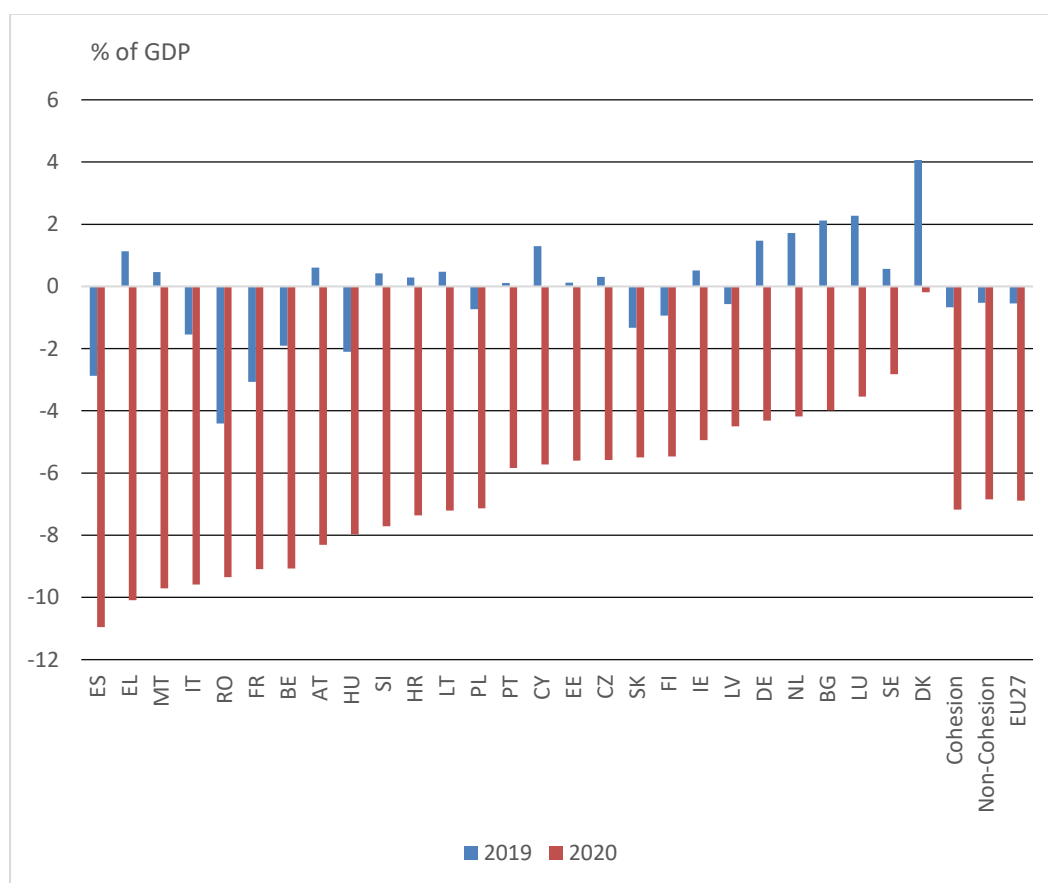
⁶ Automatic stabilisers are features of the fiscal system which result in reduced tax revenue and increased public spending in an economic downturn without discretionary government action.

⁷ European Commission (2021), “European Economic Forecasts - Autumn 2021”, European Economy Institutional Paper n. 160, Directorate-General for Economic and Financial Affairs, November; available at this link: https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/autumn-2021-economic-forecast_en.

The general government balances of EU Member States in 2019 and 2020 reflect the changes in public finances induced by the pandemic (Figure 8.3).

In 2019, there were 17 Member States with a fiscal surplus, and only France and Romania had a deficit greater than 3% of GDP. In 2020, all EU countries had a deficit, which was above 3% of GDP in 25 of the 27 cases, with Spain (11%) and Greece (10.1%) having the largest. The outlook of the budget balance in Cohesion countries does not appear to be substantially different from that in Non-Cohesion ones, suggesting that the stage of economic development did not determine the scale of fiscal response to the pandemic.

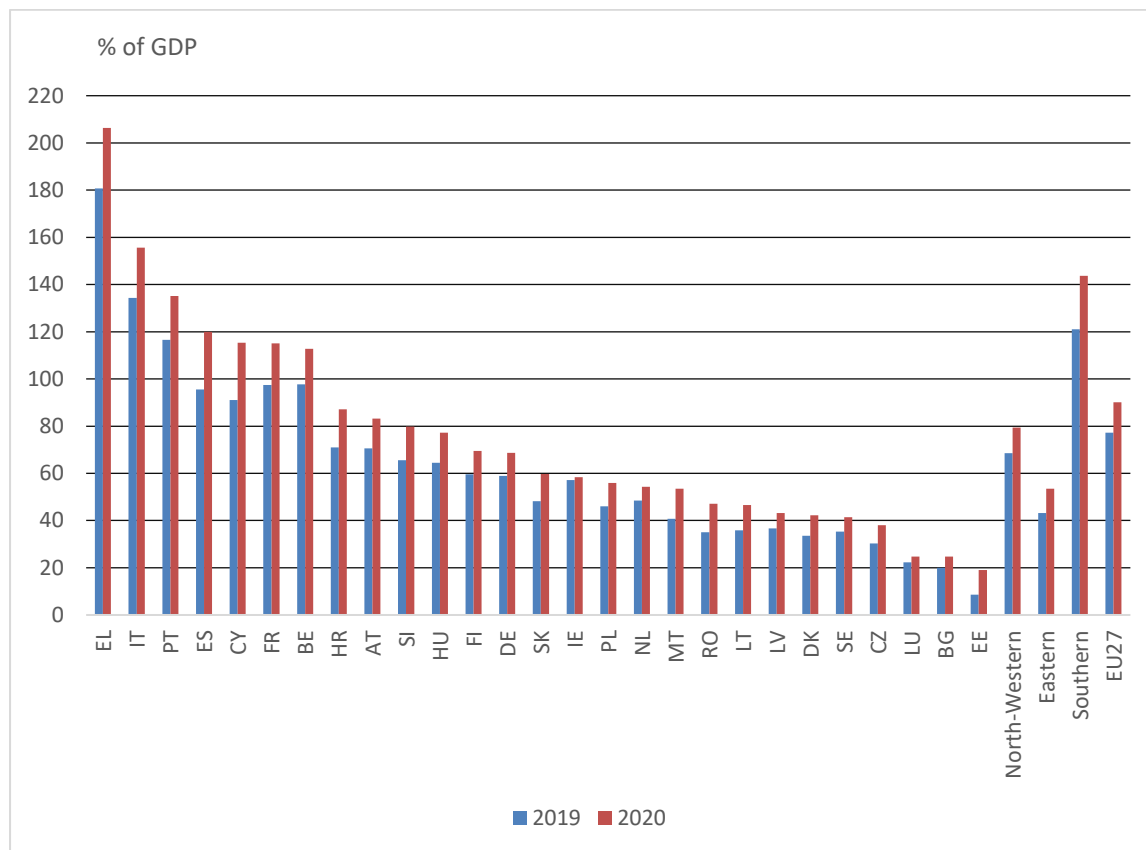
Figure 8.3 General government balance, 2019 and 2020



Source: Eurostat gov_10dd_edpt1

The effect of the pandemic is equally evident in public debt levels. In 7 countries (Greece, Italy, Portugal, Spain, Cyprus, France and Belgium), this was over 100% of GDP in 2020 as compared with only three countries (Greece, Italy and Portugal) in 2019 (Figure 8.4). The debt level was highest in the southern EU countries, (144% of GDP) and lowest in the eastern EU (53%). In 17 Member States, public debt increased by more than 10 pp in 2020 and in four of these (Greece, Spain, Cyprus, and Italy), by over 20 pp.

Figure 8.4 General government debt, 2019, 2020



Source: Eurostat gov_10dd_edpt1

8.3.2 Government expenditure peaked in 2020 as a consequence of the COVID-19 crisis

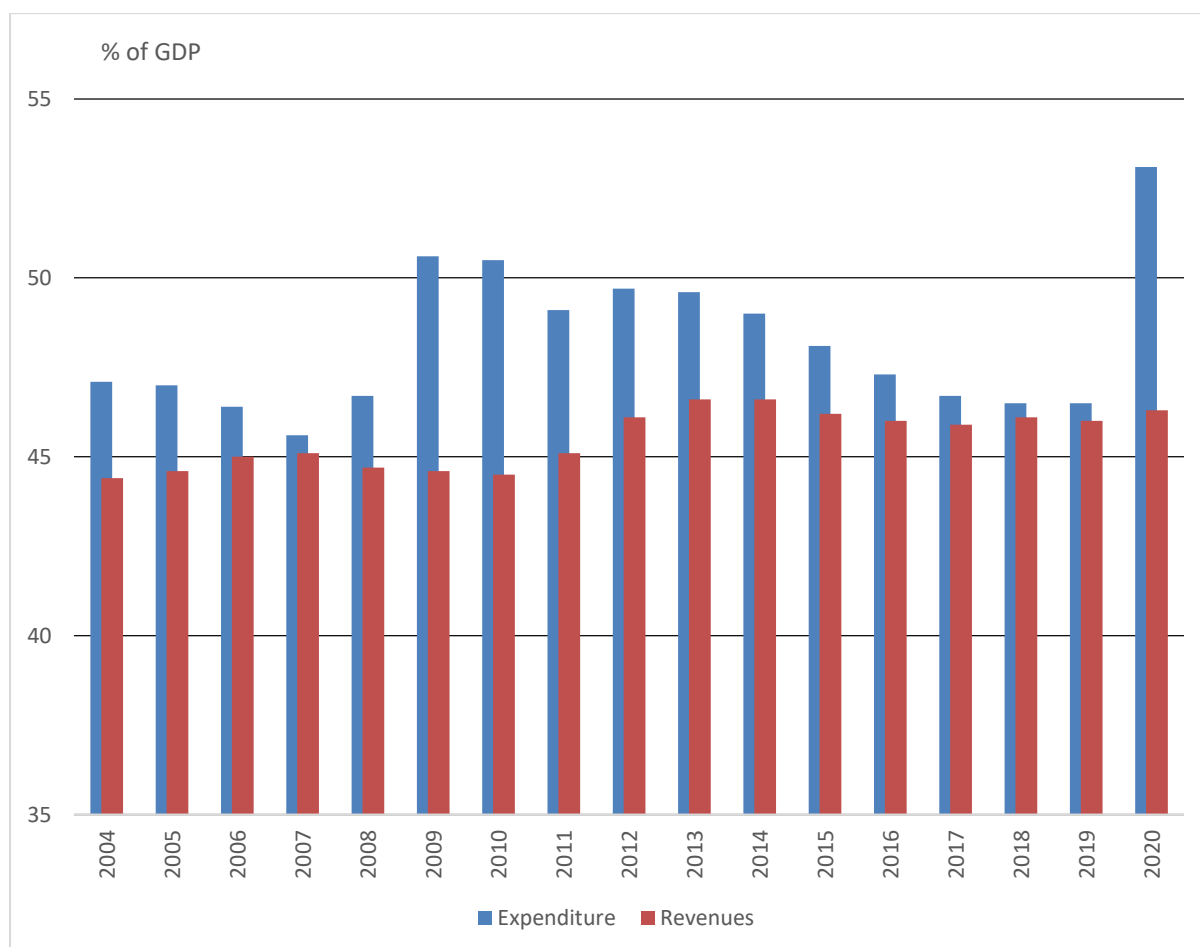
The widening of the fiscal deficit in 2020 was largely due to a sharp increase in government expenditure relative to GDP, while the revenue to GDP ratio remained broadly unchanged.⁸ In the previous economic crisis in 2009 and 2010, government expenditure in the EU-27 rose to just over 50% of GDP. It declined to 46.5% of GDP in 2018 and 2019, but then increased to 53.1% in 2020 due to the combined effect of a reduction in GDP and an increase in expenditure in absolute terms (Figure 8.5). The swift rise in public expenditure occurred in all Member States, although it varied

⁸ In general, during a downturn, revenue in absolute terms tends to decline in line with GDP, resulting in its ratio to GDP remaining unchanged. By contrast, government expenditure in absolute terms tends to increase, because of the greater social and other support needed, which accordingly adds to the ratio of expenditure-to-GDP, already pushed up by the reduction in economic output. See: Mourre, G., A. Poissonnier and M. Lausegger (2019), "The Semi-Elasticities Underlying the Cyclically-Adjusted Budget Balance: An Update & Further Analysis", European Economy Discussion Paper n. 098, Directorate-General for Economic and Financial Affairs, May.

considerably in scale, ranging from an increase of 3.2 pp in Ireland, to one of over 10 pp in Greece and Spain.

As the pandemic emergency comes under control and the economic situation improves, a progressive reduction in expenditure relative to GDP is expected as a result of both the withdrawal of the extraordinary measures put in place to contain the spread of the pandemic and the rebound in GDP (see Box 8.1 for a review of the effects of public expenditure and expansionary fiscal policy in general during the recent recessions).

Figure 8.5 General government expenditure and revenue, EU-27, 2004-2020



Source: Eurostat gov_10a_main

Box 8.1 The effects of government expenditure on growth during recessions

Calculating the impact of public expenditure on economic activity in the short-to-medium term involves estimating the ‘fiscal multiplier’, first conceived by John Maynard Keynes and defined as the change in output resulting from a given change in government expenditure, taxes or a combination of the two. The Great Recession of 2008-2009 sparked renewed interest in estimating the size of this multiplier. Interest was revived further by the recent pandemic-induced recession, the policy response and possible future developments.

Estimates of the multiplier vary over time and between economies and depend on the type of model applied and the assumptions incorporated in it.¹ In broad terms, the size of the multiplier seems to be affected by factors such as the presence of financial frictions, the credibility of the policy action concerned and its permanent or temporary nature, the composition of public spending, the presence or absence of market rigidities, the size of automatic stabilisers, the type of monetary policy in force, the degree of openness of the economy and the exchange rate regime.²

Most recent models suggest that the multiplier may be larger in periods of economic downturn than during economic expansion, as high as 2.5 compared to 0.6.³ This is also corroborated by several empirical studies.⁴

This would imply not only that an expansionary fiscal policy is more effective in stimulating growth during a recession than previously thought, but also that fiscal consolidation at such times entails bigger downward pressure on economic activity. Furthermore, recent research highlights the importance of negative cross-border spill-over effects from fiscal consolidation through trade linkages which reinforce the negative impact of fiscal tightening on output.⁵

Both in 2008 and 2020, at the onset of the Great Recession and the COVID-19 crisis respectively, fiscal policy in the EU turned markedly expansionary, with public deficits increasing sharply in order to stimulate growth. In the years following the Great Recession, in the presence of a still depressed economy during the European sovereign debt crisis (from 2010 onwards), the fiscal policy stance in the EU reverted to being contractionary. Research suggests that this reduced output not only in the short term but also in the medium term, effectively prolonging and deepening the crisis.⁶

In the face of a sudden downturn, such as the one experienced as a consequence of the COVID-19 pandemic, an increase in public spending can have a significant effect on economic activity. This is particularly true in situations where the monetary policy stance is already expansionary (as it has been in the euro area since the Great Recession, and in particular from mid-2014 onwards), and therefore there is limited room for counteracting the crisis through further relaxing the policy.

In this context, in 2020, in reaction to the COVID-19 pandemic-induced recession, the EU and national governments injected a substantial amount of public resources into the economy, driving up public spending to historically high levels, and generating a large government deficit. In 2021, with the continued activation of the General Escape Clause, Member States could provide targeted and temporary fiscal support, while safeguarding fiscal sustainability in the medium term. As the pandemic emergency comes under control, they should gradually shift from a protective emergency response to measures that facilitate reallocation of resources, and support the recovery. When economic conditions allow, fiscal policies should aim at restoring prudent medium term fiscal positions and ensuring debt sustainability, while enhancing investment.

¹ See for instance: Perotti, R. (2005), "Estimating the effects of fiscal policy in OECD countries", CEPR Discussion Paper n. 4842, Centre for Economic Policy Research; Blanchard, O. and R. Perotti (2002), An empirical characterisation of the dynamic effects of changes in government spending and taxes on output, *The Quarterly Journal of Economics*, 117(4):1329–1368; Beetsma, R., M. Giuliadori and F. Klaassen (2008), The effects of public spending shocks on trade balances and budget deficits in the European Union, *Journal of the European Economic Association*, 6(2-3):414–423; Barro, R. J. and C. J. Redlick (2011), Macroeconomic effects from government purchases and taxes, *The Quarterly Journal of Economics*, 126(1):51–102; Beetsma, R. and M. Giuliadori (2011), The effects of government purchases shocks: Review and estimates for the EU, *The Economic Journal*, 121(550):F4–F32.

² European Commission (2012), "The Quality of Public Expenditures in the EU", Occasional Papers n. 125, Directorate-General for Economic and Financial Affairs, December.

³ Auerbach, A. and Y. Gorodnichenko (2013), Output spillovers from fiscal policy, *American Economic Review*, 103(3):141–146.

⁴ See for instance: Corsetti, G., A. Meier and G. Müller (2012), What determines government spending multipliers?, *Economic Policy*, 27(72):521–565; Auerbach, A. and Y. Gorodnichenko (2012), Measuring the output responses to fiscal policy, *American Economic Journal*, 4(2):1–27; Baum, A., M. Poplawski Ribeiro and A. Weber (2012), “Fiscal Multipliers and the State of the Economy”, IMF Working Papers n. 12/286, International Monetary Fund, December.

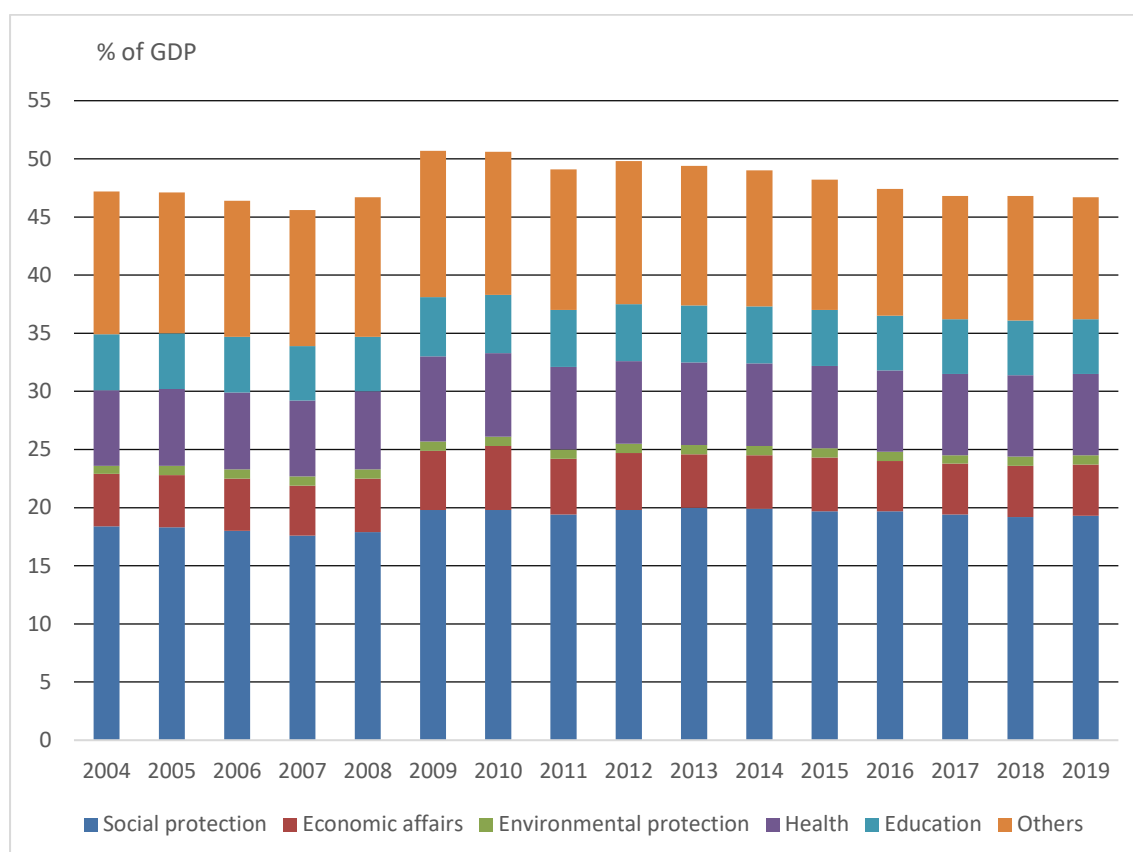
⁵ See for instance: Goujard, A. (2017), Cross-Country Spillovers from Fiscal Consolidations, *Fiscal Studies*, 38(2):219–267; Poghosyan, T. (2020), Cross-country spillovers of fiscal consolidations in the euro area, *International Finance*, 23(1):18–46.

⁶ DeLong, J. B., L. H. Summers, M. Feldstein and V. A. Ramey (2012), Fiscal Policy in a Depressed Economy [with Comments and Discussion], *Brookings Papers on Economic Activity*, SPRING 2012:233–297; Fatás, A. and L. H. Summers (2018), The permanent effects of fiscal consolidations, *Journal of International Economics*, 112:238–250; Fatás, A. (2019), Fiscal Policy, Potential Output, and the Shifting Goalposts, *IMF Economic Review*, 67:684–702; Gechert, S., G. Horn and C. Paetz (2019), Long-term Effects of Fiscal Stimulus and Austerity in Europe, *Oxford Bulletin of Economics And Statistics*, 81(3):0305–9049.

Turning to the composition of public spending by function and its evolution over time (see Box 8.2 for a description of the breakdown in government expenditure by function), it is notable that social protection expenditure accounts for the largest share in the EU-27 (Figure 8.6). In 2019 (the latest year for which complete data are available), it amounted to over 40% of total spending and just over 19% of GDP, almost 2 pp more than in 2007 (immediately before the Great Recession). The pandemic has undoubtedly led to an increase in social protection expenditure, but by how much remains to be seen.

Expenditure on economic affairs (including investment in transport and communications, in particular) remained relatively unchanged between 2007 and 2019, at just over 4% of GDP. The same is true of expenditure on education (just under 5% of GDP in 2019), and environmental protection (just under 1% of GDP throughout the period). By contrast, expenditure on health increased from around 6.5% in 2007 to 7% in 2019.

Figure 8.6 General government expenditure in selected policy areas, EU-27, 2004-2019



Source: Eurostat gov_10a_exp

Box 8.2 Methodological note: the Classification of Functions of Government (COFOG)

The Classification of Functions of Government (COFOG) was developed by the OECD and is applied to government expenditure and the net acquisition of non-financial assets (outlays). The Eurostat COFOG guide describes in detail the contents of each functional category.¹

There is a 3-level classification with 10 'divisions' at the top level, each of which is broken down into 6-9 groups, which in turn are partly sub-divided further into 'classes'.

In this report, the 10 top-level divisions are re-grouped into the following 6 categories: Economic affairs (COFOG division 04); Environmental protection (division 05); Health (division 07); Education (division 09); Social protection (division 10), and Others (comprising divisions 01 'General public services', 02 'Defence', 03 'Public order and safety', 06 'Housing and community amenities', and 08 'Recreation, culture and religion').

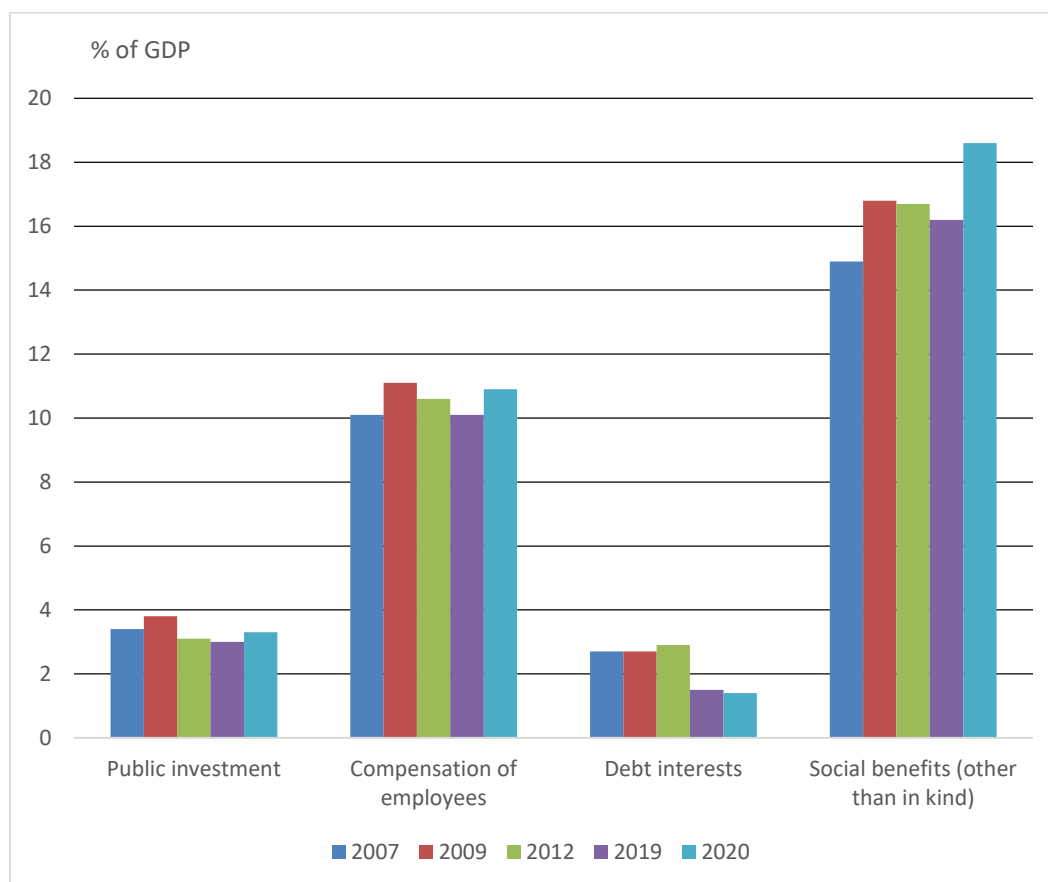
In addition, in some of the analysis, the COFOG Economic affairs division is sub-divided into the following 7 categories: Agriculture, forestry, fishing and hunting (COFOG group 04.2); Fuel and energy (04.3); Mining, manufacturing and construction (04.4); Transport (04.5); Communication (04.6); R&D Economic affairs (04.8); and Other (groups 04.1 'General economic, commercial and labour affairs', 04.7 'Other industries', and 04.9 'Economic affairs n.e.c.').

¹ Eurostat (2019), *Manual on sources and methods for the compilation of COFOG statistics – 2019 edition*, Luxembourg: Publications Office of the European Union.

Government expenditure can also be divided into current and capital expenditure. The former includes compensation of employees (wages and salaries), current transfers (such as social benefits) and interest payments on public debt. Capital expenditure mainly consists of gross fixed capital formation, or investment, though also capital transfers, primarily to support businesses.

Between 2007 and 2019, three main changes in the composition of expenditure occurred (Figure 8.7). First, spending on debt interest almost halved relative to GDP, mainly due to low interest rates but also to the reduction in government debt, and it declined even further in 2020. Second, expenditure on social benefits increased by 1.3 pp as a share of GDP, and rose by over 2.4 pp in 2020 reflecting the effects of the pandemic. Third, by contrast, government investment declined by 0.4 pp relative to GDP. In 2020, public investment rose again, and the expectation is that it will continue to increase, at least in the short-term, both in real terms and relative to GDP.

Figure 8.7 Selected categories of general government expenditure, EU-27, 2007, 2009, 2012, 2019 and 2020



Source: Eurostat gov_10a_main

8.3.3 Public investment evolved unevenly across Member States, and it has not recovered yet from the financial crisis of 2008-2009

There is consensus in the economic literature that efficient regulation, an effective and well-functioning public administration, and well-targeted public investment are all essential for the functioning of modern economies by providing critical infrastructure and public services, ensuring respect for the rule of law and enforcing property rights. Services such as healthcare and education and the related infrastructure and facilities, as well as investment in transport, environmental protection and support for R&D are important for sustainable and inclusive growth over the long term. All of these are likely to experience either a socially inequitable allocation of resources or significant under-spending if left to market forces.

Public investment has a particularly important role in growth as it contributes to increasing and renovating the stock of fixed assets (such as buildings, infrastructure and facilities to deliver services) that will affect the trajectory of economic development, and growth prospects, over the long-term.

Public investment can act as an important stimulus to the economy during a period of recession when the private sector is reluctant to invest. It also can have significant cross-border effects on growth, with trade linkages in the single market spreading economic gains across the EU economy. A reduction in public investment is, therefore, a cause for concern. Cohesion policy funding increases public investment in Member States, especially less developed ones that may have less fiscal space for expenditure, in compliance with the principle of additionality (see Box 8.3). It is, accordingly, an important lever for post-crisis economic rebalancing and recovery.

Box 8.3 The principle of additionality in ESI Funds

Definition

The ESIF regulations for 2014-2020 stipulate that the support they provide should be additional to, and not replace, public or equivalent structural expenditure by Member States (i.e. nationally-funded government gross capital formation or investment). Over the entire programming period, therefore, Member States need to maintain a level of public or equivalent structural expenditure at least equal to the reference level set in the Partnership Agreement at the beginning of the period. Going forward, this holds true also for the new generation of cohesion policy funds 2021-2027.

Member States subject to verification in 2014-2020

The regulations also stipulate that the verification of the additionality principle shall only take place in those Member States in which less developed regions cover at least 15% of the total population, because of the scale of the financial resources allocated to them. In Member States in which less developed regions cover at least 65% of the total population, the verification is to take place at national level. In those where they cover more than 15% and less than 65%, it is to take place at regional level. Meaning, it is focused on the regions receiving most support.

In the period 2014-2020, 11 Member States were subject to additionality verification at national level (Bulgaria, Czechia, Estonia, Croatia, Latvia, Lithuania, Hungary, Poland, Portugal, Romania, and Slovakia), and three Member States at regional level (Greece, Italy, and Slovenia).

Verification process

The verification of the additionality principle takes place at three different times over the 2014-2020 funding cycle: (i) at the time of submission of the Partnership Agreement (ex-ante verification), (ii) in 2018 (mid-term verification), and (iii) in 2022 (ex-post verification).

The planned profile of public structural expenditure needs to be included in the Partnership Agreements. Once approved, the figures concerned are taken as the reference level of expenditure to be maintained over the 2014-2020 period. In sum, the verification procedure consists of comparing the average level of gross fixed capital formation as a percentage of GDP, as reported in the Stability and Convergence programmes submitted as part of the European Semester, with the reference levels reported in the Partnership Agreements (where verification occurs at the regional level, the level of gross fixed capital formation in the less developed regions is used). A Member State is deemed to have complied with the principle of additionality if the annual average structural expenditure is equal to or higher than the reference level.

The mid-term verification is purely for monitoring purposes; no financial corrections are foreseen at this stage should non-compliance with the additionality principle be detected. Member States that are found not to comply are invited by the European Commission to step up public investment in order to comply ex post. The Commission can also revise the reference level of public structural expenditure in the Partnership Agreement, in consultation with the Member State concerned, if the economic situation has changed significantly from that estimated at the time of adoption of the Partnership Agreement.

In case of non-compliance ex post, the Commission can decide to implement a financial correction, which has not to exceed 5% of the funding originally allocated to the less developed regions concerned for the programming period.

State of play

Mid-term verification of the additionality principle for the period 2014-2020 took place between 2018 and 2019. At the end of the process, Bulgaria, Italy, and Romania were deemed not to be compliant. As a consequence, in autumn 2019, the Commission informed the respective authorities that they would have to increase public investment to reach the levels needed. The ex-post verification in 2022 will take account of any significant changes in the economic situation since the mid-term verification, including as a result of the COVID-19 pandemic-induced recession and the public policy responses.

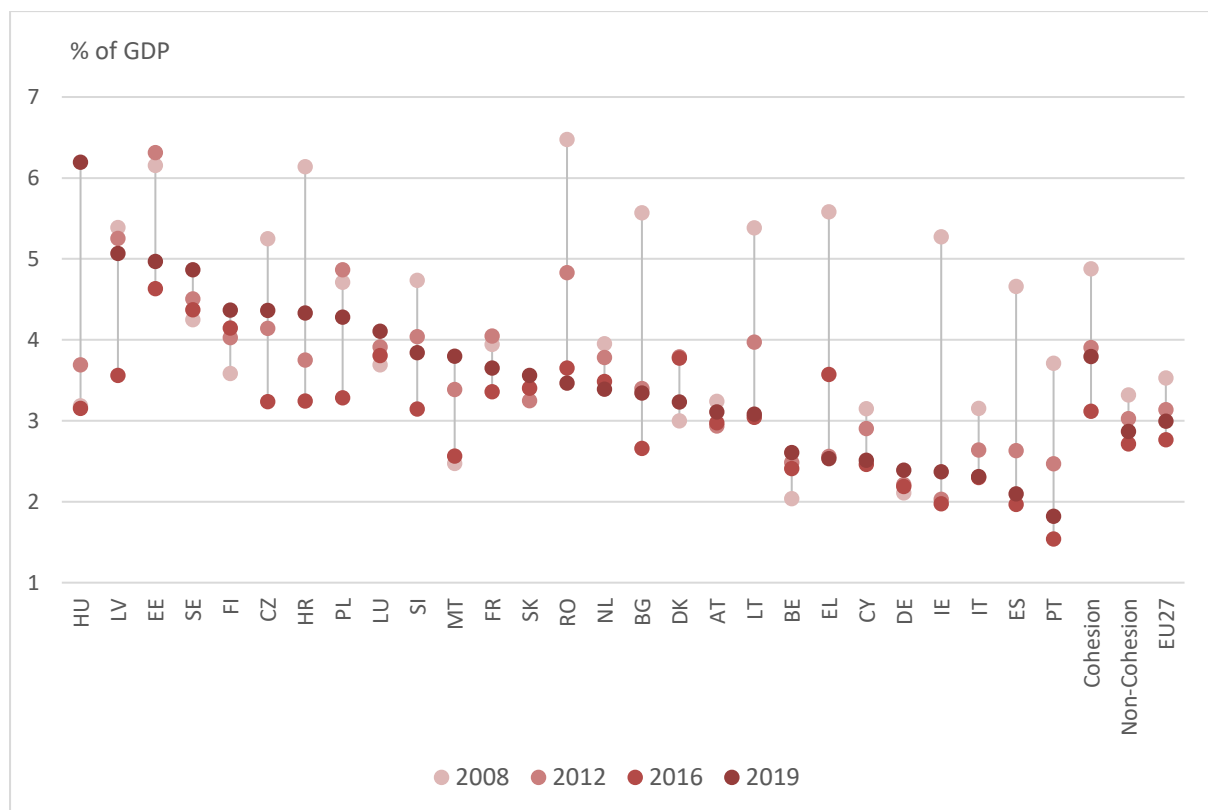
With the exception of 2009, which was the peak of efforts to moderate the economic downturn, there was a general decline in public investment relative to GDP over the period 2008 to 2019 (Figure 8.8). This suggests that public investment never recovered from the 2008-2009 financial crisis, giving cause for concern about the consequences that depressed levels of investment might have on growth over the medium and longer-term. The pandemic may well have reduced public investment further.

Public investment declined more over the 2008-2019 period in Cohesion countries (from 4.9% of GDP to 3.8%) than in Non-Cohesion countries (from 3.3% to 2.9%). This implies that countries most

in need of the investment are the ones reducing it most, with potential adverse consequences for the pace and sustainability of their convergence towards the EU average level of GDP per head.

In geographical terms, the largest decline in public investment was in the southern countries (by 1.7 pp relative to GDP), followed by the eastern countries (0.7 pp); while there was less change in north-western ones, except for Ireland. In Greece, Romania and Ireland, the decline was about 3 pp; in Spain, Lithuania, and Bulgaria, over 2 pp. The high level of public debt may have contributed to constraining public investment in Greece and Spain, but in the other countries listed, debt was considerably lower.

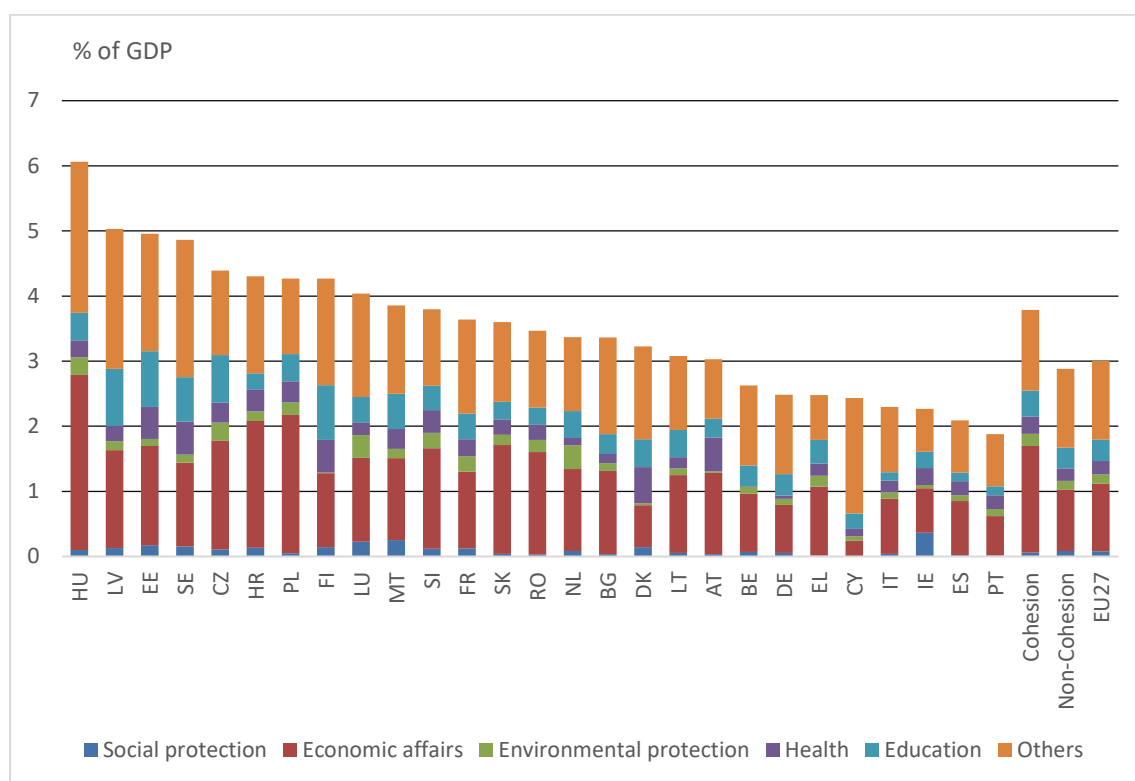
Figure 8.8 Total general government investment, 2008, 2012, 2016, and 2019



Source: Eurostat gov_10a_main

A third of total government investment in the EU goes to the COFOG category of economic affairs (covering energy, transport, and communications in particular), which alone amounted to 1% of GDP in 2019 (Figure 8.9). In Cohesion countries, the figure is significantly larger - 1.6% of GDP, though varying from 2.7% of GDP in Hungary to just 0.2% in Cyprus.

Figure 8.9 Total public investment in selected policy areas, 2019



Source: Eurostat gov_10a_exp

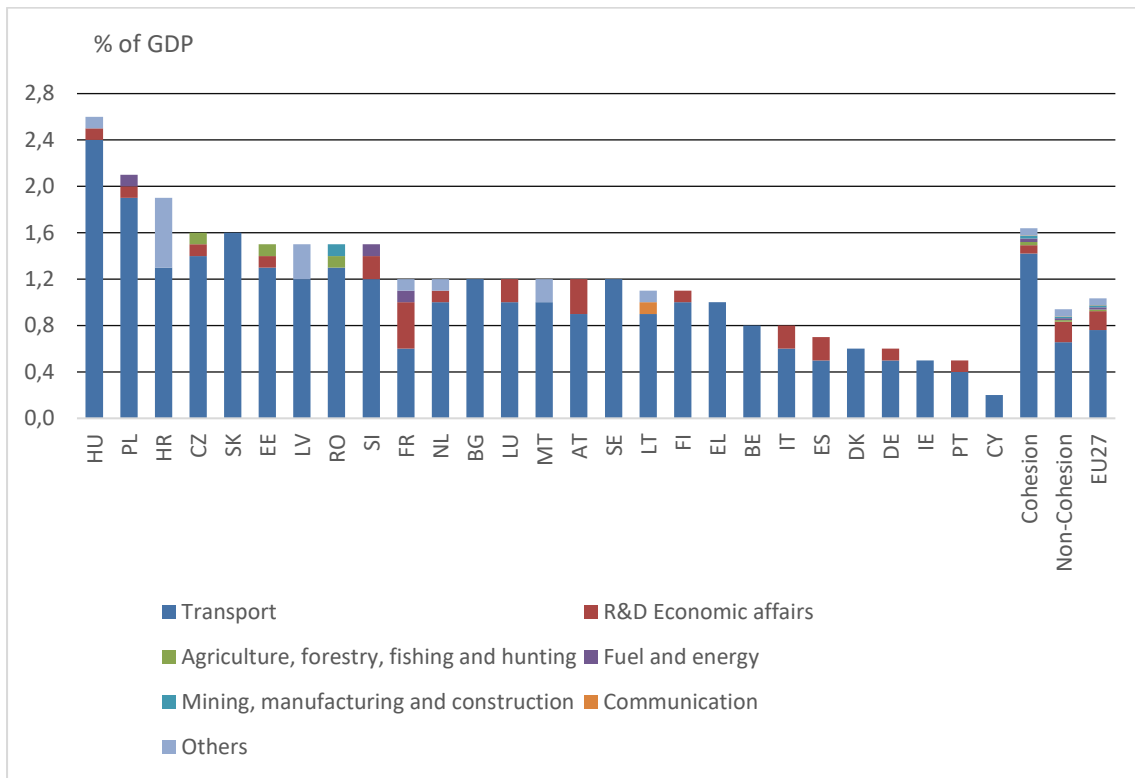
Within the economic affairs category, a large part of the investment goes to transport, amounting to 0.8% of GDP in 2019 in the EU); and in all Member States, it was the largest area of investment in the category, ranging from 2.4% of GDP in Hungary to 0.2% in Cyprus (Figure 8.10).

In Cohesion countries, transport investment accounted for just under 1.4% of GDP, twice the figure in Non-Cohesion ones, reflecting ongoing construction of transport networks, which should support economic development and convergence.

Public investment in R&D is an important growth-enabling factor and the second largest component of investment in the economic affairs category in the EU-27, at just under 0.2% of GDP in 2019. The largest expenditure was in France (0.4% of GDP), followed by Austria (0.3%).

In contrast to investment in transport, Non-Cohesion countries invested almost twice as much of their GDP in R&D as Cohesion ones (0.2% as against 0.1%). The relatively low level of investment could be detrimental to their innovation capacity and their ability to sustain growth in the medium and long term.

Figure 8.10 General government investment in selected areas in the Economic affairs category, 2019



Source: Eurostat gov_10a_exp