# SOUTHERN EUROPE: WHY SUCH LOW POTENTIAL GROWTH?



**Spain, Greece, Italy and Portugal have been hit hard economically by the Covid-19 epidemic. These countries have also suffered for many years from sluggish potential growth, which is among the lowest in Europe. The main obstacles are more or less the same: a low level of investment and productivity, and a slowing - or even declining - demographics which weigh on the workforce. How have these different factors evolved? What may be the impact of the current economic crisis on structural growth? Which levers to operate?**

Potential growth refers to the growth that an economy can sustain over the long term without generating inflationary pressures. It excludes the short-term effects linked to a gap between demand and supply. In other words, the more an economy manages to increase its potential growth, the more it will be able to raise its GDP in a sustainable manner. Potential output is determined by three factors – labor, capital and productivity (or total factor productivity, TFP) – and it is a theoretical measure; it is not observed but estimated using econometric models.

Several organisations estimate the potential growth of countries. Although it may differ in certain aspects, the results are nevertheless clear: potential growth in Spain, Greece, Italy and Portugal is one of the lowest in Europe. This is particularly evident in the results of the OECD (see Chart 1) and the European Commission (see Chart 2). Based on OECD data[1], real potential growth only increased, between 2014 and 2019, by 1.09% in Portugal, 0.57% in Spain, 0.1% in Italy, while it fell by 0.40% in Greece. Comparing these figures with the rest of Europe, we see approximately a two-point gap with most Eastern European countries and a one-point deficit with the Scandinavian economies.

The forecasts for 2020 and 2021 do not show a significant reversal of the trend (see Charts 1b and 2b). Note, however, that these projections have not, for the time being, been updated and therefore do not take into account the consequences of the coronavirus crisis[2]. The epidemic will undoubtedly have a downward impact on potential growth of each country.

## A problem that lasts and gets worse

### Productivity gaps with the rest of Europe are widening

The potential growth of southern Europe countries is first held back by a low level of productivity. Eurostat data show a significant difference in productivity per hour worked[3] with the rest of Europe. This level, which was comparatively low at the start of the 2000s, then increased more slowly than the European average, especially over the past five years (see Chart 3). The case of Italy is particularly striking: while productivity exceeded the European average by almost 9% in 2005, this gap has steadily narrowed over the past fifteen years, even as the process of deindustrialisation was slowing down (see Chart 4). Productivity level remains historically low in Greece and Portugal, while it has deteriorated more recently in Spain.

Two main factors explain this relative decline in productivity in these four countries compared to other European economies.

Firstly, the stronger specialisation of these economies in services to the detriment of the industrial sector, the weight of which has fallen significantly since the end of the 1990s, although it remains relatively high in Italy (see Chart 4). In Italy and Spain, the share of industry (excluding construction) in value added fell from a level above 20% in the late 1990s to 17.5% and 14.5%, respectively, at the end of 2019. This share has increased in Greece over the past ten years, but its contribution to the country's value added (13.4%) remains the lowest in Europe.

Although to a lesser extent in Italy, the strengthening of tourism activity, as an engine of economic growth, has played an important role in this increased specialisation in services. Indeed, it has led to the development of various sectors such as accommodation and food services, transport or even real estate. The share of these activities in the total remains higher than the European average (see Table 1).

VALUE ADDED BY SECTOR (% TOTAL VA)

| Q1 2020 | Greece | Italy | Portugal | Spain | EU 28* |
|---|---|---|---|---|---|
| **Agriculture, forestry & fishing** | **4.2** | **2.2** | **2.4** | **3.0** | **1.5** |
| Industry (ex-construction) | 14.7 | 18.8 | 17.7 | 15.5 | 18.9 |
| Manufacturing | 10.9 | 15.9 | 13.9 | 11.8 | 15.7 |
| Construction | 3.6 | 4.4 | 4.7 | 6.0 | 5.4 |
| Wholesale, retail & transports | 23.3 | 20.4 | 24.6 | 22.2 | 19.1 |
| Information & communication | 3.4 | 3.9 | 3.7 | 4.1 | 5.6 |
| Finance & insurance activities | 3.3 | 5.5 | 5.1 | 4.4 | 5.1 |
| Real estate activities | 17.8 | 14.3 | 12.3 | 12.2 | 11.1 |
| Profesionnal , technical & scientific activities | 5.4 | 9.8 | 7.7 | 9.2 | 11.7 |
| Public administration, defense, education | 20.0 | 16.5 | 19.1 | 18.8 | 18.2 |
| Arts, entertainment & other services activities | 3.8 | 4.1 | 2.7 | 4.5 | 3.3 |

* Data are for Q4 2019

TABLE 1

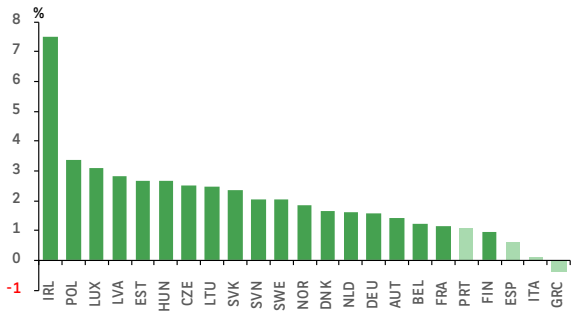
1 *OECD Economic Outlook*, November 2019.

2 The OECD forecasts are from November 2019 while those from the European Commission are from May 2020.

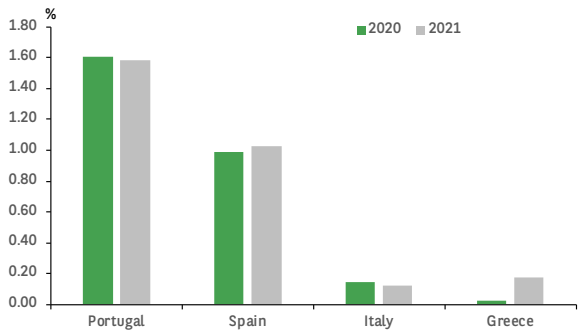
3 Measuring productivity per hour worked rather than per employee allows a more precise measure of productivity, because it eliminates potential distortions between full-time and part-time workers.

## POTENTIAL GROWTH ESTIMATES (OECD)

Average potential growth over the period 2014-2019




Growth potential, forecasts 2020-2021

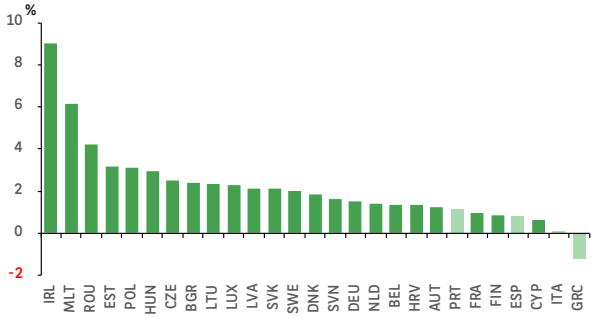



CHARTS 1A & 1B

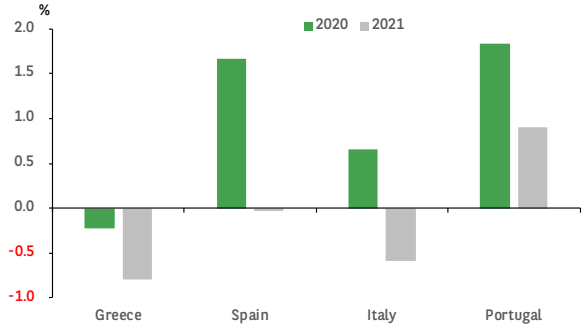
SOURCE: OECD ECONOMIC OUTLOOK (NOVEMBER 2019), BNP PARIBAS

## POTENTIAL GROWTH ESTIMATES (EUROPEAN COMMISSION)

Average potential growth, over the period 2020-2021



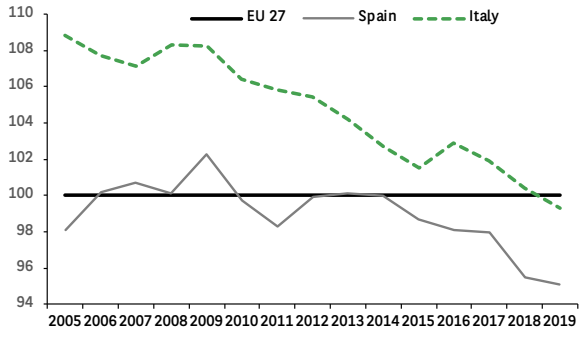

Growth potential, forecasts 2020-2021

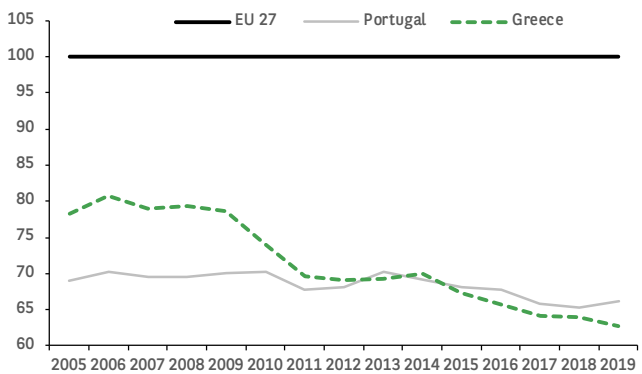



CHARTS 2A & 2B

SOURCE: EUROPEAN COMMISSION, BNP PARIBAS

## TREND IN PRODUCTIVITY




CHARTS 3A & 3B

N.B.: The EU average is standardised (100).

SOURCE: EUROSTAT, BNP PARIBAS

However, the productivity of services is on average lower than that of industry. This is particularly evident from a study by Sorbe et al. (2018) on the average productivity of market services within the OECD. The authors estimate that in these sectors productivity is, on average, 40% lower than in the manufacturing industry[4]. There are four main reasons for this:

- Economies of scale are smaller than in manufacturing;
- Activities are harder to automate than in manufacturing;
- Transaction costs are higher;
- Competition is lower, mainly because a large proportion of activities is non-tradable.

However, the relatively greater weight of service activities in the economy does not fully explain these productivity gaps, since a strong heterogeneity exists within this sector. As shown in Table 2, the "information & communication" sector and "professional, scientific & technical" activities show a higher average level of productivity than other sectors where the employment content is higher. However, the Southern Europe countries rely most on these other sectors (see Table 1). This constitutes a brake, admittedly moderate, but persistent to productivity growth.[5]

That said, it is worth remembering that these countries have become more competitive in recent years, partly because of a decrease in labour costs, mainly through lower wages. That decrease has outpaced the contraction in GDP, except in Italy (see box 1 page 10). However, this does not solve the entire problem. The competitiveness issues that the four countries are facing today relate less to prices (i.e. labour costs) than in the past, and more to productivity.

## Insufficient investment

The second obstacle to countries' potential growth is the lack of capital accumulation. Gross fixed capital formation (GFCF) represented less than 20% of GDP in Q4 2019. This ratio fell from 2012 onwards below the European average.[6] In Greece, in particular, the share of investment in GDP dropped by more than half in the space of ten years, reaching a low of 9.7% in Q4 2018, before recovering somewhat (11,1% in Q1 2020). However, it is by far the lowest share in Europe.[7] Part of this decline, particularly in Spain and Portugal, is due to the drastic reduction in investment in the construction and real estate sectors which has resulted, over the past decade, from the "deflation" of speculative real estate bubbles in these two countries.[8]

APPARENT LABOUR PRODUCTIVITY*
(2018, THOUSAND EUROS PER EMPLOYEE)

| Sector | Greece | Spain | Italy | Portugal |
|---|---|---|---|---|
| Manufacturing | 33 | 59.8 | 65.3 | 30.5 |
| Water supply; sewerage, waste management and remediation activities | 39.4 | 60.8 | 74.6 | 45.3 |
| Construction | 11.8 | 35.9 | 38 | 20 |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 15.8 | 35.3 | 40.8 | 23.7 |
| Transportation and storage | 29.4 | 53.3 | 54.8 | 43..2 |
| Accommodation and food service activities | 7 | 22.6 | 22.3 | 16.7 |
| Information and communication | 44.7 | 73 | 85.7 | 53.6 |
| Real estate activities | 31.6 | 53.1 | 61.6 | 34.3 |
| Professional, scientific and technical activities | 16 | 40.5 | 46.3 | 24.2 |
| Administrative and support service activities | 15.2 | 26.1 | 32.6 | 13.5 |

* Ratio between the value added of a sector and the number of employee in this sector

TABLE 2 SOURCE: EUROSTAT

4 Sorbe et al. (2018), *Can productivity still grow in services-based economies? Literature overview and preliminary evidence from OECD countries*, OECD working paper.
5 In addition, many studies have looked at ways to improve the reliability of productivity statistics, in particular in service activities. The increasing integration of technologies makes it difficult to accurately measure the level of production and, by extension, productivity. For a recent study, see Abdirahman, M., Coyle, D., Heys, R. & Stewart, W. (2020). *A comparison of deflators for telecommunications, economics and statistics services* / Economics and Statistics, 517-518-519, 103-122. See also Byrne, Oliner and Sichel (2017), Prices of high-tech products, mismeasurement and pace of innovation, NBER working paper series, or Feldstein (2017) *Underestimating the real growth of GDP, personal income, and productivity, Journal of Economic Outlook*. This reflection goes beyond the framework of this EcoConjoncture. However, this is unlikely to change the conclusions of this study: the difficulties of measuring productivity increase as investment in new technologies and job creation in these sectors rise, which is not really the case for the four countries studied. Conversely, a better measurement of productivity would have every chance of showing an even greater productivity gap between these countries and those with a more developed technological sector.
6 The European average was 21.3% in Q4 2019 (source: Eurostat).
7 Only Luxembourg (11.4%) has a lower level than Italy, Spain and Portugal.
8 As a share of GDP, investment in construction fell in Spain from a high of 20.8% in Q3 2006 to 9.9% in Q4 2019. In Portugal, this share dropped from 13.5% to 9,5% over the same period.

## SHARE OF INDUSTRY (EXCLUDING CONSTRUCTION) IN TOTAL VALUE ADDED

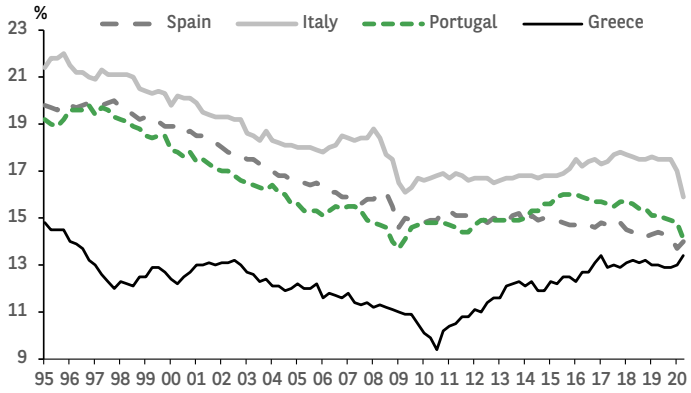



CHART 4

SOURCE: EUROSTAT, BNP PARIBAS

## GFCF EXCLUDING CONSTRUCTION

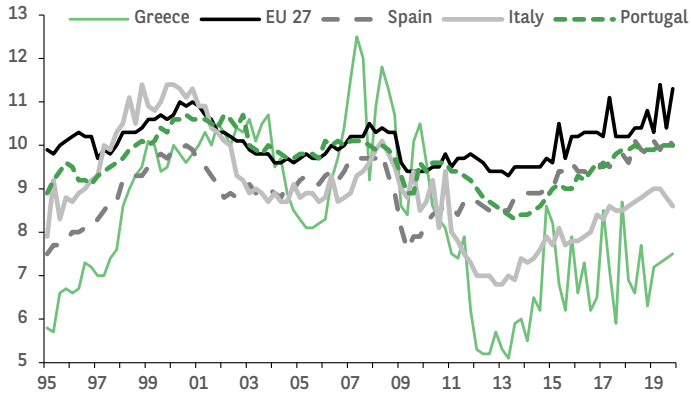
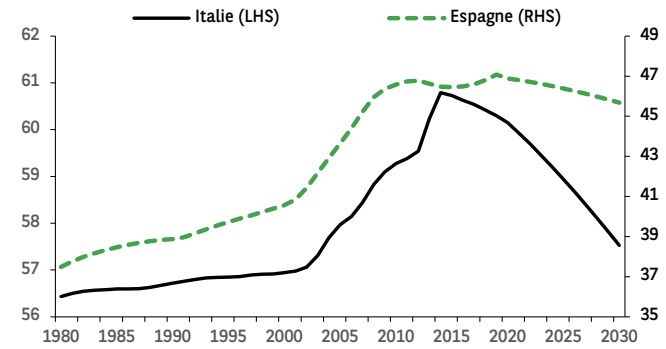
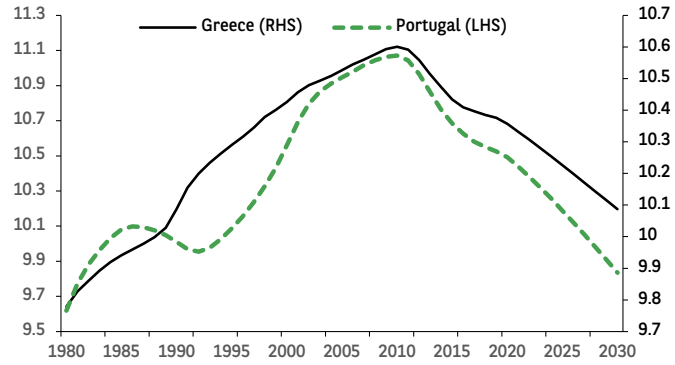



CHART 5

SOURCE: EUROSTAT, BNP PARIBAS

## POPULATION PROJECTIONS, EXCLUDING NET MIGRATION

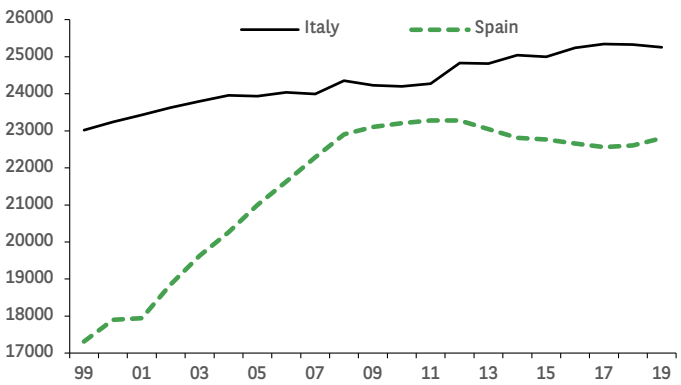


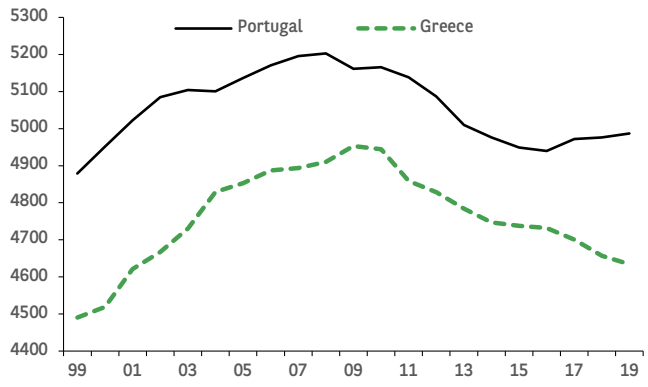




CHARTS 6A & 6B

SOURCE: EUROSTAT, BNP PARIBAS

## LABOUR FORCE (15-64 YEARS)




CHARTS 7A & 7B

SOURCE: OECD

However, that does not explain everything. If we exclude investment in construction (see Chart 5), the ratio to GDP remains below 10% for the four countries, which is still lower than the European average (11.3%). In fact, Southern Europe countries invest comparatively little in equipment capable of generating significant productivity gains. Investments in capital goods (machinery and transport) and so-called intangible investments (classified as "intellectual property products") are indeed among the lowest in Europe.[9] This deficit is visible in research and development (R&D) expenditure which is recorded as income from intellectual property. R&D is essential to develop innovation and make the link between fundamental research and commercialisation processes, and thus allow productivity gains in the long term. According to the World Bank, the share of GDP devoted to R&D in 2018 (most recent data) was 1.18% in Greece, 1.24% in Spain, 1.37% in Portugal, and 1.40% in Italy. These are, once again, levels well below the European average, which stood at 2.18% of GDP in 2018.

### The demographic drag

Southern European countries are also all facing a significant demographic decline which has repercussions on the level of the working population. In Greece, Spain and Portugal the population (excluding net migration) began to shrink in 2010, while the inflection point took place in 2014 in Italy. The decline of the Italian population is no less significant today. According to figures from Istat[10], the Italian population fell by 0.9% (-551,000) between 2014 and 2019. The main reason is the birth rate, which was in 2019, the lowest for more than a century. This trend is expected to continue in the coming years. According to Eurostat, the Italian population, excluding net migration, could decline by 2.6 million by 2030, or a drop of 4.4% over the current decade[11] (see Chart 6). At the same time, and again excluding net migration, the population in Greece and Portugal would contract by 4.6% and 3.6%[12] respectively. Spain is expected to see a fall of 2.6% by 2030.[13]

Although not the only factor in play – the activity rate has fallen for example – declining populations are causing the labour force to stagnate (Spain and Italy) or decline (Greece and Portugal), as Chart 7 shows. Against this prospect of a steady decline in the workforce, the necessity to generate productivity gains to support economic growth will become increasingly important.

## Effects of the Covid-19 pandemic on potential growth: some avenues for reflection

### How does a period of recession affect long-term growth?

Will the Covid-19 crisis further reduce the potential growth of these countries? There is no simple answer to this question because there are many factors to consider. Let us first recall the main channels through which an economic shock has repercussions on medium and long-term productive capacities (Table 3):

Investment in productive capital can be reduced if companies face, for example, more difficult access to credit – e g due to an increase in their indebtedness – or greater uncertainty about their return on investment.

Lasting decline in company profitability, which weighs on corporate capital formation.

Structural unemployment (which can also be called NAIRU[14]) can increase, especially if long-term unemployment reduces the possibilities for job seekers to find a job (for example because of loss of skills).

A decline in the labour force participation rate, especially if many job seekers become discouraged and leave the active population.

While the impact of the current crisis on several factors seems unquestionable – fall in investment, rise in structural unemployment and fall in the participation rate - its effect on total factor productivity is more nuanced. On the one hand, an economic crisis will affect the productivity if investment in innovation, and especially research and development, falls. But conversely, it can encourage companies to become more efficient.

### What was the impact of the 2008-2009 financial crisis on potential output?

Most studies agree that there exists a positive relationship between a fall in GDP and a drop in potential growth. Ball (2014)[15] estimates that, during the 2008-2009 crisis, the losses of potential GDP, compared to the level that would have been observed had the crisis not occurred, amounted to more than 20% for Greece and Spain. These two countries were among the most affected in Europe by the financial crisis of 2008 and the European sovereign debt crisis in 2011. Potential growth, coming out of the crisis, has indeed fallen significantly, having even turned negative in Greece (see Chart 8). This means that the loss of potential GDP vis-à-vis the pre-crisis trend is increasing over time. Ollivaud & Turner (2015)[16] corroborate Ball's work, by finding also a significant contraction in potential output, and in particular in Greece (see Chart 9). Haltmaier (2012)[17] uses a wider panel of recessions over time and also concludes a loss of productive capacity emerging from a period of contraction. In summary, these studies show a hysteresis effect, that is a persistent impact of the 2008-2009 economic shock on long-term output.

9 As defined by Eurostat (ESA 2010), investments in intellectual property product (IPP) include investments in software, research and development, artistic and literary rights, and mineral exploration. Eurostat data does not provide a breakdown of the investment for each of these components. However, based on charts from other countries, it is likely that software and R&D investments make up the bulk of IPP investments in Europe. In the United States, investment in R&D and software represented 91.9% of total investment in intellectual property products in 2019 (data from the Bureau of Economic Analysis).

10 https://www.istat.it/it/files//2020/07/Statistica-report_Bilancio-demografico_anno-2019-EN.pdf

11 A small drop in net migration since 2017 has also contributed to the decline in the population.

12 To stimulate births, the Greek government, for example, introduced at the beginning of 2020 a birth bonus of 2,000 euros

13 The natural growth (i.e. the balance between births and deaths) of the population in Spain has been falling steadily for more than 10 years and has recorded since 2017 a negative balance, which continues to worsen. See the INE report: https://ine.es/en/prensa/mnp_2019_p_en.pdf

14 Non-Accelerating Inflation Rate of Unemployment

15 Laurence Ball (2014), *Long-term damage from the Great Recession in OECD countries*, European Journal of Economics and Economic Policies

16 Ollivaud & Turner (2015). T*he effect of the global financial crisis on OECD potential output*. OECD Economic Journal

17 Jane Haltmaier, *Do recessions affect potential output?* US Federal Reserve International Finance Discussion Papers, December 2012

| CHANNEL THROUGH WHICH A RECESSION IMPACT POTENTIAL OUTPUT | | |
|---|---|---|
| **Main channels** | **Causes** | **Impact on potential growth** |
| **Investment** | Tighter access to credit | Negative |
| | Greater incertainty on returns to investment | Negative |
| **Structural unemployment** | Loss of skills by jobseekers | Negative |
| **Labour force paticipation rate** | Discouragement of job seekers | Negative |
| | Move into other activities (retirement, training) | Negative |
| **Total factor productivity** | Drop in spending on innovation, R&D | Negative |
| | Increase in productive effiency | Positive |

TABLE 3

SOURCE: BNP PARIBAS

GROWTH POTENTIAL BEFORE AND AFTER THE 2008-09 CRISIS

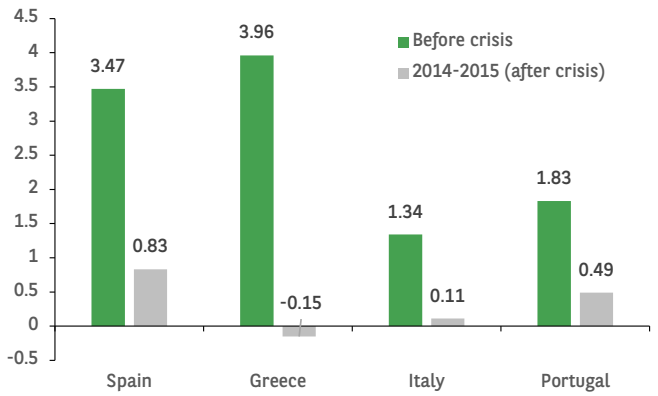



CHART 8

SOURCE: BALL (2014)

REDUCTION IN POTENTIAL OUTPUT AFTER THE 2008-09 CRISIS

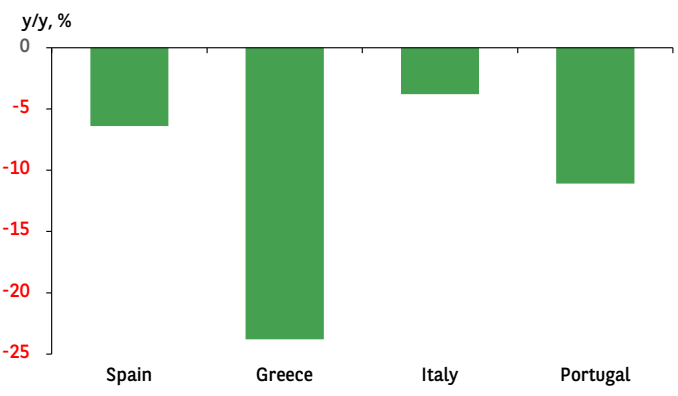



CHART 9

SOURCE: OLLIVAUD & TURNER (2015)

The study by Haltmaier (2012) also indicates that the magnitude of the recessionary shock has, for developed countries[18], a significant impact on potential GDP losses. In other words, the more severe the recession, the greater the loss of potential output[19]. This last point, if true in the current economic context, is important. Indeed, and even though it is still too early to assess the impact of the current crisis on long-term output, it is clear that the recessionary shock observed in the first half of 2020 was particularly severe for the countries under the scope of this article. Real GDP contracted during this period between 14.6% (Greece) and 22.1% (Spain). Only Belgium and France have experienced such significant losses in activity (see Chart 10). If we look more specifically at investment (see Chart 11), we see that Spain and Italy have experienced sharp falls, beyond 20%, while Portugal and Greece have recorded decreases of around 10%, which remains a significant contraction.

CONTRACTION IN GDP IN H1 2020

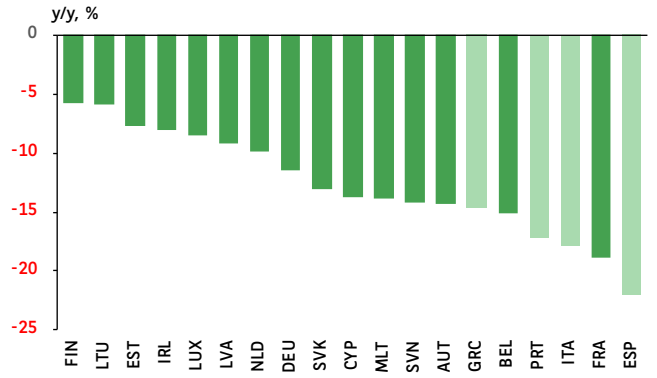



CHART 10 SOURCE: EUROSTAT, BNP PARIBAS

CONTRACTION IN GFCF IN H1 2020

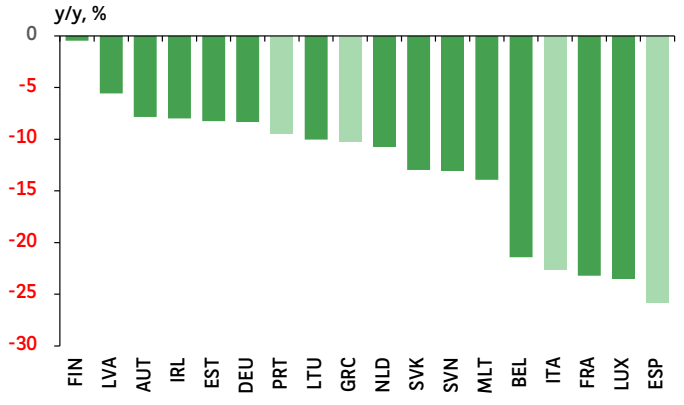



CHART 11 SOURCE: EUROSTAT, BNP PARIBAS

18 The results are not significant in the case of emerging countries.
19 For a recent and comprehensive study of the impact of recessions on potential GDP, see Cera et al., *Hysteresis and Business Cycles*, IMF working paper, May 2020.

## The digital sector, a lever for growth to be exploited

Productivity gains linked to digital technologies appear high today, making this sector a major investment focus. Digital technologies, in fact, generate ripple (or complementarity) effects between many parts of the production process. Thus, digital technology makes it possible to improve the relationship between the management of capital and skills within a company[20], or between value chains and customer management.[21] There are also ripple effects between different technologies, such as the concomitant development of very high-speed internet and the cloud.[22]

The positive impact of the digital transition on productivity in businesses and public services is also widely documented. Rivares et al. (2019)[23] are particularly interested in the impact of online platforms on the productivity of services. The analysis covers 10 OECD countries and uses data from Google Trends as a proxy for the level of platform usage.[24] On average, the increased use of digital platforms boosts productivity by about 2.5%. The development of digital technology makes it possible, first of all, to reduce information asymmetries between consumers and suppliers, thus strengthening competition. It also allows more efficient allocation of workers to the most productive firms in these sectors. Sorbe et al. (2019)[25] estimate the productivity gains generated more specifically by the expansion of very high-speed internet and the cloud. They estimate that a 10% increase in broadband usage gradually increases productivity over time, ranging from + 1.4% in the first year to + 3.9% after three years. Productivity gains from the cloud are also increasing, going from + 0.9% in the first year to + 2.3% at the end of the third year.

The digital transition is one of the areas where Southern Europe countries are lagging behind. The European Commission's Digital Economy and Society Index[26] (DESI index) highlights this deficit (see Table 4):

- Greece is second to last (27th) in the ranking, and last in terms of connectivity, 25th for "citizens' digital skills and use of internet services". This delay is reflected in terms of jobs: according to the European Commission report, the share of jobs in the ICT sector in 2017 represented only 1.5% of total employment, the lowest level in the EU.[27]

20 Brynjolfsson et Hitt (2000), *Beyond computation : information technology, organisational transformation and business performance*, Journal of Economic Perspectives pp 23-48
21 Bartel, Ichniowski et Shaw (2007). *How does information technology affect productivity? Plant-level comparisons of product innovations, process improvement, and workers skills. The Quarterly Journal of Economics*
22 For a UK case study, see De Stefano, Kneller & Timmis (2014), *The (Fuzzy) Digital Divide: The Effect of Broadband Internet Use on UK Firm Performance*, University of Nottingham discussion paper.
23 Rivares et al. (2019), *Like it or not? The impact of online platforms on the productivity of incumbent service providers*, OECD Working papers No 1548
24 The assumption being that the more a digital platform is used, the more it is searched on Google.
25 Sorbe et al. (2019), *Digital Dividend : policies to harness the productivity potential of digital technologies*, OECD Economic paper
26 https://ec.europa.eu/digital-single-market/en/desi
27 These figures corroborate the more recent Eurostat figures. Employment in Greece in the information and communication sector represented 2.1% of total employment in Q4 2019, the lowest level in Europe.

- Italy is also at the bottom of the ranking (25th) and last for "citizen skills". The report points out that only 45% of the population has basic software skills, compared with an EU average of 60%, and 80% in the Netherlands.
- Portugal ranks 19th, due to a lack of education of the population and a comparatively low utilisation rate of internet services. The report underlines, among other things, the low share of graduates in information and communication technologies (1.9% of the total number of new graduates against a European average of 3.6% in 2017).
- Spain ranks better (11th), although the training of citizens in digital technology also remains insufficient.[28]

However, policies have already been put in place to accelerate the digital transition, with a strong focus on public administration and services (see box 2 page 10).

## Conclusion:

In recent years, structural growth in Italy, Spain, Greece and Portugal has been hampered by several factors: the tertiarisation of the economy and the importance of low value-added services, the fall in demographics and a lack of investment in equipment able to generate solid productivity gains. The Covid-19 crisis could exacerbate some of these chronic problems. A further drop in potential growth would also accentuate the difficulties these countries face in reducing their public debt-to-GDP ratios, which are set to increase dramatically this year.[29] In addition, the banking sector could be further weakened, in particular in Greece and Italy where the level of non-performing loans remained high before the coronavirus crisis.[30]

The current situation could nevertheless encourage the implementation of crucial structural reforms, such as the acceleration of the digital and ecological transition, which could constitute an important lever of productivity and employment in the medium and long term.

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THE DESI AND ITS COMPONENTS (2020)

| | Italy | Spain | Portugal | Greece |
|---|---|---|---|---|
| **DESI** | **25** | **11** | **19** | **27** |
| Connectivity | 17 | 5 | 12 | 28 |
| Human capital/digital skills | 28 | 16 | 21 | 25 |
| Use of internet services | 26 | 11 | 24 | 25 |
| Integration of digital technology by businesses | 22 | 13 | 16 | 24 |
| Digital public services | 19 | 2 | 13 | 27 |

N.B.: the table shows the 2020 rankings in the five areas making up the DESI, i.e. i) connectivity, ii) human capital/digital skills, iii) use of internet services, iv) integration of digital technology by businesses and v) digital public services.

TABLE 4

SOURCE: EUROSTAT

28 For more details on Spain, see BNP Paribas Ecoflash Spain: hopes of green recovery, 9th June 2020

29 According to the European Commission forecast (May 2020), the ratio of public debt to GDP would reach, at the end of 2020, 196.4% in Greece, 158.9% in Italy, 131.6% in Portugal and 115 , 6% in Spain.

30 According to IMF data, the ratio of non-performing loans in Q1 2020 stood at 35.29% in Greece and 8.09% in Italy (Q2 2020).

## WAGES AS A PROPORTION OF GDP

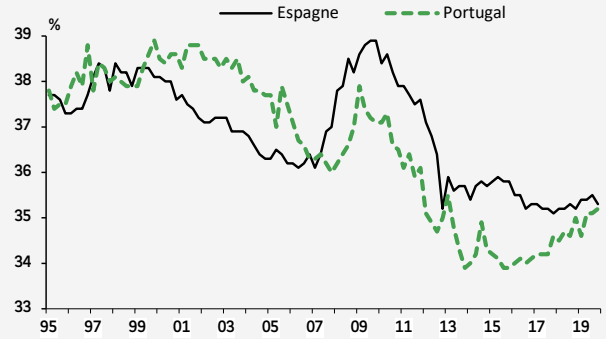


CHART 12A

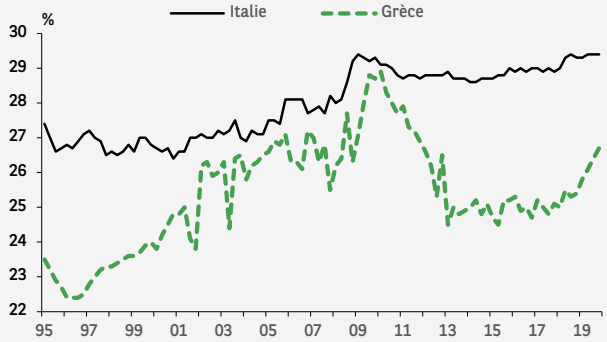


CHART 12B

SOURCE: EUROSTAT

The unit labour cost (ULC) represents the cost of labour per unit of output. All other things being equal, the ULC increases either through a rise in labour costs or a fall in productivity. Since productivity growth has been fairly weak in recent years (see following section), the ULC has adjusted mainly through lower wages. With the exception of Italy, wages as a proportion of GDP fell sharply in the years following the European crisis (see Chart above).

In Greece, although the wages/GDP ratio rose in the first decade of this century (peaking at 28.7% in Q4 2009), it then fell sharply, reflecting the country's austerity policies. It has now started to rise again, reaching 26.5% in Q4 2019.

In Portugal, the ratio hit a low of 33.9% in Q4 2013, before rallying to 36.2% in Q1 2020.

In Spain, the wages/GDP ratio hit an all-time low of 35.1% in Q3 2018, before rising to 37.2% in Q1 2020.

The ratio has remained relatively stable in Italy (28-29%), although it is lower than in Spain and Portugal.

N.B.

1. Labour costs represent average compensation costs paid by an employer in respect of a given employee or one hour of work. Labour costs per hour worked therefore correspond to total compensation costs paid in respect of employees divided by the total number of hours worked.

2. Compensation costs, in the broad definition used by the International Labour Organization, have several components: i) direct wages and remuneration; ii) bonuses; iii) remuneration for time not worked, e.g. paid leave, pay for official holidays and termination benefits; iv) employer social-security contributions and v) employee training costs.

BOX 1

SOURCE: BNP PARIBAS

## WHICH POLICIES HAVE BEEN PUT IN PLACE TO ACCELERATE THE DIGITAL TRANSITION?

In December 2019, Italy launched Italia 2025[1], an intergovernmental programme, designed to stimulate innovation and speed up the country's digital transformation. The programme involves 20 measures such as the creation of a single app and a unique digital identity for accessing all public services, as well as the greater use of artificial intelligence in administrative and judicial procedures.

Meanwhile, the Portuguese government has launched its digital transition action plan on 21st April 2020.[2] This programme has a similar ambition as in Italy, that is the creation of a digital identity for each citizen, along with full digitisation of the 25 most-used public services.

In Greece, a ministry for digital governance was set up in July 2019 to oversee a major digital public services programme.

The Spanish authorities have announced a major digital investment programme, España Digital 2025. This a joint effort between the public and private sectors, involving EUR 140 billion of investment between 2020 and 2025.[3] half of this sum will be deployed between 2020 and 2022 partly via the money allocated by the EU Recovery Fund.[4] This plan is composed of 50 measures, such as the reinforcement of training in digital technologies, rolling out of 5G technology, and digitalisation of public sector and SMEs' activities.

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1. https://innovazione.gov.it/it/cosa-facciamo/italia-2025/
2. https://eportugal.gov.pt/en/noticias/governo-lanca-plano-de-acao-para-a-transicao-digital
3. https://www.lamoncloa.gob.es/lang/en/presidente/news/Paginas/2020/20200723digital-spain.aspx.
4. EUR 15 billion of public investment between 2020 and 2022 will come from the European Recovery Fund

BOX 2

SOURCE: BNP PARIBAS

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