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SOUTHERN EUROPE: WHY SUCH LOW POTENTIAL GROWTH?

Guillaume Derrien

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?

UNITED KINGDOM: WHAT WILL BE THE ECONOMIC CONSEQUENCES OF A HARD BREXIT?

Hubert de Barochez and Kenza Charef

With only a few weeks left before the end of the transition period that has extended the United Kingdom's de facto membership of the European Union, considerable uncertainty remains about Brexit and its consequences. Whatever the outcome of the current negotiations on a free trade agreement, it is clear that this will be a hard Brexit. From this observation, a number of important questions emerge. What will be the consequences of the UK's withdrawal from both the EU's single market and customs union? What effect will Brexit have on the UK economy, and will it differ across sectors? How will Brexit influence future economic policy in the UK?

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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

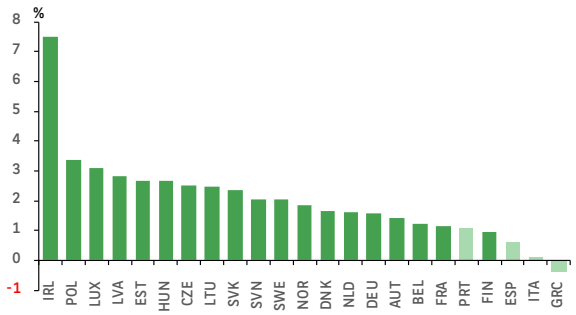
1 *OECD Economic Outlook*, November 2019.

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

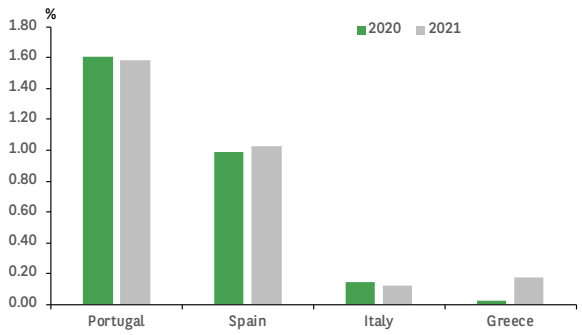
3 Measuring productivity per hour worked rather than per employee allows a more precise measure of productivity, because it eliminates potential distortions between full-time and part-time workers.

POTENTIAL GROWTH ESTIMATES (OECD)

Average potential growth over the period 2014-2019



Growth potential, forecasts 2020-2021

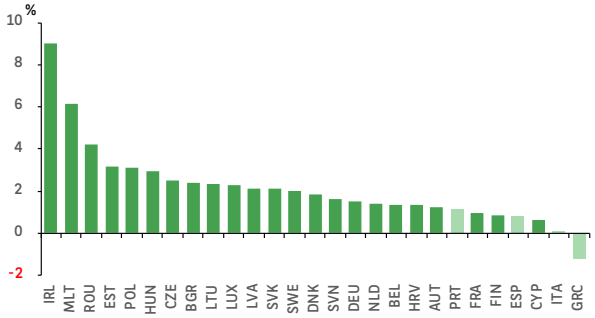


CHARTS 1A & 1B

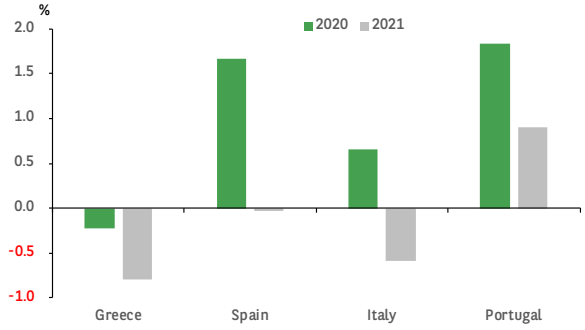
SOURCE: OECD ECONOMIC OUTLOOK (NOVEMBER 2019), BNP PARIBAS

POTENTIAL GROWTH ESTIMATES (EUROPEAN COMMISSION)

Average potential growth, over the period 2020-2021



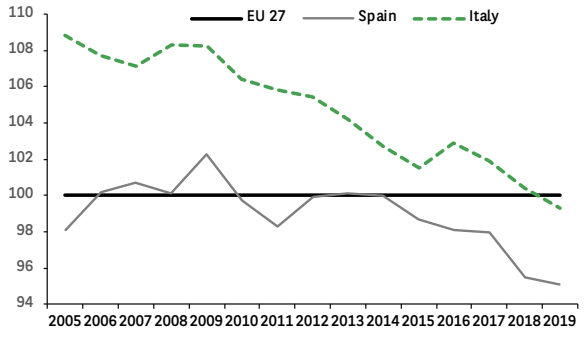
Growth potential, forecasts 2020-2021

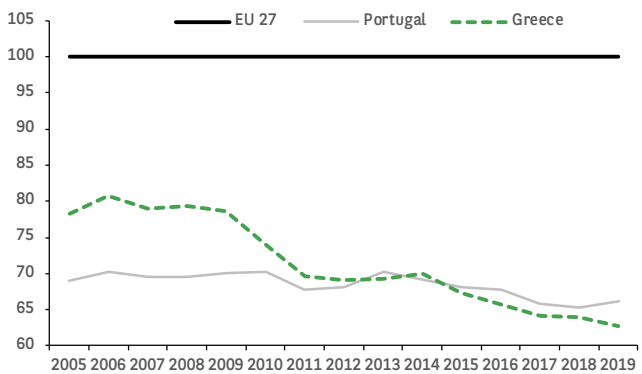


CHARTS 2A & 2B

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

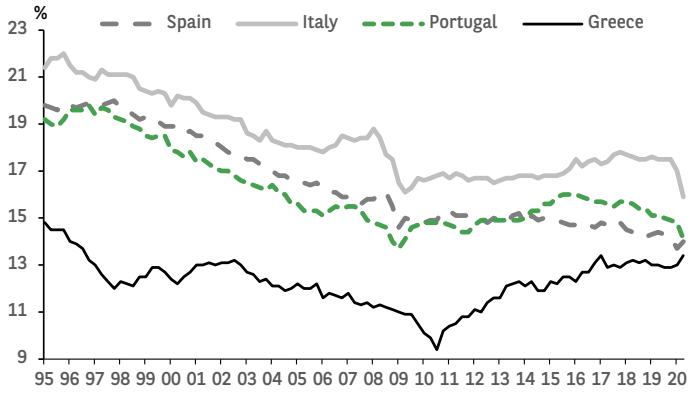


CHART 4

SOURCE: EUROSTAT, BNP PARIBAS

GFCF EXCLUDING CONSTRUCTION

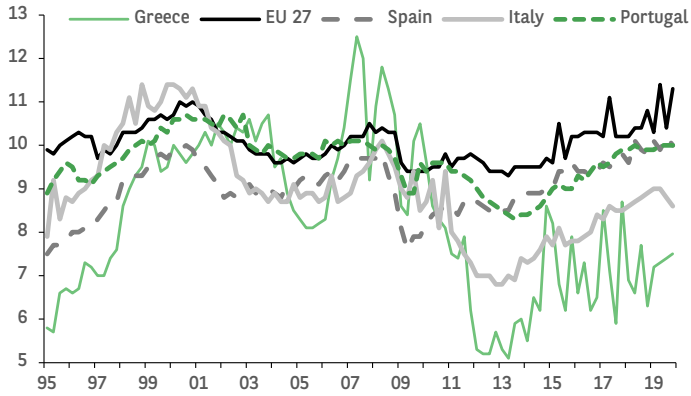
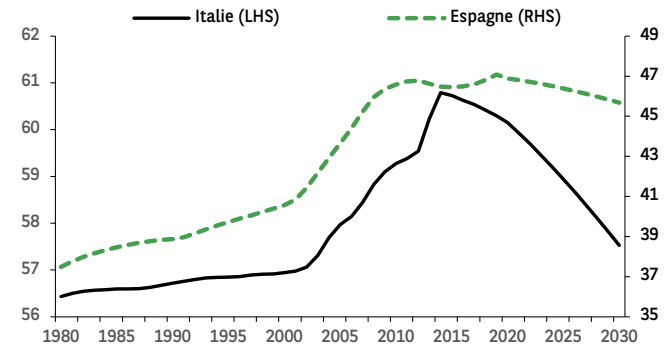
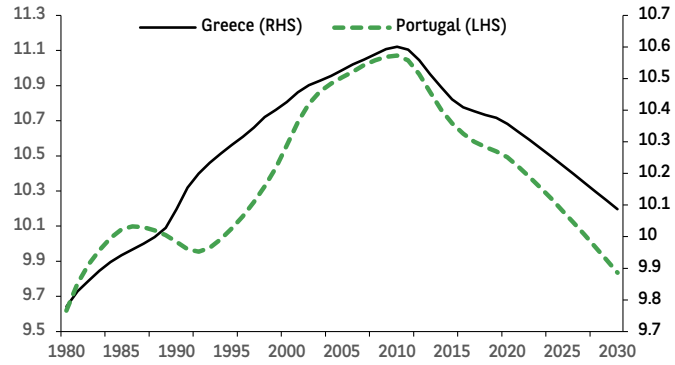


CHART 5

SOURCE: EUROSTAT, BNP PARIBAS

POPULATION PROJECTIONS, EXCLUDING NET MIGRATION

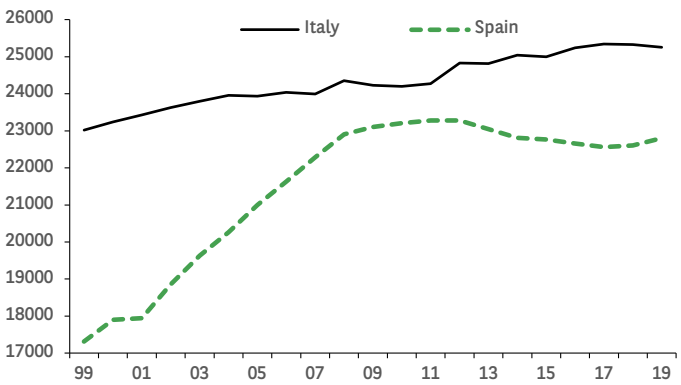


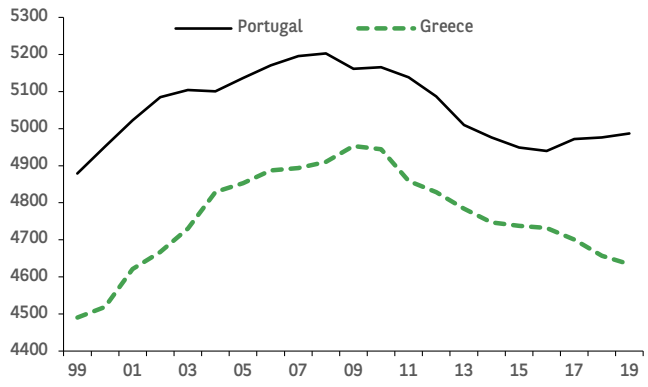


CHARTS 6A & 6B

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

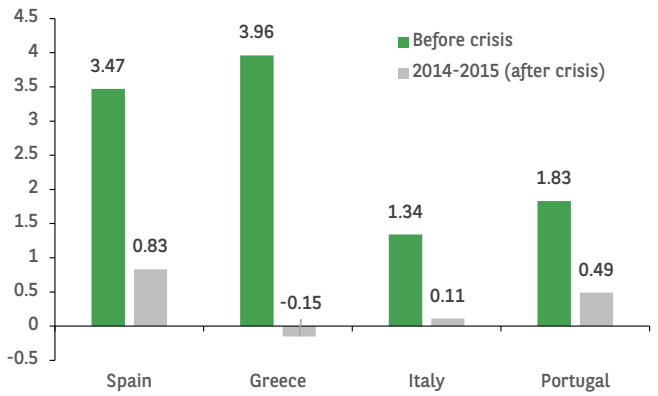


CHART 8

SOURCE: BALL (2014)

REDUCTION IN POTENTIAL OUTPUT AFTER THE 2008-09 CRISIS

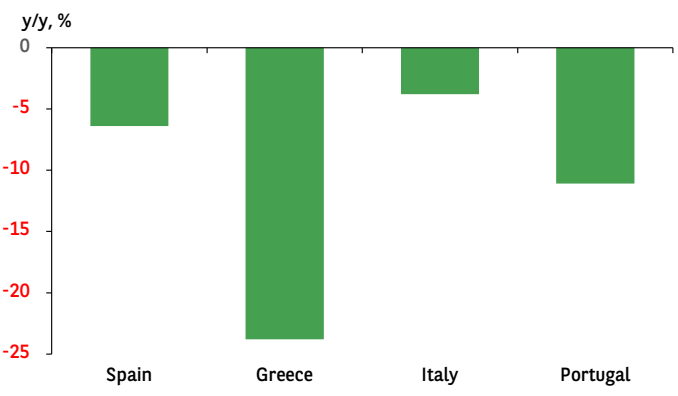


CHART 9

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

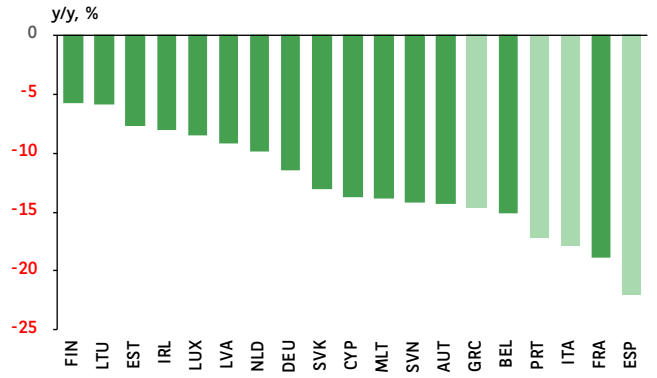


CHART 10 SOURCE: EUROSTAT, BNP PARIBAS

CONTRACTION IN GFCF IN H1 2020

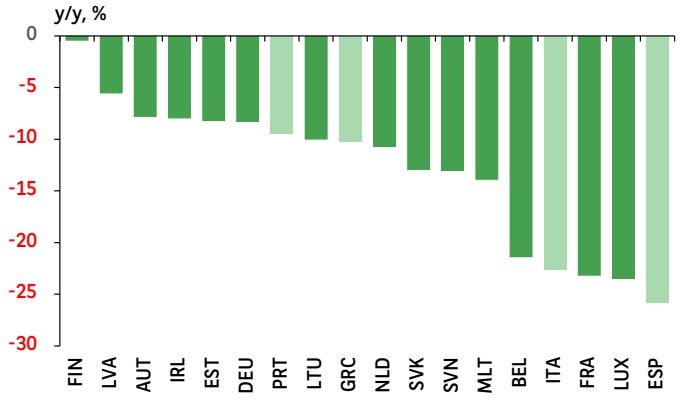


CHART 11 SOURCE: EUROSTAT, BNP PARIBAS

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

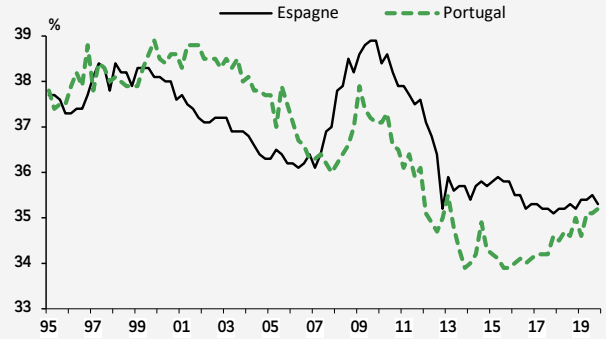

CHART 12A

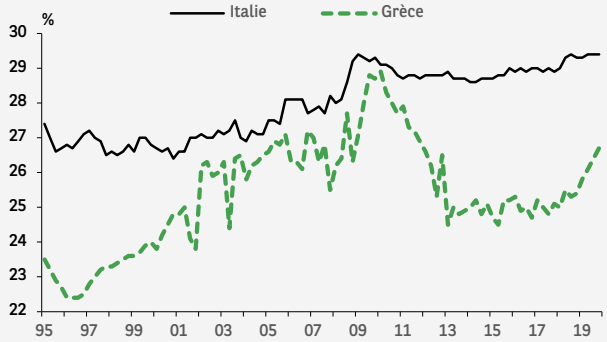

CHART 12B

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

UNITED KINGDOM: WHAT WILL BE THE ECONOMIC CONSEQUENCES OF A HARD BREXIT? 11

With only a few weeks left before the end of the transition period that has extended the United Kingdom's de facto membership of the European Union, considerable uncertainty remains about Brexit and its consequences. Whatever the outcome of the current negotiations on a free trade agreement, it is clear that this will be a hard Brexit. From this observation, a number of important questions emerge. What will be the consequences of the UK's withdrawal from both the EU's single market and customs union? What effect will Brexit have on the UK economy, and will it differ across sectors? How will Brexit influence future economic policy in the UK?

Since its official withdrawal from the European Union on 31 January 2020 – made possible by the ratification of the EU-UK Withdrawal Agreement (the Withdrawal Agreement) – the United Kingdom has entered a transition period during which EU law continues to apply. In particular, during this period the country remains in the EU's single market and customs union, continues to apply EU policies in justice and internal affairs, remains subject to the EU's executive mechanisms, and has to observe all international agreements signed by the EU.

Although the Withdrawal Agreement allowed for this transition period to be prolonged by up to two years by mutual agreement, the UK has refused any extension. The transition period will therefore end, as initially planned, at the end of the year. At this point, the UK will, in accordance with its wishes, leave the EU's single market and customs union. This hard Brexit will have an impact not only on the trade relationship between the two parties, but also on the exchanges between the UK and the rest of the world. This in turn will have repercussions for the UK economy as a whole – even though its sectors will be differently affected – and thus for the country's economic policy.

The EU's single market and customs union

Also known as the common market or internal market, the single market has, since its creation in 1993, ensured the free movement of people, goods, services and capital – the "four freedoms" – within the European Union. Its primary goal is to facilitate trade and business between its members, by removing technical, legal and bureaucratic obstacles. For example, the free circulation of goods is guaranteed by the removal of customs tariffs and quotas, the principle of mutual recognition, the removal of physical and technical barriers, and the promotion of standardisation.

The twenty-seven members of the European Union, together with the UK until the end of the transition period, are full members of the single market. In addition, the single market has been partly extended to three of the four current members of the European Free Trade Association (EFTA) – Norway, Iceland and Liechtenstein – since the Agreement on the European Economic Area (EEA), which now covers these three countries and all EU member states, entered into force on 1 January 1994. This extension is only partial as it excludes certain dispositions, such as the EU's Common Agricultural Policy (CAP) and Common Fisheries Policy (CFP), resulting in the possibility, and indeed the existence, of customs tariffs on agricultural products traded between the three countries and the EU. However, this partial access to the single market comes with conditions. In return, Norway, Iceland and Liechtenstein must respect the four freedoms, contribute to the EU budget, and incorporate EU law relating to the internal market into their domestic legislation. Meanwhile, Switzerland, the fourth EFTA member, rejected EEA membership in a referendum. However, the country also enjoys partial access to the single market, thanks to more than a hundred bilateral agreements with the EU.

The EU, along with Monaco, also forms a customs union. This has three main implications: no customs tariffs are applied to goods moving between EU countries; member states apply a common tariff for goods imported from third countries; and goods that have been legally imported may circulate freely on the whole EU territory without customs checks.

At the same time, the EU belongs to three other customs unions, with Turkey, Andorra and San Marino. The union with Turkey covers only industrial and transformed agricultural goods. Such goods can therefore move freely between the two parties, that is to say without being subjected to tariffs or quotas. In addition, Turkey applies the EU's common external tariff, and it aligns with the EU acquis – that is to say with its legislation – in several areas, most notably regarding industrial standards. Lastly, while Turkey has the right to negotiate and conclude free trade agreements with third countries, it does so in parallel with the EU.

The EEA is not a customs union, as there is no coordination of customs tariffs. It is therefore possible for a country to be part of the single market without belonging to the EU's customs union. This is true of Norway, Iceland and Lichtenstein. It is also possible to be a member of the customs union without being part of the single market. This is the case for Turkey, which is therefore not required to fully respect the four freedoms.

The effects of leaving the single market and customs union

While the UK voted for Brexit in 2016, the country could have left the Union while retaining access to the single market, for instance by joining the EFTA in order to remain within the EEA. After all, the EFTA was created on the UK's initiative, and the country only left it in 1973 in order to join the EU.

However, former Prime Minister Theresa May and her successor Boris Johnson have both refused to remain in the single market. In her Lancaster House speech of 17 January 2017[1], Mrs May ruled out this possibility, as it would require continuing to respect the four freedoms, adhering to regulation over which the UK had no influence, and remaining under the jurisdiction of the European Court of Justice (ECJ). According to her, this would mean *"not leaving the EU at all"*.

After leaving the single market, the UK will become a "third country" in the eyes of the EU. The country will therefore lose a significant degree of fluidity for its exchanges with EU member states. Admittedly, a free trade agreement, as proposed by the EU, would prevent the introduction of customs tariffs or quotas for goods traded between the two parties. However, such an agreement would not prevent the emergence of numerous non-tariff barriers to trade in both goods and services. In the case of goods, these may include additional procedures, notably

1 The government's negotiating objectives for exiting the EU: PM speech, United Kingdom Government, January 2017.

to meet EU standards, and enhanced customs controls, resulting in additional costs and border delays for UK exporters. Moreover, should regulation and standards in the UK and the EU gradually diverge, such barriers could develop over time. Even if a free trade agreement is reached, traded goods will need to meet rules of origin – precise criteria to determine the origin of products – in order to be exempted from tariffs and quotas.

In addition, the UK government has refused to remain within the EU customs union, because of its willingness to negotiate free trade agreements with third countries independently. This means that the country will no longer benefit from the trade deals that the EU has struck with third countries. The UK is therefore currently negotiating with the rest of the world to replicate these agreements and find new ones. Another consequence of leaving the EU's customs union is that the UK will use its own set of tariffs for its imports, the UK Global Tariff (UKGT). It is true that more than 15% of tariffs have been cut to zero, and that some others have been reduced or simplified. However, the UK has not yet replicated all EU agreements, which means that these new tariffs will apply to a greater share of its trade. To date, the UK has reached agreements with just over fifty countries, which represent nearly 12% of its total imports and exports. By comparison, the countries which have signed trade agreements with the EU represent around 16% of total UK trade.

If the UK does not reach a free-trade agreement with the EU, these tariffs will also apply to its imports from the EU – which account for more than half of the UK's total imports. The additional costs from tariffs and non-tariff barriers will in turn certainly be passed through to prices, thus reducing the purchasing power of UK consumers. At the same time, UK exports to EU countries would be subject to the EU's Common Customs Tariff (CCT). According to the UK's largest employers' organisation, the Confederation of British Industry (CBI), UK companies will face tariffs on 90% of their exports to the EU, which would clearly damage their competitiveness.

Estimating the impact of Brexit

While there are large uncertainties, the immediate shock to the UK's economy following its effective withdrawal from the EU could be substantial. According to a survey undertaken by the Institute of Directors[2], one quarter of business leaders were unsure in September whether their company would, by the end of the year, be prepared for the end of the transition period. In a letter to logistics groups[3] dated 22 September, Michael Gove, Minister for the Cabinet Office and responsible for Brexit preparations, alerted to the risks faced by the sector at the end of the transition period. Under the "reasonable worst-case scenario" (RWCS), between 40% and 70% of UK trucks travelling to the EU "might not be ready for new border controls". In addition, a lack of capacity at border points could reduce the flow rate to between 60% and 80% of normal levels, leading to queues of up to 7,000 trucks in the UK and to delays of up to two days.

The shock could be particularly large in the scenario of an exit without a deal. A study from the UK Treasury in 2016[4] estimated that in a scenario in which the UK remained within the EEA – something that is no longer an option – GDP would be after two years 3.6% lower than it would have been if the country had remained in the EU. In the scenario of a no-deal Brexit, GDP would be 6% inferior. In November 2018, the Bank of England[5] estimated that, under an exit scenario defined by the terms of the Withdrawal Agreement and Political Declaration, the UK's GDP in 2023 would be between 1.25% and 3.75% lower than it would have been if it had followed its pre-referendum trend. Under a scenario with no deal and no transition period, GDP would be between 7.75% and 10.5% inferior, and an immediate drop of between 3% and 8% was considered.

According to the many studies that have sought to quantify the economic effects of Brexit, it is quite unlikely that these negative effects will be offset in the long term (see Table 1). Admittedly, the results of these studies vary significantly, given their scope (some focus only on trade, others factor in foreign direct investment, migration, the UK's contributions to the EU budget, etc.) and the range of scenarios covered (the UK staying in the single market, leaving with a free-trade agreement, leaving without a deal, etc.). Nevertheless, they all agree on two important points. First, they are unanimous in concluding that, regardless of its final form, Brexit will have a negative effect on the UK economy. The second shared finding is that the "harder" the type of Brexit, the greater the shock to the UK economy will be. In fact, the shortfall is generally expected to be twice as large in the scenario of a no-deal Brexit, compared to a deal scenario – the two outcomes that remain on the table. According to a study from UK in a Changing Europe[6], the negative impact of a no-deal exit in the long term would be two to three times larger than the impact of the Covid-19 crisis.

In the long term, the consequences of Brexit for investment, productivity, potential growth and migration could also have a significant effect on the British economy. The Centre for Economic Performance[7] and the OECD[8] predict a drop in foreign direct investments (FDI) towards the UK of 22% and 30%, respectively, over a ten-year horizon. One explanation for these declines is that the UK has so far attracted investments thanks to the access it provided to the EU market. Meanwhile, research from the OECD as part of its latest Economic Survey for the UK[9] suggests that the increase in barriers to trade and to competitiveness could reduce the productivity of most UK service sectors by 3% to 5% over the long term.

Overall, these studies suggest that the impact of Brexit on the UK economy over the long term will depend on two key parameters: the initial shock caused by the end of the transition period and the degree of divergence between the UK and the EU. Whatever happens, it appears that the impact of Brexit on the UK economy will be negative, which could warrant fiscal and monetary support measures (see final section).

2 IoD responds to PM's Brexit statement warning businesses to prepare, Institute of Directors, October 2020.
3 Letter from Michael Gove to road haulage groups, Road Haulage Association (RHA), September 2020.
4 HM Treasury, *HM Treasury Analysis: The immediate economic impact of leaving the EU*, Discussion paper (May), London, 2016.
5 EU withdrawal scenarios and monetary and financial stability, Bank of England, November 2018.
6 Menon A, J. Portes, J. Rutter et al., *What would no deal mean?, UK in a Changing Europe and LSE*, September 2020.
7 Dhingra S., G. Ottaviano, T. Sampson, and J. Van Reenen, *The impact of Brexit on foreign investment in the UK*, Centre for Economic Performance (LSE), April 2016.
8 Kierzenkowski R., N. Pain, E. Rusticelli, and S. Zwart, *The Economic Consequences of Brexit: A Taxing Decision*, OECD Economic Policy Papers, No. 16, OECD Publishing, Paris, 2016.
9 OECD Economic Surveys: *United Kingdom 2020*, OECD, 2020.

ESTIMATED EFFECTS OF BREXIT ON UK GDP (DEVIATIONS FROM REMAIN SCENARIO)				
Study	**Date**	**EEA**	**FTA**	**WTO**
Booth et al. (Open Europe)	March 2015	-	-0.8%	-2.2%
PwC/CBI	March 2016	-	-1.2%	-3.5%
HM Treasury	April 2016	-3.8%	-6.2%	-7.5%
Kierzenkowski et al. (OECD)	April 2016	-	-5.1%	
Ebell & Warren (NIESR)	May 2016	-1.8% -	-2.1% with productivity:	-3.2% -7.8%
Rojas-Romagosa (CPB)	June 2016	-	-3.4%	-4.1%
Jafari & Britz	June 2017	-	-	-4.6%
Felbermayr et al. (IFO)	June 2017	-0.4%	-0.6%	-1.7%
Pisani & Caffarelli (Banca d'Italia)	January 2018	- -	-0.9% with productivity:	-2.0% -10.6%
Latorre et al.	June 2018	-1.2%	-	-2.6%
Vicard (CAE)	July 2018	-0.8%	-2.2%	-2.7%
IMF	July 2018	-	-2.5%	-4.0%
Hantzsche et al. (NIESR)	November 2018	-	-3.9%	-5.5%
Levell et al. (CEP)	November 2018	- with productivity:	-1.9% -5.5%	-3.5% -8.7%
UK Government	November 2018	- -	- with migration :	-7.7% -9.3%
Ortiz & Latorre	December 2018	-0.5%	-	-1.1%
Menon et al. (UKinEU)	September 2020	-	-	-8.0%
Arriola et al. (OECD)	Forthcoming	-	-3.5%	-

TABLE 1

SOURCE: SEE APPENDIX

The consequences of Brexit by economic sector

The consequences of Brexit will vary markedly across sectors, in part because of their different degrees of integration in international value chains. In boxes 1 and 2 (see pages 16 & 17), two typical cases are studied, the fishing sector and the aerospace industry. They illustrate the challenges of leaving an economic area as complex as the EU's single market.

More broadly, some sectors of the UK economy appear more vulnerable than others to Brexit. One reason is the relative importance of the EU market for each sector. The share of UK exports going to the EU varies significantly across sectors, from less than 20% in the case of insurance to more than 70% for communications and agriculture[10] (see Chart 1).

That being said, exports represent only a share of the total production of each sector. The share of exports going to the EU in the total production of each sector certainly gives a more precise idea of their reliance on the single market. Chart 2 shows that electronics, the primary sector, motorised vehicles and chemical products are the sectors that export the biggest share of their production to the EU – more than 20% in each case. By contrast, the communications sector has in fact little exposure to the single market. That is because, while 70% of the sector's exports are directed towards the EU, less than 5% of its production is exported.

Beyond exchanges, other factors, such as their degree of openness and structural differences, suggest that the impact of Brexit will vary substantially across sectors. A forthcoming study from the OECD[11] seeks to estimate the impact of Brexit on the UK's imports and exports by sector. It is based on the OECD's computable general equilibrium (CGE) METRO model, which incorporates developments in non-tariff measures, services trade and trade in value added. In the relatively favourable scenario where a free-trade agreement is found, the study estimates that, for each sector, imports will be roughly 5% to 10% lower over the medium term than they would have been if the UK had remained in the EU. When it comes to exports, all sectors would lose, with the exception of natural resources. The two sectors most affected, with losses of around 15%, would be motor vehicles and textiles (Chart 3). Under a no-deal scenario, exports would be reduced for all sectors, with shortfalls of more than 40% for motor vehicles and meat.

Overall, the manufacturing industry and agribusiness appear to be the most vulnerable to the UK's withdrawal from the EU's single market. However, it will probably be the services sector that will weigh the most on the UK economy. That is due to this sector's weight in the UK economy: services account for around 80% of total added value in the UK.

The impact on economic policy

Brexiteers argued during the campaign of the 2016 referendum that leaving the EU would lead to significant savings, as Brexit would end UK contributions to the EU budget. Between 2014 and 2018, the UK's average gross contribution was GBP13.4bn per year, when taking into account an average rebate equivalent to GDP4.6bn. Meanwhile, the EU provided funds to the UK public and private sectors amounting an annual average of GBP5.6bn – most notably under the Common

10 Latorre M. C., Z. Olekseyuk, H. Yonezawa, and S. Robinson, *Brexit: Everyone Loses, but Britain Loses the Most*, Working Paper Series WP19-5, Peterson Institute for International Economics, 2019.

11 Arriola C., S. Benz, A. Mourougane, and F. Van Tongeren (forthcoming), *The Trade Impact of the UK's Leaving the EU Single Market*, OECD Economics Department Working Papers, OECD Publishing, Paris.

SHARE OF UK EXPORTS GOING TO THE EU (%)

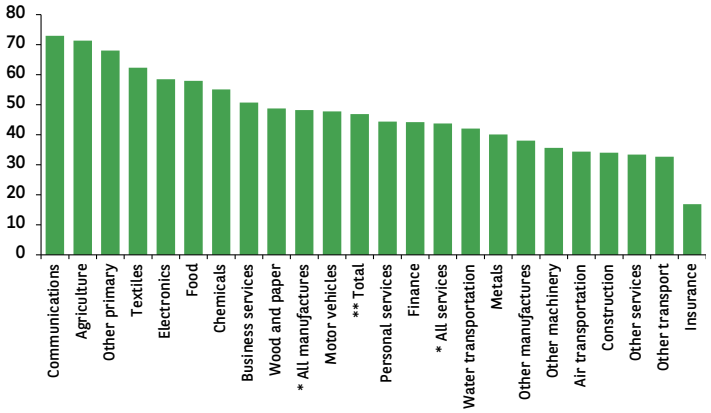

CHART 1 SOURCE: PIIE, GTAP, FMI, BNP PARIBAS

SHARE OF UK PRODUCTION EXPORTED TO THE EU (%)

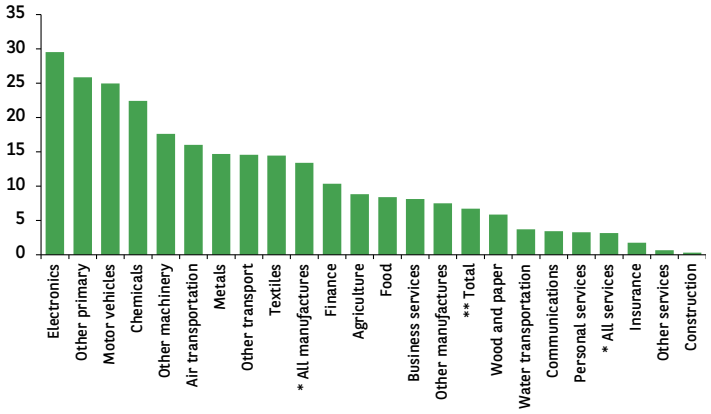

CHART 2 SOURCE: PIIE, GTAP, FMI, BNP PARIBAS

VARIATION OF EXPORTS IN A DEAL SCENARIO (%)

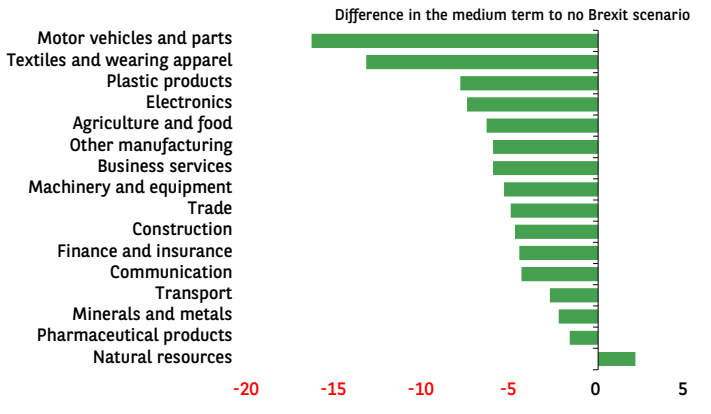

CHART 3 SOURCE: OECD, ARRIOLA ET AL. (FORTHCOMING)

Agricultural Policy (CAP) and the European Regional Development Fund (ERDF). Overall, the UK's average net contribution was GBP7.8bn per year, which represents around 1% of total government spending[12]. As well as stopping its contributions to the EU budget, the UK will, as a result of its exit from the customs union, retain the revenues from the tariffs charged on its imports. Until now, these were transferred to the EU. While on the paper it seems that the UK will gain from Brexit, things might be quite different in reality.

First, any gains from the end of contributions will be limited over the coming years by the financial settlement. The settlement represents the UK's commitments undertaken prior to Brexit that the country will have to honour, and it is expected to exceed GBP30bn[13]. What's more, if they had been kept by the British government last year, the revenues from tariffs would only have added 0.4% to its total revenues. Lastly, and perhaps more importantly, the economic losses caused by Brexit will probably weigh on the UK's public finances, by dragging down government tax revenues and raising spending in some areas (such as unemployment benefits). This would raise the government's deficit – which has already increased markedly due to the Covid-19 crisis – and in turn government debt. Admittedly, the government could seek to counter this shock, but such support would take the form of some combination of additional expenditure and tax cuts. Therefore, a deterioration of the UK's public finances, relative to a scenario in which the country remained in the EU, appears inevitable.

Finally, it is also possible that the UK will seek to relax its regulations in order to attract investors and businesses. However, the UK is already one of the most lightly regulated developed economies, particularly in terms of labour protection and product market regulation. On top of this, any regulatory divergence from the EU would presumably be followed by additional barriers to trade with the EU, as the latter pays particular attention to ensuring that access to its market meets strict conditions in order to maintain fair competition.

When it comes to monetary policy, the Bank of England remains pragmatic. In a speech to the Central Bank of Ireland in September 2018[14], Mark Carney, the then Governor of the Bank of England, noted that the monetary policy response was not automatic and would *"depend on the balance of the effects on demand, supply, and the exchange rate"*. The central bank is concerned that it will face the scenario it confronted in the immediate aftermath of the referendum. On the one hand the fall in the pound had created inflationary risks, and on the other hand the uncertainty triggered by the result of the referendum had raised fears of a significant economic slowdown. Faced with this dilemma, the Bank of England ultimately decided to ease monetary policy, notably by cutting its policy interest rate by 25 basis points to 0.25% and by expanding its quantitative easing (QE) programme.

The Bank of England could face a similar situation after the UK's effective withdrawal from the EU. A no-deal scenario would quite likely lead to a depreciation of the pound, considering the uncertainty it would generate. A significant depreciation would correspond to an easing of financial and monetary conditions – via its effect on export competitiveness – and hence soften the blow to the economy. However, it would also create upward pressures on inflation via higher import prices. Nevertheless, in this scenario, the Bank of England would probably still opt for looser monetary policy.

Monetary support could come in the form of zero or even negative interest rates – Bank Rate has already been cut to a record low of 0.10% following the Covid-19 crisis. To this end, the Bank of England has conducted a survey[15] to assess the financial sector's readiness for a hypothetical introduction of zero or negative rates. Although the central bank denied that this survey was indicative that such policy would eventually be adopted, money markets are already pricing in a fall in interest rates to negative levels in the coming months.

Otherwise, the Bank of England could expand its QE programme further. However, the share of government bonds it owns has significantly risen with the Covid-19 crisis. While at the beginning of the year the central bank was targeting a stock of GBP425bn in sovereign bond purchases, it has since raised this figure to GBP875bn. At present, the bank holds nearly 45%[16] of outstanding government bonds. It is true that the central bank can own up to 70% of the "free float" – which is the total amount in issue minus government holdings. However, given the large share the central bank already possesses, the effects of more purchases would be uncertain. Moreover, the Monetary Policy Committee (MPC) could be unwilling to increase the share of sovereign bonds it holds much further. When a central bank detains a substantial share of its own government's debt, the line between independent policy and monetary financing – the direct financing of the government – becomes blurred, which could potentially damage the central bank's credibility. Nevertheless, the Bank of England has more scope when it comes to purchases of corporate bonds. One reason is that such purchases do not incur the risk of monetary financing. Another is that, although the Bank of England has doubled its target for corporate bond purchases since the crisis began, the target is now at GBP20bn, which represents only around 10% of the total stock of eligible bonds. This suggests that the bank has more leeway in this area, which could prove particularly useful given that British companies risk bearing the brunt of the negative effects caused by Brexit.

Conclusion

Overall, in light of the unprecedented nature of the UK's decision to leave the European Union, there is considerable uncertainty around its consequences, although no study expects the country to benefit from it. Given the UK's choice to leave both the EU's single market and customs union, this will surely be a hard Brexit. Although a free trade agreement would prevent the imposition of tariffs and quotas, numerous non-tariff barriers will emerge in any case and entail a cost for the British economy. It will take time and money for companies – in particular those which are not well prepared – to adapt to the changes. While the UK's fiscal and monetary authorities could attempt to offset the short term impact through more accommodating policies, the Covid-19 crisis has reduced their room for manoeuvre.

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12 The UK contribution to the EU budget, Office for National Statistics (ONS), September 2019.
13 *Brexit: the financial settlement – in detail*, UK Parliament, March 2020.
14 "The future of work", speech by Mark Carney, Bank of England, September 2018.
15 Letter from Sam Woods 'Information request: Operational readiness for a zero or negative Bank Rate', Bank of England, October 2020.
16 Bank of England faces new doubts over potency of buying bonds, Financial Times, 3 November 2020.

FISHERIES: SMALL SECTOR BUT BIG DISAGREEMENTS

Despite being a minor sector for the British economy – its value added accounted for only 0.1% of GDP in 2019 – the UK fishing industry has been a key issue in the negotiations between the UK and the EU on a free-trade agreement. Given that European fishermen are highly dependent on their access to British territorial waters, the UK benefits from real leverage on this issue.

The Common Fisheries Policy

At the European level, the fishing industry is regulated by the Common Fisheries Policy (CFP), which was introduced in 1970 and reformed in 2014. The CFP gives the entire European fleet equal access to the territorial waters of all member states. It has four main policy areas: managing fisheries, with the aim of safeguarding stock reproduction, laying the foundations for a profitable industry, sharing out fishing opportunities fairly, and conserving marine resources; developing and implementing policy at the international level; managing the market in fishery and aquaculture products; and the funding of the policy which, for 2014-2020, is organised through the European Maritime and Fisheries Fund (EMFF). As part of its role of managing fisheries, the CFP sets common rules for all fishermen on which species can be caught, where they can be caught, how much can be caught, and with what equipment. The CFP seeks to establish sustainable fisheries and to preserve stocks, notably by including bycatch in the quotas allocated to each fisherman.

What is the UK offering?

The British fishing industry considers the CFP unfair and has for many years criticised its unilateral nature. When only considering volumes taken, free access to the EU's territorial waters does benefit more to EU fishermen than to their UK counterparts. Between 2012 and 2016, for example, an average of 760,000 tonnes of fish, worth around GBP540mn, were caught by vessels from other EU members in British waters, while the UK fleet caught only 90,000 tonnes, worth GBP110mn, in EU territorial waters[1].

What's more, the CFP subjects UK fishermen to strict quotas. As a result, the volume of fish taken by the British vessels in their own waters has halved since the introduction of the policy. London also criticises the arbitrary manner fishing quotas are allocated. For instance, in the Channel, French boats are allowed to take nearly nine times more cod than UK fishermen – although in UK waters overall British vessels take nearly three quarters of the cod.

The central issue in the negotiations regarding fisheries therefore lies in the extent to which the UK will regain control of its territorial waters. Given that the UK will no longer be constrained to allow EU fishermen into its waters, Michael Gove has called for greater realism and flexibility from the European negotiators.

What is Brussels asking for?

On the European side, Michel Barnier was until recently demanding full access to UK territorial waters for EU fishermen. This position was mainly backed by France, Belgium, the Netherlands and Spain. Fisheries primarily concern eight European countries, but all twenty-seven remaining EU members have remained united on the issue.

Access to British waters is vital for the fleets of many of the UK's neighbours, notably Belgium. With just 67km of coastline, Belgium has a very limited Exclusive Economic Zone. As a result, 80% of the 15,000 tonnes of fish sold each year in the country's two biggest fish markets, Ostend and Zeebrugge, come from British waters, and 4,200 jobs depend directly on the fishing industry.

The UK's proposal that any agreement should be renegotiated every year – on the same model as the agreement between the EU and Norway – was staunchly opposed by the Europeans, who feared lack of stability for their fishermen. The Europeans have also refused to separate fisheries from the overall negotiations with the UK. In response, Boris Johnson has threatened to leave the EU without a deal.

What would happen if no deal is found?

Should no agreement be reached between the two parties, WTO rules would apply, which would mean the introduction of customs checks and the application of tariffs. The UK could even deny European vessels access to its territorial waters, where they find 42% of their total catch volumes each year. Indeed this figure is even higher for the fleets of the UK's closest neighbours, such as the Netherlands and Belgium. According to the European Fisheries Alliance, this ban could cut the profits of European fleets by half and result in the loss of 6,000 jobs[2]. A lack of agreement on fisheries would also lead to more administrative procedures – such as authorisations for the sale of their products – for many fishermen who currently land their catches freely in UK ports.

Meanwhile, in a no-deal scenario, UK fishermen and dealers would see restrictions on their access to the territorial waters of the EEA and, more importantly, to the single market. In particular, tariffs would be charged on their exports of fish to the EU – the rate applied by the EU to fish and fish products is nearly 12%. Given that 75% of UK fisheries exports go to the European market, this would certainly have a severe effect on the UK fishing industry. Finally, failure to reach an agreement, particularly on quotas, would raise the risk of overfishing.

Faced with these prospects, the UK government is attempting to reduce the country's dependence on the European market by negotiating bilateral agreements not only with EU member states but also with third countries such as Norway.

1 Sustainable fisheries for future generations, Department for Environment, Food and Rural Affairs, July 2018
2 Building a sustainable, strong and mutually beneficial joint Fisheries Management post-Brexit, European Fisheries Alliance, January 2020.

BOX 1

AEROSPACE, A BIG MISSING PIECE IN THE NEGOTIATIONS

"In the event of a no-deal Brexit, Airbus would have to make some decisions that would be very painful for the UK." This was the message to the UK from Tom Enders, former CEO of Airbus, in January 2019. A year later, his successor, Guillaume Faury, stated his determination to work with the UK on "an ambitious industrial strategy", and said that he foresaw "significant potential to improve and expand" Airbus' activities in the United Kingdom, suggesting increased awareness of the importance of this market for the company's business model.

The UK aerospace industry

The aerospace sector is a key pillar of the UK's economy and accounts for roughly 114,000 jobs. In 2019, this industry alone generated GBP34 billion in value added, which is equivalent to 7% of total industrial value added. The sector is one of the strongest growing in the UK and is associated with very high productivity per head.

At present, the UK is an important piece of the Airbus production line, supplying the company with components such as wings, engines and landing gear, which are then assembled in EU countries – most notably France. As a result, in 2018 half of the UK's exports of aerospace parts and components by value went to EU member states.

How is the industry structured at the European level?

The EU aerospace industry is fully integrated and regulated by the European Aviation Safety Agency (EASA). EASA is one of the only two organisations that is allowed to certify aerospace parts, components and products – the other being the US Federal Aviation Administration (FAA). Manufacturers active in the UK, such as Airbus, Rolls Royce, GKN and Bombardier, therefore rely on EASA certification. Countries that are not members of the EU can become associate members of the EASA. While this allows them to benefit from EASA agreements and certification, they do not have voting rights. Thanks to the Bilateral Aviation Safety Agreement (BASA), EASA members enjoy access to the markets of a number of third countries, such as the USA, Brazil and Canada.

As the transition period nears its end, uncertainty remains

If no deal is found between the EU and the UK, the latter will leave EASA on 1 January 2021. This would have immediate negative consequences for the UK aerospace industry.

First, this would prevent the certification of aerospace components produced in the country. A transition period lasting several years would certainly have to be put in place before the British Civil Aviation Authority (CAA) could be able to assume this certification role.

The UK exiting the EASA would also result in customs checks at its borders with the EU. According to the ADS business federation, this would represent additional costs of GBP1.5 billion per year for the aerospace sector. Indeed, as far as the aerospace sector is concerned, trade between the UK and EU is very intensive. For example, the delivery time for wings from Airbus' Broughton production site to its Toulouse assembly centre is currently only two hours, and several trips can be made each day with no administrative requirements[1].

Lastly, leaving the EASA would mean for the UK being cut off from the markets of third countries with which the agency has bilateral agreements.

That said, in a no-deal scenario the UK would still be covered by the WTO agreement on aerospace products and components, which means that no tariffs would be applied to civilian aircraft products and components. Whilst this agreement does not cover intermediate products and raw materials, these are nevertheless protected by a specific regime adopted by the EU, from which UK exporters would continue to benefit.

Faced with these prospects, one of the options considered would be to keep the UE in the EASA as an associate member. The UK would no longer participate in the EASA's decision process, but would continue to benefit from its bilateral agreements. In any case, Mr. Faury notes that "numerous precautions" will have to be taken by governments to protect European aerospace value chains.

1 According to evidence given by Katherine Bennett, Senior Vice-President at Airbus UK, during a House of Lords Committee in 2017.

BOX 2

APPENDIX: SOURCES FOR TABLE1

Arriola C., S. Benz, A. Mourougane, and F. Van Tongeren (forthcoming), *The Trade Impact of the UK's Leaving the EU Single Market*, OECD Economics Department Working Papers, OECD Publishing, Paris.

Booth S., C. Howarth, M. Persson, R. Ruparel, and P. Swidlicki, *What if...? The Consequences, challenges & opportunities facing Britain outside EU,* Report 03/2015, London, Open Europe, 2015.

Ebell M. and J. Warren, *The long-term economic impact of leaving the EU*, National Institute Economic Review, 236, 121-138, May 2016.

Felbermayr G., J. Gröschl, I. Heiland, M. Braml, and M. Steininger, *Brexit's Economic Effects on the German and European Economy,* Study commissioned by the German Federal Ministry for Economic Affairs and Energy (BMWi), CESifo, Munich, June 2017.

Hantzsche A., A. Kara, and G. Young, *The Economic effects of the Government's proposed Brexit Deal,* NIESR, London, November 2018.

HM Treasury, *HM Treasury Analysis: The Long-Term Economic Impact of EU Membership and the Alternatives*, Cm. 9250, April 2016.

IMF, *Long-term impact of Brexit on the EU*, Article IV Consultation Staff paper, Euro area, Selected Issue, July 2018.

Jafari Y. and W. Britz, *Brexit—An economy-wide Impact Assessment looking into trade, immigration, and foreign direct investment*, Paper presented at the 20th Annual Conference on Global Economic Analysis, West Lafayette, IN, June 2017.

Kierzenkowski R., N. Pain, E. Rusticelli, and S. Zwart, *The Economic Consequences of Brexit: A Taxing Decision*, OECD Economic Policy Papers, No. 16, OECD Publishing, Paris, 2016.

Latorre, M. C., H. Yonezawa, and Z. Olekseyuk, *Can Brexit be overturned with other trade and FDI agreements? A quantitative assessment*, Paper presented at the 21th Annual Conference on Global Economic Analysis, Cartagena, Colombia, June 2018.

Levell P., A. Menon, J. Portes, and T. Sampson, *The Economic Consequences of the Brexit Deal*, Centre for Economic Performance (LSE) and UK in a Changing Europe, 2018.

Menon A, J. Portes, J. Rutter et al., *What would no deal mean?, UK in a Changing Europe and LSE*, September 2020.

Ortiz G. and M. C. Latorre, *A computable general equilibrium analysis of Brexit: Barriers to trade and immigration restrictions*, SSRN Working paper, 2018.

Pisani M. and F. Vergara Caffarelli, *What will Brexit mean for the UK and euro area economies? A model-based assessment of trade regimes*, Temi di Discussione/Working Papers 1163, Bank of Italy, January 2018.

PricewaterhouseCoopers, *Leaving the EU: Implications for the UK economy,* March 2016.

Rojas-Romagosa H, *Trade effects of Brexit for the Netherlands*, CPB Background Document, The Hague, June 2016.

UK Government, *EU Exit: Long-Term Economic Analysis*, 2018

Vicard V, *Une estimation de l'impact des politiques commerciales sur le PIB par les nouveaux modèles quantitatifs de commerce*, Focus du Conseil d'Analyse économique, n°22, Juillet 2018.

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