

The 2020 health crisis trough

Background

The world economy experienced one of the deepest—yet shortest—recessions on record, characterized by its global reach, affecting virtually all countries at the same time. The worldwide adoption of measures to contain the spread of the COVID-19 virus resulted in a sudden-stop in economic activity. These measures were generally implemented during the first quarter of 2020.

Confinement of the population and restrictions to trade in international markets mapped into one of the deepest dips in Spanish real GDP on record—a 5.4% decline in 2020Q1 relative to the previous quarter. Tourism—a major contributor to Spanish GDP—was particularly affected, dragging Spanish real GDP down by 17.7% in 2020Q2. Taken together, the Spanish Economic Association’s Business Cycle Dating Committee (hereafter “the Committee” for short) decided to date the most recent peak in economic activity in 2019Q4. Using the newly adopted criterion that the recession starts following the peak, the subsequent recession would therefore have started 2020Q1.

As confinement measures were slackened, mobility increased and international markets reopened. The effect was for real GDP growth to bounce back by 16.8% in 2020Q3, among the highest rates of growth in recent memory. This jump in economic activity was visible across a wide range of economic indicators. Given this evidence, **the Spanish Economic Association’s Business Cycle Dating Committee has determined that the trough of economic activity took place in 2020Q2.**

A decline in real GDP over one or two quarters is usually too short a period to be able to conclusively determine that a cyclical turning point has taken place. The economy is typically buffeted by short-lived shocks from which the economy recovers on its own. Moreover, these shocks may affect some sectors of the economy, but not others. However, the Committee felt that virological evidence of SARS-CoV-2 infections and the global nature of the pandemic

(affecting all economic sectors at once as well as all economies abroad), merit dating turning points that are quite close in time. The resulting recession (measured from the quarter following the peak to the quarter of the trough), is among the shortest (the recession of the 1970s is another example), though one of the deepest, with effects visible everywhere, and experienced by virtually all economies abroad.

Summary

The Committee dated the recent peak of economic activity in 2019Q4, and subsequent trough in 2020Q2. This implies—using our new convention—that the economy was in recession in 2020Q1 and 2020Q2 during which time, real GDP declined a cumulative 22.1%. Drilling down from quarters to months, the Committee dated the month of the peak in February 2020 whereas the trough was dated April 2020. That means that, at a monthly frequency, the recession lasted two months, the shortest recession on record.

Real GDP declined by 5.4% in 2020Q1 and by 17.7% in 2020Q2. The abrupt nature of the turning point in economic activity is shown in Figure 1. The figure normalizes real GDP to 100 in 2015. As the figure makes clear, the economy had been steadily growing until the end of 2019. The economy declines in the first quarter of 2020 and tanks in the second quarter, before rebounding in the third. Though the rebound does not quite bring the economy back to its pre-pandemic trend, it allows the Committee to easily date the associated turning points.

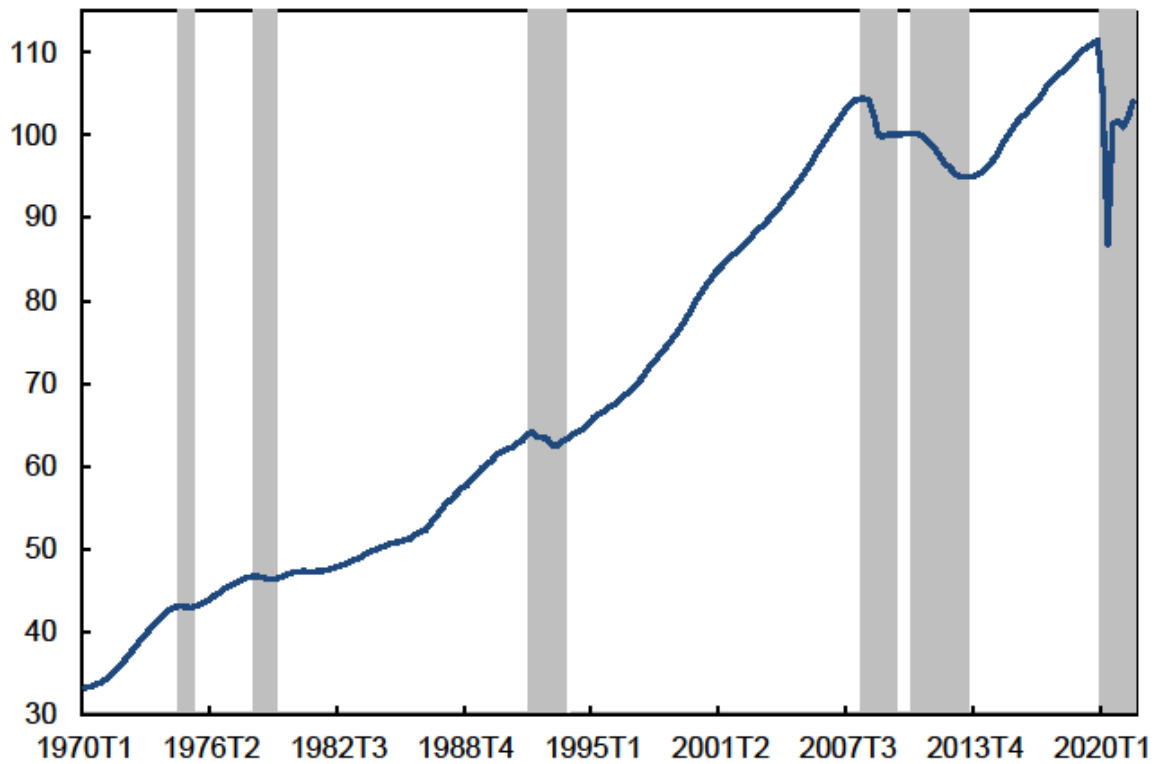
The Committee notes that it is not necessary for the economy to recover back to its previous peak of economic activity before dating its trough. In fact, as Table 1 shows, it has never been the case that in dating a trough, the economy had recovered the level of economic activity from the previous peak. Moreover, as is evident from Figure 1 and Table 1, real GDP never recovered enough to reach its previous peak before another downturn was dated.

Figure 1. Real GDP and its cyclical properties

GDP backcasted

1970T1 - 2021T3

2015 = 100



Source: INE

Notes: Real GDP index set to 100 in 2015Q1. PIB is GDP in Spanish.

Source: INE (Institute of National Statistics). See text.

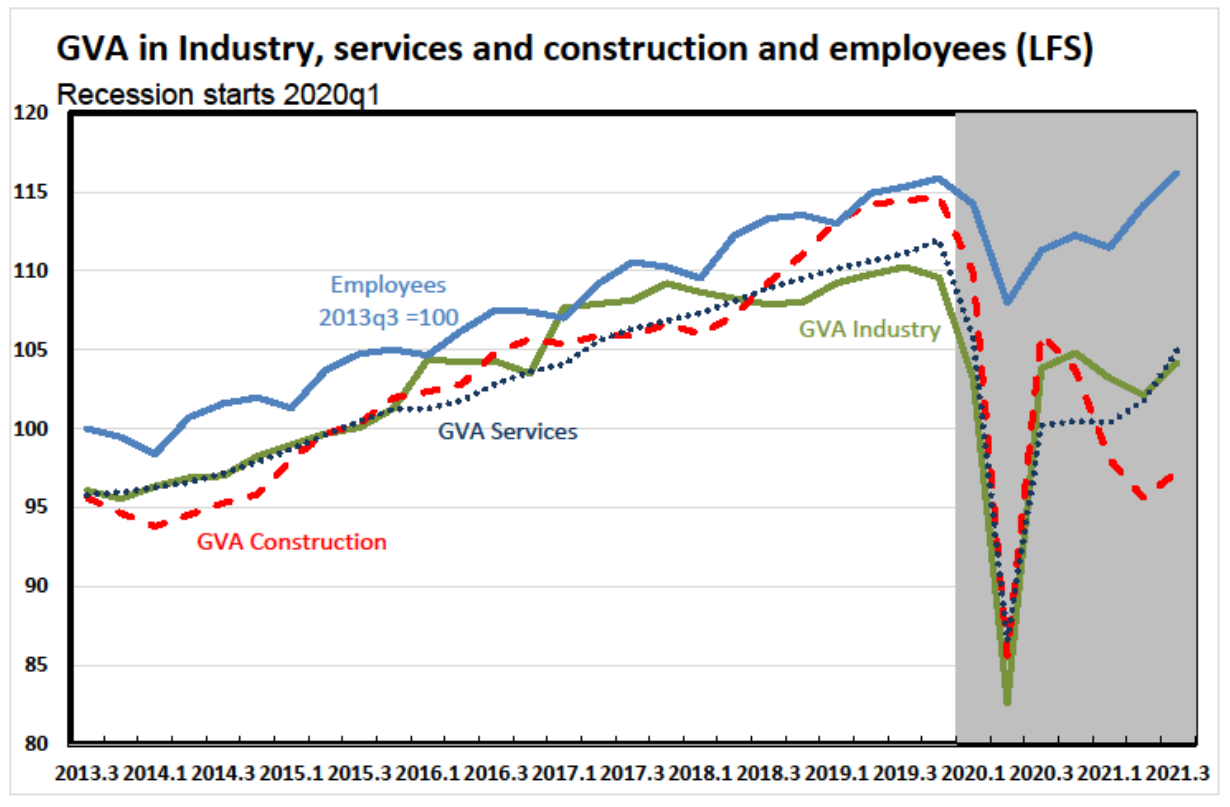
Where the dynamics displayed in Figure 1 visible in other sectors of the economy? To answer this question, we look into the Gross Value Added (VAB in Spanish) of the three largest sectors of the economy, namely: manufacturing, services, and construction. Figure 2 displays each of these GVA series, which all share a common and pronounced dip. Specifically, manufacturing, services, and construction each declined by 19.9%, 18.1%, and 22.3% respectively in 2020Q2 whereas they rebounded by 25.7%, 15.8%, and 23.9% respectively in 2020Q3.

Table 1. When did real GDP recover the value reached in the previous peak

Peak	Trough	Real GDP recovered level of previous peak
1974Q4	1975Q2	1975Q3
1978Q3	1979Q2	1979Q4
1992Q1	1993Q3	1994Q2
2008Q2	2009Q4	2017Q1
2010Q4	2013Q2	2017Q1
2019Q4	2020Q2	-

Next, we consider the situation in labor markets. Figure 2 also displays the series for employed workers (“ocupados EPA” in Spanish) overlaid with the three series of VBA previously discussed. Although the government introduced programs to retain the jobs of workers that would have otherwise been counted as unemployed (a program whose acronym in Spanish is ERTE), the dynamics in labor markets more generally, follow those of the three main sectors shown in the figure.

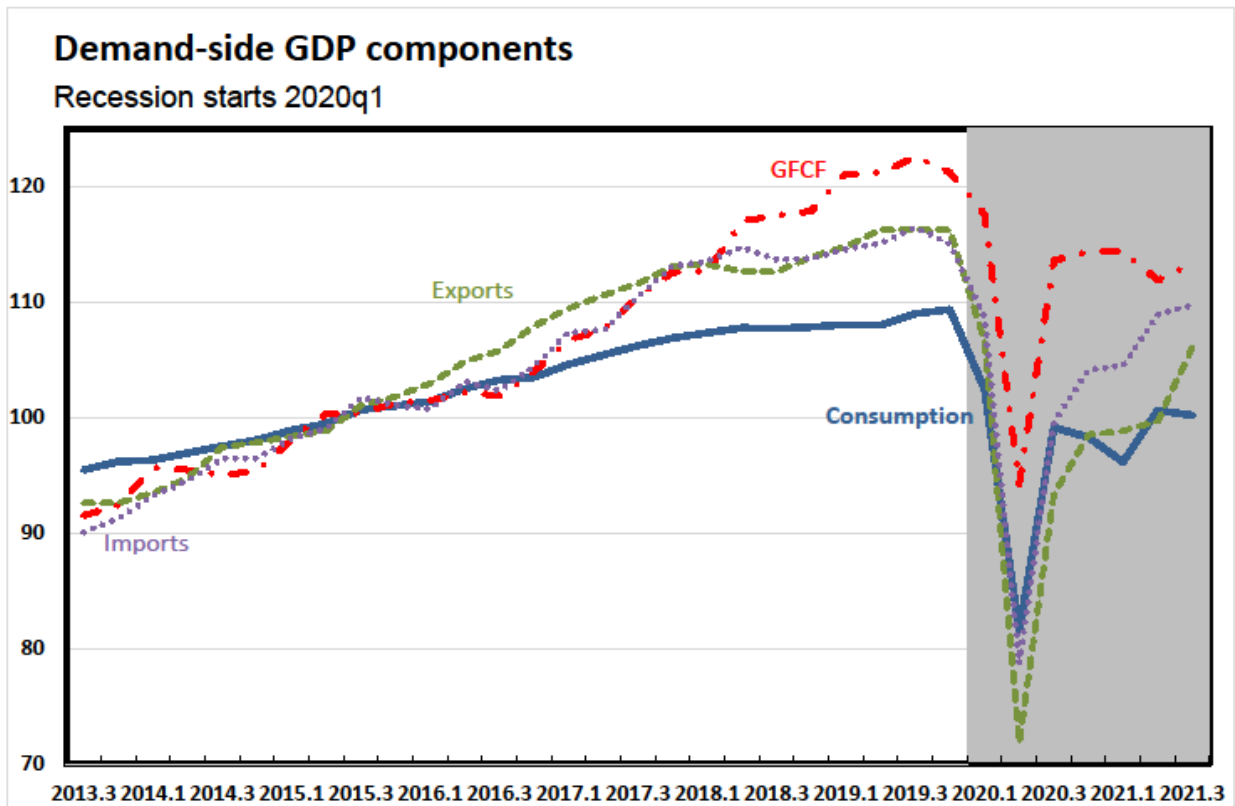
Figure 2. Sectoral GVA and employment



Notes: VAB = Gross Value Added adjusted for inflation and indexed to 100 in 2015Q1. Dotted line is real GDP as shown in Figure 1 and provided as a reference. See text.

Figure 3 evaluates the components of GDP from the demand side. Thus, relative to the peak, consumption, investment, imports and exports all fell by large amounts in 2020Q2 (20.4%, 19.9%, 32.7%, and 27.6% respectively), and rebounded strongly in 2020Q3 (21.5%, 20.6%, 30 %, and 26.5%, respectively). These oscillations are among the most severe ever recorded and serve to emphasize the sharpness of the downturn.

Figure 3. The demand components of real GDP



Notes: all components adjusted for inflation and indexed to 100 in 2015Q1. See text.

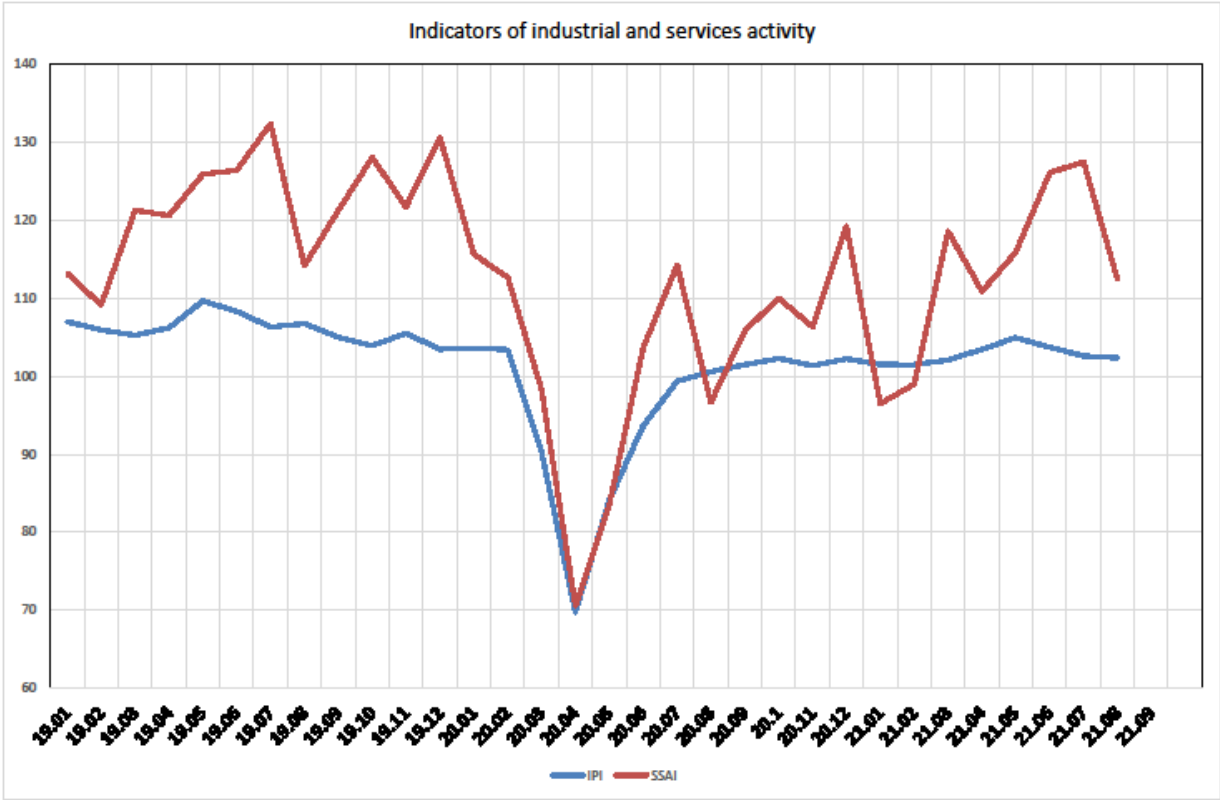
Monthly dating

Starting with this report, the Committee will begin issuing dates of peaks and troughs at monthly frequency. In order to do this, the Committee will examine a variety of monthly indicators. These are displayed in Figure 4, 5, and 6.

Figure 4 displays the industrial production index (IPI) along with the activity index for services (IASS). Both series obtained a minimum value of around 70 in April 2020, but by May both indices had largely recovered to pre-recession levels. Figure 5 displays the Purchasing Managers Index (PMI), which displays the same patterns as those observed in Figure 4. Finally, Figure 6 shows the series of workers enrolled in Social Security (Afiliados), a proxy measure of

employment available at monthly frequency. As is common in labor market indicators for Spain, there is some delay relative to other measures of economic activity and therefore, the trough takes place in June 2020. The Committee usually adjusts for this well-known delay.

Figure 4. Industrial production and service activity indices



Notes: IPI refers to the industrial Production Index and IASS refers to the Index of Activity in the Service Sector.

In addition to these indicators, the Committee took into consideration an additional measure motivated by the health crisis: mobility. Several sources have developed mobility indicators, which are not only useful to track virological dynamics since mobility is correlated with economic activity. In the Appendix, the Committee plots mobility indicators provided by INE (the Institute of National Statistics), and by Google. Though not directly a measure of economic activity, these indices tend to corroborate the restart of economic activity with the restart of mobility.

Based on the evidence provided by the quarterly and monthly indicators in conjunction with the indices of mobility, **the Committee dates the recent trough of economic activity in April 2020.**

Conclusion

The recession caused by the COVID-19 pandemic will be remembered as one of the shortest, yet sharpest and globally widespread in modern financial history. The sudden stop in economic activity due to confinement measures introduced to slow down the spread of the virus generated dramatic declines in economic activity in the first two quarters of 2020. As confinement measures began to be relaxed, economic conditions improved almost as dramatically.

Taking the evidence previously discussed into consideration, **the Committee dates the trough of economic activity in the second quarter of 2020 at quarterly frequency, and in April 2020 at monthly frequency.**

The members of the Spanish Business Cycle Dating Committee involved in this decision are: Máximo Camacho, Universidad de Murcia (President of the Committee); María Dolores Gadea, Universidad de Zaragoza; Jesús Gonzalo, Universidad Carlos III de Madrid; Òscar Jordà, Federal Reserve Bank of San Francisco & University of California, Davis; Eva Ortega, Banco de España; and Juan Rubio-Ramírez, Emory University.

Figure 5. Purchasing Managers' Index (PMI)

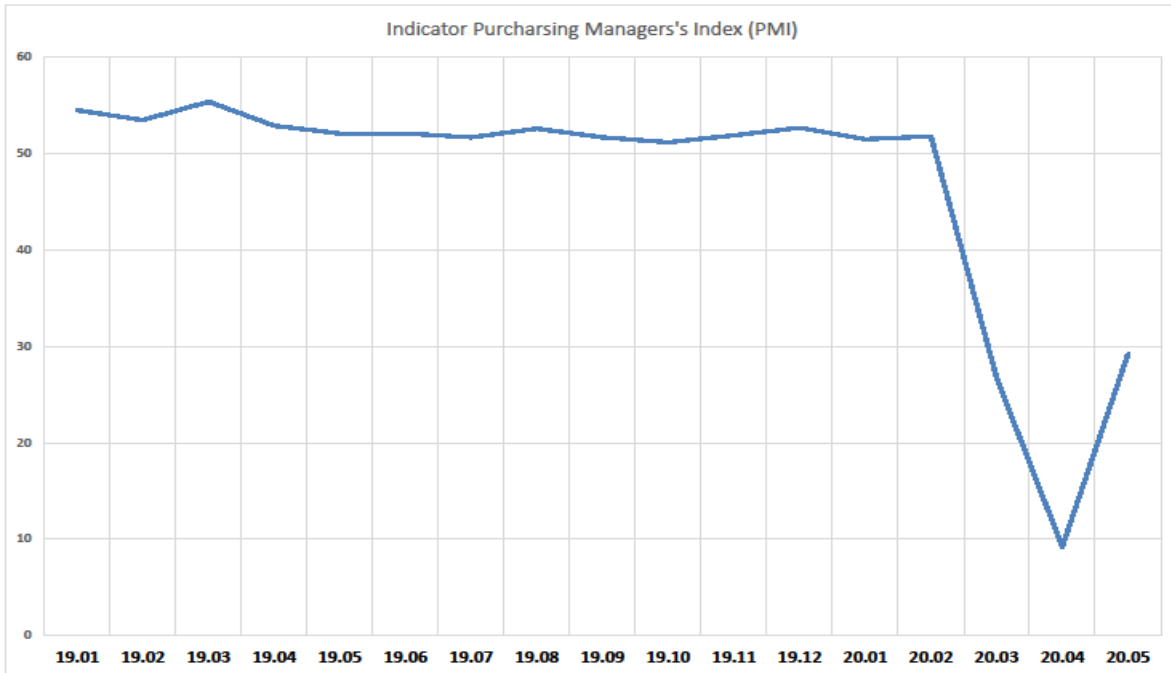
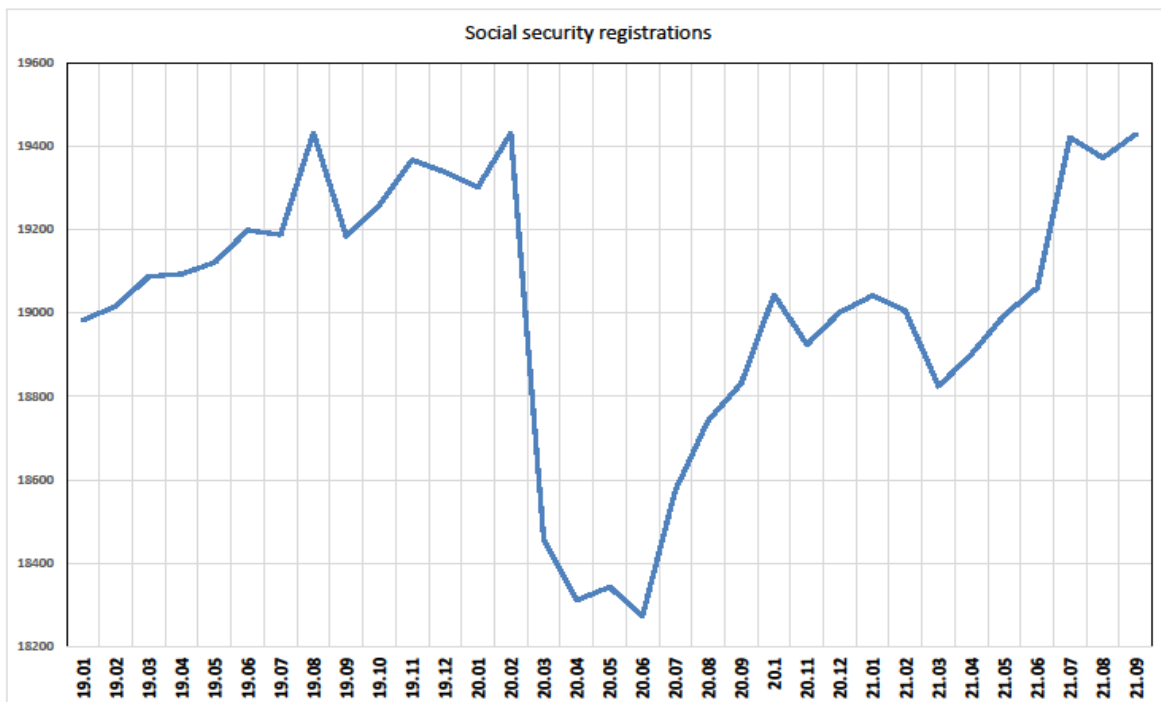


Figure 6. Workers enrolled in Social Security (Afiliados)

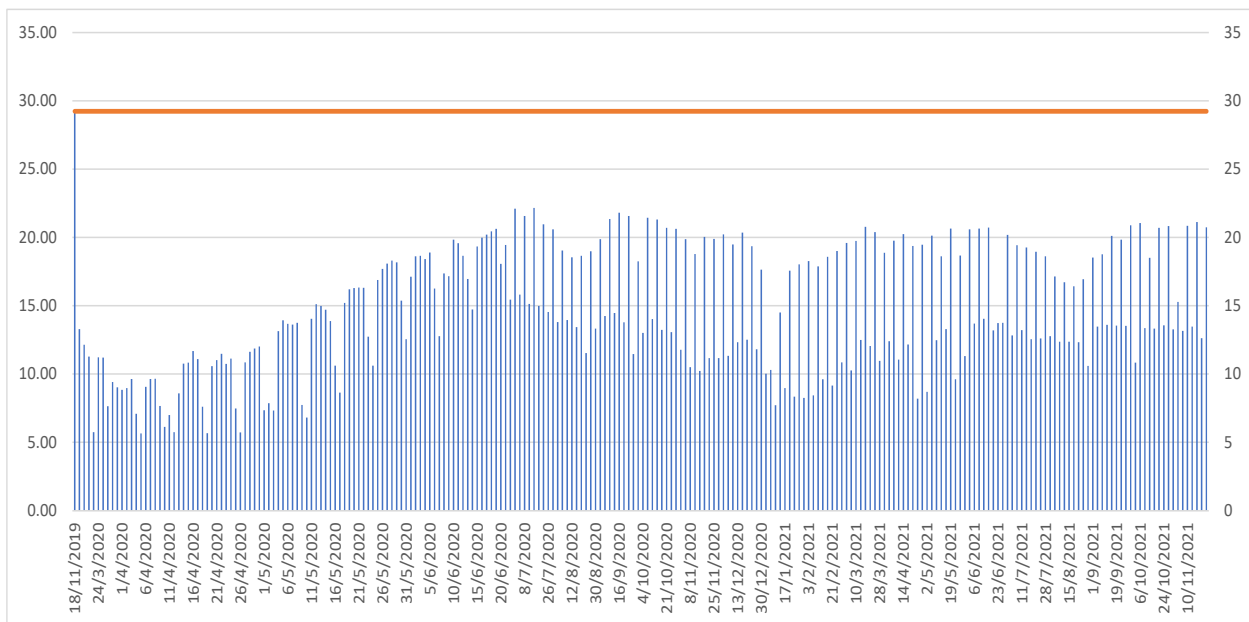


Notes: Expressed in thousands of workers. See text.

Appendix. Mobility during the pandemic

The Institute for National Statistics (INE) constructed a mobility index by analyzing data from cell-phones. Using these data, INE were able to determine the percentage of users that remained in their area of residence versus those that moved outside it. The result is displayed in Figure A1.

Figure A1. INE mobility index based on cell-phone data



In order to have a reference point with which to compare the data during the start of the pandemic and to understand the effect of confinement measures on mobility, one can look at the average mobility between Monday November 18 and 21 of 2019. The start date can be read from the Figure as 18/11/2019. The data are somewhat noisy due to seasonal effects and other factors. As a result, there is not a clear demarcation of when confinement measures were introduced and subsequently eased.

Hence, we then looked at data provided by Google in “Informes de Movilidad Local sobre el COVID-19” as it is known in Spanish. This report shows time series of mobility broken down by places, such as commercial and leisure areas; supermarkets and pharmacies; parks; bus and train stations; workplaces; and residential zones.

The data displayed in Figure A2 show the share of visitors to each area relative to the norm. The norm is determined using historical data for each weekday using 5 weeks between January 3 and February 6, 2020, before confinement measures were introduced.

Figure A2. Google indices of mobility by area

