

DEVELOPMENTS IN THE PROJECTIONS OF THE MAIN MACROECONOMIC VARIABLES IN 2020

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The emergence of COVID-19 prompted a drastic change, from March 2020, in the paths of the main macroeconomic variables, such as GDP, employment and the unemployment rate. These sudden developments completely altered the outlook for these aggregates, which also became subject to an exceptionally high level of uncertainty. This led the Banco de España, and other institutions, to draw up alternative scenarios, in which the paths of the different variables were shaped by various sets of assumptions as to the intensity of the COVID-19 outbreaks or when a medical solution would become widely available.

Shaping outlooks to certain assumptions about the trajectory of specific variables is not new. Projections are often based on concrete assumptions about the course of oil prices or fiscal policy measures, for example. What has been unprecedented since the emergence of COVID-19 is that the projected path of macroeconomic variables has been subject to the hypothetical materialisation of certain epidemiological assumptions.

Uncertainty was especially high during the spring of last year, driven in particular by the difficulties in estimating the effects of the restrictions on mobility and economic activity (in March and April) and of the subsequent gradual lifting of these measures (in May and June). In this context, the three scenarios published by the Banco de España in April envisaged average falls in GDP in 2020 of -6.8%, -9.5% and -12.4%, respectively.¹ The three scenarios published in June projected GDP declines of -9%, -11.6% and -15.1%.²

In the second half of the year uncertainty lessened for several reasons, the first of which was the shorter time period remaining until year-end. The greater knowledge about the relationship between the lockdown measures and activity also had an effect, as did even the perception that it was increasingly unlikely that another lockdown as stringent as that imposed in the spring would be needed.

All this was reflected in a significant narrowing in the gap between the rates of decline of GDP projected under the most extreme scenarios. Specifically, the two September scenarios foresaw GDP decreases of -10.5% and -12.6%, while the three December scenarios envisaged falls of -10.7%, -11.1% and -11.6%.³

Chart 1 shows the changes over the year in these GDP projections, together with the latest estimate (-11%). As can be seen, the decline in economic output in 2020 was at the mid-point between scenarios 2 and 3 published in April (around 1.5 pp off in each case) and 0.5 pp below the rate projected under the gradual recovery (intermediate) scenario published in June. It was closer to the more benign of the two scenarios published in September and was practically the same as the December baseline scenario. In any event, aside from the high degree of uncertainty about the size of the decline in GDP, no systematic bias of either sign is detected in the projections, which broadly speaking include positive and negative differences vis-à-vis the latest figure available.

Chart 2 shows a similar comparison for employment projections, measured in terms of number of hours worked. This variable was chosen to measure changes in employment in 2020, as opposed to employment in terms of numbers of people or full-time equivalent jobs, because the latter were distorted owing to the high number of workers furloughed under the short-time work scheme, who are classified for statistical purposes as employed even when they are not contributing to economic output.

As the chart shows, the difference for 2020 as a whole between successive projections of hours worked and the latest figure available (decline of -10.4%) showed a somewhat more negative bias than in the case of GDP. In other words, given the behaviour of activity, either the number of hours worked tended to be underpredicted or the trajectory of this variable was more favourable than that inferred from its historical relationship with GDP.

1 See "Reference macroeconomic scenarios for the Spanish economy after COVID-19", Analytical Articles, *Economic Bulletin 2/2020*, Banco de España, for which the cut-off date was 13 April. In addition to the three scenarios mentioned (prepared with help from the Quarterly Macroeconomic Model of the Banco de España), this publication included three further scenarios for 2020. These envisaged declines in GDP of -6.6%, -8.7% and -13.6% and were constructed drawing on alternative assumptions about the lockdown measures in the year and their impact on each productive sector.

2 See "Macroeconomic projections for the Spanish economy (2020-2022): the Banco de España's contribution to the Eurosystem's June 2020 joint forecasting exercise", for which the cut-off date was 25 May.

3 See Box 1 "Macroeconomic scenarios for the Spanish economy (2020-2022)" in the "Quarterly report on the Spanish economy", *Economic Bulletin 3/2020*, Banco de España, and "Macroeconomic projections for the Spanish economy (2020-2023): the Banco de España's contribution to the Eurosystem's December 2020 joint forecasting exercise", for which the cut-off dates were 10 September and 25 November, respectively.

DEVELOPMENTS IN THE PROJECTIONS OF THE MAIN MACROECONOMIC VARIABLES IN 2020 (cont'd)

Chart 1
FORECAST ANNUAL CHANGE IN GDP IN 2020 UNDER THE DIFFERENT SCENARIOS

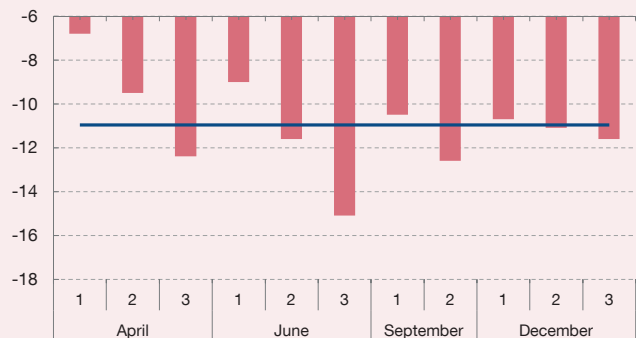
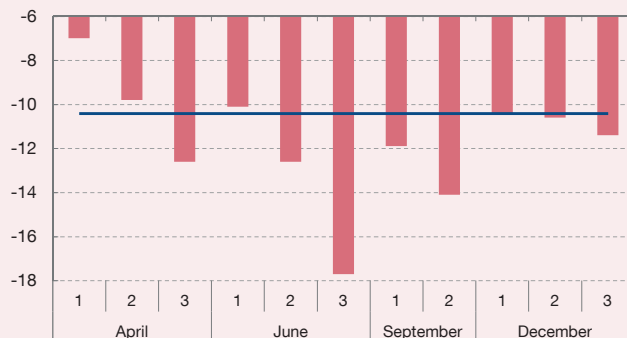


Chart 2
FORECAST ANNUAL CHANGE IN HOURS WORKED IN 2020 UNDER THE DIFFERENT SCENARIOS



FINAL FIGURE

Chart 3
QUARTER-ON-QUARTER CHANGE IN HOURS WORKED

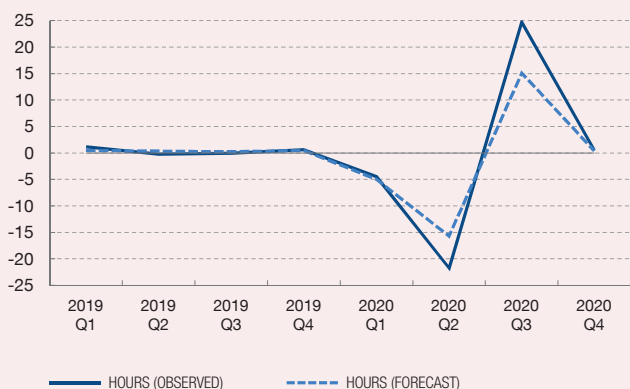
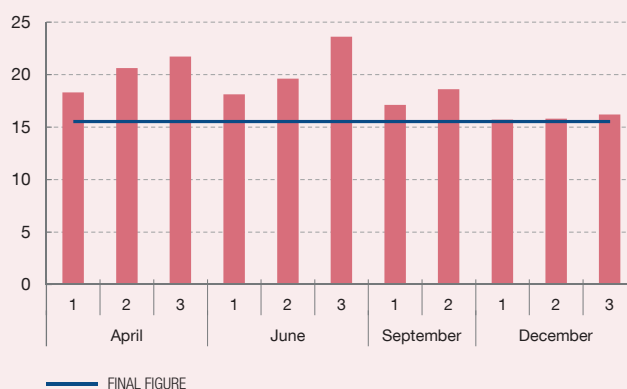


Chart 4
FORECAST UNEMPLOYMENT RATE IN 2020 UNDER THE DIFFERENT SCENARIOS

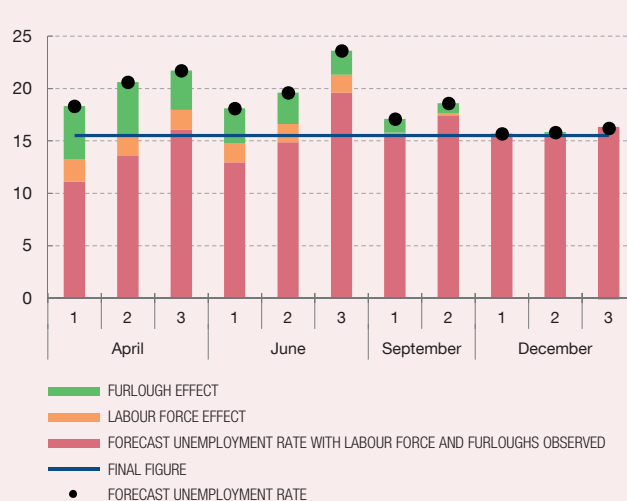


FINAL FIGURE

Chart 5
LABOUR FORCE



Chart 6
FORECAST UNEMPLOYMENT RATE IN 2020 UNDER THE DIFFERENT SCENARIOS



SOURCES: Spanish Labour Force Survey (INE), Quarterly National Accounts (INE) and Banco de España macroeconomic projections.

Chart 3 sheds some light in this respect. As the chart shows, the sensitivity of hours worked to GDP was higher than the historical relationship between the two variables would warrant, both in Q2 (negative difference) and Q3 (positive difference).⁴ However, in absolute terms, the positive difference in Q3 is twice the negative difference in Q2. This confirms that, for the year as a whole, the number of hours worked was more favourable than was to be expected according to GDP growth,⁵ considering the historical relationship between the two variables.

Lastly, in the case of the unemployment rate, there was a systematic overprediction throughout 2020, with the sole exception of the December projections when the year was almost at its close (see Chart 4). Thus, for example, the three scenarios published in April envisaged average unemployment rates in 2020 of 18.3%, 20.6% and 21.7%, compared with the final figure of 15.5%. So what are the reasons for such significant deviations which, moreover, also appeared in other institutions' projections?⁶

There are two main reasons, the first of which is the unexpected sharp fall (by more than one million people) in the labour force in Q2. This stems from the fact that the Spanish Labour Force Survey (EPA) classified as economically non-active a very large number of people who, although unemployed and available for work, were unable to actively seek work in Q2 because of the lockdown restrictions (see Chart 5).

The second reason is connected with one of the typical characteristics of the process of preparing macroeconomic projections, namely, as is explained above, the fact that they are dependent upon certain assumptions. Specifically, in the case of economic policy measures, only those measures that have already been approved are included in the projection exercises. For this reason, the successive scenarios drawn up by the Banco de España only included the extensions to the short-time work schemes as and when they received Government approval. Thus, for instance, the duration of the schemes considered in the April scenarios coincided with the duration of the first state of alert, while the duration of those considered in the

scenarios published in June, September and December 2020 was limited by the duration approved (i.e. up to 30 June 2020, 30 September 2020 and 31 January 2021, respectively). Accordingly, each of the extensions prolonged the period of time in which a large number of workers remained under these short-time work schemes. Given that the EPA criteria used to classify persons according to their employment status do not consider furloughed workers to be unemployed, this has, for the full year, a direct positive impact on employment figures (in number of persons) and a direct negative impact on unemployment rate figures.

Chart 6 depicts the successive unemployment rate projections (shown in Chart 4) broken down by the effects of the two above-mentioned factors plus a third residual element. This last component (the red section in each bar) depicts what would have been the unemployment rate projection at each time and under each scenario had the assumptions on the labour force and furlough scheme extensions in 2020 coincided with actual developments.

Broadly speaking, the chart shows that the unemployment rate projections made in the baseline scenarios of the different projection exercises would have been closer to the final level observed had the overprojection bias been eliminated. This is especially true in the first half of the year, before the unexpected fall in the labour force and successive furlough scheme extensions were known.

The drop in the labour force in 2020 Q2 is an extraordinary factor which, as indicated above, was linked to the strict lockdown in the first state of alert. There is, therefore, no reason why a similar trend should be observed in 2021. The unemployment rate projections for this year included in the scenarios published by the Banco de España in this report are based on the assumption that, in accordance with current legislation, the short-time work schemes will last only until the end of May. However, the impact on the unemployment rate of a hypothetical extension beyond that date would, in principle, be lower than in spring 2020, as the number of furloughed workers is much lower than the peak recorded in April 2020.

4 The exercise conducted consisted of a regression, using seasonally-adjusted quarterly rates, of hours worked to GDP for the period 1995-2019, allowing for different values of the GDP ratio and the regression constant in growth periods and recessions.

5 As indicated above, furloughed workers under the short-time work schemes are considered to be employed. Given that these schemes have been much more widely used in this crisis than in the past, replicating this exercise for employment measured in numbers of persons would result in a much larger correction to this variable in accordance with its historical relationship with GDP (-8.2%) than that actually observed (-4.2%).

6 For example, the mean of the average unemployment rate projections for 2020 in the Forecast Panel published by FUNCAS (*Panel de previsiones de la economía española*, Spanish version only) in May 2020 was 20.2%.