

The Inequality Tracker uses big data technology to analyse inequality in Spain

CaixaBank Research launches the world's first tracker to measure inequality in real time

- ***This public-private collaborative initiative has been developed by a team of researchers from the Pompeu Fabra University, the Institute of Political Economy and Governance (IPEG) and CaixaBank Research.***
- ***The aim of this Inequality Tracker is to provide information about the impact of the COVID-19 crisis on Spanish homes and, especially, on the most vulnerable groups of society.***
- ***The first results reveal that the COVID-19 crisis would have led to a steep rise in inequality if the public sector's activity had not cushioned, in part, the effect.***

Barcelona, 16 November 2020

CaixaBank Research launches the world's first tracker to measure the evolution of economic inequality and the role of the welfare state in Spain in real time. The aim of this Inequality Tracker is to provide information on the impact of the COVID-19 crisis on Spanish homes and, especially, on the most vulnerable groups of society, as well as contribute to the debate on the effectiveness of the public sector's protection mechanisms.

The initiative, pioneering on a global scale, is the result of a public-private collaboration between a team of researchers from the Pompeu Fabra University, the Institute of Political Economy and Governance (IPEG) and CaixaBank Research.

One aspect that makes the launch of the Inequality Tracker especially relevant is that social inequality data is currently published with a delay of several years. However, the Inequality Tracker has been able to extract and interpret inequality data in real time, becoming the first project worldwide to obtain and immediately publish results. In addition, the data obtained allow the segmentation of results by income level, gender, age, place of origin, geographical characteristics of the place of residence and autonomous region of residence, thus offering an unprecedented level of detail.

The results will be published monthly on an open access platform (www.inequality-tracker.caixabankresearch.com), where the evolution of inequality will be tracked using interactive charts. Furthermore, the data will be downloadable to facilitate their analysis and

distribution, and the platform will feature all the technical and informative articles published by the team of researchers on the inequality analysis.

Big data technology to analyse inequality in Spain

One of the more relevant aspects that distinguish this Tracker from other projects is that it employs big data technology to analyse the evolution of approximately 3 million salaries, duly anonymised. This technology allows for the management of the huge volume of available information to obtain a precise and representative estimate of society's distribution of wages and their evolution throughout time. It also permits detailed analysis of the impact that the crisis is having on different subgroups.

In order to measure the evolution of economic inequality, different indicators and variables have been considered. The most pertinent one is the monthly distribution of wage income before and after the transfers provided by the public sector, segmented by population group (gender, age, geographical characteristics of the place of residence, and country or region of origin).

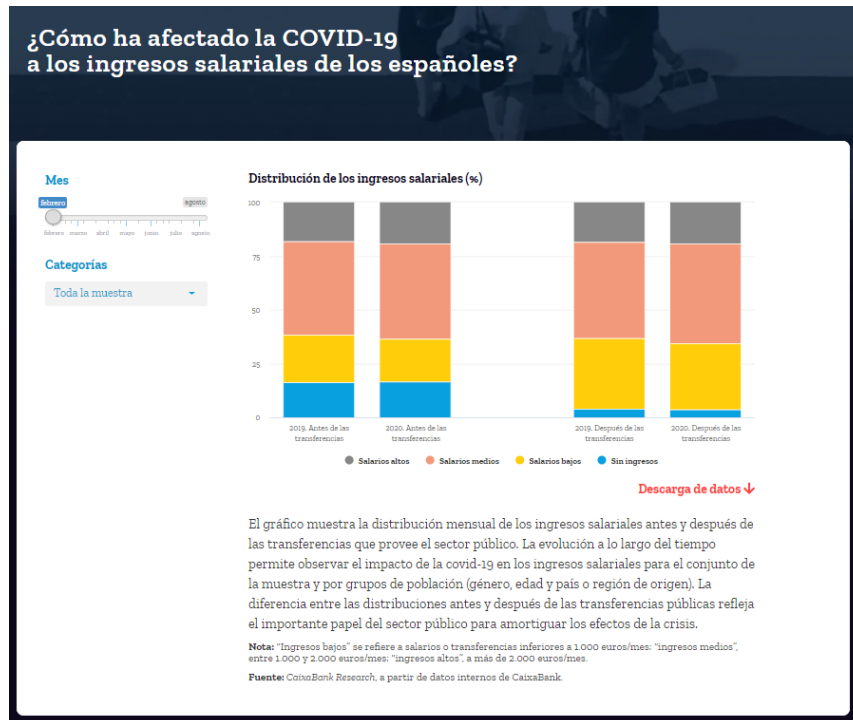
The monthly evolution of the Gini index -an economic measure used for calculating income inequality- before and after the public transfers is also considered for the whole of Spain and by group of population (gender, age, country or region of origin, geographical characteristics of the place of residence and autonomic region of residence).

The first results

The Inequality Tracker's first results, which were published this month of November and which CaixaBank Research includes in the dossier of its [Monthly Report](#), reveal that the COVID-19 crisis would have led to a steep rise in inequality if the public sector's activity had not cushioned, in part, the effect. They also show that the high levels of inequality registered at the height of the crisis (April and May) started to drop gradually thanks to the upturn in activity.

However, the data obtained also conclude that the impact of the crisis is not the same among different groups of society: it is especially marked among people who already had low income prior to the pandemic. Between the months of February and April, the percentage of people without income increased by 15 percentage points, a third of the people with low income (wages or transfers under 1,000 euros) lost their income, and a third of the people with medium income (between 1,000 and 2,000 euros) received a lower income (13% became part of the lower income group and 20% lost their income). A substantial proportion of the high-income group (over 2,000 euros) also experienced a drop in their income, although most

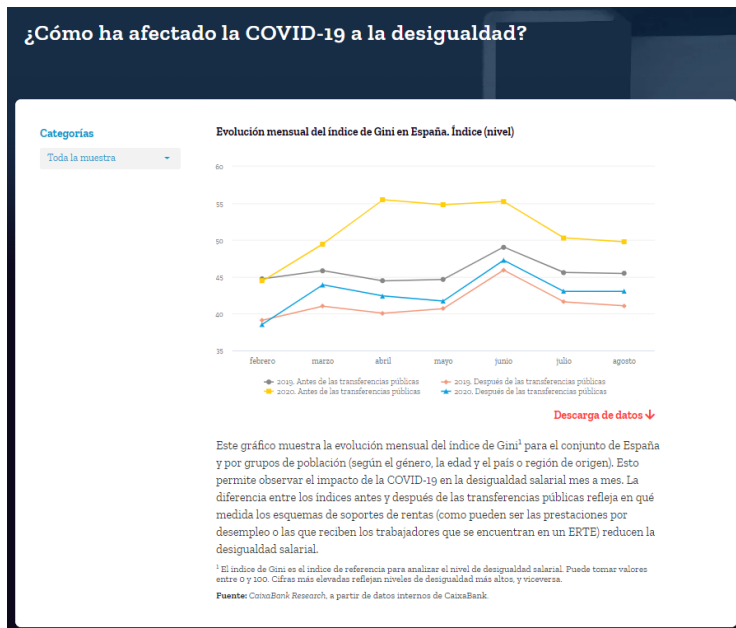
of them became part of the medium income group (20%). During May, and especially as of June, the easing of lockdown measures significantly spurred economic activity and had an effect on the distribution of income: the proportion of people without income considerably dropped and the higher wage groups regained further weight, particularly the higher and medium income groups.



The impact of the public sector's transfers

However, when considering the public sector's transfers in the income distribution's evolution, the figures change significantly and unveil the crucial role that these transfers are playing in dampening the severity of the crisis. Thus, the percentage of people without income increased by 7 points between February and April, whereas it is 15 points if the public transfers are not considered. In other words, the public sector's transfers covered almost half of the people that stopped receiving a wage income between February and April. These public transfers had a particular impact on people that lost their job that had a medium income before the pandemic, covering 66%, while they covered 27% of people with low income.

When considering the Gini index, the results are also revealing: before the public sector's transfers, the index shows a very strong upturn (11 points) between February and April, whereas after the transfers it remains more stable in time and "only" rises 2 points between February and August.



Young people between 16 and 29 , one of the groups suffering the most

With regard to the effects of the crisis per group, the analysis concludes that young people between 16 and 29 years of age, who already had a much lower income level than older people, is one of the groups that is suffering the most: 42% of young people that had a medium income level before the pandemic became part of the low income group or lost their income and, among those who had low income, 44% lost their income. Again, when considering public sector transfers, the increase of people losing their income is cut by half (11.8 pp in the case of young people).

The impact of the crisis is also affecting more those born abroad: as in the case of young people, immigrants present a distribution of income biased towards the lower income groups, which are suffering most from the crisis. Without taking into account the public sector transfers, the number of people born abroad with no income rose by 21 pp between February and April (10.2 pp after the transfers).

According to the Tracker, the crisis has made no distinction between gender in terms of inequality, whereas it is starker in the urban areas than in the rural areas of Spain. At a regional level, the results show that in spite of the strong and generalised increase of inequality in all autonomous regions, the rise was especially high in the Balearic and Canary Islands, two regions in which tourism has a particularly large weight in the economy. However, when bringing the public sector's transfers into the mix, the differences between autonomous regions are significantly lower.