

# Income and employment losses during the COVID-19 pandemic and the financial situation of households: evidence from the EFF

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## Rationale

Drawing on the Spanish Survey of Household Finances (EFF), this article analyses the relationship between the losses of employment or reductions in labour income caused by COVID-19 and the Spanish population's financial position, uncertainty and life satisfaction.

## Takeaways

- Between 2019 and end-2020, uneven declines in labour income were observed among individuals affected by job retention schemes, lay-offs or business closures, although public assistance mitigated the most pronounced falls.
- Between 2017 and 2020, the relative fall in spending on non-durable goods was 6-10 percentage points higher among those affected by such circumstances, reflecting broad-based increases in uncertainty about their future income.
- Compared with the unaffected group, levels of indebtedness rose most markedly, and increases in net wealth were most subdued, among those who experienced more protracted job or income losses.

## Keywords

COVID-19, income, wealth and debt distribution, public policy.

## JEL classification

D31, H31, J63.

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## Introduction

More than three years on since the COVID-19 pandemic began, its short and medium-term effects on activity and employment have been widely documented, drawing on both aggregate sources and more disaggregated data.<sup>1</sup> However, the absence of disaggregated data on household income, spending, debt and wealth has hindered analysis of the financial position of those households whose employment and labour income were affected by the pandemic containment measures.<sup>2</sup> The 2020 Spanish Survey of Household Finances (EFF by its Spanish acronym)<sup>3</sup> was the seventh wave of this survey and provides a representative and updated picture of the composition and distribution of household wealth, debt, income, spending and expectations at end-2020,<sup>4</sup> i.e. nine months after the pandemic broke out. As a result, all of these dimensions can be analysed together in an extraordinary context. Furthermore, the 2020 EFF questionnaire included an extra section to gather granular, backward-looking information on the losses of employment or labour income suffered by members of the household as a result of the pandemic.

This article analyses the relationship between the losses of employment or labour income experienced by Spanish households as a result of the pandemic and changes in their income, spending, perceived uncertainty and financial position between 2017 and 2020 (the years of the last two waves of the survey). The longitudinal dimension of the survey is used to explore this relationship, by building a panel sample of 3,552 individuals from both waves. Thus, developments in the variables of interest between 2017 (prior to the pandemic) and end-2020 (after the most acute phase of the pandemic) can be analysed, drawing a distinction between individuals whose employment and labour income were affected by COVID-19 and those who were unaffected. In addition, in the case of income, the data available in the 2020 EFF allows a comparison to be drawn between the reported monthly income referring to the last few months of 2020 with monthly income in 2019 (computed from the figure for 2019 as a whole).<sup>5</sup>

In the EFF, losses of employment or of labour income are measured at the individual level, while other variables of interest, such as perceived uncertainty, spending levels and financial position, refer to the household as a whole. Accordingly, each member of the household constitutes one observation, even though some of the variables analysed relate to the

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1 The effect on labour force participation and unemployment is studied, for example, in Izquierdo, Puente and Regil (2021), gender differences are examined in Farré, Fawaz, González and Graves (2022) and Gómez, Hospido and Sanz (2021), and the economic effects of a possible deterioration in health are considered in Hurtado and Izquierdo (2023).

2 See Crossley, Fisher, Low and Levell (2023) for an analysis of the United Kingdom.

3 More information on the EFF can be found on the survey [website](#).

4 The data were collected between November 2020 and June 2021, although the survey reflects the situation of households at end-2020.

5 Specifically, the 2020 EFF provides granular information on the different income sources relating not only to the time of the interview (end-2020) but also to the calendar year prior to the survey (2019).

household. All of the data, both those for the household as a whole and those referring to each of its members, are provided by the questionnaire respondent, who is the person most familiar with the household's finances.

## Losses of employment or income during the pandemic

As we have seen, the 2020 EFF provides granular information on the losses of employment and labour income suffered by the household members as a result of the pandemic and the related containment measures. Respondents were asked about different types of employment shocks, such as losing their job due to dismissal or business closure, or keeping their job but suffering temporary reductions in labour income (whether partial or in full), which could include being placed on job retention schemes. Such losses of employment or income were relatively prevalent, affecting 28% of economically active individuals aged 18 to 64 during the period in question. The 2020 EFF also compiled information on whether these losses lasted for more or for less than six months. Of the above-mentioned 28% who were affected by such losses, about half were affected for more than six months.

Lastly, by type of employment or income loss, 44% of those affected had their contracts temporarily suspended as part of job retention schemes, 26% lost their job due to dismissal or business closure, and the remaining 30% suffered temporary total or partial reductions in income unrelated to job retention schemes or job loss.<sup>6</sup> In terms of duration, and by type of employment shock, most job losses lasted for more than six months, whereas the majority of contract suspensions under job retention schemes lasted for less than six months.<sup>7</sup> Among those who experienced temporary losses of labour income but kept their job, the percentage affected by this situation for more than six months was similar to those affected for less than six months.

## Changes in households' financial situation

To assess the relationship between losses of employment or income and changes in the situation of individuals and households, a comparison is drawn, for the unaffected and affected groups, between developments in their income, spending, perceived uncertainty, indebtedness and wealth and their reported level of satisfaction. Furthermore, for the affected group, the analysis distinguishes between the two dimensions considered in the previous section. First, the differences in the variables of interest by duration of the employment shock (more or less

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6 According to social security data, 3.5 million registered workers were on COVID-19-related job retention schemes at end-April 2020, while that figure was 2.6 million at the end of May (<https://www.seg-social.es/wps/portal/wss/internet/EstadisticasPresupuestosEstudios/Estadisticas/EST8/22bfb5ae-8eba-4c44-a258-93a26194e11b>). The backward-looking data on losses of employment or reductions in labour income compiled by the 2020 EFF show that 2.5 million economically active individuals were affected by job retention schemes. The difference between the number calculated from the survey and the social security figure for April may indicate a certain tendency not to report or to forget the earliest, very short-lived job retention schemes or to report them as another type of loss.

7 Specifically, 63% of those who lost their jobs were affected for more than six months, compared with 38% for those placed on job retention schemes.

than six months) are analysed. Second, a distinction is drawn based on the type of income or employment shock: job loss, job retention scheme or temporary loss of income while maintaining employment.<sup>8</sup>

## Changes in income

During the pre-pandemic period (2017-2019), median monthly labour income at individual level increased by around 12.5%, both for those whose employment status or labour income would not subsequently be affected by the pandemic and for those who would be affected for more than six months (see Chart 1.a). However, a look at the period 2019-2020,<sup>9</sup> to identify changes during part of the first year of the pandemic,<sup>10</sup> reveals very different developments. For unaffected individuals, median monthly labour income for the month of the interview was 1.07% higher than monthly labour income in 2019. By contrast, those affected by loss of employment or income for more than six months experienced a drop of 55%. Furthermore, monthly labour income increased by around 2% for those affected by loss of employment or income lasting less than six months.

Differentiating between those who lost their job, those who kept their job but with reduced income and those who were placed on job retention schemes (see Chart 2.a), at end-2020 the median labour income of the group who lost their job, either due to dismissal or business closure, was down by 100% compared with 2019. Conversely, for those who remained in employment but with temporarily reduced income, monthly labour income at end-2020 was down by just 3.44%. Lastly, for workers affected by job retention schemes, median monthly labour income at end-2020 was very similar to that in 2019 (see Chart 2.a). These results illustrate how unevenly the different types of employment shocks translated into labour income reductions or losses.

As for the possible mitigating role of the public assistance provided to counter the effects of the pandemic, the EFF data on the different income sources can be used to construct a measure of monthly labour income including the public assistance received by each individual. In this analysis, public assistance refers to both standard unemployment benefits and the unemployment benefits associated with job retention schemes (such assistance was particularly prevalent during the first year of the pandemic). Thus, the analysis considers the support provided by both the automatic stabilisers that predated the pandemic (e.g. the standard unemployment benefits) and the discretionary measures introduced during the pandemic (e.g. the benefits associated with job retention schemes).

When the labour income of those affected by employment or income losses is measured including public assistance, the fall in median monthly labour income of those affected for more than six

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8 However, it is important to bear in mind that there may be significant compositional differences among the three groups that are not controlled for in this analysis. For instance, the percentage of self-employed workers in the group affected for a prolonged period of time is appreciably higher than in the unaffected group.

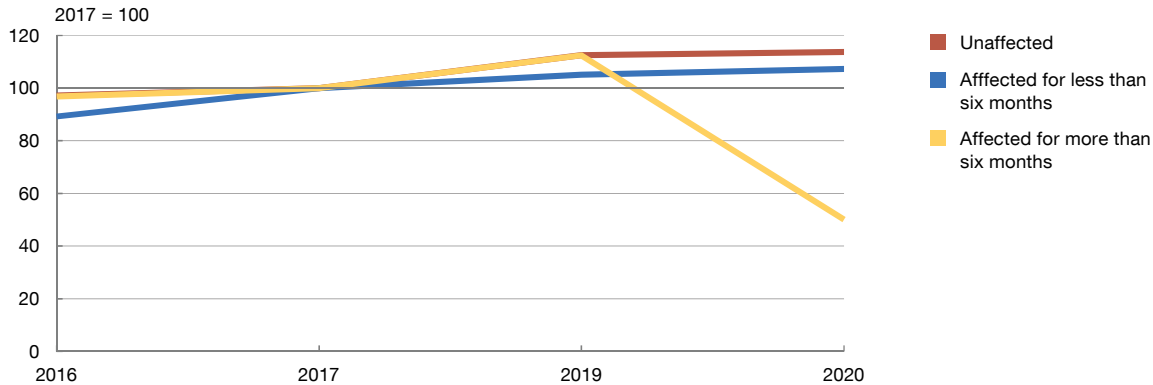
9 It is important to remember that the 2020 EFF provides granular information on the different income sources relating not only to the moment of the interview (end-2020), but also to the calendar year prior to the pandemic (2019). Thus, changes in income relative to the pre-pandemic situation can be analysed.

10 Fieldwork for the 2020 EFF took place between November 2020 and June 2021.

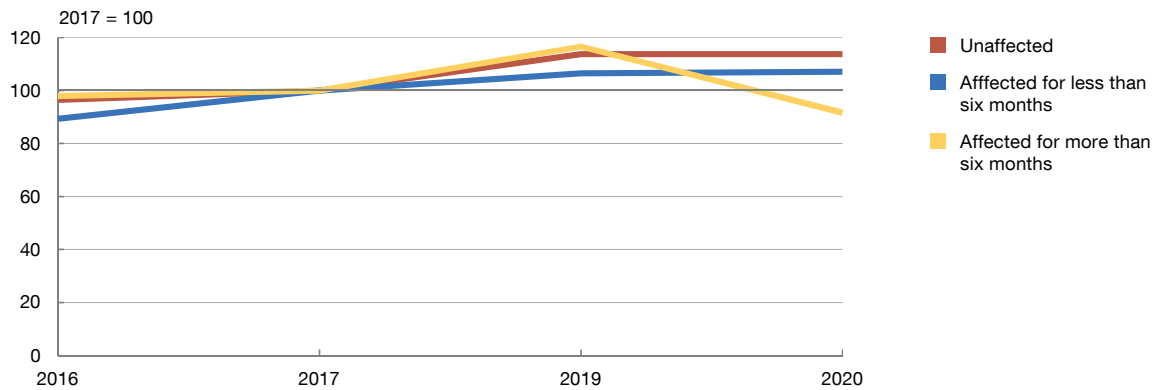
Chart 1

**Monthly income of those affected by job or income losses as a result of COVID-19, by duration of the employment shock**

1.a Monthly labour income (median) not including public assistance, by duration of the employment shock



1.b Monthly labour income (median) including public assistance, by duration of the employment shock



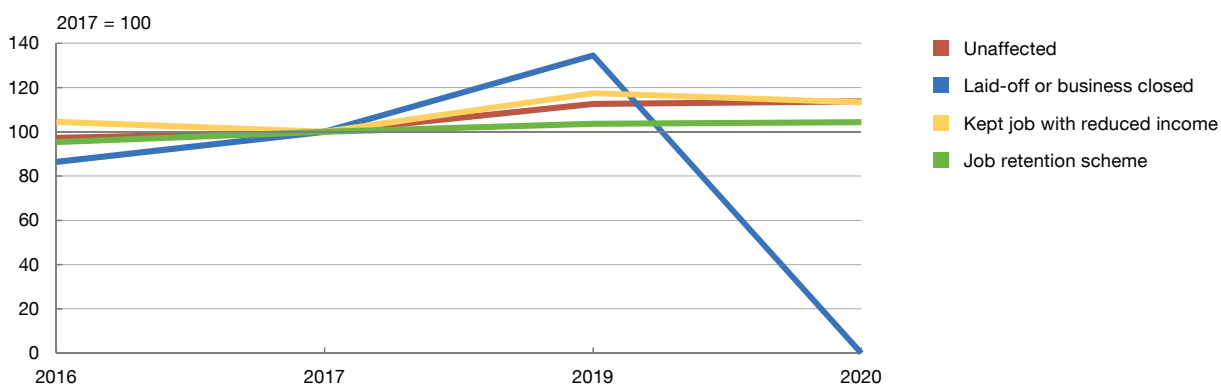
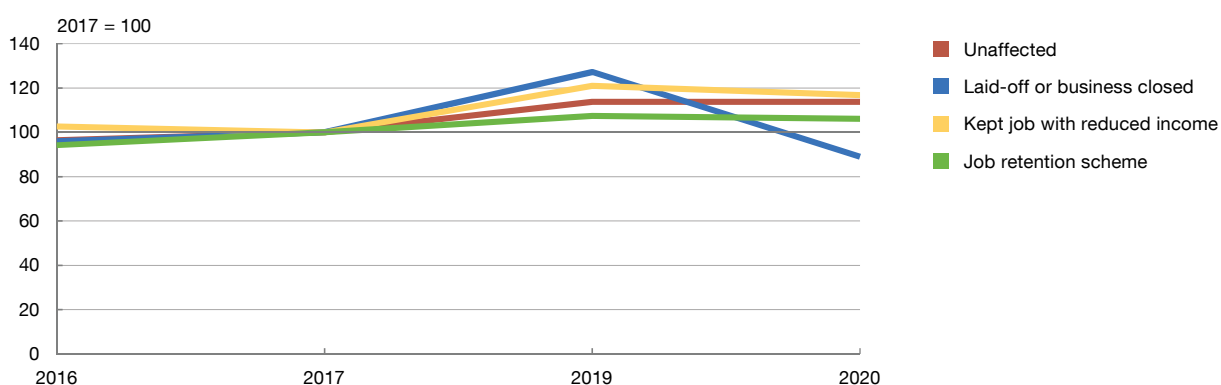
SOURCE: EFF (Banco de España).



months halves to 21%, compared with 55% when public assistance is not considered (see Chart 1.b). For those affected for less than six months the results are virtually unchanged. By type of employment or income loss, the inclusion of public assistance reduces the decrease in median monthly labour income of those who lost their job entirely from 100% to 30%, but entails no substantial changes for affected individual who kept their job (see Chart 2.b).

As mentioned above, there were two types of public assistance during COVID-19: that already available before the onset of the pandemic (such as unemployment benefits) and that implemented over the course of the pandemic (such as the improvement in job retention scheme conditions). In the case of longer-lasting losses or declines (more than six months), approximately 60% of the public assistance provided to this group was via job retention schemes and around 40% as

Chart 2

**Monthly income of those affected by job or income losses as a result of COVID-19, by type of employment shock****2.a Monthly labour income (median) not including public assistance, by type of employment shock****2.b Monthly labour income (median) including public assistance, by type of employment shock**

SOURCE: EFF (Banco de España).

unemployment benefits.<sup>11</sup> In this regard, the decline in median monthly labour income among those affected over a longer period is 55% without any public assistance measures, compared with 36.7% considering only the measures available before the pandemic and 21% considering all the public assistance measures.<sup>12, 13</sup>

11 The breakdown between discretionary public assistance and that available before COVID-19 is less informative when the analysis is conducted by type of employment or income loss, since job losses and business closures (associated with the highest median income loss) trigger automatic public assistance, such as unemployment benefits. Conversely, income losses linked to job retention schemes are associated with discretionary public assistance (the job retention schemes themselves). However, the median loss of labour income in the case of job retention schemes was very small at end-2020 (see Chart 2). In this respect, it is more informative to study the contribution of the different types of government support for the most significant income losses as a whole (i.e. for shocks lasting more than six months, regardless of the original shock).

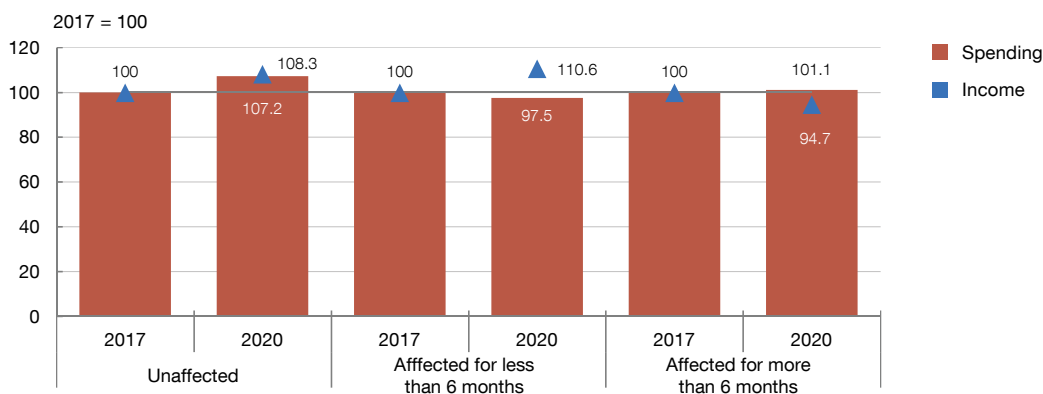
12 However, it should be noted that the calculations shown in this article are based on the median rather than the average, making it impossible to accurately infer what percentage of the protective effect of this support is attributable to each type of aid. An analysis based on the average would allow this breakdown to be calculated, but it would also be more sensitive to outliers. This is particularly important in the case of microdata and could result in the conclusions being less representative in aggregate terms.

13 The mitigating role of government support can also be seen in income inequality developments during 2000. Indeed, the ratio between the 80th and the 20th percentiles of labour income excluding public assistance would have increased from 4 to 17, whereas this same ratio including public assistance only increased from 3.4 to 4.1.

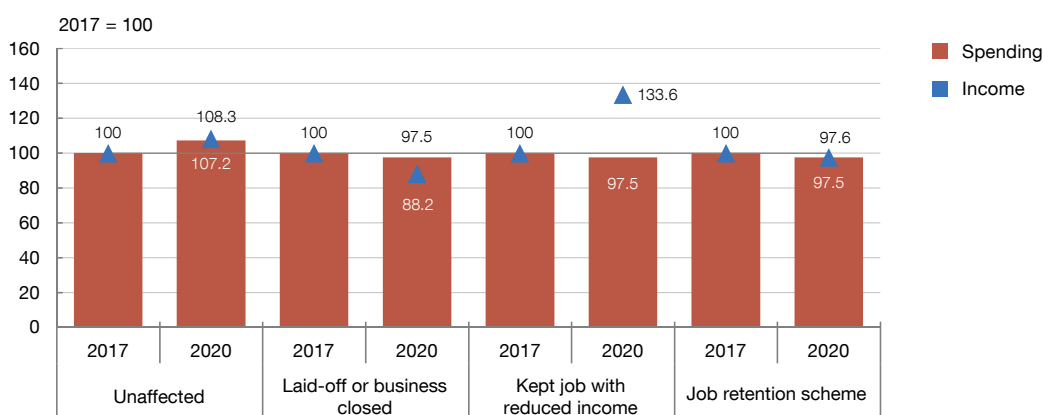
Chart 3

### Spending on non-durable goods and household income of those affected by job or income losses as a result of COVID-19

#### 3.a Median monthly spending on non-durable goods and household income, by duration of the employment shock



#### 3.b Median monthly spending on non-durable goods and household income, by type of employment shock



SOURCE: EFF (Banco de España).



## Changes in spending on non-durable goods and the role of uncertainty

This section analyses the relationship between employment and income losses and the changes between 2017 and 2020<sup>14</sup> in spending on non-durable goods and in total household income, as well as in households' uncertainty about their future income.

The median expenditure on non-durable goods declined by a moderate 2.5% in most of the groups affected by employment shocks (see Charts 3.a and 3.b), although it rose by 1.07% among those affected for more than six months. However, compared with the increase in spending by unaffected individuals (7.2%), spending by those affected for less than six months grew 10

<sup>14</sup> It should be noted that the changes for variables other than income may only be analysed between 2017 and 2020 (but not between 2019 and 2020). This is because the 2020 EFF includes information for 2019 for income but not for the other variables.

percentage points (pp) less and that by those affected for more than six months grew 6 pp less (see Chart 3.a).<sup>15</sup> It should be noted that spending between the 2017 and 2020 waves by those affected for less than six months who kept their jobs with reduced labour income declined even though their monthly labour income did not. Between 2017 and 2020, household spending for individuals experiencing different types of employment or income loss grew by around 10 pp less than that for unaffected individuals (see Chart 3.b). In short, although household income developments were heterogeneous across the different groups, all the affected groups experienced relatively similar drops in spending compared with the unaffected group.<sup>16</sup>

There is a discrepancy between the relatively homogeneous decline in spending across all affected households and the heterogeneous decline in income. One possible explanation for this is that employment and income losses drove up uncertainty for both affected and, to a lesser extent, unaffected households, leading to a reduction in spending.<sup>17</sup> To measure uncertainty, one EFF question asks households to share 10 points among five different hypothetical scenarios of household income change over the following 12 months. Thus, the households assign probabilities to each of the scenarios, revealing their expectations about their future income. Uncertainty can be measured from this information as the standard deviation of expected income growth.<sup>18</sup>

Charts 4.a and 4.b show the median values of the distribution of this measure of uncertainty for the various groups of individuals, by employment shock duration and type.<sup>19</sup> For example, while the uncertainty indicator was 3% for the unaffected group in 2020, it exceeded 5% for households affected for a longer time and by more prolonged employment or income losses.<sup>20</sup> Moreover, the levels of uncertainty about future income increased for all groups during the first year of the pandemic, especially among those affected for a longer time (+2 pp), those who lost their job or business (+1.2 pp) and those who saw a drop in their labour income despite not losing their jobs (+2.2 pp).

By duration of the labour shock, uncertainty increased less for the unaffected (+0.43 pp) than for those affected for less than six months (+0.76 pp) and those covered by job retention schemes (+0.67 pp). In this case, the differences in income and spending developments between 2017 and end-2020 may also stem from other factors (such as mobility restrictions or a more fragile financial position).

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15 Two points should be kept in mind when interpreting these patterns of spending on non-durable goods. First, for the financial variables other than income, the pre-pandemic situation considered is that corresponding to 2017 (as no information is available for 2019). Second, the 2020 EFF data were collected in the period from November 2020 to June 2021, the latter months of which saw some recovery in economic activity.

16 The divergent performance of spending and income during the pandemic was also observed in earlier studies (Alves and Martínez-Carrascal, 2023).

17 See Parker and Preston (2005) for the effect on spending of objective measures of household uncertainty and Christelis, Georgarakos, Jappelli and van Rooij (2020) for the effect of subjective measures.

18 See Arellano, Bonhomme, De Vera, Hospido and Wei (2021) for more details about this methodology. These authors show that young people and individuals experiencing episodes of unemployment or inactivity face greater uncertainty about their income.

19 The expectations analysed in this exercise are for the household as a whole and are generally reported by the respondent.

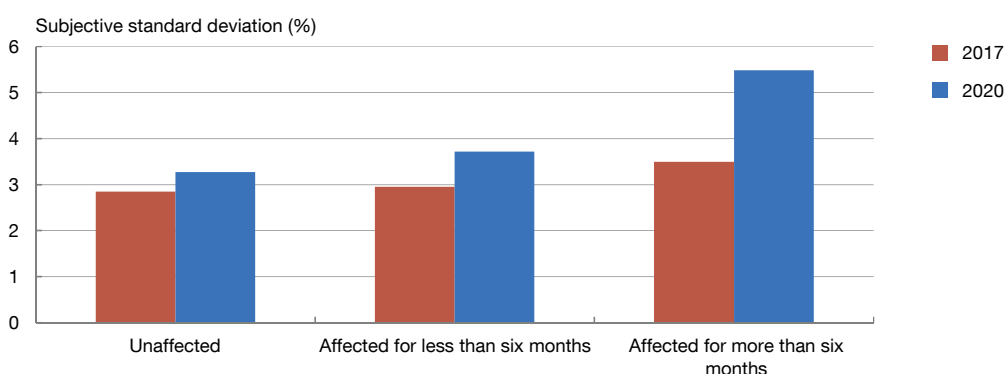
20 This means that an individual with an income of €30,000 and an uncertainty of 5% expects such income to oscillate between €28,500 and €31,500 over the next 12 months, whereas with an uncertainty of 3% it is expected to oscillate only between €29,100 and €30,900.



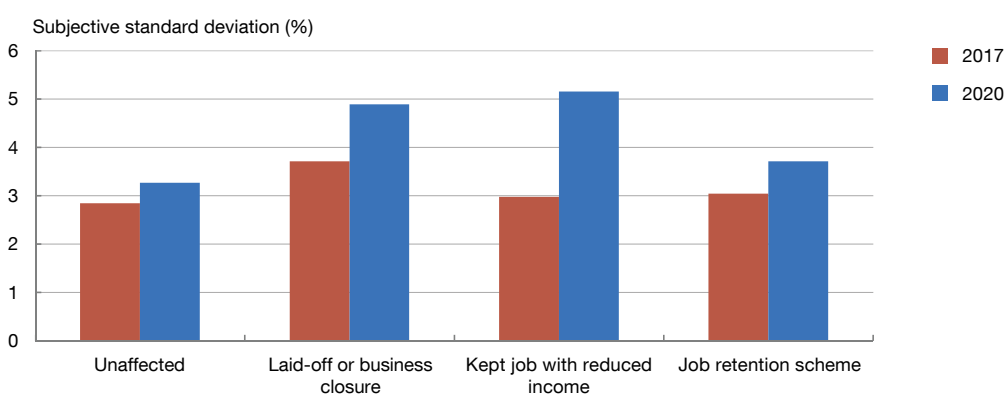
Chart 4

## Uncertainty about future income for different groups of households affected by job or income losses as a result of COVID-19

### 4.a Median uncertainty by duration of the employment shock



### 4.b Median uncertainty by type of employment shock



SOURCE: EFF (Banco de España).



## Changes in financial position and life satisfaction

As indicated above, spending by households affected by employment or income losses fell less than their income. It is therefore possible that this group supported their consumption through both savings and borrowing. Indeed, all affected groups saw increases in their median total debt, whereas the median for the unaffected group remained unchanged between 2017 and 2020 (see Chart 5.a). Of note in this regard are the increases in median indebtedness in the case of those affected for more than six months, mainly through higher non-mortgage borrowing (primarily personal loans and credit card debt).<sup>21</sup> Similarly, the percentage of households with some kind of debt among those affected for more than six months rose by 5 pp (from 72% to 77.8%), while among unaffected households it remained unchanged at 75%.

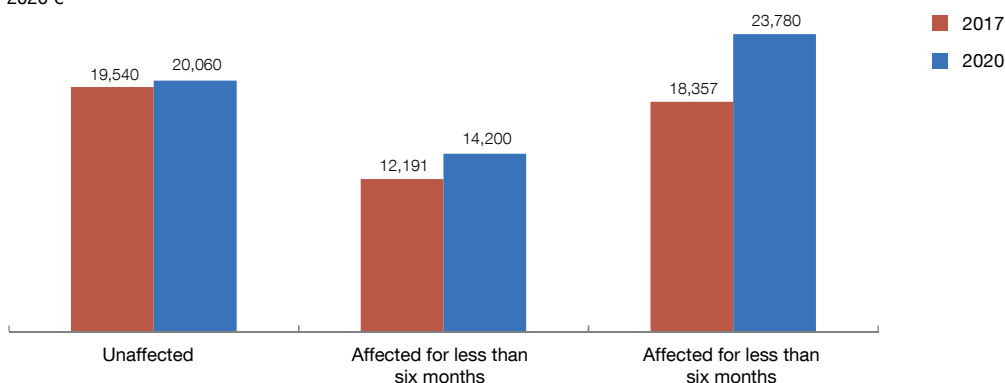
<sup>21</sup> The results by type of employment loss are less clear, given the small size of the corresponding samples. Total median debt increased among those who experienced income losses without losing their job (61%) and those covered by job retention schemes (25%). Conversely, median debt fell 38% among those who lost their jobs due to lay-offs or business closures.

Chart 5

**Total debt and net wealth of the different groups of households affected by job or income losses as a result of COVID-19**

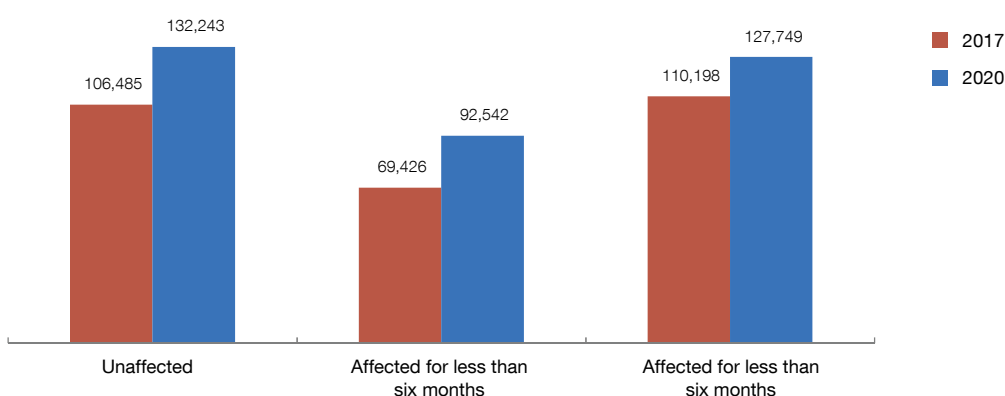
## 5.a Median total debt by duration of the employment shock

2020 €



## 5.b Median net wealth by duration of the employment shock

2020 €



SOURCE: EFF (Banco de España).

After analysing the effects on income, spending and debt, Chart 5.b shows that the change in net wealth between 2017 and 2020 was positive for all groups, albeit to different degrees. Thus, the increases observed for those affected by longer-lasting employment or income losses were 8.3 pp smaller than in the other two groups, possibly due to their growing volume of debt.<sup>22</sup>

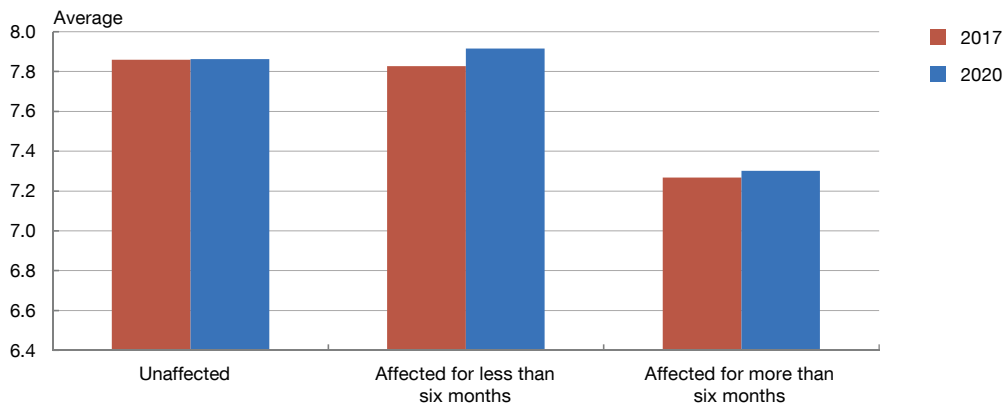
Lastly, of note among the dimensions not strictly related to the financial sphere are emotional well-being developments, proxied by the life satisfaction levels reported by survey respondents. In particular, on EFF information, the average levels of so-called life satisfaction remained unchanged between the 2017 and 2020 waves across almost all groups, and even improved in some cases (see Chart 6.a). A possible explanation for this is that a substantial share of employment and income losses lasted for less than six months and/or were mitigated by public assistance,

<sup>22</sup> Again, the results for net wealth by type of shock should be taken with caution. In general, the group of those who lost their jobs due to lay-offs or business closures recorded lower increases, mainly because of a portion of this group seeing the value of their businesses decline. Those affected by job retention schemes also experienced lower increases in average net wealth, due primarily to their higher indebtedness and a smaller increase in the value of their financial assets.

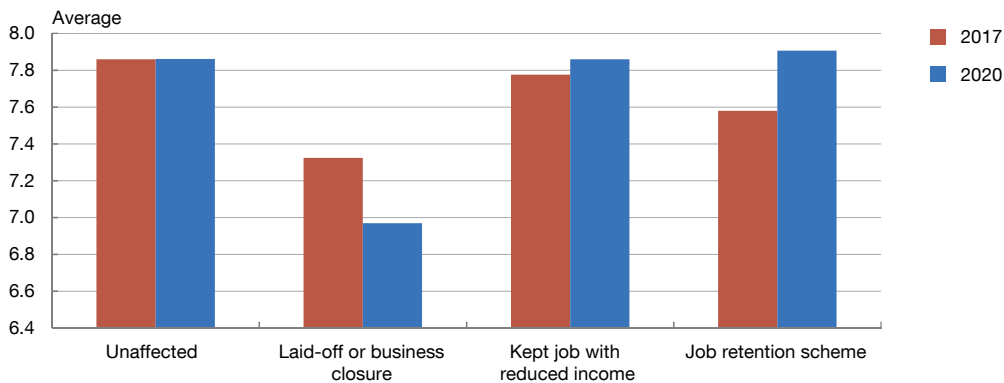
Chart 6

**Satisfaction of the reference person for different groups of households affected by job or income losses as a result of COVID-19**

6.a Life satisfaction by duration of the labour shock



6.b Life satisfaction by type of labour shock



SOURCE: EFF (Banco de España).



such as job retention schemes. Thus, only individuals who were laid off or experienced business closures reported a decline in their life satisfaction levels (see Chart 6.b), possibly because of the greater uncertainty about their future income.

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