Box 2.1

FINANCIAL BURDEN ASSOCIATED WITH THE MAIN RESIDENCE AND HOUSEHOLD CONSUMPTION

Access to credit by households may support their consumption, enhancing their level of well-being. However, the effects of household leveraging may turn negative if said level is unsustainable or if the associated debt burden is excessive. For example, the literature points out that although access to sustainable mortgages to finance the main residence may incentivise consumption, high debt burden levels are, however, associated with greater household vulnerability and lower consumption in the face of a worsening economic situation.[1]

This box provides a quantitative approximation to the impact of household indebtedness on private consumption. Specifically, it examines the relationship between the financial effort associated with Spanish households' main residence costs and their consumption expenditure. To this end, the available data from the latest waves of the Spanish Survey of Household Finances for the period 2002-22 are used.[2]

According to the more recent waves of this survey, over 60% of aggregate spending in consumption is concentrated in households with outstanding debt (Chart 1). These households' share in consumption rose from 56.1% in 2011 to 62.5% in 2022.[3] In this group approximately one-half of this expenditure corresponds to households whose main residence is mortgaged, a share that has remained relatively steady throughout the period analysed. Although the proportion of total consumption of households living in rented housing (with or without debt) is relatively low, it has increased notably, from 8.9% in 2014 to 15.6% in 2022.

An analysis follows of whether consumer spending has behaved homogeneously among households depending on their debt burden[4] and income[5] levels. Specifically, the average rates of change in real consumption per household between 2002 and 2022 (Chart 2), broken down by income tercile and by whether or not it has debt, is calculated. In the first group (households with outstanding debt) the average change in real consumption is negative for the first two income terciles, while those in the upper tercile show zero average growth. In turn, households with no debt burden show a slight upward trend or stability in their real consumption. This difference is especially marked among lower-income households, where the absence of debt translates into greater spending capacity and a more stable consumption in the face of potential economic shocks. However, as the Chart shows, there is significant dispersion regarding average growth within each group, especially among households with outstanding debt.

Additional regression exercises, aimed at explaining changes in consumption based on debt burden level for households with similar socio-economic and demographic characteristics, confirm the existence of a significant inverse correlation between debt burden and consumption.[6] This analysis is carried out for the sub-set of households with outstanding mortgage loans on their main residence. The relationship between the broader concept of financial burden and consumption for households with no debt living in rented housing was also analysed.[7,8]

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1 See, for instance, Box 1.1 in the Banco de España Annual Report 2014; José María Casado, Marc Folch and Roberto García-Coria (2015), "Evolución y determinantes del consumo de la UEM durante la crisis", *Boletín Económico – Banco de España,* 10/2014, pp. 81–91; Scott R. Baker (2018), "Debt and the Response to Household Income Shocks: Validation and Application of Linked Financial Account Data", *Journal of Political Economy,* Volume 126, Number 4, pp. 1504–1557, doi: https://doi.org/10.1086/698106; Andreas Fagereng and Elin Halvorsen (2016), "Debt and household consumption responses", Working Paper – SSRN, doi: https://doi.org/10.2139/ssrn.2942502; Ying Fan and Abdullah Yavas (2020), "How Does Mortgage Debt Affect Household Consumption? Micro Evidence from China", *Real Estate Economics,* Volume 48, Issue 1, pp. 43–88, doi: https://doi.org/10.1111/1540-6229.12244; Rutger Teulings, Bram Wouterse and Kan Ji (2023), "Disentangling the effect of household debt on consumption", *Empirical Economics,* Volume 65, pp. 2213–2239, doi: https://doi.org/10.1007/s00181-023-02428-4; Hector Sala and Pedro Trivín (2024), "Household finances, debt overhang and consumption patterns", *Economic Modelling,* Volume 139, 106836, doi: https://doi.org/10.1016/j.econmod.2024.106836.

2 The latest observation available relates to 2022, when the recovery in consumption following the pandemic was still incomplete. Since then, it is estimated that the recovery by age group and by income level has been uneven (Martínez-Carrascal, 2025).

3 Between 2002 and 2022, the share of indebted households living in rented housing rose by 8 percentage points (pp), while that of households with a mortgage on their main residence did so by 6 pp. By contrast, the percentage of homeowners without debts decreased by 14 pp during the same period. The share of other household groups in the total households remained stable over the period under review.

4 The debt burden is the ratio of payments for all outstanding mortgage and non-mortgage debt (including principal and interest repayments) to gross household income.

5 This exercise is conducted for all households, regardless of their debt type and main residence tenure status.

6 We follow the methodological approach used in Philip Du Caju, Guillaume Périlleux, François Rycx and Ilan Tojerow (2023), "A bigger house at the cost of an empty stomach? The effect of households' indebtedness on their consumption: micro-evidence using Belgian HFCS data", *Review of Economics of the Household,* Volume 21, pp. 291-333, doi: https://doi.org/10.1007/s11150-022-09605-x.

7 Accordingly, the analysis does not cover households with other types of debt, such as mortgages on second homes or non-mortgage debt.

8 For those who rent their main residence, the financial burden is defined as rental burden, i.e. the ratio of main residence rental payments to gross household income. For those with a mortgage on their main residence, the debt-to-income ratio would be equal to the debt burden (see footnote 4).

Chart 1
Distribution of consumption expenditure based on indebtedness and main residence tenure status (a)

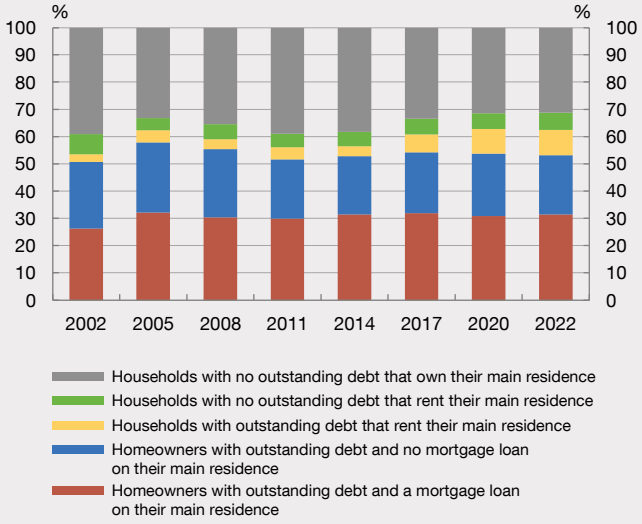


Chart 2
Average growth of consumption expenditure per household. Breakdown by income tercile and indebtedness (a) (b)

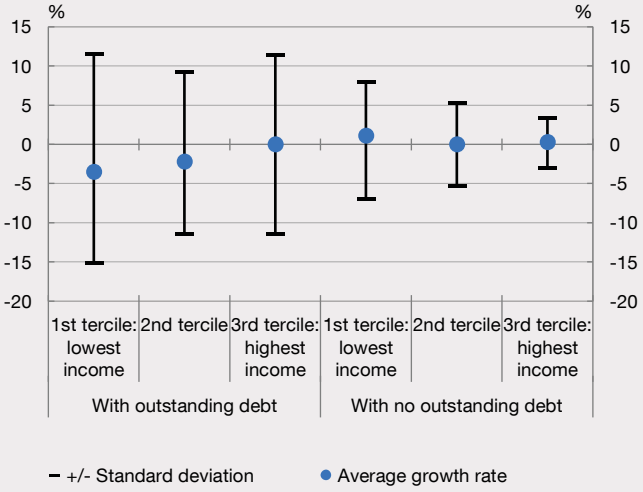


Chart 3
Differences in consumption of households with a mortgage or that rent (c)

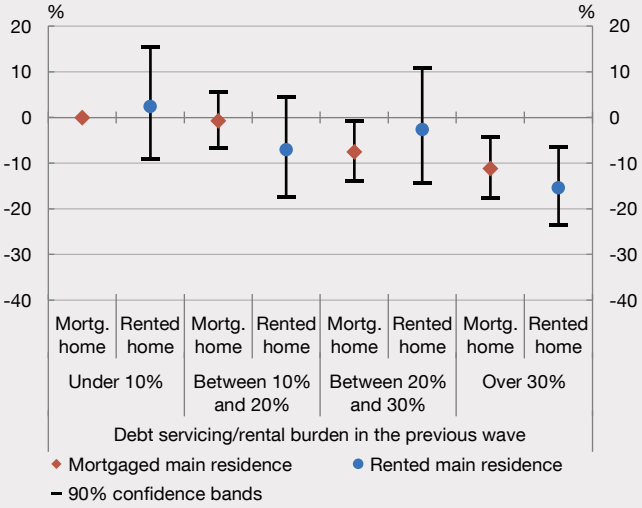
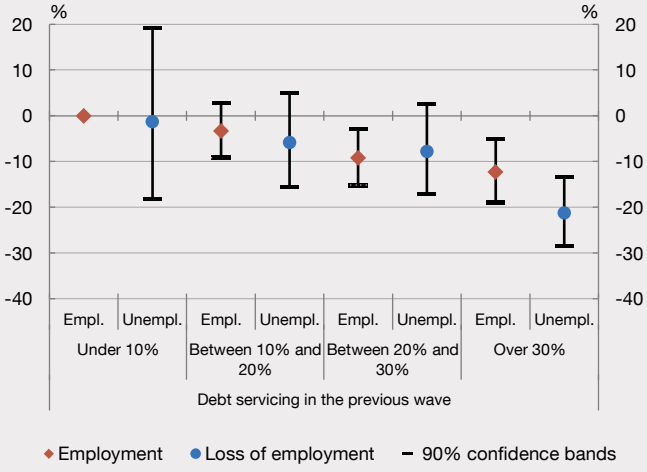


Chart 4
Differences in consumption of indebted households in the face of changes in the reference person's employment status (d)



SOURCE: Banco de España, Spanish Survey of Household Finances.

a All types of goods and services consumption are considered, including spending on food, other non-durable goods (including utilities), vehicles and household equipment acquired in the last year.

b Average consumption growth is calculated as the average rates of change in consumption per household, in real terms, of the survey waves compared with the previous wave, for each income tercile (calculated based on the total household distribution). The upper (lower) bar accompanying each point in the chart is obtained by adding (subtracting) the standard deviation to (from) the corresponding average rate.

c The consumption variable is modelled (in logarithms) through different binary variables relating to the debt/rent service-to-income ratio, controlling for level of income, wealth and debt (in logarithms) and for other demographic and economic factors (such as sex, age, household type and size, income and wealth percentile, employment status and phase of the economic cycle). For households with an outstanding mortgage on their main residence, debt service is defined as the ratio of payments for all outstanding mortgage or non-mortgage debt (including principal repayment and interest payment) to gross household income. For households with no debt that rent their main residence, the rental burden is defined as the ratio of rental payments to gross household income. The information on both household indebtedness and rental burden was drawn from the previous wave of the survey to reduce potential endogeneity problems. The percentage effect on the baseline category for each of the binary variables mentioned is shown, with a 90% standard error confidence interval (bars). As the dependent variable in the regression is defined in logarithms, the percentage effect (and the standard error intervals) on the consumption baseline category is given by the calculation $(e^{\beta}-1)\times 100$, where β represents the estimated coefficient for each binary variable. The baseline category (with a coefficient equal to 0) comprises households with an outstanding mortgage on their main residence that allocated between 0% and 10% of their income to debt servicing in the previous wave of the survey.

d The same type of specification and analysis used in Chart 3 is used here. The baseline category (with a coefficient equal to 0) comprises households with mortgages on their main residence that allocated between 0% and 10% of their income in the previous wave to debt servicing and whose reference person remained employed or self-employed between survey waves.

For household owners with an outstanding mortgage loan on their main residence, there is a negative correlation between consumption and the debt burden (Chart 3).[9] Specifically, consumption is 8% lower for households using between 20% and 30% of their income to pay debts than for households using less than 10%. This negative difference increases to 11% for households with similar characteristics dedicating more than 30% of their income to this end. These findings suggest that the negative correlation between consumption and indebtedness is greater in particular when the interest burden exceeds 30% of household income.

An inverse correlation is also observed between consumption and the financial burden for households that, despite having no debts, use a substantial portion of their income to pay rent for the house they reside in. In particular, households without debts that use more than 30% of their income to pay rent for their main residence consume 15% less than those with similar characteristics with a mortgage on their main residence and allocating less than 10% of their income to pay such debt. Nonetheless, consumption does not differ significantly among households without debts that allocate more than 30% of their income to pay rent and those with a mortgage that also allocate over 30% of their income to pay that debt. These results suggest that the weight of housing costs (whether through rental or mortgage payments) can have a significant effect on the level of household consumption, especially when it exceeds 30% of income.

Although the foregoing evidence suggests that the debt burden for households with outstanding mortgage loans on their main residence affects their consumption, this influence may differ depending on each household's economic situation. In the event of an adverse shock, such as job loss, the fall in consumption could be even more pronounced.

To explore this hypothesis, the analysis is broadened to consider changes in consumption when the main reference person becomes unemployed (Chart 4). The negative correlation between debt burden and consumption heightens in this scenario. A household that owns and has a mortgage on its main residence, whose reference person works and uses more than 30% of income to pay the outstanding debt, consumes 12% less than a household with similar characteristics whose debt service-to-rent ratio is below 10%. However, if the reference person becomes unemployed, consumption in the latter household drops by 21% compared with the former. Although the difference between the two consumption gaps is not statistically significant, it is considerable (9 pp). These findings point to employment status being the most determining factor for explaining the heterogeneity of consumption among similar households with different debt burden levels.

For owners of a main residence with a mortgage, a fall of 10% in non-durable and food consumption is estimated when the debt service-to-income ratio exceeds 30%. Also noteworthy is the 38% estimated fall in vehicle purchases for this same household group.[10]

As the previous analysis shows, an excessive debt burden tends to reduce spending on consumption, especially in adverse situations such as the loss of employment. This sensitivity of consumption to economic shocks may affect other agents, such as firms, which could experience fluctuations in demand for their products, with possible effects on their economic and financial position and, ultimately, on financial stability.

9 Although a correlation that does not entail causality is analysed, the information on both household indebtedness and rental burden was drawn from the previous wave of the survey to reduce potential endogeneity problems.

10 No statistically significant correlation is found in this exercise (although a high dispersion is) between the debt burden and spending on other durable goods (household equipment) for households with an outstanding mortgage on their main residence.