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Consumption responses to inheritances: The role of durable goods

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ABSTRACT

This paper studies the impact of inheritances, a key component in household wealth accumulation, on consumption. Specifically, we investigate how inheritances influence household consumption growth, distinguishing durable and nondurable goods. In doing so, we use data from the Panel Study of Income Dynamics spanning 2005–2019. The results reveal a positive effect of inheritances on household consumption of durable goods. Such an effect occurs immediately after receiving the inheritance and its average magnitude is about 27 %. Estimates also reveal that large inheritances significantly impact the consumption growth of durables, but also of nondurables, while small inheritances show no effects. Consumption responses are stronger among liquidity and borrowing constrained households, aligning with life-cycle models of consumption behavior. Insights inform planners by highlighting varied effects of inheritances on household consumption, particularly emphasizing the nuanced impact of inheritance size.

1. Introduction

Household consumption is a key component of economic development and well-being. According to economic theory, household consumption decisions and budget constraints are tightly linked. Consequently, understanding whether changes in wealth affect consumption is crucial for evaluating how policies that modify household budget constraints transmit to household consumption and savings behaviors, such as specific fiscal and monetary policies on pension systems, taxes, transfer policies or assets returns.

The effect of economic resources on consumer decisions has been explained by two different hypotheses: the Life-Cycle Hypothesis (LCH) and the Permanent Income Hypothesis (PIH). The LCH predicts that households make their consumption choices based on the *expected* evolution of lifetime earnings and smooth their consumption over their lifetime, saving (borrowing) during periods of high (low) earnings (Modigliani and Brumberg, 1954). As a result, anticipated changes in income are incorporated into consumption plans, while unanticipated changes lead households to revise these plans. On the other hand, the PIH states that individuals spend their income consistently with their long-term average income throughout their lifetime and that, therefore, transitory income changes should trigger negligible effects on current consumption, whereas persistent changes in income should induce an immediate change in consumption patterns (Friedman, 1957). This paper is built on these intertemporal consumption models and studies household consumption responses to changes in wealth.

The literature on consumption has mainly focused on income effects, either through household income (Blundell et al., 2008; Kukk et al., 2016; Hryshko and Manovskii, 2022; Arellano et al., 2024), wages (Blundell et al., 2016; Theloudis, 2021), lottery wins (Imbens

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et al., 2001; Kuhn et al., 2011; Fagereng et al., 2021; Kim and Koh, 2024) or specific cash transfers (De Rock et al., 2022; Angelucci et al., 2024). These studies shed light on important issues regarding consumption responses to income shocks. However, the analysis of how changes in household wealth—a significant component of household budget constraints—impact on household consumption behavior remains relatively understudied (Christelis et al., 2021).

Inheritances constitute one of the crucial components of intergenerational transmission and accumulation of wealth (Boserup et al., 2016; Adermon et al., 2018; Elinder et al., 2018; Druedahl and Martinello, 2022; Salas-Rojo and Rodríguez, 2022; Wei and Yang, 2022; Nekoei and Seim, 2023) and they may stimulate household consumption decisions through either pure wealth effects or relaxed financial constraints channels. On the one hand, the first wealth effect refers to an increase in lifetime/permanent wealth after inheriting, which may lead heirs to increase their consumption accordingly. On the other, the inheritance may relax financial constraints for certain recipients, thus leading to immediate changes in their consumption plans. However, the literature has not effectively addressed the question of how inheritances may impact household consumption, due to the relative lack of data on consumption in household surveys (Li et al., 2010; Pistaferri, 2015; Attanasio and Pistaferri, 2016).

To our knowledge, only Joulfaian and Wilhelm (1994); Suari-Andreu (2023) and Belloc et al. (2023) have partially examined the impact of inheritance receipt on household consumption. Joulfaian and Wilhelm (1994) use data from the Panel Study of Income Dynamics (PSID) and test the impact of inheritances on household food consumption, showing that inheritances have a small positive effect on food consumption. Suari-Andreu (2023) and Belloc et al. (2023) use a sample of older European individuals from the Survey of Health, Ageing and Retirement in Europe (SHARE), and show mixed results regarding the impact of inheritances on household food consumption. While Suari-Andreu (2023) does not obtain any change in household food expenditure, Belloc et al. (2023) show a positive effect of inheritances on food consumption outside the home. Consequently, the existing research suffers from a common limitation: it solely focuses on food expenditure.

Within this context, this paper examines the impact of wealth shocks driven by the receipt of inheritances on household consumption. We use data from the PSID, a large nationally representative household panel survey collecting information on households in the United States since 1968. Specifically, we use eight survey waves conducted from 2005 to 2019, when the survey dataset recorded the most comprehensive information regarding household consumption (Andreski et al., 2014).¹

Our results indicate that the receipt of an inheritance leads to an immediate increase of approximately 27 percent in household consumption growth for durables, which represents an increase of about \$8494. However, inheritances do not seem to impact household consumption of nondurable goods. The results suggest that this increase is driven by large inheritances, which increase the consumption growth of durables by 30.9 % and that of nondurables by 3.7 %. Furthermore, these effects are stronger among households with liquidity and borrowing constraints, so they exhibit excess sensitivity to the actual receipt of inheritances.

These results are compatible with life-cycle theories of consumption behavior, which posit that consumption should only respond to permanent shocks, with responses being more pronounced among financially constrained households. Within this framework, large inheritances may be perceived as permanent shocks by all households, thereby prompting adjustments in consumption plans, whereas constrained households present stronger consumption responses upon the actual receipt of inheritances, as they were unable to borrow or draw on liquid savings to smooth their consumption.

Our contribution is threefold. First, we study the impact of inheritances, both anticipated and unanticipated, on household consumption, analyzing various consumption categories. Household food consumption is commonly used in the literature as a proxy for total consumption. Nevertheless, this consumption category is less likely to be affected by wealth shocks, in comparison to other household expenditures. Against this, our panel dataset includes detailed information on both durable and nondurable household consumption expenditures, which allows us to study household consumption responses beyond food expenditure. Second, we explore the amount inherited, and study whether the magnitude of the wealth shock matters, and if there is any nonlinearity according to the size of the inheritance.² None of the previous studies have examined small and large inheritances, due to data constraints. Finally, we test whether the main estimates are heterogeneous depending on certain household characteristics. Specifically, we pay attention to the role played by liquidity and borrowing constraints. Although we cannot control for ex-ante consumption responses to inheritances and test the LCH in its simplest form, the LCH posits that constrained households may display excessive sensitivity to realized inheritances compared to other households, as they are forced to delay consumption changes until financial improvements actually occur.

The rest of the paper is organized as follows. Section 2 surveys the related literature. Section 3 introduces the data, the sample selection, and the construction of the variables. Section 4 presents the econometric strategy, while Section 5 describes the results. Section 6 concludes.

¹ Our survey dataset does not allow us to distinguish between anticipated and unanticipated inheritances to examine ex-ante consumption responses. As a result, we cannot test the LCH in its simplest version. However, according to the LCH, only constrained households should respond to the realization of inheritances, commonly known as "excess sensitivity" to realized income changes.

² The literature on consumption insurance has found asymmetric responses to good (e.g., positive) versus bad (negative) income and wealth shocks using hypothetical scenarios (Christelis et al., 2019, 2021; Fuster et al., 2021). We thus exploit the information regarding inheritance amount and distinguish between small and large positive shocks, to test for any nonlinearity consumption response to the receipt of inheritances of different sizes.

2. Literature review

This paper relates to research studying household consumption and its response to changes in the household economic environment. Several authors have analyzed how shocks to income relate to consumption (e.g., Blundell et al., 2008, 2016; Arellano et al., 2017, 2024).³ However, the literature has not paid as much attention to the relationship between wealth and consumption, mainly due to the lack of household data on wealth and consumption.

Most of the literature regarding consumption responses to wealth focuses on house prices and has shown that it is a significant driver of household consumption (Disney et al., 2010; Browning et al., 2013; Cristini and Sevilla, 2014; Christelis et al., 2015; Bhutta and Keys, 2016; Aladangady, 2017; Paiella and Pistaferri, 2017; Burrows, 2018; Berger et al., 2018; Andersen and Leth-Petersen, 2021; Suari-Andreu, 2021; Graham and Makridis, 2023; Lee, 2023). For instance, Disney et al. (2010) use data from the British Household Panel Survey to find that house prices positively relate to consumption, while Browning et al. (2013) find similar results using Danish administrative data. Several authors explored the Great Recession of 2008, and its impact on household consumption behaviors. For instance, Christelis et al. (2015) use the Health and Retirement Study and find that increased house prices positively impact the marginal propensity to consume (MPC). Paiella and Pistaferri (2017) report similar results using the Italian Survey of Household Income and Wealth, focusing on nondurable consumption and (expected and unexpected) increases in wealth driven by house prices.

In recent years, other authors have focused on the relationship between inheritance expectations, and household consumption and savings (Basiglio et al., 2023; Malo and Sciulli, 2023). Basiglio et al. (2023) show that expecting a large inheritance is negatively related to savings in the Netherlands, but positively correlated to the intention to leave an inheritance, in line with Stark and Nicinska (2015) and Niimi and Horioka (2018). Similarly, Malo and Sciulli (2023) use data from the European Household Finance and Consumption Survey and find that households expecting a wealth transfer in the future consume as if they were in a higher wealth decile, while liquidity constrained households do not experience such correlation. These results fit the life-cycle model, since non-liquidity constrained households adapt their consumption behavior once they expect to receive an inheritance, while households with financial constraints cannot modify their consumption decisions.

We contribute to this strand of the literature by analyzing consumption responses to inheritance receipt. Nevertheless, we are not the first to explore inheritances and consumption. First, Joulfaian and Wilhelm (1994) study household food consumption responses to inheritances using the PSID, and find that receiving an inheritance shows a positive but small correlation with household food consumption. On the other hand, Suari-Andreu (2023) uses data from the SHARE and finds that inheritances do not change household food consumption. However, Belloc et al. (2023) show that inheritances have a positive effect on the amount spent on food consumption outside the home, while no effect appears for the amount spent on food inside the home.

3. Data and variables

3.1. Data and sample selection

We use public data from the Panel Study of Income Dynamics (PSID), a survey conducted by the University of Michigan.⁵ The PSID is the world's longest running nationally representative longitudinal household study and collects a rich set of information about socioeconomic characteristics, labor market experiences, income, wealth, health status, family structure, and consumption expenditures through in-person, telephone, and computer-assisted interviewing methods. It began in 1968 with interviews of over 18,000 individuals living in approximately 5000 US families and has continued to interview both the original families and their descendants since then, regardless of where they live. Specific boost samples have been incorporated through time to account for changes in the population and ensure the study is representative of the whole US population, enhancing the sample sizes of these groups.⁶

The original PSID sample consists of two different sub-samples: a nationally representative sample of roughly 3000 families designed from the Survey Research Center (SRC) at University of Michigan, and an oversample of roughly 2000 low-income families from the Survey of Economic Opportunity of the Census Bureau to facilitate research of poverty-related issues (PSID, 2021). We focus only on the initially representative SRC sample. Besides that, the PSID became a biennial survey in 1997, and since then it has undergone some changes. Specifically, we use survey waves from 2005 to 2019 to deal with consistent consumption information, as the consumption expenditure data of the PSID was enhanced in 2005 after a first impulse in 1999 (Arellano et al., 2024).⁷ See Andreski et al. (2014) for a summary regarding information about consumption expenditures in the PSID from 1968 to 2009.⁸

³ Meghir and Pistaferri (2011) and Crawley and Theloudis (2024) provide a review of this literature.

⁴ Other authors have estimated the MPC using specific survey questions about how much respondents would change their consumption in response to alternative scenarios involving unexpected, transitory, income changes (Jappelli and Pistaferri, 2014, 2020; Christelis et al., 2019; Fuster et al., 2021; Albuquerque and Green, 2023; Cherchye et al., 2024) or housing wealth changes (Christelis et al., 2021).

⁵ Detailed information on the PSID is available at https://psidonline.isr.umich.edu/.

⁶ This includes a Latino sample in 1990/1992 and an immigrant sample in 1997/1999 and 2017/2019.

⁷ This has led authors to resort to imputation procedures (Blundell et al., 2008). Alternative datasets, such as the German Socio-Economic Panel, only have information regarding household expenditures on utilities, rent, household furnishings, property taxes or loan payments, while the UK Household Longitudinal Study has information on loans, rent, utilities, and food and alcohol consumption.

⁸ Since 2005, the PSID gathers information regarding five additional consumption categories: household furnishings, household repairs, clothes, trips, and recreation. Before 2005 the information on housing durables only included loan payments associated to vehicles.

Our sample restrictions are minimal. First, we limit the sample to couples formed by a male and a female (Blundell et al., 2016; Arellano et al., 2017, 2024; Theloudis, 2021; Theloudis et al., 2024), either married or unmarried, who are aged between 21 and 65 years (Mazzocco, 2007).⁹ Since we will use first-difference models plus household fixed effects to remove any time-invariant unobserved variable that may affect household consumption growth rate and inheritances receipt, we additionally restrict the analysis to couples who are observed for at least three consecutive waves during the sample period, have no missing data on the key variables, and non-zero consumption data. We also follow existing research using the PSID and other household panel surveys, and focus on stable households (same head and wife; if any of them change, so they split off, we reinstate the household as a new one if the household head marries again).¹⁰ The resulting sample is an unbalanced panel of 16,653 household-year observations from 3050 households over the 2005–2019 period (eight survey years).¹¹

3.2. Variables

The PSID provides data on household consumption for a wide range of items, and we use consumption spending information for a total of 46 consumption expenditure items. We aggregate these expenditures for each household into three different annual spending categories: total consumption, nondurable consumption, and durable consumption. Nondurable consumption consists of food (defined as the sum of spending on food at home, food away from home, food delivered to home, plus the spending on food using food stamps), vehicle gasoline expenses, parking and car pool expenses, car insurance, bus and train fares, taxi fares, other transportation costs, school expenses, childcare, health insurance, nursing home and hospital bills, doctor bills, prescriptions, electricity expense, heating fuel, water and sewage costs, other utilities such as telecommunications, rent for renters, and rent equivalent for homeowners (imputed as 6 percent of the self-reported home value (Attanasio and Pistaferri, 2014; Kaplan et al., 2014; Blundell et al., 2016; Arellano et al., 2017; Daminato and Pistaferri, 2020; Fisher et al., 2020; Theloudis, 2021; Aguiar et al., 2024)) or people in other housing arrangements, home insurance, property taxes, trips, recreation and clothing expenditure.¹² The nondurable consumption category is largely based on previous research using the PSID consumption data from 1999 onwards (Attanasio and Pistaferri, 2014; Kaplan et al., 2014; Blundell et al., 2016; Arellano et al., 2017, 2024; Theloudis, 2021). On the other hand, durable consumption is the sum of car repair or maintenance expenses, other car payments, outlays on vehicles, vehicle lease payments, downpayments on vehicles, vehicle loan payments, household furnishings and household repairs (Madera, 2019; van Leeuwen et al., 2021; Kim and Koh, 2024; Kim et al., 2024). Total household consumption is the sum of expenditures on these two categories. A complete list of all consumption items contained in each category is provided in Table A2.

The other key variable in this study is inheritance receipt. This information is provided in the PSID through the question "*Did you* (or anyone else in the family living there) get any other money in the prior year—like a big settlement from an insurance company, or an inheritance?". For those who answer "Yes", a follow-up question is asked: "How much of that was an inheritance?". We harmonize the first question regarding inheritance, big settlement receipt in the past calendar year by using the amount question variable that asks only for the amount of the inheritance, and we assign 0 for households not providing exact inheritance amounts.¹³ Consequently, we refrain from other income changes associated to any indemnification and focus on wealth changes through the receipt of inheritances.

The PSID dataset allows us to define various socio-demographic variables, including age, race, maximum education level attainment, employment status, household income, household wealth, self-reported home value, and specific housing tenure types such as outright owners, mortgagors and renters. Additionally, it provides information on family composition, including family size and the number of children in the family unit. All monetary variables are expressed in 2018 dollars, deflated using the consumer price index from the Bureau of Labor Statistics. An important remark is that the PSID is retrospective, so all variables refer to information over the past calendar year.

3.3. Descriptive analysis

Table 1 provides summary statistics. Average real consumption is \$92,791, while the average for nondurable and durable consumption is \$60,977 and \$31,814, respectively. Household food consumption accounts for about one-fifth of total nondurable consumption, while housing- and vehicle-related expenditures represent approximately 32.4 and 67.6 percent of household durable

⁹ We set the maximum age threshold at 65 years, consistent with numerous related studies utilizing the PSID (Blundell et al., 2008; Park, 2020; Busch et al., 2022; Hryshko and Manovskii, 2022; Attanasio et al., 2024; Theloudis et al., 2024).

¹⁰ See, for instance, Blundell et al. (2008, 2016), Jappelli and Pistaferri (2020), Theloudis (2021), Hryshko and Manovskii (2022), Trivin (2022), Bredemeier et al. (2023), or Arellano et al. (2024).

¹¹ Refer to Appendix Table A1 for a detailed view of the sample size retained at each stage of the sample selection. The term household 'Head', referred to as the 'Reference Person' in the PSID since 2015, may denote either male or female respondents in data collected after this change. However, the final sample is restricted to male heads, as female heads are only observed for a maximum of two periods in our sample (survey waves 2017 and 2019), and the econometric analysis requires a minimum of three consecutive periods per household.

¹² As questions about different expenditures refer to different time horizons—weekly, monthly, or yearly—to facilitate recall (Li et al., 2010), before calculating total household consumption we convert all the figures to annual figures by scaling the reported consumption expenditure.

¹³ We cannot distinguish the legal recipient of the inheritance within the couple, which may be a limitation (Belloc et al., 2024). Nevertheless, this has minor implications in our empirical strategy given that the PSID only collects data on consumption at the household level, so our main unit of analysis is the household. Both issues are common shortcomings of household surveys (Frémeaux and Leturcq, 2020; Meriküll et al., 2021; Calvi et al., 2023).

Summary statistics.

Variables		Mean	Std Dev	
-		menn	Stat Berr	
Consumption				
Total consumption (/1000)		92.791	144.902	
Nondurable consumption (/1000)		60.977	53.980	
- % food		0.201	0.085	
Durable consumption (1000)		31.814	132.228	
 % housing consumption 		0.324	0.326	
 % vehicle consumption 		0.676	0.085	
Inheritances				
Inheritance receipt		0.028	0.164	
Value of inheritance		2365.277	35,981.700	
Value of inheritance, conditional on receipt		85,073.330	199,030.500	
Household income, assets and composition				
Household income (/1000)		134.017	150.566	
Household wealth (/1000)		467.418	1552.518	
House value (/1000)		257.184	281.340	
Outright owner		0.134	0.340	
Mortgagor		0.683	0.465	
Renter		0.164	0.371	
Household size		3.273	1.257	
Number of children		1.071	1.213	
	Male		Female	
	Mean	Std. Dev.	Mean	Std. Dev.
Individual demographics				
Employed	0.923	0.267	0.810	0.393
Age	43.454	11.472	41.730	11.330
Less than high school	0.067	0.250	0.036	0.187
High school	0.236	0.425	0.213	0.410
Some college	0.697	0.460	0.751	0.433
White	0.875	0.330	0.890	0.313
Black	0.046	0.209	0.037	0.188
Other ethnicity	0.079	0.270	0.073	0.261
Total observations (households X years)	16.653			
Number of households	3050			

Notes: Data come from the Panel Study of Income Dynamics (PSID), 2005–2019. Sample is restricted to married (heterosexual) couples aged 21–65 followed for at least three consecutive periods. All monetary values are converted to 2018 US dollars. Differences in individual characteristics between males and females are statistically significant at standard levels of significance based on a *t*-test for the comparison of sample means.

consumption, respectively. On average, 2.8 percent of households received an inheritance, with an average real amount of \$2365.28 for the whole sample. Conditional on inheriting, the average inheritance was \$85,073.33.¹⁴ The average household income is \$134,017, while the average household wealth is approximately \$467,418. Additionally, the average self-reported home value stands at \$257,184, with 68.3 percent of households holding mortgages and 16.4 percent identifying as renters. For other household variables, the average household size is 3, while the average number of children in the household is 1. For individual variables, the average employment status is 92.3 percent for men and 81 percent for women, aligning with Blundell et al. (2016) and Theloudis et al. (2024). In terms of demographics, the average age in our sample is 43 years old for men and 42 years old for women. 69.7 percent of men have some college education (vs. 6.7 percent who have less than high school), while 75.1 percent of women have some college education (vs. 3.6 percent who have less than high school).

4. Econometric strategy

To analyze the effects of inheritances on consumption, we estimate first-difference models to account for individual unobserved heterogeneity, and to study how receiving an inheritance impacts on *changes* in consumption, rather than on the level of consumption. Consequently, we study the impact of inheritances on household consumption growth rate. Specifically, we estimate the following first-difference model using ordinary least squares (OLS), separately for total, durable and nondurable consumption:

$$\Delta \log(\mathbf{y}_{it}) = \alpha_i + \beta_1 inheritance_{it} + \Delta X_{it} \gamma + Z_{it-1} \delta + (\tau_t \times \eta) + \varepsilon_{it}, \tag{1}$$

where subscript *i* denotes households and *t* denotes periods (i.e., survey waves), respectively. $\Delta \log(y_{it})$ is the change in log consumption (household consumption growth rate) for household *i* between period *t* and period t - 1 (either total, durable or nondurable household consumption), and *inheritance*_{it}, the main independent variable, is a dummy variable that takes value 1 if the household *i*

¹⁴ See Appendix Figure A1 for the distribution of the worth of inheritances, conditional on receipt.

received an inheritance the past calendar year, 0 otherwise.¹⁵

We account for any remaining unobserved household time-invariant heterogeneity that may be simultaneously affecting both inheritances, not captured in other controls or through the first differences, as well as changes in consumption and incorporate household-specific fixed effects, denoted as α_i (Albuquerque, 2019; Andersen and Leth-Petersen, 2021). ΔX_{it} is a set of changes in time-varying controls between survey waves, including changes in spouses' employment status, self-reported house value, tenure status, household size and number of children.¹⁶ In addition, we control for some time-variant variables in levels in the period prior to inheriting through Z_{it-1} , and include the first lag for a set of control variables, including the spouses' employment status, tenure status (i.e., two dummy variables denoting mortgagors and renters for the past period, respectively),¹⁷ log of household wealth,¹⁸ log of family income, household size and number of children.¹⁹ To control for regional time-varying economic conditions, we also include an interaction term between year and State fixed effects in Eq. (1), where τ_t represents year fixed effects, and η represents region (State) fixed effects (we omit a region sub-index for the sake of simplicity).²⁰ Finally, ε_{it} is the error term. Standard errors are cluster-robust by household and year to address heteroscedasticity and cross-sectional and temporal dependence in the panel (Cameron and Trivedi, 2022).

The coefficient of interest from Eq. (1) is β_1 , which can be interpreted as the percentage change in household consumption growth corresponding to the receipt of an inheritance (i.e., the semi-elasticity of household consumption growth to the receipt of an inheritance). According to the LCH, two scenarios emerge. First, if the inheritance is anticipated, it should not generate any change in household consumption (e.g., $\beta_1 = 0$), as it would already be incorporated into prior consumption paths. Conversely, if the inheritance is unanticipated, it should affect consumption behavior ($\beta_1 \neq 0$). Furthermore, intuition points to positive changes in wealth, as is the case of receiving an inheritance, positively affecting consumption ($\beta_1 > 0$), assuming households consume normal goods.

As an additional analysis, we replace the dummy variable *inheritance*_{it} by two dummy variables that account for the inheritance amount and estimate the following first-difference model using OLS:

$$\Delta \log(\mathbf{y}_{it}) = \alpha_i + \beta_1 small_{it} + \beta_2 large_{it} + \Delta X_{it} \gamma + Z_{it-1} \delta + (\tau_t \times \eta) + \varepsilon_{it}, \tag{2}$$

where we replace the dummy variable for inheritance receipt, *inheritance*_{it}, by two dummy variables, *small*_{it} and *large*_{it}. *small*_{it} is a dummy variable that takes value 1 for the receipt of small inheritances (worth between 0-29,157.44) and *large*_{it} is a dummy variable that takes value 1 for the receipt of large inheritances (worth strictly more than 29,157.44). The cutoff of 29,157.44 is chosen according to the distribution of the inheritance amount, based on the median of its distribution, similar to previous studies having access to inheritance (Elinder et al., 2012; Blau and Goodstein, 2016; Bø et al., 2019) or lottery values (Flèche et al., 2021).

Coefficients β_1 and β_2 represent the semi-elasticity of household consumption growth rate, for total, durable and nondurable consumption, to the receipt of a small or large inheritance, respectively. As explained when describing Eq. (1), if the LCH holds, anticipated inheritances should not have a significant impact on household consumption, whether small or large, whereas unanticipated inheritances should yield a positive and statistically significant impact on consumption, whose heterogeneity would be reflected by coefficients β_1 and β_2 . In addition, according to the PIH, the receipt of a large inheritance can be perceived as a permanent wealth shock and should therefore positively affect household consumption. Conversely, no significant effect should be found for the receipt of a small inheritance, which represents a transitory wealth shock. The rest of the specification in Eq. (2) remains identical to Eq. (1), and we also consider households which received no inheritances the past year as the reference category. Analogously to Eq. (1), we allow for heteroscedasticity and cluster standard errors by household and year. Hence, in this alternative model we regress the growth rate of household consumption on the receipt of small and large inheritances.

5. Results

5.1. Baseline results

Table 2 shows the results from estimating Eq. (1). Column (1) shows estimates on the growth rate of total household consumption,

¹⁵ Differences are computed as the value at period t, minus the value at date t - 1, two calendar years as the PSID is biennial.

¹⁶ Before computing the first difference, we assign a value of 0 to the log of house prices for observations with unreported housing prices.

¹⁷ Outright owner is the omitted category.

¹⁸ Household wealth encompasses asset components like savings, stocks, bonds, business value, private annuities, retirement accounts, cash value in life insurance, home value, the value of vehicles, farms and businesses, and other real estate, net of liabilities including mortgages, vehicle loans, and other debts such as credit card debt, student loans, medical or legal bills, loans from relatives, or unspecified other debts. As a consequence, by controlling for wealth we account for house value, which is a major driver of consumption changes (Bhutta and Keys, 2016; Aladangady, 2017; Andersen and Leth-Petersen, 2021).

¹⁹ Given that inheritances are a component of household wealth, we opt to include household wealth prior to inheriting (i.e., one period in the past) as a control. Despite that, estimates are robust to defining wealth net of inheritances and including current changes in wealth as a control variable. Similarly, we avoid another bad control issue by controlling for the first lag of household income. Total household income encompasses both labor- and non-labor income, such as public and private transfers, social security benefits for all family members, trust fund income, interest income, dividends income, rent income and taxable earnings like income from wages or net business profits. This income variable is reported after government transfers but before taxes and refers to the total income of head, spouse, and other household members.

²⁰ All the results remain robust if we additionally control for separate state and year fixed effects.

Household consumption first-difference estimates, inheritance receipt.

Dependent variable:	$\Delta \log(\text{total consumption})$	$\Delta \log(durable \ consumption)$	$\Delta \log(nondurable \ consumption)$
Inheritance receipt	0.027	0.267**	0.017
I.	(0.037)	(0.104)	(0.016)
Δ (male employed)	0.026	0.053	-0.009
	(0.034)	(0.093)	(0.017)
Past male employed	0.108***	0.366***	-0.012
	(0.036)	(0.106)	(0.018)
Δ (female employed)	0.011	0.012	-0.001
	(0.022)	(0.061)	(0.012)
Past female employed	-0.047**	-0.090	-0.001
	(0.024)	(0.065)	(0.013)
Past household income	-0.043***	-0.105**	-0.031***
	(0.012)	(0.047)	(0.009)
Past household wealth	-0.001	-0.008**	-0.001
	(0.001)	(0.004)	(0.001)
Δ (house value)	0.016***	0.019***	0.017***
	(0.002)	(0.006)	(0.001)
Δ (tenure status)	0.042**	0.214***	0.005
	(0.019)	(0.053)	(0.011)
Past mortgagor	0.000	0.045	-0.045***
	(0.028)	(0.077)	(0.016)
Past renter	-0.093**	-0.037	-0.145***
	(0.037)	(0.098)	(0.023)
Δ (household size)	0.073***	0.107**	0.049***
	(0.018)	(0.044)	(0.009)
Past household size	0.007	0.009	0.003
	(0.022)	(0.055)	(0.010)
Δ (number of children)	-0.049***	-0.033	-0.039***
	(0.017)	(0.046)	(0.009)
Past number of children	0.004	-0.007	0.008
	(0.021)	(0.053)	(0.010)
Constant	-0.214	-0.674	-0.065
	(0.316)	(1.415)	(0.242)
Household fixed effects	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes
R-squared	0.147	0.128	0.211
Observations	13,559	13,559	13,559
Households	3050	3050	3050

Notes: Data come from the Panel Study of Income Dynamics (PSID), 2005–2019. Sample is restricted to heterosexual couples aged 21–65 followed for at least three consecutive periods. Robust standard errors, clustered by household and year, are reported in parentheses. *p < 0.1, **p < 0.05, ***p < 0.01.

while Columns (2) and (3) show analogous results for the consumption of durables and nondurables, respectively. Estimates show that the receipt of an inheritance does not induce any statistically significant change in *total* household consumption growth.

On the other hand, estimates show a positive and statistically significant effect of inheritances on the consumption of durables. Specifically, having received an inheritance increases the consumption growth of durables by about 26.7 percent, net of observed and unobserved heterogeneity. This corresponds to an average increase on durable consumption of approximately \$8494. Regarding household nondurable consumption, Column (3) shows that it is not affected by the receipt of an inheritance.

To sum up, the main results in Table 2 show that inheritances change the current consumption behavior of households, as they increase their consumption of durable goods immediately after inheriting, while the consumption of nondurables seems unaffected. Specifically, the MPC on durable goods resulting from the inheritance shock is estimated at 0.10, indicating that households allocate approximately 10 percent of their inheritance to consumption of durable goods.²¹ This MPC is slightly higher than those reported in recent studies examining consumption responses, mostly on nondurable goods, to wealth shocks in other asset categories, such as housing or financial wealth. For instance, Mian et al. (2013); Cristini and Sevilla (2014); Christelis et al. (2015, 2021), Aladangady (2017); Paiella and Pistaferri (2017); Bottazzi et al. (2020); Andersen and Leth-Petersen (2021), and Trivin (2022) find MPC estimates ranging from 0.02 to 0.09. In other words, households that inherit seem to make investments related to vehicles or housing in the year of inheriting. However, the fact that nondurable goods do not seem to be affected by the receipt of inheritances fits prior results using a particular subcategory of nondurable consumption such as food (Suari-Andreu, 2023). These results reflect that household consumption of durables is more sensitive to shocks in household wealth than the consumption of nondurables, and suggests that ignoring

²¹ To calculate this value, we multiply the semi-elasticity of inheritance receipt from Table 2, Column (2) (0.267), which represents a type of MPC out of an inheritance shock, by the ratio of average consumption on durable goods (\$33,615) to the average inheritance value (\$85,073.33) in our sample, both conditional on receiving an inheritance.

household spending on durable goods, the standard practice in the empirical consumption literature (see Kim et al., 2024), omits an important margin of household consumption and leads to biased estimates on consumption responses to shocks on household economic resources.

5.2. Amount inherited

We now estimate Eq. (2), and study if receiving a small (equal or lower than 29,157.44) or a large (greater than 29,157.44) inheritance generates a differential impact on household consumption behavior.²² Table 3 shows the estimates and suggests that the size of the inheritance matters, as it is relatively larger inheritances which significantly affect household consumption behavior, whereas smaller inheritances do not have a statistically significant impact on consumption growth rates.

Specifically, a large inheritance increases the household consumption growth on durable goods by 30.9 percent, representing an average increase of about \$9830. That is to say, households tend to spend a significant portion of the inheritance on consumption of durable goods. In addition, receiving a large inheritance also produces a statistically significant increase in household consumption growth of nondurables, and this increase is about 3.7 percent (p = 0.066), which represents an average increase of \$2256. To sum up, household consumption responses depend on the size of the shock, with larger inheritances significantly increasing current household consumption in all categories.²³ However, estimates suggest that durables consumption increases by a larger amount, of about \$7574.

To further investigate the nonlinearities in the size of the inheritance on consumption, we re-scale the inheritance amount by the household income in the period preceding the inheritance. This approach acknowledges the likelihood that households respond heterogeneously to wealth increases, depending on their income level and economic circumstances prior to receiving an inheritance (Brown et al., 2010; Doorley and Pestel, 2020). By normalizing inheritance relative to prior income, we can more effectively control for variations in consumption responses based on household income levels preceding the inheritance.

For instance, an inheritance amount equivalent to a cut-off of \$29,157.44 may represent a substantial shock for lower-income households, potentially leading to consumption increases. Conversely, for higher-income households, this amount could have a more muted effect. We then replace the two dummy variables for small and large inheritances using the information of household income in the previous period and define two dummy variables that take value 1 for inheritances equal or below the median of the distribution of this re-scaled variable, or strictly above the median of the distribution of this re-scaled variable, or strictly above the median of the distribution of this re-scaled variable conditional on inheriting, respectively, and value 0 otherwise. Numerically, we define a large inheritance as an inheritance higher than 29.7 % of past household income. The reference category is households which received no inheritance, consistent with our previous estimates. This specification thus enables us to better capture potential nonlinearities in the impact of inheritances on consumption and offers insight into how consumption responses may vary depending on the pre-existing economic status.

Table 4 shows the results of this alternative specification for small and large inheritances, while the rest of the specification remains identical to Eq. (2). The results are fairly consistent with those of Table 3. Receiving a large inheritance increases the household consumption growth rate on durable goods by 37.8 percent, which represents an average increase of \$12,025. Besides, having received a large inheritance increases the household consumption growth rate on nondurables by 3.6 percent, so it implies an average increase of \$2195. Nevertheless, this latter magnitude is imprecisely estimated (p = 0.091). On the other hand, small inheritances, according to this alternative definition, do not seem to impact household consumption.

5.3. Disaggregated analysis

Our results suggest that inheritances increase household consumption of durable goods, with large inheritances significantly increasing the household consumption on both durable and nondurable goods. Alternatively, given that our dataset involves 46 consumption items, as detailed in Sub-Section 3.2., we run the baseline analysis at less aggregated levels. Specifically, we consider 6 sub-categories for nondurable consumption: expenditure on food, clothing, services, utilities, nondurables related to housing, and nondurables related to vehicles. On the other hand, we disaggregate the category of household consumption on durable goods on two different household purchases: purchases related to housing and vehicle expenses (refer to Table A2 for further details). We now focus on these eight sub-categories separately. Estimates of Eqs. (1) and (2) on the household consumption growth of these separate categories are shown in Tables 5 and 6, respectively.

Results from Table 5 suggest that inheritance increases the growth of household consumption on food and of durables related to housing. Specifically, the receipt of an inheritance increases consumption growth on food by 7.6 percent, while it increases consumption growth on durables related to housing by 34.1 percent. When disaggregating by inheritance amount, as shown in Table 6, we find that large inheritances increase the household consumption growth on food by 12.4 percent, while they also increase the household consumption growth on durables related to housing and vehicles, no heterogeneity is observed based on the inheritance size. This result, combined with the findings in Tables 3 and 4, indicates

²² We do not directly analyze the amount inherited, as likely due to the high prevalence of zeroes, statistical significance is challenging.

²³ Our sample comprises couples between the ages of 21 and 65. However, it is probable that partners inherit beyond the age of 65. Therefore, we relax age-specific restrictions and estimate Eqs. (1) and (2) without imposing these constraints. The resulting estimates, which are presented in Tables A3 and A4, demonstrate robustness. In Tables A5 and A6 we also include single heads and find that inheritances receipt shift consumption on durable and nondurable goods, whereas small and large inheritances (inheritances worth strictly more than \$28,789.33) increase consumption growth on durable goods by 27.4 and 32.5 percent, respectively.

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Table 3

Household consumption first-difference estimates, inheritance amount.

Dependent variable:	$\Delta \log(\text{total consumption})$	$\Delta \log(durable \ consumption)$	$\Delta \log(nondurable \ consumption)$
Small inheritance	-0.039	0.218	-0.007
	(0.048)	(0.145)	(0.023)
Large inheritance	0.083	0.309**	0.037*
C .	(0.054)	(0.147)	(0.020)
Δ (male employed)	0.027	0.054	-0.009
	(0.034)	(0.093)	(0.017)
Past male employed	0.107***	0.366***	-0.012
	(0.036)	(0.106)	(0.018)
Δ (female employed)	0.011	0.012	-0.001
	(0.022)	(0.061)	(0.012)
Past female employed	-0.046*	-0.090	-0.001
	(0.024)	(0.065)	(0.013)
Past household income	-0.043***	-0.105**	-0.031***
	(0.012)	(0.047)	(0.009)
Past household wealth	-0.001	-0.008**	-0.001
	(0.001)	(0.004)	(0.001)
Δ (house value)	0.016***	0.019***	0.017***
	(0.002)	(0.006)	(0.001)
Δ (tenure status)	0.042**	0.213***	0.005
	(0.019)	(0.053)	(0.011)
Past mortgagor	-0.000	0.044	-0.045***
	(0.028)	(0.077)	(0.016)
Past renter	-0.093**	-0.037	-0.145***
	(0.037)	(0.098)	(0.023)
Δ (household size)	0.073***	0.107**	0.049***
	(0.018)	(0.044)	(0.009)
Past household size	0.008	0.009	0.004
	(0.022)	(0.055)	(0.010)
Δ (number of children)	-0.049***	-0.033	-0.039***
	(0.017)	(0.046)	(0.009)
Past number of children	0.004	-0.007	0.008
	(0.021)	(0.053)	(0.010)
Constant	-0.213	-0.673	-0.064
	(0.316)	(1.415)	(0.242)
Household fixed effects	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes
R-squared	0.147	0.128	0.211
Observations	13,559	13,559	13,559
Households	3050	3050	3050

Notes: Data come from the Panel Study of Income Dynamics (PSID), 2005–2019. Sample is restricted to heterosexual couples aged 21–65 followed for at least three consecutive periods. Robust standard errors, clustered by household and year, are reported in parentheses. *p < 0.1, **p < 0.05, ***p < 0.01.

that households may allocate large inheritances towards investments in both housing and vehicles.

5.4. Heterogeneity

In this subsection, we investigate whether the effect of inheritances on household consumption is heterogeneous across the sample, paying attention to the household financial situation, a characteristic that may affect the estimates reported in Tables 2, 3 and 4. Specifically, we show that inheritances increase household consumption growth for durable goods, while large amounts significantly increase household consumption growth for durable and nondurable goods. Nevertheless, households may respond to inheritances differently according to their financial situation.

The economic theory predicts that households change their consumption plans immediately after receiving an unexpected permanent shock in household resources. This economic prediction should be stressed among constrained households, who are not able to adjust their consumption behavior optimally until they have the economic resources available to spend. Thus, we alternatively estimate a full interaction model, for each dependent variable, where we additionally include a dummy variable for constrained households fully interacted with all the regressors of Eqs. (1) and (2). That is, we estimate three fully interacted models to examine

Household consumption first-difference estimates, inheritance amount scaled by past household income.

Dependent variable:	$\Delta \log(\text{total consumption})$	$\Delta \log(durable \ consumption)$	$\Delta \log(nondurable \ consumption)$
Small inheritance	-0.024	0.156	-0.003
	(0.045)	(0.137)	(0.021)
Large inheritance	0.078	0.378**	0.036*
C C	(0.058)	(0.156)	(0.021)
Δ (male employed)	0.027	0.056	-0.008
	(0.034)	(0.093)	(0.017)
Past male employed	0.107***	0.366***	-0.012
1 5	(0.036)	(0.106)	(0.018)
Δ (female employed)	0.011	0.012	-0.001
	(0.022)	(0.061)	(0.012)
Past female employed	-0.047*	-0.090	-0.001
	(0.024)	(0.065)	(0.013)
Past household income	-0.043***	-0.104**	-0.031***
	(0.012)	(0.047)	(0.009)
Past household wealth	-0.001	-0.008**	-0.001
	(0.001)	(0.004)	(0.001)
Δ (house value)	0.016***	0.019***	0.017***
	(0.002)	(0.006)	(0.001)
Δ (tenure status)	0.042**	0.213***	0.005
	(0.019)	(0.053)	(0.011)
Past mortgagor	0.000	0.045	-0.045***
	(0.028)	(0.077)	(0.016)
Past renter	-0.093**	-0.036	-0.145***
	(0.037)	(0.098)	(0.023)
Δ (household size)	0.073***	0.107**	0.049***
	(0.018)	(0.044)	(0.009)
Past household size	0.007	0.009	0.003
	(0.022)	(0.055)	(0.010)
Δ (number of children)	-0.049***	-0.034	-0.039***
	(0.017)	(0.046)	(0.009)
Past number of children	0.004	-0.006	0.008
	(0.021)	(0.053)	(0.010)
Constant	-0.216	-0.677	-0.066
	(0.316)	(1.416)	(0.242)
Household fixed effects	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes
R-squared	0.147	0.128	0.211
Observations	13,559	13,559	13,559
Households	3050	3050	3050

Notes: Data come from the Panel Study of Income Dynamics (PSID), 2005–2019. Sample is restricted to heterosexual couples aged 21–65 followed for at least three consecutive periods. Robust standard errors, clustered by household and year, are reported in parentheses. *p < 0.1, **p < 0.05, ***p < 0.01.

Table 5

Consumption breakdown first-difference estimates, inheritance receipt.

Dependent variable:	∆log (food)	∆log (clothing)	∆log (services)	∆log (utilities)	$\Delta \log(housing nondurable)$	∆log(vehicle nondurable)	∆log(housing durable)	∆log(vehicle durable)
Inheritance receipt	0.076**	0.091	0.085	0.057	-0.017	-0.020	0.341**	0.175
	(0.038)	(0.094)	(0.071)	(0.035)	(0.025)	(0.053)	(0.161)	(0.149)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.187	0.171	0.220	0.213	0.344	0.244	0.176	0.180
Observations	7597	7597	7597	7597	7597	7597	7597	7597
Households	2027	2027	2027	2027	2027	2027	2027	2027

Notes: Data come from the Panel Study of Income Dynamics (PSID), 2005–2019. Sample is restricted to heterosexual couples aged 21–65 followed for at least three consecutive periods. Robust standard errors, clustered by household and year, are reported in parentheses. *p < 0.1, **p < 0.05, ***p < 0.01.

Consumption breakdown first-difference estimates, inheritance amount.

Dependent variable:	∆log (food)	∆log (clothing)	∆log (services)	∆log (utilities)	∆log(housing nondurable)	∆log(vehicle nondurable)	∆log(housing durable)	∆log(vehicle durable)
Small inheritance	0.024 (0.050)	0.002 (0.147)	0.018 (0.105)	0.012 (0.050)	-0.014 (0.036)	-0.047 (0.071)	0.443* (0.227)	0.093 (0.186)
Large inheritance	0.124** (0.055)	0.174 (0.114)	0.148 (0.093)	0.099** (0.048)	-0.020 (0.034)	0.006 (0.076)	0.246 (0.222)	0.250 (0.235)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared Observations Households	0.187 7597 2027	0.171 7597 2027	0.220 7597 2027	0.214 7597 2027	0.344 7597 2027	0.244 7597 2027	0.176 7597 2027	0.180 7597 2027

Notes: Data come from the Panel Study of Income Dynamics (PSID), 2005–2019. Sample is restricted to heterosexual couples aged 21–65 followed for at least three consecutive periods. Large inheritance denotes inheritances higher than \$29,226.18. Robust standard errors, clustered by household and year, are reported in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

whether there is any heterogeneity, and the estimates for inheritances receipt vary based on households' constrained status.

To do so, we define the debt service ratio (DSR), and the liquidity-to-asset ratio (LAR) based on Johnson and Li (2010) and Albuquerque (2019). The DSR equals the ratio of mortgage payments by household income, whereas the LAR is the fraction of the sum of money in checking or savings accounts, money market funds, certificates of deposit, government bonds, or treasury bills to household income. Then, we define as "constrained households" those with a DSR in the top quintile (denoting borrowing-constrained households) and a LAR of <2.5 % (liquidity constrained households), in line with Johnson and Li (2010) and Albuquerque (2019).²⁴ This analysis allows us to test whether there is any heterogeneity in our main estimates.

Results are displayed in Tables 7, 8 and 9, and suggest heterogeneity according to the household financial situation. As expected, the consumption response to inheritances is significantly larger for constrained households. Specifically, we find that inheritances increase household consumption growth for constrained households, whereas they also increase their household consumption growth on durables by a greater amount compared to non-constrained households. Numerically, as shown in Table 7, receiving an inheritance raises household consumption growth by 27.8 percent among constrained households, whereas inheritances increase the consumption growth rate of durable goods by a significant 104.8 percent more for constrained households compared to their unconstrained counterparts.

Furthermore, these heterogeneity effects appear to be primarily driven by large inheritances, which lead to a greater increase in consumption growth among constrained households. Specifically, we find that large inheritances increase total consumption growth by about 58.4–60.7 percent and household consumption growth on durables and nondurables by 191.3–234.1 and 26.7–28.4 percent in constrained households, depending on the definition of large inheritances, respectively. For unconstrained households, large inheritances also seem to increase the household consumption growth on durables by 28.1–32.1 percent. The overall result from this heterogeneity analysis is that liquidity constraints explain the consumption response to inheritances, with excess sensitivity to the actual receipt of inheritances among constrained households.

5.5. Discussion

All in all, our results show that households adapt their consumption plans after inheriting. Specifically, they suggest that households increase their consumption in the year of inheriting, mainly through increasing their purchases of durable goods by about \$8494. To the best of our knowledge, this is a novel finding in the literature on consumption responses to wealth shocks and is in stark contrast to prior works, such as those by Joulfaian and Wilhelm (1994), Suari-Andreu (2023) and Belloc et al. (2023), who examine food consumption expenditures. However, we go beyond these works by considering the whole picture of household purchases.

Furthermore, we find that the size of the inheritance plays a significant role, and recipients of large inheritances increase their consumption expenditure on both durable and nondurable goods. This result suggests that large inheritances may be perceived as permanent shocks, thereby raising the household's long-term average income. As such, these inheritances cannot be smoothed through savings alone and lead to substantial changes in household consumption, consistent with the PIH.²⁵ Specifically, we find that large

²⁴ We also explore alternative groupings for both the DSR and the LAR, based on Johnson and Li (2010) and Albuquerque (2019), and obtain robust results. Additionally, we conduct further heterogeneity analysis to examine whether the estimates differ for hand-to-mouth (HtM) households (Kaplan and Violante, 2014; Kaplan et al., 2014; Aguiar et al., 2024; Cherchye et al., 2024). Our analysis reveals that 31.03% of households are HtM, with approximately 93.84% of these classified as wealthy HtM. These findings are consistent with prior research utilizing the PSID dataset (Kaplan et al., 2014; Aguiar et al., 2024). However, the primary results remain consistent regardless of HtM household status.

²⁵ This claim is supported by the findings in Tables 8 and 9, which show that large inheritances also shift durable consumption growth among nonconstrained households.

Heterogeneity analysis by household financial situation: Household consumption first-difference estimates, inheritance receipt.

Dependent variable:	Δ log(total consumption)	$\Delta \log(durable \ consumption)$	$\Delta log(nondurable consumption)$
Inheritance receipt	0.016	0.231**	0.013
	(0.038)	(0.106)	(0.016)
Inheritance receipt X Constrained	0.278**	1.048**	0.055
	(0.134)	(0.491)	(0.107)
All controls and interactions	Yes	Yes	Yes
Household fixed effects	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes
R-squared	0.149	0.130	0.215
Observations	13,559	13,559	13,559
Households	3050	3050	3050

Notes: Data come from the Panel Study of Income Dynamics (PSID), 2005–2019. Sample is restricted to heterosexual couples aged 21–65 followed for at least three consecutive periods. Constrained households refer to those with a DSR in the top quintile and a LAR of <2.5 %. Robust standard errors, clustered by household and year, are reported in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

Table 8

Heterogeneity analysis by financial situation: Household consumption first-difference estimates, inheritance amount.

Dependent variable:	$\Delta log(total consumption)$	$\Delta \log(durable \ consumption)$	$\Delta \log(nondurable \ consumption)$
Small inheritance	-0.054	0.170	-0.009
	(0.050)	(0.150)	(0.023)
Large inheritance	0.073	0.281*	0.032
	(0.055)	(0.148)	(0.021)
Small inheritance X Constrained	0.239	0.834	0.008
	(0.151)	(0.595)	(0.129)
Large inheritance X Constrained	0.584***	1.913***	0.267***
	(0.161)	(0.467)	(0.091)
All controls and interactions	Yes	Yes	Yes
Household fixed effects	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes
R-squared	0.150	0.130	0.215
Observations	13,559	13,559	13,559
Households	3050	3050	3050

Notes: Data come from the Panel Study of Income Dynamics (PSID), 2005–2019. Sample is restricted to heterosexual couples aged 21–65 followed for at least three consecutive periods. Constrained households refer to those with a DSR in the top quintile and a LAR of <2.5 %. Robust standard errors, clustered by household and year, are reported in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

Table 9

Heterogeneity analysis by financial situation: Household consumption first-difference estimates, inheritance amount scaled by past household income.

Dependent variable:	$\Delta \log(\text{total consumption})$	$\Delta \log(durable \ consumption)$	$\Delta \log(nondurable \ consumption)$
Small inheritance	-0.028	0.141	-0.000
	(0.046)	(0.140)	(0.021)
Large inheritance	0.059	0.321**	0.027
	(0.059)	(0.159)	(0.022)
Small inheritance X Constrained	0.050	0.364	-0.108
	(0.158)	(0.696)	(0.146)
Large inheritance X Constrained	0.607***	2.020***	0.284***
	(0.127)	(0.418)	(0.085)
All controls and interactions	Yes	Yes	Yes
Household fixed effects	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes
R-squared	0.150	0.130	0.215
Observations	13,559	13,559	13,559
Households	3050	3050	3050

Notes: Data come from the Panel Study of Income Dynamics (PSID), 2005–2019. Sample is restricted to heterosexual couples aged 21–65 followed for at least three consecutive periods. Constrained households refer to those with a DSR in the top quintile and a LAR of <2.5 %. Robust standard errors, clustered by household and year, are reported in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

inheritances increase the household consumption growth on durables and nondurables by \$9830 and \$2256, respectively. Finally, we find that these effects are particularly pronounced among constrained households. This latter finding aligns with the LCH, which posits that the consumption response is stronger among constrained households, as they were unable to adjust their consumption plans and

spend according to their preferences through the use of borrowings or savings to finance their consumption forward. As a result, constrained households exhibit excessive sensitivity to realized inheritances.

6. Conclusions

This paper studies the impact of wealth on household consumption behavior. To do so, we use public data from the PSID from 2005 to 2019, a period for which detailed information on household consumption is available. Understanding how consumption responds to changes in wealth is crucial for understanding the transmission of changes in fiscal and monetary policies on household behavior, but the literature so far has mostly focused on consumption responses to income changes, and limited attention has been paid to wealth and its components. Within this framework, we contribute to this literature by examining the impact of inheritances, a significant source of wealth, on household consumption decisions.

Our results suggest that inheritances immediately change household consumption behavior and households increase their consumption expenditures in the year of inheriting. Specifically, we show that inheritances increase household consumption growth in durable goods by 26.7 percent, which represents an expenditure of about \$8494. When we differentiate among inheritances according to their size, we find that large inheritances increase household consumption growth in durable and nondurable goods by 30.9 and 3.7 percent, respectively. Consequently, consumption of durables increases by a larger amount, of about \$7574, on average. Finally, these consumption responses are more pronounced among constrained households, which significantly increase their consumption growth on durable and nondurable goods, exhibiting excess sensitivity to inheritances. The prior literature regarding inheritances and nondurable goods is mixed, with some showing some effects (Joulfaian and Wilhelm, 1994; Belloc et al., 2023) and others finding no effects (Suari-Andreu, 2023). However, against all these works that focus on a very restrictive and essential part of households' consumption, we have information from a wide range of household consumption items, beyond household food expenses, and about the size of the inheritance.

A limitation of this paper is that we cannot distinguish between anticipated and unanticipated inheritances, so we cannot provide a test for the validity of the LCH for the *whole* sample. Despite inheritances being a significant boost to household economic resources, individuals may anticipate their receipt and change their consumption behavior some time before actually receiving the inheritance according to standard life-cycle theories, particularly among those households who are in a strong financial situation. However, it is very hard to identify unpredictable movements in wealth and we cannot address this limitation. The consumption response to inheritances should be larger for households who did not expect the inheritance, and this suggests that our overall coefficients may be biased downwards.

Future research must use information regarding subjective inheritance expectations to check whether households are forwardlooking when making their consumption decisions, preferably through the use of panel datasets, given that the evidence so far is descriptive and based on conditional correlations (Basiglio et al., 2023; Malo and Sciulli, 2023).²⁶ We also suggest for future research to replicate our findings in a long-term setting, to gain additional insights about any persistence behind our estimates through consumption smoothing over time.

Despite these limitations, the findings of this paper hold important implications for policy. They suggest that fiscal and monetary policy interventions that target household wealth, through policy interest rates, tax reforms or other redistributive policies, may lead to immediate changes in household consumption behavior. Moreover, these results are important for current policy debates on the design of inheritance taxes, as inheritances can have a large impact on consumption and flow through to the real economy via changes in household wealth, thereby boosting GDP in the short run. Finally, the size of the shock matters and large positive shocks to wealth are more likely to impact household consumption decisions than small ones.

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CRediT authorship contribution statement

Ignacio Belloc: Writing – original draft, Investigation, Formal analysis, Data curation, Conceptualization. **José Alberto Molina:** Writing – review & editing, Validation, Supervision, Resources, Software, Project administration, Investigation, Funding acquisition, Conceptualization. **Jorge Velilla:** Writing – review & editing, Validation, Methodology, Investigation, Conceptualization.

Declaration of competing interest

None.

²⁶ The PSID had information about inheritance expectation in the 1984 survey wave ("What about future inheritances—are you fairly sure that you (or someone in your family living there) will inherit some money or property in the next ten years?") but follow-up waves suppressed this question.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.jmacro.2024.103661.

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