Consumption and Liquidity Shocks

Antonio Acconcia[1] · **Simone Chinetti[2]** · **Tullio Jappelli[1]**

Abstract

We study the response of consumption to anticipated and unanticipated liquidity gains using information on gifts (occasional and recurrent) and severance pay from the Italian Household Income and Wealth survey. Consistent with standard intertemporal consumption models, we find that unanticipated income shocks affect nondurable consumption while anticipated shocks have no effect. In the former case, the marginal propensity to consume is estimated to be around 7%. We find also that this consumption response is stronger for poor households (around 10%) and negligible for rich ones.

Keywords Liquidity · MPC · Transitory Windfall Gains · Anticipated Income Changes

JEL Classification D12 · D14 · E21 · E63 · G51 · H31

1 Introduction

How do households respond to income shocks? In recent years interest in this question has reignited in the context of the considerable fiscal and monetary stimuli implemented to counteract the economic downturns following the 2008 financial crisis and the COVID-19 pandemic. This paper provides new evidence on this long-standing macroeconomics issue by studying different types of liquidity changes affecting Italian households which allow us to distinguish the consumption effects of unexpected income shocks and anticipated income changes.

To investigate the effects of unexpected income shocks, we exploit windfall gains received by households, namely occasional gifts. These can plausibly be interpreted as unanticipated income variations which should induce a revision to consumption plans.

✉ Antonio Acconcia
   antonio.acconcia@unina.it

1   Department of Economics and Statistics and CSEF, University of Naples Federico II, Via Cinthia, 80126 Naples, Italy

2   Department of Economics and Statistics, University of Naples Federico II, Naples, Italy

To study the impact of anticipated income changes, we focus on recurrent gifts (on the assumption that in general they are expected) and severance pay, a form of deferred compensation to which private and public employees are entitled regardless of the reason for their employment termination. The availability of a detailed categorization of income components allows estimation in the same regression of the effects of both expected and unexpected income changes. In line with standard intertemporal consumption models, we find no effect of anticipated income changes whereas unexpected and transitory income shocks are associated with significantly increased consumption, particularly among households at the low-end of the income distribution. The magnitude of the estimated Marginal Propensity to Consume (MPC) is broadly consistent with the theoretical predictions.

Our analysis relies on data for the period 2002–16 from the Bank of Italy Survey on Household Income and Wealth (SHIW) which includes a representative panel of the Italian resident population. The survey asks for information on nondurable consumption, income components (including severance pay and gifts), and demographic variables, and allows us to control for time-invariant household characteristics. By exploiting a unified empirical framework, we can be confident of interpreting differences in the MPC estimates associated with expected and unexpected income changes.

In the total sample, we find that the MPC resulting from unexpected cash transfers (occasional gifts) is around 7%, and is close to zero in the case of severance pay or recurrent gifts. However, the average masks important heterogeneities, because the MPC following an unexpected income shock depends on the household's initial financial wealth position. For relatively poor households, namely those below the sample median of financial wealth, an unexpected income shock is associated with an MPC close to 10%, while for high-wealth households the MPC is small and not statistically different from zero.

The rest of the paper is organized as follows. Section 2 reviews the literature most closely related to our analysis. Section 3 describes the data. Section 4 presents the empirical framework used to estimate the MPC and reports the empirical findings. Section 5 concludes.

2 The Consumption Response to Income and Wealth Changes

The fiscal response to the 2007–08 financial crisis and the pandemic crisis reinvigorated debate on the effectiveness of cash transfers (such as tax rebates and bonuses) to stimulate household consumption. According to the permanent income hypothesis, the consumption response to income and wealth shocks depends crucially on the nature of the shock and consumers' related expectations. If income changes are anticipated, they should not induce any revision to the optimal consumption plan since they were part of the consumers' information set before their realizations. However, unanticipated income or wealth shocks should induce consumption revisions that depend on the nature of the shock: consumption should respond strongly to permanent shocks but should be much less sensitive to transitory shocks.

In line with the theoretical predictions, the response of consumption to changes in resources can be estimated using quasi-experiments that clearly isolate episodes

of anticipated and unanticipated variations in income or wealth.[1] Resource variations related to taxation (i.e. tax rebates, refunds, bonuses), financial and non-financial wealth (i.e. housing and financial assets), and wages or pensions (i.e., payment schedules and social security receipts) are usually disclosed in advance or are expected by households, thus they can be used to study how consumption adjusts to anticipated income changes. By leveraging the randomness in the timing of these changes, many studies suggest that consumption varies more than the permanent income hypothesis would suggest. These studies include Parker et al. (2013) which shows that on average, households spend between 12 and 30% of their tax rebates on nondurable consumption goods and services, and Broda and Parker (2014) which suggests average spending of 10% immediately following a cash transfer.

Studies that show that consumption smoothing does not occur emerge also in the case of predictable and transitory tax refunds (Souleles 1999) and predictable changes to social security taxes (Parker 1999), pure liquidity shocks due to cash on hand transfers to finance earthquake reconstruction (Acconcia et al. 2020), changes in the credit supply (Gross and Souleles 2002), and the 2013 U.S. government shutdown (Baker and Yannelis 2017; Gelman et al. 2020), and suggest average MPC nondurables of up to 25%.[2] If consumption expenditure includes purchase of durable goods the estimated effects can be even larger (see e.g. Souleles 1999 and Agarwal et al. 2007).

Typical unanticipated shocks to income or wealth are those induced by exogenous tax rate changes, temporary paycheck reductions, lottery prizes, and sudden variations in financial wealth. Most studies relying on these shocks find significant effects on consumption, sometimes over and above what is predicted by standard intertemporal models, and several papers find considerable response heterogeneity.[3]

Theoretical models suggest that if credit or insurance markets are incomplete, the consumption responses to transitory income shocks are heterogeneous and asymmetric. For instance, models that include prudent individuals and income risk predict that the MPC declines with cash-on-hand (Carroll and Kimball 1996; Jappelli and Pistaferri 2020), and that the MPC in response to a positive income shock is smaller than the MPC from a negative shock (Christelis et al. 2019).

The MPC depend also on the size of the shock, and the MPC from small income gains is higher than the MPC from large gains (Andreolli and Surico 2021). MPC differences are also correlated to observable characteristics. For instance, following an income shock, consumption expenditure rises significantly more for wealthy hand-to-mouth consumers (Kaplan and Violante 2014; Acconcia et al 2020), mortgage holders (Misra and Surico 2014), consumers with low levels of liquid wealth or low incomes (Johnson et al. 2006; Carroll et al. 2017), and those whose credit balances are near their limits (Agarwal et al. 2007). Our finding for occasional gifts which show

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[1] Alternative approaches use subjective expectations and responses to questions on hypothetical income or wealth changes available from the survey data; see e.g. Jappelli and Pistaferri (2010) and Parker and Souleles (2019), or focus on statistical decomposition of the income process in conjunction with covariance restrictions between income and consumption (Blundell et al. 2008).

[2] See also Kan et al. (2017) and Souleles (2002).

[3] See e.g. Imbens et al. (2001), Kuhn et al. (2011), Agarwal and Qian (2014), Surico and Trezzi (2018), Fagereng et al. (2021).

that the consumption response varies significantly with financial wealth is in line with these results.

Most previous studies estimate the MPC based on either anticipated or unanticipated shocks. A notable exception is Paiella and Pistaferri's (2017) analysis of wealth shocks on Italian households following the 2007–08 financial crisis. These authors found a similar MPC of around 3% in the case of both anticipated and unexpected changes in wealth driven by house price changes. In this paper, we use the same data source and contribute to the literature on MPC by looking at episodes of income changes which plausibly can be assumed to be anticipated (recurring gifts and severance pay) or unanticipated (occasional gifts). Our unified empirical framework implies that different MPC estimates associated to variations in anticipated and unanticipated income components can be compared directly. In contrast to Paiella and Pistaferri (2017), we find a statistically significant consumption response to unexpected shocks, and find also that the size of the MPC is close to that estimated by Bottazzi et al. (2020) for wealth shocks.[4]

3 Data

We exploit household-level balance sheet drawn from the SHIW conducted by the Bank of Italy. The survey asks for detailed information on demographic variables, income, consumption, and wealth (broken down into real assets, financial assets, and debt components) for a representative sample of the Italian resident population. Our analysis covers the period 2002–16 and relies on the rotating panel component of the SHIW which involves around half of the households interviewed in a given survey being included in the succeeding survey. Overall, the panel includes 10,555 households interviewed at least twice. The survey is conducted every two years.

In each year considered, the SHIW provides information on amounts derived from earnings, governments transfers, and income from real and financial assets. Earnings are net of taxes and include severance payments. The survey provides separate information on financial gifts received from relatives or friends, identified by the responses to the following two questions which provide examples of the types of gift considered and their classification as recurrent or occasional: "*In the course of the year, have you personally received occasional gifts / financial contributions (weddings, graduations, special occasions) from non-cohabiting relatives or friends?*" and "*In the course of the year, have you personally received recurrent gifts/financial contributions (rent, monthly allowance, etc.) from non-cohabiting relatives or friends?*".

We consider three types of positive transitory income changes, two of which are likely to be expected and one which is unexpected. Occasional financial gifts are sporadic and scarce, characterizing only some households, and occurring only once or twice for these households during the sample period. We classify them as unexpected income shocks. Recurring gifts refer to regular payments (donations) rather than a

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[4] Guiso et al (2005) and Paiella (2007) study the effects of wealth shocks on consumption, and suggest that the MPC from housing wealth is between 2 and 4%.

one-time gift. From the recipient's point of view they are anticipated, and thus should not affect consumption.

Severance pay is a universal feature of both public and private Italian labor contracts. It accrues gradually over the worker's career and is paid out when the worker retires or the contract is terminated. Over time, severance pay has come to constitute a substantial component of Italian household lifetime income, and for workers with long careers amounts to three or four times the worker's annual earnings. Currently, private and public sector workers are subject to the same severance pay rule which implies payment of a constant fraction of annual earnings usually deferred to the time of retirement or in the case of contract cancellation and termination of the employment relationship.[5] Note that severance pay is considered a salary component so its receipt does not change the individual's lifetime resources. This means that severance pay allows us to study the effect of anticipated liquidity injections not associated with variations in lifetime income. According to the permanent income hypothesis, consumption should not be sensitive to the timing of the severance payment.

By exploiting information on gifts, severance pay, and consumption, we can identify households that during the sample period experienced a positive income change and can estimate their consumption response. We consider consumption of nondurables and services which information is available for all the survey years. Income components and consumption are deflated using the consumer price index (CPI) and are expressed in 2010 thousand euro.

4 Empirical Model and Results

Our empirical analysis is based on the following regression model which relates consumption changes to unexpected income shocks and expected income changes:

$$\Delta c_{it} = \alpha + \beta \Delta y_{it}^u + \gamma \Delta y_{it}^e + \lambda \Delta z_{it} + \delta_t + \varepsilon_{it} \tag{1}$$

where Δc_{it} is the change in non-durable consumption, Δy_{it}^u is the unexpected change in income measured as the reported value of occasional gifts, and Δy_{it}^e is the expected change in income measured as the reported value of severance pay and recurrent gifts. The variables included in the of z_{it} vector capture the effect of potential preference shifts; ε_{it} is an error term. We introduce time effects δ_t to control for aggregate shocks.

The permanent income model suggests that occasional gifts should have a positive albeit small effect on consumption, while there should be no effect from expected income changes (severance pay and recurrent gifts). Accordingly, Eq. (1) can be used to test the hypothesis that expected income changes do not affect consumption ($\gamma = 0$), and estimate the MPC in response to an unexpected income shock (β). Standard errors clustered at household level are used for inference.

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[5] The severance pay contribution rate is 6.91% of the gross yearly salary. Contributions are then indexed to the cost of living based on the formula $0.015 + 0.75p$, where p is the rate of change in the consumer price index. Prior to 2000, public sector employees benefited from a more generous system. Their deferred compensation was computed using an earnings-based formula which considered only final employment salary year not the employee's earnings over the entire work career (Jappelli and Padula 2016).

The z vector includes change in family size, a dummy for changes in the labour-market status of the household head, and changes in the age of the household head.[6] Changes in labor market status control for the possibility that the household head is no longer in a professional position (i.e.is retired, unemployed, or no longer partici-pating in the labour market). If leisure and consumption are substitutes, this type of statuschange could be associated with a change in consumption.

Equation (1) is initially estimated on the sample of treated households, that is, recipients of severance pay and gifts. To check the robustness of the baseline estimates and improve their external validity, we expanded the sample to include non-recipients of gifts and severance pay selected through propensity score matching. In a third model, we estimated Eq. (1) including all the households in our dataset.

To recover the propensity score, we perform a logit estimation including the vari-ables: age, education, gender, sector of activity, family size, number of income earners, and size of city of residence.[7]Based on the propensity score,, we perform a nearest-neighbor matching (1 nearest-matching) with the common support option, without replacement, and with a caliper at 0.1 (i.e. we set a maximum distance and maximum value of 0.1 for the controls).

4.1 Descriptive Statistics

Table 1 presents summary statistics for the longitudinal sample observed from 2002 to 2016. Column (1) includes only households reporting occasional gifts, recurrent gifts, or severance pay. Column (2) adds the control group of households (receiving no gifts or severance pay) identified through the propensity score matching. Column (3) includes all available panel observations. The comparison across the three samples shows that on average, households have similar non-durable consumption expenditure (€23,000–24,000) and similar income levels (€31,000–34,000), with higher financial wealth in the total sample. Three out of four households are headed by a male with an average age of 54 years (61 in the total sample). Almost 50% of household heads are employed. On average, households include three individuals.

Figure 1 plots the distribution of the income components considered in our empirical analysis. Overall, almost half of the income changes are related to severance payments (39.7%). The mode of severance pay is in the €20,001–50,000 category, while the one related to recurrent gifts is €2001–5000, both considerably higher than occasional gifts.

4.2 Regressions Results

Table 2 column (1) reports our baseline estimates. We find that non-durable consump-tion does not respond to expected income changes (severance pay and recurrent gifts) but increases after an unexpected positive income shock. In particular, the MPC result-ing from an occasional gift is 0.058 and is statistically different from zero at the 10%

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[6] Notice that the choice to introduce a change in household head age among the regressors is consistent with the assumption that the level of consumption is a function of both age and age squared.

[7] A similar strategy is suggested in the working paper version of Fagereng et al. (2021).

Table 1 Descriptive statistics

	Baseline sample (1)	Propensity score matching (2)	Total sample (3)
Nondurable consumption	23.24 (13.80)	24.34 (13.06)	22.80 (12.75)
Occasional gifts	0.28 (3.26)	0.18 (2.60)	0.03 (1.11)
Recurrent gifts	0.34 (1.51)	0.10 (0.86)	0.04 (0.52)
Severance pay	0.77 (5.71)	0.49 (4.56)	0.09 (1.95)
Income	31.08 (22.01)	34.37 (21.86)	32.34 (23.73)
Financial wealth	25.41 (98.68)	26.99 (111.08)	30.39 (114.30)
LMS: Employed	0.47 (0.50)	0.50 (0.50)	0.39 (0.49)
Family size	2.92 (1.34)	3.01 (1.29)	2.49 (1.26)
Age	54.02 (13.36)	54.38 (12.64)	61.03 (14.83)
Male	0.76 (0.43)	0.81 (0.39)	0.75 (0.43)
Observations	3383	5328	29,378

Table reports the sample means (with standard deviations in parentheses) of the main variables considered in the regression analysis. Column (1) includes the sample of households reporting occasional gifts, regular gifts, or severance pay. Column (2) adds a control group identified through propensity score matching. Column (3) includes all available panel observations in 2002–2016. Nondurable consumption, income, occasional gifts, recurrent gifts, severance pay, and financial wealth are deflated using the CPI and expressed in 2010 thousands of Euro. LMS is labor market status and is a dummy indicating whether the household head is employed
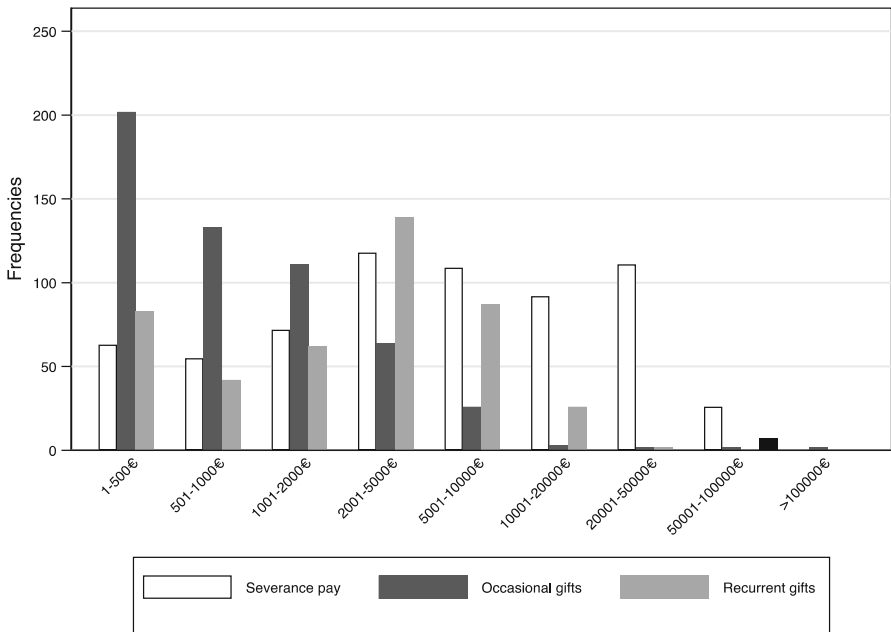

Fig. 1 Distribution of income changes. Figure plots the distribution of severance pay, recurrent gifts, and occasional gifts deflated by the CPI and expressed in 2010 euro. Data are from the 2002–2016 SHIW

Table 2 MPC from gifts and severance pay

	Baseline sample (1)	Propensity score matching (2)	Total sample (3)
Occasional gifts	0.058* (1.89)	0.064** (2.00)	0.058* (1.87)
Recurrent gifts	− 0.211 (− 0.78)	− 0.520 (− 1.12)	− 0.221 (− 0.85)
Severance pay	0.038 (1.46)	0.034 (1.33)	0.033 (1.29)
Age	− 0.006 (− 0.66)	− 0.021*** (− 2.87)	− 0.010*** (− 3.93)
Change family size	3.174*** (10.10)	2.761*** (10.66)	2.900*** (21.96)
Change LMS	2.680*** (3.78)	1.881*** (3.19)	1.949*** (6.70)
Observations	3383	5328	29,378

The dependent variable is change in nondurables consumption. All regressions include year dummies. Column (1) includes households reporting occasional gifts, regular gifts, or severance pay. Column (2) adds a control group identified through propensity score matching. Column (3) includes all available panel observations in 2002–2016

t-statistics are computed using robust standard errors at the household level. * is statistical significance at the 10% level, ** is significance at 5%, *** is significance at at 1%

level. In column (2), we use the sample from propensity score matching. Again, the coefficients of recurrent gifts and severance pay are not statistically different from zero, while the MPC from occasional gifts is 0.064 and is statistically different from zero at the 5% level. The results in column (3) which includes all panel observations are similar.

As a first robustness check, in Table 3 we expand the vector of controls to account for group specific shocks by including region, city size, and sector of employment

Table 3 Regressions controlling for region, city, and sector fixed effects

	Baseline sample (1)	Propensity score matching (2)	Total sample (3)
Occasional gifts	0.063** (1.98)	0.069** (2.19)	0.061* (1.94)
Recurrent gifts	− 0.200 (− 0.70)	− 0.497 (− 1.04)	− 0.194 (− 0.74)
Severance pay	0.041 (1.55)	0.036 (1.38)	0.036 (1.40)
Age	0.002 (0.15)	− 0.007 (− 0.60)	0.002 (0.51)
Change family size	3.189*** (10.14)	2.761*** (10.69)	2.907*** (21.98)
Change LMS	2.598*** (3.80)	1.659*** (2.88)	1.814*** (6.27)
Observations	3382	5327	29,363

The dependent variable is change in nondurables consumption. Regressions include year, region, city size, sector of employment, and household head dummies. Column (1) includes households reporting occasional gifts, regular gifts, or severance pay. Column (2) adds a control group identified through propensity score matching. Column (3) includes all available panel observations in 2002–2016

t-statistics are computed using robust standard-errors at the household level. *, **, and *** are statistical significance at the 10%, 5%, and 1% levels

dummies. The coefficient estimates are virtually unchanged, supporting the hypothesis that only unexpected income shocks affect consumption changes.[8] In a second robustness check, we replace the change in labour-market status with two dummies for becoming unemployed and exiting the labor force. The coefficient estimates of the two dummies are not statistically different from each other and those of the key regressors do not change (results not reported).

In 2000 the Italian government reformed severance pay of public employees. Under the new regime, severance pay is linked to the public employee's entire working career rather than to the salary received in the final year of employment. The new regime applies only to contracts signed after 2010. In the transition period (contracts signed between 2000 and 2010), a pro-rata arrangement with two components applies. The first component is $0.8 \times$ number of years of contribution until December 2010 $\times$ (final year salary/12). The second component is $0.0691 \times$ yearly earnings, capitalized at the rate $0.015 + 0.75p$, (where p is the inflation rate) as in the old regime. The weights of the two components are given by years of service before and after December 2010.[9]

Notice that since the new severance pay regime applies only to contracts signed after 2010, and since our sample extends from 2002 to 2016, none of the public employees in of our sample retired under the new regime (having at most 6 years seniority in 2016). It is possible that some of the public employees in our sample retired between 2012 and 2016 during the reform transition period. However, in our baseline regression this effect should be small. Note also that for a public employee retiring in 2012 with 40 years of contributions, the respective weights for the severance pay computation are 38/40 under the old formula and 2/40 under the new formula. Even in the last year of our sample, for those retiring in 2016, the weights are 34/40 and 6/40, implying only a small change in severance pay due to the reform.

We recognize that in principle even a small number of observations could affect our results. Since we have no information on contract start years (before or after 2000), we ran the estimation dropping all households with at least one public sector employee. The results in Table 4 are similar to the baseline estimates presented in Table 2.

The interpretation of the estimated coefficients of recurrent gift and severance pay could be a potential concern related to our main specification. Specifically, if recurrent gifts are truly anticipated, their difference over time should also be anticipated and thus should not be associated with consumption changes. The issue is less relevant for severance pay, since payouts do not occur in every year. We estimated Eq. (1) replacing the levels of gifts and severance pay with their changes over time. Table 5 shows that results remain qualitatively unchanged.

The final step in our analysis involves checking whether the MPC differs along the wealth distribution. Table 6 present the sample split according to the median value of financial wealth, and shows that the MPC of relatively poor households

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[8] The results are robust to the inclusion of age dummies and the family size rather than changes to family size.

[9] Jappelli and Padula (2016) exploit the reform to study its consumption effect for a sample of working individuals aged 20–55 and test whether public employees who remain part of the labor force save more after the reform, to compensate for the reduction in future wealth. In contrast, we check whether the timing of income (in this case, severance pay received on retirement which is anticipated for all private employees and for all public employees who retired before 2010) affects the timing of consumption.

Table 4 Regressions dropping public sector employees

	Baseline sample	Propensity score matching	Total sample
	(1)	(2)	(3)
Occasional gifts	0.059* (1.91)	0.065** (2.01)	0.087*** (3.70)
Recurrent gifts	− 0.209 (− 0.76)	− 0.526 (− 1.11)	− 0.286 (− 1.03)
Severance pay	0.032 (1.14)	0.027 (1.01)	0.035 (1.24)
Age	− 0.004 (− 0.43)	− 0.018** (− 2.36)	− 0.005* (− 1.72)
Change family size	3.086*** (9.57)	2.636*** (10.02)	2.755*** (20.24)
Change LMS	2.600*** (3.54)	2.046*** (3.31)	1.947*** (7.18)
Observations	3162	4840	24,079

The dependent variable is change in nondurables consumption. The sample excludes households with at least one member employed in the public sector. Regressions include year, region, city size, sector of employment, and household head dummies. Column (1) includes households reporting occasional gifts, regular gifts, or severance pay. Column (2) adds a control group identified through propensity score matching. Column (3) includes all available panel observations in 2002–2016

t-statistics are computed using robust standard-errors at the household level. *, **, and *** are statistical significance at the 10%, 5%, and 1% levels

Table 5 Regressions for changes in gifts and severance pay

	Baseline sample	Propensity score matching	Total sample
	(1)	(2)	(3)
Change in occasional gifts	0.058** (2.44)	0.064*** (2.66)	0.057** (2.45)
Change in recurrent gifts	− 0.273 (− 1.32)	− 0.486 (− 1.35)	− 0.279 (− 1.36)
Change in severance pay	0.025 (1.32)	0.024 (1.26)	0.023 (1.18)
Age	− 0.004 (− 0.53)	− 0.019*** (− 2.83)	− 0.009*** (− 3.92)
Change family size	3.134*** (10.02)	2.739*** (10.61)	2.894*** (21.94)
Change LMS	2.567*** (3.66)	1.843*** (3.16)	1.934*** (6.67)
Observations	3383	5328	29,378

The dependent variable is change in nondurables consumption. Regressions include year, region, city size, sector of employment, and household head dummies. Column (1) includes households reporting occasional gifts, regular gifts, or severance pay. Column (2) adds a control group identified through propensity score matching. Column (3) includes all available panel observations in 2002–2016

t-statistics are computed using robust standard-errors at the household level. *, **, and *** are statistical significance at the 10%, 5%, and 1% levels

(financial wealth below the median) is significantly higher than among rich households. In particular, the MPC of poor households is approximately 10% and is statistically different from zero at the 1% level, whereas for rich households it is close to 0 and not statistically different from zero. A possible problem with our approach is that occasional gifts might be related to events that generate expenditure, and therefore are endogenous. However, if this were the case, we would expect more consumption

Table 6 MPC of poor and rich households

	Baseline sample		Propensity score matching		Total sample	
	Poor	Rich	Poor	Rich	Poor	Rich
	(1)	(2)	(3)	(4)	(5)	(6)
Occasional gifts	0.091*** (6.23)	0.005 (0.14)	0.106*** (5.59)	− 0.012 (− 0.43)	0.094*** (5.82)	− 0.010 (− 0.35)
Recurrent gifts	− 0.337 (− 0.90)	0.114 (0.36)	− 0.632 (−1.09)	0.032 (0.14)	− 0.306 (− 0.95)	0.058 (0.16)
Severance pay	0.091 (0.46)	0.025 (0.91)	0.111 (0.79)	0.019 (0.71)	0.082 (0.60)	0.029 (1.11)
Age	− 0.004 (− 0.41)	− 0.015 (− 0.96)	− 0.014* (− 1.69)	− 0.038*** (− 3.00)	− 0.006* (− 1.86)	− 0.016*** (− 3.39)
Change family size	2.904*** (6.96)	3.393*** (7.17)	2.491*** (7.94)	3.036*** (7.03)	2.382*** (16.45)	3.666*** (15.27)
Change LMS	3.204*** (3.43)	1.719* (1.67)	2.327*** (3.20)	1.164 (1.31)	2.071*** (6.52)	1.772*** (3.66)
Observations	1692	1691	2664	2664	14,705	14,673

The dependent variable is change in nondurables consumption. Poor (rich) households are those whose financial wealth is below (above) the sample median. Regressions include year, region, city size, sector of employment, and household head dummies. Column (1) includes households reporting occasional gifts, regular gifts, or severance pay. Column (2) adds a control group identified through propensity score matching. Column (3) includes all available panel observations in 2002–2016 t-statistics are computed using robust standard-errors at the household level. *, **, and *** are statistical significance at the 10%, 5%, and 1% levels

associated with such gifts, irrespective of household characteristics. Our finding that occasional gifts are associated with higher consumption only among relatively poor households is consistent with models where liquidity constraints and precautionary motives affect consumption decisions.

5 Summary

We used SHIW data on the income components of Italian households and the same regression framework to estimate the impact of expected income changes and unexpected income shocks on nondurables consumption. The evidence suggests that unexpected transitory income shocks due to occasional financial gifts affect consumption, and that the average MPC is 7%. The response to a shock varies with financial wealth: while the MPC of poor households is around 10%, the MPC of rich households is not statistically different from zero which is broadly consistent with previous evidence for Italy. Neither household groups respond to expected income changes driven by severance pay or recurrent gifts. The heterogeneous effects of occasional gifts on consumption are in line with evidence highlighting the relevance of liquidity constraints for shaping consumption behavior.

Declarations

References

Acconcia A, Corsetti G, Simonelli S (2020) Liquidity and consumption: evidence from three post-earthquake reconstruction programs in Italy. Am Econ J Macroecon 12(3):319–346

Agarwal S, Qian W (2014) Consumption and debt response to unanticipated income shocks: evidence from a natural experiment in Singapore. Am Econ Rev 104(12):4205–4230

Agarwal S, Liu C, Souleles NS (2007) The reaction of consumer spending and debt to tax rebates—evidence from consumer credit data. J Polit Econ 115(6):986–1019

Andreolli M, Surico P (2021) Less is more: consumer spending and the size of economic stimulus payments. CEPR Discussion Paper DP 15918:2021

Baker SR, Yannelis C (2017) Income changes and consumption: Evidence from the 2013 federal government shutdown. Rev Econ Dyn 23:99–124

Blundell R, Pistaferri L, Preston I (2008) Consumption inequality and partial insurance. Am Econ Rev 98:1887–1921

Bottazzi R, Trucchi S, Wakefield M (2020) Consumption responses to a large shock to financial wealth: evidence from Italy. Scand J Econ 122(2):762–789

Broda C, Parker JA (2014) The Economic Stimulus Payments of 2008 and the demand for consumption. J Monet Econ 68:20–36

Carroll CD, Kimball MS (1996) On the concavity of the consumption function. Econometrica 64(4):981–992

Carroll CD, Slacalek J, Tokuoka K, White MN (2017) The distribution of wealth and the marginal propensity to consume. Quant Econ 8:977–1020

Christelis D, Georgarakos D, Jappelli T, Pistaferri L, van Rooij M (2019) Asymmetric consumption effects of transitory income shocks. Econ J 129(622):2322–2341

Fagereng A, Holm MB, Natvik GJ (2021) MPC heterogeneity and household balance sheets. Am Econ J Macroecon 13(4):1–54

Gelman M, Shachar K, Shapiro MD, Silverman D, Tadelis S (2020) How individuals respond to a liquidity shock: Evidence from the 2013 government shut-down. J Public Econ 189:103917

Gross DB, Souleles NS (2002) Do liquidity constraints and interest rates matter for consumer behavior? Evidence from credit card data. Q J Econ 117(1):149–185

Guiso L, Paiella M, Visco I (2005) Do capital gains affect consumption? Estimates of wealth effects from Italian households' behaviour, Bank of Italy, Working Paper 555.

Imbens GW, Rubin DB, Sacerdote BI (2001) Estimating the effect of unearned income on labor earnings, savings, and consumption: evidence from a survey of lottery players. Am Econ Rev 91(4):778–794

Jappelli T, Padula M (2016) The consumption and wealth effects of an unanticipated change in lifetime resources. Manag Sci 62(5):1458–1471

Jappelli T, Pistaferri L (2010) The consumption response to income changes. Annu Rev Econ 2(1):479–506

Jappelli T, Pistaferri L (2020) Reported MPC and unobserved heterogeneity. Am Econ J Econ Pol 12(4):275–297

Johnson DS, Parker JA, Souleles NS (2006) Household Expenditure and the Income Tax Rebates of 2001. Am Econ Rev 96(5):1589–1610

Kan K, Peng S-K, Wang P (2017) Understanding consumption behavior: evidence from consumers' reaction to shopping vouchers. Am Econ J Econ Pol 9(1):137–153

Kaplan G, Violante GL (2014) A model of the consumption response to fiscal stimulus payments. Econometrica 82(4):1199–1239

Kuhn P, Kooreman P, Soetevent A, Kapteyn A (2011) The effects of lottery prizes on winners and their neighbors: evidence from the Dutch postcode lottery. Am Econ Rev 101(5):2226–2247

Misra K, Surico P (2014) Consumption, income changes, and heterogeneity: evidence from two fiscal stimulus programs. Am Econ J Macroecon 6(4):84–106

Paiella M (2007) Does wealth affect consumption? Evidence for Italy. J Macroecon 29:189–205

Paiella M, Pistaferri L (2017) Decomposing the wealth effect on consumption. Rev Econ Stat 99(4):710–721

Parker JA (1999) The reaction of household consumption to predictable changes in social security taxes. Am Econ Rev 89(4):959–973

Parker JA, Souleles NS (2019) Reported effects versus revealed-preference estimates: evidence from the propensity to spend tax rebates. Am Econ Rev Insights 1(3):273–290

Parker JA, Souleles NS, Johnson DS, McClelland R (2013) Consumer spending and the economic stimulus payments of 2008. Am Econ Rev 103(6):2530–2553

Souleles NS (1999) The response of household consumption to income tax refunds. Am Econ Rev 89(4):947–958

Souleles NS (2002) Consumer response to the Reagan tax cuts. J Public Econ 85(1):99–120

Surico P, Trezzi R (2018) Consumer Spending and Property Taxes. J Eur Econ Assoc 17(2):606–649