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Abstract

Using data from a new survey of 3,000 Italian households collected at the end of October 2020, we study the effect of fear of COVID-19 contagion and income risk on consumption. The survey elicits individual-level indicators of fear of contagion, distinguishing between worries while working, shopping, traveling, eating out and meeting relatives or friends, and indicators of changes in spending behavior after the pandemics. The probabilities of consumption drops and increased saving are positively associated to fear of contagion, particularly while shopping, traveling and eating out. Income uncertainty, measured by the probability of job loss, also contributes to explain the increase in saving and the drop in consumption. Our findings suggest that fear of contagion and income uncertainty limits the effectiveness of policies aimed at stimulating consumption during the pandemic.

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1. Introduction

In the second quarter of 2020, Italy's saving rate rocketed to 18.6%, more than double the rate observed at the end of 2019. This unprecedented increase was due to a large fall in disposable income in the second quarter of 2020 with respect to the first quarter (-5.6%), combined with a dramatic drop in consumption (-11.4%), particularly of expenditure on semi-durables and durables. The income and consumption dynamics are common to other European countries; the most recent Eurostat figures show that in the second quarter of 2020, the 8.0 percentage points increase in the household saving rate in the euro area, due to the sharp decrease in consumption (-12.6 points), is much higher than the rate of decrease in households' gross disposable income (-3.3 points).[1,2]

The spectacular increase in saving during the COVID-19 crisis is rather unusual, and seems to contradict standard economic models that suggest that during recessions income falls more than consumption, as households attempt to smooth at least part of the negative shock, resulting in decreased saving rates.

There are several possible explanations for this unusually large increase in the saving rate. Households consumption might have reduced because the lockdown measures prohibit several categories of consumption or because household income dropped. Alternatively, it might be due to the precautionary saving effect. Uncertainty regarding the length of the crisis, future income and employment prospects, and the ability of governments to sustain income through welfare programs and assistance, may have induced households to reduce current consumption and increase their saving buffer. Another less explored explanation is that the drop in

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[1] Sweden was the only EU Member State where the saving rate declined (-0.6 percentage points), while the highest year-on-year increase was observed for Ireland (22 points), followed by Spain (13.7 points), see https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20201110-2.

[2] In the third quarter of 2020, when lockdown and social distancing measures were lifted, the household saving rate in Italy remained at unprecedented high levels (14.6%), see Bank of Italy, Economic Bulletin, January 2021. Bank of Italy also suggests that, besides lockdown measures and precautionary reasons, fear of contagion is an important motivation behind the observed increase of the saving rate.

consumption was due to the risk of contracting the virus during in-person shopping and interactions with friends, relatives or colleagues, that is, an *infection-concern* motive which caused consumers to choose to reduce trade and commercial activities. While the lockdown effect can be regarded as a form of forced saving, the infection-concern motive is behavioral because it was not imposed by the lockdown orders.

This work adds to the growing literature on consumption during the COVID-19 pandemic and is novel in that it provides information on subjective fear of contagion whereas most studies so far rely almost exclusively on administrative and detailed transaction data. We use data from a new survey of 3,000 Italian households to shed light on the reasons for the consumption drop during the crisis. The survey was administered during the last two weeks of October 2020, before the most recent round of lockdown measures.[3] The survey asked for qualitative information on change in consumption behavior (whether consumption dropped during the crisis) and change in saving (whether saving for emergencies increased during the crisis), covering the second and third quarters of 2020. The novelty of the survey is that it elicits individual-level indicators of fear of contagion through questions about fear of infection while working, shopping, traveling, eating out and meeting relatives or friends. We also derive an indicator of income risk, based on the subjective expectation of job loss.

We find a strong association between the probability of reducing consumption (particularly of durable goods) and increasing saving to hedge against infection and income risk. Among the various indicators of fear of contagion, the one most closely correlated to a drop in consumption and increased saving is fear of infection while shopping, eating out and traveling. This finding shows that the consumption and saving response to the pandemic was not determined by a generic fear for contagion and the health consequences of COVID-19 but

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[3] The first national lockdown in Italy was between March 9 and May 3, and the second with some differences across regions, began on November 4.

by a change in behavior due to the specific risk of contagion while consuming. Income uncertainty, measured by the probability of job loss, also contributes to explain the increase in saving and the drop in consumption. Our findings suggest that policies aimed at stimulating consumption are not likely to be effective if uncertainty and fear of contagion are still prevalent.

The paper is organized as follows. Section 2 reviews the literature on consumption during the COVID-19 crisis. Section 3 describes the survey and presents descriptive evidence of the correlation between the consumption drop, the saving increase, income risk and the fear of contagion. Section 4 presents the econometric estimates and Section 5 summarizes the results.

2. Consumption during the COVID-19 crisis

The impact of the COVID-19 pandemic on consumption expenditures and saving is considered crucial for understanding the nature of the crisis (supply or demand), assessing the likely shape (V, U or L) of a recovery and the design of effective policies to stimulate aggregate demand. The focus of the literature on these topics is the dynamics of consumption during the pandemic based on high-frequency, real-time data, and the reasons for the drop in consumption.

There are four reasons why household consumption might respond to the spread of the epidemic and the social isolation measures: (i) the ban on consumption imposed by the suspension of many production and commercial activities (lockdown measures); (ii) the temporary drop in earnings not compensated by government transfers due to the halting of economic activities which occurred in many sectors during the lockdowns; (iii) increased precautionary saving due to increased uncertainty about future earnings, employment prospects and credit conditions, and uncertainty about the length of the crisis; and (iv) an infection-

concern motive, that is the behavioral response to the risk of contracting the virus during in-person shopping, traveling and interacting with friends, relatives or colleagues.

The literature on the effects of the COVID-19 pandemic on household consumption and saving has focused mainly on the first three reasons, leaving households' response to the fear of contracting the virus in various situations (working, shopping, meeting friends or relatives) largely unexplored.

Several studies of high- and middle-income countries use transaction-level data from financial companies, commercial stores or tax authorities which provide granular, high-frequency information on spending categories and bank balances.[4] Although there are differences among countries and the datasets analyzed by these contributions, two stylized facts emerge from the literature. First, the drop in consumption during the pandemic is accounted for by sectors which experienced partial or total lockdown (e.g. recreation, restaurant and tourism services), while spending on necessary goods and through sectors shielded by risk of contagion (e.g. online shopping) have been most unaffected or even increased. Second, the reduction in consumption is stronger for high-income households which, at the same time, experienced a sharp increase in saving. Both results are consistent with the hypothesis that the saving increase was caused by the ban on consumption (a form of forced saving). The main limitation of transaction-level data is that they provide no information on expectations about the health and economic consequences of the pandemic. This shortcoming does not always allow a full

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[4] Studies using transaction data are available for several countries (China, Denmark, France, Iran, Japan, Mexico, Portugal, Spain, Switzerland, Taiwan, U.K., U.S.). See Firth et al. (2020) for references.

assessment of the role of uncertainty and fear of contagion on spending behavior, reasons (iii) and (iv) above.

Three recent studies use survey data, or survey data merged with transaction-level data, to explore the relevance of the precautionary motive. Baker et al. (2020) merge transaction-level data from a U.S. fintech company with information from a survey conducted by that company of active users of its platform. They analyze households' consumption response to the cash assistance provided by the CARES Act and show that average spending increased by 0.25 cents per dollar in the weeks after receipt of the CARES payments. The increase in spending is much higher for low-income households suffering from reduced income and liquidity problems. In addition, consistent with the precautionary saving motive, the results indicate that amongst respondents who expected to lose their jobs and government benefits the propensity to consume was significantly smaller than among those who considered these events to be unlikely.

These results are partially confirmed by Coibon et al. (2020) who analyze self-reported spending responses for a large sample of CARES payment recipients in the United States. In line with Baker et al. (2020), Coibon and colleagues find that low-income and liquidity constrained individuals spent a greater share of their stimulus payments. However, loss of personal earnings and macroeconomic expectations have no significant impact on how individuals use government financial support.

Christelis et al. (2020) analyze consumption dynamics based on a European Central Bank Consumer Expectations Survey of a panel of households from the six largest euro area countries. Consistent with precautionary saving and liquidity constraints, they find that households that were fearful that their financial position would deteriorate due to COVID-19, consumed less and had a smaller propensity to increase spending in response to a hypothetical stimulus payment.

Chetty et al. (2020), Eichenbaum et al. (2020) and Goolsbee and Syverson (2021) explore whether consumers' spending and saving decisions are affected by concerns about the risk to themselves and their families of COVID-19 infection. They provide indirect evidence supporting reason (iv) above, and their research is closely related to our work. Specifically, Chetty et al. (2020) use credit-debit card and cash transaction data from two primary financial companies in the U.S. They find that the contraction in spending is more marked for goods and services that require in-person contact and involve high risk of infection, and more importantly, they find that consumption of in-person services compared to other spending remained depressed even during the progressive reopening of economic activities. In addition, consistent with the infection-concern motive, consumer spending decreased more in U.S. counties with high COVID-19 infection rates. However, Chetty et al. (2020) have no direct information on consumers' concern about the risk of contagion during in-person shopping and services requiring in-person contacts (such as hotels, restaurants and travel).

Eichenbaum et al. (2020) analyze a sample of public servants in Portugal whose incomes during the pandemic have been largely unaffected. In line with the highest COVID-19 mortality rates being among older people, they find that the reduction in consumption spending increased with age, and that the spending gap between older and younger people is greater for goods and services requiring in-person contact and at the time when the number of COVID-19 cases was especially high. While Eichenbaum et al. (2020) do not observe subjective expectations about risk of infection, to corroborate the relevance of the infection-concern motive they calibrate an intertemporal consumption model with probabilities of infection for individuals with different ages and different health status, closely reflecting real conditions.

Goolsbee and Syverson (2021) examine consumer behavior using cell phone records. They find that legal shutdown orders accounted for only a modest share of the decline in

economic activity, measured by the number of consumer visits to businesses. Most of the decline in consumer visits was associated to the number of deaths in the county, in line with consumers choosing of their own volition to avoid commercial activity for fear of infection. In other words, individual choice has been more important than lockdown orders. We build on this stream of work by collecting and analyzing data for a representative sample of households with expectations about the risk of contracting COVID-19 in various situations, thereby providing a direct test of the infection-concern hypothesis.

3. The Survey

To study the determinants of consumption during the COVID-19 crisis, we designed a Survey on COVID-19 and Consumption (SCC). We commissioned administration of the survey to Doxa, a leading Italian polling agency with extensive experience of managing household surveys. The purpose of the survey was to elicit information on consumers' expectations and behavior during the COVID-19 epidemic, and to study the changes to consumption and saving since the start of the crisis due to fear of contagion, and income expectations.

The SCC was administered to 3,000 individuals and focused on two groups of variables: saving and consumption (distinguishing between non-durable and durable expenditure), and subjective measures of fear of contagion in different situations, and fear of job loss. The survey also asked for information related to basic socioeconomic variables: age, gender, education, broad occupational categories, income categories, region of residence and city size.

The sampling scheme is similar to that used in the Bank of Italy Survey of Household Income and Wealth (SHIW). The Italian resident population is stratified along three criteria: geographical area of residence (North-East, North-West, Central and South Italy), age group

(18-34, 35-44, 45-54, 55-64, over 65) and gender. The survey was administered in the two weeks between October 22nd and November 2nd, before the emergence of the second wave of the pandemic. On November 4th the Italian government implemented lockdown measures based on different strictness of social distancing measures designated "red", "orange" and "yellow" regions depending on the number of COVID-19 cases, forecasts of the spread of the infection and available intensive care beds.

The SCC sample is drawn from a larger representative sample of 120,000 individuals maintained and updated regularly by Doxa. All the interviews were enabled by a Computer Assisted Web Interviewing method (CAWI). The overall response rate was 71.2%, with quite low unit non-response for all questions. We use sample weights to make the statistics population-representative.

Table A1 in the Online Appendix compares the sample means of the SCC selected variables and the 2016 SHIW (the most recent available). The gender, age and geographic distributions of the two samples are similar. However, there are clearly some important differences between the two samples. The most important difference is for higher education: the sample mean of the proportion of respondents with tertiary education is 22% in the SCC, and 13% in the SHIW. However, the proportion of individuals with secondary education is 39% in the SHIW and 32% in the SCC. Also, the SCC sample includes a lower proportion of retired individuals (16% vs. 21% in the SHIW), and a lower proportion of single individuals. Since education is correlated to income (for which we have only a coarse measure), our survey oversamples a relatively rich segment of the population which is more likely to have internet access and be able to respond to online questionnaires.

3.1. Fear of contagion from COVID-19

We elicit perceptions of fear of COVID-19 contagion through questions about perceived risk in three different situations: while working, while shopping, eating out or traveling, and through contacts with relatives or friends. Each variable is coded numerically from 1 (not worried), to 10 (extremely worried). We computed the average of the three indicators which we denoted "Average fear".[5] The Appendix provides a translation of the actual questions.

Table 1 reports sample statistics of the fear indicators, and Figure 1 plots their distribution. The median is 7 for each of the three indicators but the highest sample mean of fear is for shopping, eating out or traveling. Figure 1 shows that there is considerable cross-section heterogeneity. Only 5% of households are rather insensitive to any fear, while 20% reported the maximum level of fear for each of the three indicators. Notice also that the high sample proportion reporting no fear related to working (19%) is driven largely by the group of unemployed and retired individuals (excluding these individuals, reduces the proportion to 8%).

The three measures of fear are positively correlated, showing that there are common personal traits and characteristics that affect fear of contagion, regardless of the situation. However, the correlation is far from perfect. For instance, the correlation coefficient between "fear while working" and each of the other two indicators is 0.52. This feature of the data is useful in the regression analysis, when we attempt to distinguish the reasons why individuals cut consumption or increased saving during the crisis.

Next, we explored econometrically the correlation between fear of contagion and demographic characteristics and income.[6] Table 2 regresses the following fear indicators against a set of socioeconomic variables: *Fear while working* (column 1), *Fear while shopping,*

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[5] In the case of missing values, we computed the average using only the non-missing observations.
[6] The CSS provides only coarse information on disposable income, and we converted a qualitative indicator into a discrete variable, see the Appendix for details.

eating out and traveling (column 2), *Fear of contagion from relatives or friends* (column 3), and *Average fear* (column 4). Perceived fear of contagion is lower for males which is in line with the literature on risk attitude, suggesting that women are more risk averse than men (Croson and Gneezy, 2009; Filippin and Crosetto, 2016). Fear of contagion is lower also for retired individuals and the unemployed, and falls with age, possibly because older workers are less exposed to jobs where contagion is more likely. An alternative explanation might be that the elderly have fewer social interactions, regardless of lockdown orders, and therefore are less likely to go out, to shop or to meet other people.

Notice that age, retirement and unemployment matter only for fear while working. Conditional on other characteristics, there are no retirement and unemployment status differences related to fear of contagion from shopping and social interactions. Fear is higher for married couples and increases with family size, possibly because the size of the household is correlated to more interactions among household members while working, studying or meeting people outside the household. Perceived fear of contagion is higher in the South of Italy – possibly due to a less efficient health care system – and does not differ by education and income.

3.2 Consumption and saving indicators

Our survey includes three questions on consumption and saving behavior during the pandemic. We asked whether between March and October 2020 individuals reduced consumption, distinguishing between non-durable and durable goods, or increased saving. The two consumption questions are identical except that we replaced examples of current consumption (food, clothing and travel) with examples of durable purchases (cars, appliances

and furniture). The saving question refers explicitly to saving for unforeseen events such as unemployment, health or other emergencies.

Starting from these survey questions, we construct the following three indicator variables that identify: a) "drop in non-durable consumption"; b) "drop in durable consumption"; c) "increase in savings". Given that these variables measure the change in consumption and savings that occurred during the COVID-19 crisis (March-October 2020), our estimates should not be affected by a potential spurious correlation between the fear of contagion and pre-COVID levels of consumption and savings.

From the survey data we also computed an indicator of income risk, equal to 1 if during the COVID-19 crisis the household head lost his or her job or expected to lose it in the next six months, or worked shorter hours than before the crisis. The specific wording of the questions about consumption, saving and income risk is reported in the Appendix.

Table 1 shows that 33% of respondents reduced consumption of non-durables, almost half of the sample (43%) reduced purchases of durables and 32% increased saving. As a follow-up the consumption questions, we asked about the reasons for the drop in consumption (at most two answers for each respondent were allowed). Not surprisingly, a large proportion of the responses (35% for non-durables and 41% for durables) referred to a drop in household income. However, 33% of responses reported "restrictions due to lockdown measures" and 27% "fear of going out and shopping" as the main reasons for reducing consumption during the pandemic. The proportion was lower but still substantial for the reduction in expenditure on durables (17% mentioned lockdown measures and fear of going out). Finally, 37% of those who reduced non-durable consumption said it was "to increase saving" (47% of those who reduced their durables expenditure).

The correlation between fear of contagion and the probability of reporting reduced consumption or higher saving is positive, statistically different from zero and economically significant. For example, the proportion of respondents reporting a drop in durable expenditure increases by 20 percentage points (from 30% to 50%), going from the lowest to the highest level of fear. Similarly, the proportion reporting an increase in saving increases by 20 percentage points (from 20 to 40%) for the same increase in fear. The positive association is weaker for non-durable consumption which is only weakly increasing with fear of contagion.

Consumption drops and saving increases vary also with income risk. Overall, 29% of respondents either lost their jobs between March and October 2020, expected to lose them in the next six months, or had worked shorter hours during the pandemic. The proportion of respondents reporting a drop in non-durable consumption increased from 35% in the low-risk group to 48% among those classified as in the high-risk group (from 35% to 57% and from 29% to 42% respectively for those reporting a drop in durables expenditure and an increase in saving). In the next section, we conduct an econometric analysis to control for other determinants of reduced consumption and increased saving.

4. Regression analysis

Table 3 reports the marginal effects of the probit regressions including as dependent variables the probability of a drop in non-durables consumption (column 1), drop in durables expenditure (column 2) and increase in saving (column 3) during the pandemic crisis. In Table 3 the main variable of interest is the coefficient of "Average fear". The regressions also include dummies for income risk, demographic variables (gender, age, family size, marital status,

education and region), log of household income and employment status (dummies for retirement and unemployment).

The coefficient of fear of COVID-19 infection is small and imprecisely estimated in the non-durables consumption regression but is positive and statistically different from zero in the regressions for the probability of a drop in durables expenditure and an increase in savings. The estimated effects are economically large. Indeed, going from the lowest to the highest level of fear of contagion is associated to an increase in the probability of reduced durables consumption of 17.1 percentage points and an increase in saving of 11.7 points.

Income risk is another important determinant of the probability of a consumption drop. Other things being equal, respondents who face a relatively high income risk have a higher probability of reduced consumption (11.6 and 21.2 percentage points, respectively) and a higher probability of increased saving (9.8 points).

The other coefficients in Table 3 suggest that the probability of a consumption drop is lower for males and retired individuals. Furthermore, the probability of reporting an increase in saving is higher in the South of Italy, possibly reflecting its less efficient health care system and weaker labor market.[7]

To identify the most important channels through which fear affects consumption behavior, Table 4 replicates the regressions distinguishing among the various components of fear: fear while working, while shopping, eating out or travelling, and meeting with relatives or friends. The estimates show that fear while shopping, eating out and traveling is the most important driver of reduced consumption (particularly of durables) and increased saving. This finding is consistent with the infection-concern hypothesis, that is again an important reason

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[7] As a robustness check, we replaced the income variable with a set of dummy variables; the results did not change.

for a drop in consumption is perceived risk of contracting COVID-19 during shopping or engaging in activities involving contact with others (such a restaurants, travel, hotel stays, etc.).

Overall, our findings suggest that the spike in the household saving rate observed during the crisis can be ascribed in part to reduced shopping activity and reduced consumption (especially of durable goods) due to fear of contagion, and in part to higher saving by those who lost their job or were assigned shorter hours during the crisis. Since we control in the regressions for income and demographic variables, these mechanisms work over and above the standard income effect on consumption and saving during a recession.

Retired individuals have no work interactions, and have fewer social interactions and less need to go out of the house. Therefore, as a robustness check we dropped them from our analysis. The sample included 2,301 observations but results did not change (Table A2 in the Online Appendix). In particular, the coefficient of fear from shopping, eating out and traveling is positive and significant in all three specifications, and of the same order of magnitude as for the full sample specification.

As a further robustness test, we interacted fear related to shopping with a dummy that is equal to 1 if the average monthly disposable income is greater than or equal to 3,000 euro. The coefficient of the interaction term is positive and strongly significant in the regression for a drop in non-durables consumption (Table A3 in the Online Appendix). A natural interpretation is that high-income households are more likely to spend on services such as restaurants, travel and hotels and so fear of infection has a stronger effect on spending on non-durables in this group.

5. Summary

Using new data from a recent survey of 3,000 Italian households, we investigated the mechanism behind the drop in consumption observed during the COVID-19 crisis. There are several possible explanations for what appears to be the largest decline in consumption since WWII. These include forced saving due to lockdown measures, a drop in income, precautionary saving due to increased uncertainty and a behavioral response to the risk of contracting the virus during in-person shopping and interactions with friends, relatives or colleagues. While the literature on the effects of the COVID-19 pandemic on household consumption and savings focuses mainly on the first three motives, our main contribution is providing evidence on household responses to fear of contracting the virus through different economic and social activities (working, shopping, meeting friends or relatives) using an *ad hoc* survey questionnaire.

We found that the probability of consumption drops during the pandemic, and the probability of an increase in saving are both strongly affected by the fear of contagion (particularly from shopping), and by income risk. Our findings suggest that besides precautionary and forced saving, an important explanation for the recent spike in household saving during the crisis is the change in behavior due to the specific risk of contagion while consuming. They suggest also that policies aimed at stimulating consumption are not likely to be effective while uncertainty and fear of contagion persist.

References

Baker, Scott R., R.A. Farrokhnia, Steffen Meyer, Michaela Pagel, Constantine Yannelis, (2020), "Income, Liquidity, and the Consumption Response to the 2020 Economic Stimulus Payment," NBER Working Paper No. 27097.

Chetty, Raj, John N. Friedman, Nathaniel Hendren, Michael Stepner and the Opportunity Insights Team (2020), "How did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-time Economic Tracker Based on Private Sector Data," NBER Working Paper No. 27431.

Christelis, Dimitris, Dimitris Georgarakos, Tullio Jappelli, Geoff Kenny (2020), "The COVID-19 Crisis and Consumption: Survey Evidence from Six EU Countries," CEPR Discussion Paper No. 15525.

Coibon, Olivier, Yuriy Gorodnichenko, Michael Weber, (2020), "How Did U.S. Consumers Use Their Stimulus Payments?" CESIFO Working Paper No. 8510.

Firth, Chris, John Gathergood, Neil Stewart (2020), "Might Coronavirus Bring a Lasting Shift to Online Spending?", available at: https://www.coronavirusandtheeconomy.com/question/might-coronavirus-bring-lasting-shift-online-spending.

Eichenbaum, Martin S., Miguel Godinho de Matos, Francisco Lima, Sergio Rebelo, Mathisa Trabandt (2020), "How Do People Respond to Small Probability Events with Large, Negative Consequences," NBER Working Paper No. 27988.

Filippin, Antonio, Paolo Crosetto (2016), "A Reconsideration of Gender Differences in Risk Attitudes," *Management Science* 62(11), pp. 3138-60.

Goolsbee A., Syverson C. (2020), "Fear, Lockdown, and Diversion: Comparing Drivers of Pandemic Economic Decline," Journal of Public Economics, vol. 193, 104311

Appendix - Survey Questions

Fear of contagion from COVID-19. "Thinking about the health crisis we are experiencing, how worried are you about possible COVID infection? (1) Fear of getting infected in the workplace; (2) Fear of getting infected during shopping trips, visits to restaurants or bars, during travels, holidays, etc.; (3) Fear of being infected when meeting with relatives or friends at home or away from home." The variable is coded 1 (not worried at all) to 10 (extremely worried) and includes a "don't know" category.

Saving. Think about your financial situation before the crisis and compare it with today. Have you or your household increased the amount you save to cope with unforeseen events, such as unemployment, health or other emergencies?"

Non-durables consumption. From the beginning of the crisis (March) to today, would you say that your household's non-durables consumption has decreased relative to normal times? (exclude durable goods, and think about your current expenditure on food, clothing, travel, etc.)"

Durables expenditures. "From the beginning of the crisis (March) to today, would you say that your purchases of durable goods (cars, domestic appliances, furniture, etc.) have decreased relative to normal times?"

Reasons for the drop in your consumption. If you answered YES to the consumption questions, please answer these two separate follow-up questions: "Why did your household reduce its (non-durables/durables) consumption? Indicate the reason that best describe your situation (max 2 answers): a) lockdown measures and travel restrictions made it more difficult to shop; (b) I am more worried about going out to shop ; (c) I want to increase saving to deal with future emergencies; (d) I am earning less than before the crisis."

Income. "According to Istat (the Italian statistical agency), the average household income in Italy is about 2,500 euros per month. Which of the following statements best describes your total household income (i.e. total earnings of everyone who lives with you): (1) much lower; (2) lower; (3) approximately equal to the average Italian household income; (4) higher; (5) much higher than the average; (6) don't know." The variable is used to generate dummy variables, and to obtain a course indicator of income, replacing (1) with 1500 euro, (2) with 2000 euro, (3) with 2500 euro, (4) with 3000 euro and (5) with 3500 euro.

Income risk. "Think about the current health crisis period, i.e. from March 2020 to today. Which sentence best describes your work situation? (1) I have lost my job; (2) I still have a job, but expect to lose it in the next 6 months; (3) I still have a job, but am working fewer hours than before the crisis; (4) My job position has remained stable; (5) I have found a (first or new) job; (6) I do not work and was not working before the crisis." The dummy "income risk" equals 1 based on the combination of (1), (2) and (3).

The survey asks for information on the following demographic variables: respondent's age, marital status, gender, family size, education, occupation, region of residence.

Table A1 in the Online Appendix compares SCC sample statistics with the most recent wave of the Survey of Household Income and Wealth (SHIW).
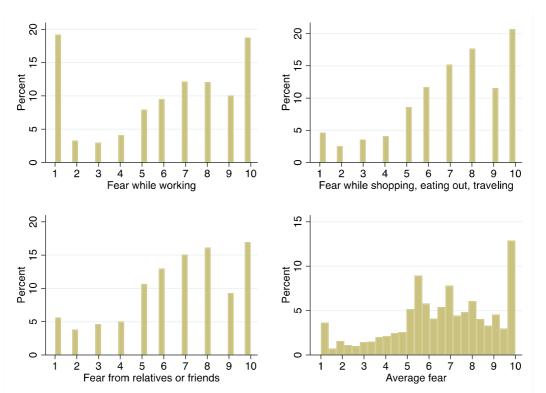
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Figure 1. Distribution of fear of COVID-19 contagion

Table 1. Summary statistics

	Mean	Standard Deviation	Median	Obs.
Fear while working	6.038	3.238	7	2,780
Fear while shopping, eating out or traveling	6.995	2.581	7	2,977
Fear of contagion from relatives or friends	6.614	2.644	7	2,982
Average fear	6.576	2.421	7	2,992
Family size	2.914	1.202	3	2,994
Age	51.02	16.92	52	3,000
Male	0.481	0.500	0	3,000
Married	0.662	0.473	1	3,000
High school	0.318	0.466	0	3,000
College	0.222	0.416	0	3,000
Resident in the Centre	0.200	0.400	0	3,000
Resident in the South	0.338	0.473	0	3,000
Retired	0.163	0.370	0	3,000
Unemployed	0.081	0.273	0	3,000
Income risk	0.292	0.454	0	3,000
Log household income	7.658	0.256	7.601	2,882
Drop in non-durable consumption	0.384	0.486	0	2,936
Drop in durable consumption	0.434	0.496	0	2,936
Increase in saving	0.316	0.465	0	2,926
Reasons for non-durable consumption drop				
Restrictions and lockdown measures	0.33	0.47	0	1,141
Fear of going out and shopping	0.27	0.44	0	1,141
Increase in savings	0.37	0.48	0	1,141
Income drop	0.35	0.48	0	1,141
Reasons for durable consumption drop				
Restrictions and lockdown measures	0.17	0.38	0	1,237
Fear of going out and shopping	0.17	0.38	0	1,237
Increase in savings	0.47	0.50	0	1,237
Income drop	0.41	0.49	0	1,237

Note*: Statistics are computed using sample weights.

Table 2. Determinants of fear of contagion from COVID-19

	Fear while working	Fear while shopping, eating out, travels	Fear from relatives or friends	Average fear
Male	-0.205	-0.531	-0.598	-0.450
	(0.117)*	(0.093)***	(0.096)***	(0.086)***
Age	-0.026	0.003	-0.003	-0.008
	(0.004)***	(0.003)	(0.004)	(0.003)**
Family size	0.150	0.115	0.167	0.142
	(0.049)***	(0.043)***	(0.040)***	(0.037)***
Married	0.411	0.239	0.184	0.268
	(0.128)***	(0.105)**	(0.107)*	(0.096)***
High school	-0.085	0.131	0.054	0.036
	(0.192)	(0.153)	(0.154)	(0.140)
College	0.152	0.305	0.133	0.196
	(0.203)	(0.159)*	(0.163)	(0.148)
Log income	-0.407	-0.330	-0.313	-0.369
	(0.266)	(0.213)	(0.220)	(0.197)*
Unemployed	-0.865	0.090	-0.065	-0.189
	(0.253)***	(0.194)	(0.205)	(0.183)
Retired	-2.059	-0.083	-0.159	-0.580
	(0.225)***	(0.158)	(0.164)	(0.149)***
Resident in the South	0.569	0.655	0.714	0.652
	(0.136)***	(0.106)***	(0.110)***	(0.100)***
Resident in the Centre	-0.110	0.249	0.166	0.121
	(0.155)	(0.122)**	(0.125)	(0.111)
Income risk	0.522	-0.042	0.067	0.151
	(0.129)***	(0.106)	(0.108)	(0.099)
Constant	9.872	8.781	8.552	9.204
	(2.029)***	(1.628)***	(1.676)***	(1.504)***
R^2	0.14	0.04	0.05	0.07
N	2,672	2,859	2,863	2,872

Note. The table reports OLS estimates with robust standard errors. *** p-value ≤ 0.01; ** p-value ≤ 0.05; * p-value ≤ 0.1

Table 3. Determinant of the probability of consumption drop and saving increase

	Drop in non-durable consumption	Drop in durable consumption	Increase in saving
Male	-0.068	-0.069	-0.035
	(0.019)***	(0.019)***	(0.018)*
Age	0.004	0.005	-0.005
	(0.001)***	(0.001)***	(0.001)***
Family size	0.007	0.021	-0.010
	(0.008)	(0.008)**	(0.008)
Married	-0.003	-0.000	0.015
	(0.021)	(0.021)	(0.020)
High school	0.032	-0.023	-0.007
	(0.029)	(0.029)	(0.028)
College	0.039	-0.037	0.039
	(0.031)	(0.031)	(0.030)
Log income	-0.067	-0.261	-0.029
	(0.040)*	(0.041)***	(0.038)
Unemployed	-0.011	-0.049	0.015
	(0.036)	(0.036)	(0.035)
Retired	-0.103	-0.067	0.038
	(0.029)***	(0.031)**	(0.032)
Resident in the South	0.005	0.067	0.059
	(0.022)	(0.022)***	(0.021)***
Resident in the Centre	0.051	0.068	0.012
	(0.025)**	(0.026)***	(0.024)
Income risk	0.119	0.207	0.095
	(0.021)***	(0.022)***	(0.021)***
Average fear	0.001	0.019	0.013
	(0.004)	(0.004)***	(0.004)***
N	2,872	2,872	2,872

Note. Table reports marginal effects from probit estimates with robust standard errors. *** p-value ≤ 0.01; ** p-value ≤ 0.05; * p-value ≤ 0.1

Table 4. Determinant of the probability of consumption drop and saving increase, with different indicators of fear of contagion from COVID-19

	Drop in non- durable consumption	Drop in durable consumption	Increase in saving
Male	-0.065	-0.064	-0.026
	(0.019)***	(0.020)***	(0.019)
Age	0.003	0.004	-0.005
	(0.001)***	(0.001)***	(0.001)***
Family size	0.008	0.022	-0.009
	(0.008)	(0.008)***	(0.008)
Married	-0.001	-0.003	0.019
	(0.022)	(0.022)	(0.020)
High school	0.020	-0.005	-0.004
	(0.031)	(0.031)	(0.030)
College	0.027	-0.018	0.046
	(0.033)	(0.033)	(0.032)
Log income	-0.094	-0.274	-0.046
	(0.041)**	(0.043)***	(0.040)
Unemployed	-0.018	-0.067	0.014
	(0.038)	(0.038)*	(0.037)
Retired	-0.108	-0.057	0.061
	(0.032)***	(0.034)*	(0.037)*
Resident in the South	-0.012	0.056	0.051
	(0.022)	(0.023)**	(0.022)**
Resident in the Centre	0.052	0.065	-0.002
	(0.026)**	(0.027)**	(0.025)
Income risk	0.116	0.212	0.098
	(0.022)***	(0.022)***	(0.021)***
Fear while working	-0.004	0.002	0.001
	(0.004)	(0.004)	(0.004)
Fear while shopping	0.011	0.017	0.012
	(0.006)*	(0.006)***	(0.006)**
Fear from relatives or friends	-0.006	0.001	0.001
	(0.006)	(0.006)	(0.005)
N	2,658	2,658	2,658

Note. Table reports marginal effects from probit estimates with robust standard errors. *** p-value ≤ 0.01; ** p-value ≤ 0.05; * p-value ≤ 0.1

Table A1. Comparison of SCC and SHIW

	SCC	SHIW (2016)
Gender		
Male	0.48	0.48
Female	0.52	0.52
Age		
18-34	0.21	0.21
35-44	0.16	0.16
45-54	0.19	0.20
55-64	0.17	0.16
over 65	0.27	0.27
Education		
Primary school	0.46	0.48
Secondary school	0.32	0.39
Tertiary school	0.22	0.13
Sector of activity		
Retired	0.16	0.21
Not employed	0.08	0.10
Household size		
1 member	0.10	0.17
2 members	0.32	0.26
3 members	0.26	0.23
4 members	0.23	0.23
5 or more members	0.09	0.11
Geographical area		
Northern Italy	0.46	0.45
Central Italy	0.20	0.20
South and Islands	0.34	0.35
Number of observations	3,000	14,560

Note: The table compares sample means of selected demographic variables in the CSS (2020) and SHIW (2016). From SHIW we consider only household members 18+. Means are computed using sample weights.

Table A2. Determinant of the probability of consumption drop and saving increase, with different indicators of fear of contagion from COVID-19. Excluding retired households

	Drop in non- durable consumption	Drop in durable consumption	Increase in saving
Male	-0.064***	-0.076***	-0.027
	(0.021)	(0.021)	(0.020)
Age	0.003***	0.005***	-0.006***
	(0.001)	(0.001)	(0.001)
Family size	0.005	0.021**	-0.010
	(0.009)	(0.009)	(0.008)
Married	-0.012	-0.026	0.023
	(0.023)	(0.024)	(0.022)
High school	0.022	0.018	-0.014
	(0.034)	(0.036)	(0.034)
College	0.023	0.006	0.042
	(0.036)	(0.037)	(0.035)
Log income	-0.118***	-0.269***	-0.089**
	(0.045)	(0.047)	(0.043)
Unemployed	-0.025	-0.066*	0.005
	(0.039)	(0.040)	(0.038)
Resident in the South	-0.009	0.037	0.046*
	(0.024)	(0.025)	(0.024)
Resident in the Centre	0.051*	0.062**	-0.004
	(0.028)	(0.029)	(0.027)
Income risk	0.109***	0.210***	0.091***
	(0.022)	(0.022)	(0.022)
Fear while working	-0.006	0.000	-0.003
	(0.004)	(0.004)	(0.004)
Fear while shopping	0.012*	0.021***	0.016***
	(0.006)	(0.007)	(0.006)
Fear from relatives or friends	-0.008	-0.001	0.001
	(0.006)	(0.006)	(0.006)
N	2,301	2,301	2,301

Note. Table reports marginal effects from probit estimates with robust standard errors. *** p-value ≤ 0.01; ** p-value ≤ 0.05; * p-value ≤ 0.1

Table A3. Determinant of the probability of consumption drop and saving increase, with different indicators of fear of contagion from COVID-19 and interaction with high-income households

	Drop in non- durable consumption	Drop in durable consumption	Increase in saving
Male	-0.063***	-0.063***	-0.028
	(0.019)	(0.020)	(0.019)
Age	0.003***	0.004***	-0.005***
	(0.001)	(0.001)	(0.001)
Family size	0.009	0.023***	-0.008
	(0.008)	(0.009)	(0.008)
Married	0.001	-0.003	0.019
	(0.022)	(0.022)	(0.021)
High school	0.022	-0.003	-0.003
	(0.030)	(0.031)	(0.030)
College	0.027	-0.017	0.047
	(0.032)	(0.033)	(0.032)
Log income	-0.218***	-0.330***	-0.092*
	(0.051)	(0.053)	(0.049)
Unemployed	-0.024	-0.068*	0.011
	(0.039)	(0.039)	(0.037)
Retired	-0.109***	-0.060*	0.060
	(0.032)	(0.034)	(0.037)
Resident in the South	-0.012	0.054**	0.051**
	(0.022)	(0.023)	(0.022)
Resident in the Centre	0.050*	0.060**	-0.000
	(0.026)	(0.027)	(0.025)
Income risk	0.117***	0.213***	0.098***
	(0.022)	(0.022)	(0.021)
Fear while working	-0.003	0.002	0.001
	(0.004)	(0.004)	(0.004)
Fear while shopping	0.008	0.015**	0.011*
	(0.006)	(0.006)	(0.006)
Fear from relatives or friends	-0.006	0.001	0.001
	(0.006)	(0.006)	(0.005)
Fear while shopping X High Income	0.017***	0.008*	0.006
	(0.004)	(0.004)	(0.004)
N	2,658	2,658	2,658

Note. Table reports marginal effects from probit estimates with robust standard errors. *** p-value ≤ 0.01; ** p-value ≤ 0.05; * p-value ≤ 0.1