STRENGTHENING NATIONAL HEALTH SYSTEMS AND DAMPENING PRECAUTIONARY ATTITUDES

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Since the outbreak of Covid-19, governments and international institutions have been acting to make national health systems more resilient to pandemic outbreaks. At the same time the marked increased in uncertainty regarding the developments of the pandemic has determined an unprecedented spike of household savings in many advanced economies, including Italy. This note provides a brief review of the economic literature on the link between health risk and savings. It argues that improved accessibility and efficiency of health systems not only enhance the health and quality of life of citizens, but can also attenuate the precautionary savings associated with increased uncertainty regarding health outcomes and hence spur households' demand.

Since the outbreak of Covid-19, governments and international institutions have been acting to make national health systems more resilient to pandemic outbreaks. However, the scope of such policies appears to be wider. For example two recent initiatives in Europe, the *ESM pandemic crisis support* and the *EU4Health Programme*, are designed not only to respond to cross-border health threats, but also to improve the accessibility and efficiency of health systems more generally. Similar developments are occurring also on the other side of the Atlantic. In late September, the US Administration unveiled the *America-First Healthcare Plan* with the stated objective of improving health care services for all patients. Among other things, this plan aims at extending telehealth services, lowering the price of some specific treatments and drugs, and increasing funds for medical research (see U.S. Department of Health and Human Services, 2020, for more details).

The objective of a better or more extended health system is, first and foremost, to improve the health and quality of life of citizens. However, there are also economic implications. For example, it is commonly agreed that improved health conditions since early in one's lifetime lead to better outcomes later on (see, e.g., Almond and Currie, 2010 and OECD, 2017), and that better health is associated with higher productivity in the workplace (see Currie and Madrian, 1999).

Another less debated channel is the propensity to save of individuals, who care about their individual health risk and about the impact of health shocks on their finances. To the extent that they have to rely on privately-provided healthcare, individuals may be induced to accumulate precautionary wealth to weather those shocks. Conversely, having access to free or low-cost public

care may attenuate the impact of idiosyncratic risk on savings.[2] An indicator of the intensity of such health risks can be the actual and expected costs born by citizens for the health services that are covered neither by private insurance nor by publicly-provided health schemes. These expenses, commonly referred to as "out-of-pocket", represent a significant share of current health expenditures across the world.[3] Nowadays, this share is slightly below 35% globally, ranging from an average of more than 40% in the South-East-Asian region to roughly 11% in the US; Europe lies somewhere in the middle, at around 30% (see WHO, 2020).[4] It is then clear that increasing public health coverage or directly improving the quality of national health systems can reduce the citizens' expected of out-of-pocket expenses, hence mitigating the intensity of this motive for precautionary saving.

Several papers have documented the link between out-of-pocket expenses and precautionary saving and highlighted the role of the government in mitigating precautionary attitudes through the extension of health social programs. Kotlikoff (1989) develops a life-cycle model where individuals receive random health shocks and pay out-of-pocket expenses to receive treatment. He shows that the precautionary saving generated by uncertain health expenditures explains a large part of the observed aggregate saving and that publicly-provided programs – that support individual medical expenses – can dampen this precautionary motive.[5] Hubbard et al. (1995) embed the US program *Medicaid* in a life-cycle model where individuals are subject to random medical outlays, and show that the existence of that scheme can explain the empirical fact that less affluent individuals tend to save less than those with higher-earnings during their lifetime. That is, the program reduces health-related economic uncertainty for enrolled individuals, typically the poorer.[6]

The empirical evidence provided by Gruber and Yelowitz (1999) corroborates the above-mentioned theoretical channel and the related quantitative evidence. The authors focus on the expansion of *Medicaid* that took place between 1984 and 1993 and show that *Medicaid* eligibility had a significant negative effect on wealth holdings, and a positive association with consumption expenditures, results that the authors interpret through the lens of the precautionary motive.[7] While there are other works confirming that extensions of public health insurance may reduce households' precautionary saving (see, for example, Chou et al., 2003, for the case of Taiwan), a recent one investigates the effect of private health insurance schemes. Lee (2016) focuses on the US *Affordable*

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[2] The channel is akin to what one expects to see in other social policy areas; for example, Engen and Gruber (2001) show that the generosity of unemployment benefit schemes affects savings via changes in expected individual income uncertainty.

[3] Specifically, out-of-pocket expenses include deductibles, coinsurance, and copayments for services covered by private or publicly-provided insurances together with all costs for services that are not covered.

[4] Notably, out-of-pocket expenses are relevant also among those who hold a private health insurance. For example, Collins et al. (2019) documents that, during the period 2016-2017 in US, nonelderly households holding employer-sponsored health insurances – placed between the 10th and 90th percentiles of the income distribution – spent on average $800 for out-of-pocket outlays and $2200 for insurance premiums, yearly.

[5] More recently, De Nardi et al. (2010) show that the fact that out-of-pocket expenses are particularly high in the old age is crucial for explaining why the elderly hold a level of assets which is well above the one predicted by a standard life-cycle motive. The elderly do save as a precaution against the health shocks that are indeed more frequent during the very end of one's life.

[6] *Medicaid* is a means-tested program that provides medical care coverage for certain low-income individuals, e.g., pregnant or disabled, and families with limited resources (see US Government, 2020, for more details).

[7] An example of the extension occurred in those years was the substantial increase in the income cutoff for *Medicaid* eligibility for children and pregnant women in all family structures.

Care Act (also known as *Obamacare*), which allows older dependent children (19-25 years old) to remain on their parents' employer-sponsored health insurance plan. Setting up an estimation strategy that isolates the parameters related to precautionary saving, he shows that the households affected by this specific provision significantly reduced their (liquid) precautionary wealth.

As mentioned above, health-related risks can be also influenced by the quality of publicly-provided health services. A low-quality public health system – one with long waiting lists, few hospital beds or poor medical instruments – induces people to save more so as to be able to pay for private health care. Indeed, Jappelli et al. (2007) find the quality of public health services to be a driver of precautionary saving in Italy. In particular, they rank the Italian provinces/districts by the quality of health services offered in their territory and then show that, after controlling for other relevant variables, individuals living in poor-quality health districts save proportionally more than those living in high quality ones.[8] Ercolani and Pavoni (2019), who also focus on Italy, show that higher health spending by regional governments lowers consumption volatility, wealth holdings and a measure of 'desired precautionary wealth' at the household level.[9] Further, these relationships are found to be stronger for households with a greater proportion of elderly people, who are presumably hit more frequently by health shocks.

The fact that a more effective public system attenuates precautionary savings means that more resources can be devoted for private consumption. However, in principle, in order to evaluate the degree of such an expansionary effect, one should take into account all the economic effects generated by these health policies. For example, Ercolani and Pavoni (2019) consider an additional channel, namely the implied financing needs to fund public health expenditures. In particular, they input the above-mentioned empirical estimates within a general equilibrium model with flexible prices, and find that increases in government health spending – financed with taxes on labor – actually lower precautionary saving and generate a positive consumption response on impact. That is, the insurance channel outweighs the effect of a higher taxation in the short-run. Evaluating the long-run effects on consumption is a much more complex task because, as time goes by, other channels surely come into play, such as the above-mentioned effects on individual productivity or the consequences that public health quality can have on life expectancy.

To conclude, health risk appears to be a significant driver of household savings. This relationship, established well before the outbreak of COVID-19, gains further relevance in the light of the current pandemic, and of the risk that new ones may emerge in the future. As argued by recent articles (Ercolani, 2020, and Dossche and Zlatanov, 2020), health-related uncertainty is among the causes of

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[8] The variables that determine the overall health quality of a district are, for example, the proportion of mammographies and of pap smear tests with no symptoms. Hospital beds, waiting lists for specific treatments, number of doctors per 1000 inhabitants, the number of hospitals are also taken into account. Obviously, a higher level of these indicators corresponds to a better quality. Interestingly, these variables are highly correlated with a subjective measure of the perceived quality of health care aggregated at a district level; in order to build this measure, citizens were asked to rate the quality of public health care in their city on the basis of their own experience.

[9] The desired precautionary wealth is a subjective variable extracted from the Survey of Income and Wealth, run by Bank of Italy, where the respondents were asked to declare how much saving was accumulated to protect themselves against various contingencies, such as unexpected outlays for health problems.

the stark increase in savings observed in the current epidemics. Investing in more resilient health systems, including on all mechanisms that may help contain the spread of the virus, is per se a valuable goal. However, it may also contribute to encourage consumers to spend more and thus support aggregate demand, to the extent that it helps attenuate the precautionary attitude of individuals who care about the implications of health shocks on their own economic situation.

Bibliography

Almond, D. and J. Currie (2011) "Chapter 15: human capital development before age five" vol. 4, Part B of Handbook of Labor Economics.

Chou, S., J. Liu, and Hammitt, J. (2003) "National health insurance and precautionary saving: evidence from Taiwan", Journal of Public Economics, 87(9-10).

CMS (2020), "CMS Office of the Actuary Releases 2018 National Health Expenditures", Centers for Medicare & Medicaid Services

Collins, S., S. Hayes, and D. Radley (2019) "How Much U.S. Households with Employer Insurance Spend on Premiums and Out-of-Pocket Costs: A State-by-State Look", The Commonwealth Fund, 23 May

Currie, J., and Madrian, B. C. (1999) "Health, health insurance and the labor market", Handbook of labor economics, 3, 3309-3416

De Nardi M., E. French, and J. Jones (2010) ″Why Do the Elderly Save? The Role of Medical Expenses.″ Journal of Political Economy 118 (1)

Dossche M. and S. Zlatanos (2020) "COVID-19 and the increase in household savings: precautionary or forced?", ECB Economic Bulletin, Issue 6/2020

Engen, M., and J. Gruber (2001) "Unemployment insurance and precautionary saving", Journal of Monetary Economics, 47

Ercolani V. (2020) "Covid-Induced precautionary saving in the US: the role of the unemployment rate" Covid-Note, Bank of Italy, 8 July

Ercolani V. and N. Pavoni (2019) "The Precautionary Saving Effect of Government Consumption", The B.E. Journal of Macroeconomics (FRONTIERS), vol 1

Gruber J. and A. Yelowitz (1999) ″Public Health Insurance and Private Savings.″ Journal of Political Economy 107 (6)

Hubbard, R., J. Skinner, and S. Zeldes (1995) ''Precautionary Saving and Social Insurance.'' Journal of Political Economy, 103

Jappelli, T., L. Pistaferri, and G. Weber (2007) ″Health Care Quality and Economic Inequality.″ Health Economics 16 (4)

Kotlikoff, L. (1989) ''Health Expenditures and Precautionary Savings'' In What Determines Saving? by Kotlikoff Cambridge, Mass.: MIT Press

Lee D. (2016) "Effects of dependent coverage mandate on household precautionary savings: Evidence from the 2010 Affordable Care Act" Economics Letters, 147

OECD (2019), "Health at glance 2019: OECD Indicators," OECD Publishing, Paris,

U.S. Department of Health and Human Services, 2020 "Executive Order on An America-First Healthcare Plan", September 24.

US Government, 2020 "Medicaid", Medicaid.gov

WHO (2020), "Global health observatory data repository", World Health Organization: https://apps.who.int/gho/data/view.main.GHEDOOPSCHESHA2011v https://apps.who.int/gho/data/view.main.GHEDOOPSCHESHA2011REGv?lang=en