

The Effect of Government Provided Insurance on Household Self-insurance

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Introduction

A lot of research has been devoted to studying the means through which households can smooth consumption in response to adverse effects, such as through own saving or borrowing, labor supply of family members or borrowing from relatives and friends. For brevity, we refer to these means as self-insurance or private risk-sharing. The ability of households to absorb shocks to their income and wealth has substantial implications for their welfare. At the same time, the extent of private risk-sharing should be an important determinant for policy interventions. For example, a reform from a progressive to a proportional tax system is judged based on the gains from reduced distortions net of the losses from lower redistribution. But the size of the latter margin depends on how much smoothing households can do on their own, through self-insurance. More generally, the value of government provided insurance is highly dependent on the extent of self-insurance that prevails in the economy and it could be severely overstated if one fails to account for the crowding-out effect it might have on private risk-sharing.

Motivated by the above, in this project we aim to understand the extent to which the social insurance system that prevails in a country affects households' incentives for private risk-sharing. Specifically, we ask:

How large is the crowding out effect that government provided social insurance has on household self-insurance?

Policy relevance

The policy relevance of our research initiative is significant, especially in the context of fiscal policies such as guaranteed minimum income, the universal basic income and income taxation. We believe our work can be of especially high interest for policy makers activating in these domains for several reasons. First, most modern countries have some form of guaranteed minimum income, but there is substantial heterogeneity in the generosity of provisions. The degree of substitutability between household self-insurance and government provided insurance via such benefits is likely to have implications for the effectiveness of changes in these policies. From a normative standpoint, the mere existence of private risk-sharing can lower the optimal level of social insurance. Second, rare policies like the universal basic income are receiving increased attention, with pilot programs ongoing, scheduled or being considered in various countries. We seek to make the point that conclusions of such pilot programs should be extrapolated with caution and interpreted through the lenses of the social insurance system already in place. Last but not the least, we conjecture that government provided insurance has a crowding out effect on self-insurance through saving. This implies that changes over time and differences across space in the social safety net are likely to have implications for wealth accumulation and wealth inequality, both of which are objects of high interest for policy makers far and near.

Project outline

A fair amount of research has been dedicated to studying households' ability to insure against income and wealth fluctuations by studying how household consumption responds to such fluctuations. This line of work is particularly salient for the case of the U.S. economy, where the data required for this type of analysis has been (though only to a limited extent) available for a long time in the form of survey data (e.g. Blundell, Pistaferri and Preston 2008, Saporta-Eksten 2014, Attanasio, Meghir and Mommaerts 2018, etc.), and for the case of developing countries, where researchers often collected the data themselves (e.g. Townsend 1994, Fafchamps and Lund 2003, Angelucci, De Giorgi and Rasul 2016, etc.). Much less is known about the extent and the means of private risk-sharing in countries that have a generous social safety net, such as Denmark. Consequently, not much is known about how changes in the social safety net broadly defined would impact household's decisions depending on the state of social insurance at the time of the reform.

We aim to fill that gap by first studying the patterns of self-insurance in the case of Denmark. We believe this exercise is interesting in its own right, but is of particular relevance for policy when analyzed in a broader context and in comparison with other countries. To that end, we compare the extent of self-insurance in Denmark with what is already known for the case of United States. We believe the comparison between these two countries is especially useful because they are both developed economies, but they are fundamentally different in the generosity of the prevailing social safety net. We ascribe differences in private risk-sharing among the two countries mainly to the crowding out effect that the social safety net has on household self-insurance.

This first part of our project is empirical in nature. We plan to use Danish administrative data to document various forms of consumption insurance against income shocks within and between households. To achieve this, we will take several approaches: *i*) we will estimate the strength of precautionary saving motives within and across generations by examining how consumption, wealth and savings respond to income risk, *ii*) we will measure the degree of partial insurance and group risk sharing in extended family networks; and *iii*) we will examine how consumption responds to negative income shocks like unemployment, as well as how sensitive the response is with respect to the generosity of the unemployment benefits.

This part of our project is highly dependent on the Danish administrative data. Using this data is crucial for a number of reasons. First, it is likely to provide a very accurate depiction of the patterns of self-insurance in a generous social insurance system. Second, the data is one of the very few (if not the only) to have information on labor and other sources of income, wealth and implicitly consumption (Browning and Leth-Petersen 2003), for a large panel of households and for a long enough period of time to observe multiple generations. These are all dimensions of the data that are essential for our approach. Third, due to the administrative nature of the data, it is less likely to be prone to measurement error, a problem that usually plagues empirical work based on United States survey data.

The second part of our project is quantitative in nature. We plan to use the empirical results to inform a structural model that encompasses all the forms of private insurance we document, as well as a realistic social insurance system. The purpose of such a model is to serve as a laboratory for various counterfactual exercises that would not only help us better understand the contribution of a generous social safety net in explaining cross-country differences in private risk-sharing, but

also evaluate alternative policies and ultimately make recommendations. An example of a policy relevant counterfactual exercise would be studying the implications on household self-insurance and economic aggregates of replacing the social security system in Denmark with a less generous one such as the one in the United States.

Timeline and expected output

We envision producing one or two academic papers as part of this research initiative, which we hope to publish in top general interest and/or field journals. We anticipate that this project will take approximately 2 years to complete. The first year will be dedicated to the empirical part of the project: obtaining the Danish administrative data, cleaning it and performing the analysis that was briefly summarized in the previous section. We plan to have these results by September 2019 and a research paper ready for submission by the end of 2019. In the second stage of the project, we plan to use our empirical results as moments to inform a structural model of private and social insurance that we can use for counterfactual experiments. We plan to have the second working paper ready by the end of 2020.

Budget

The initial task of collecting and cleaning the register data is time consuming and well-suited for research assistance, which is why we apply for funding for a research assistant working 10 hours per week for six months. We are calculating with three months of effective research time for Simon Halphen Boserup. Moreover, we apply for funding for two short research stays (approx. one week each) in New York and in Copenhagen with the purpose of allowing us time to work together face to face and push the project forward. We plan for a small amount for covering a conference or workshop trip in order to benefit us with feedback from researchers in the field. Lastly, we ask for a sum to cover costs related to obtaining and servicing microdata at Statistics Denmark.

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