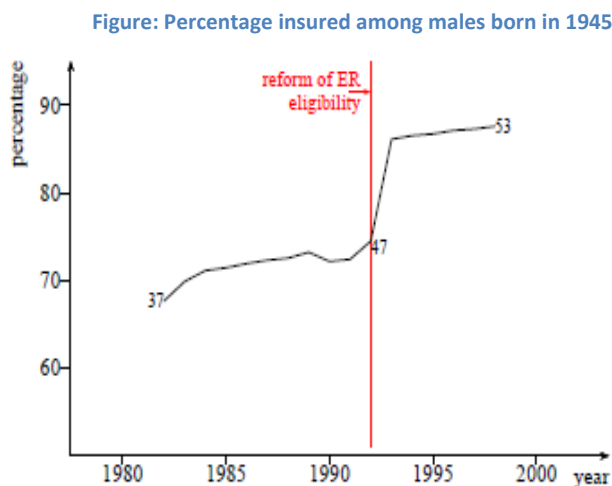Research proposal: Does Insurance Increase Entrepreneurship?

Starting up and running businesses is arguably a risky activity and insurance systems are of first-order importance for individuals' willingness to take on large risks. Therefore the lack of insurance can prevent potential self-employed to start-up but also prevent self-employed from investing in and developing the firm. One can conceive of many different insurance mechanisms, both formal and informal, and we propose an empirical project that focuses mainly on one particular formal mechanism while allowing for exploring alternative routes.

To provide context, we will first investigate the role of the Danish unemployment insurance (UI) system in stimulating entrepreneurship (entry and firm performance). The Danish UI system is unique in that it allows voluntary access and is thus not compulsory (yet highly subsidized), and also covers the self-employed. However, if we compare the propensity to start up as an entrepreneur between insured and non insured wage-earners we are unlikely to recover the causal effect of insurance, because insured people are self-selected. To deal with the endogeneity of insurance, we suggest to use an instrument: the early retirement (ER) option (efterløn), which is embedded into the UI-system. We can exploit that different cohorts face different age thresholds (change of the policy rule), at which they had to be insured in order to have the ER option.[1] The figure shows the UI membership rates changing at the age of which the 1945-cohort has to be insured to be eligible, and thus provides the intuition for why this instrument works.

Figure: Percentage insured among males born in 1945

The data we plan to use are globally unique. These are administrative data covering the entire residential population in Denmark for the period 1981-2008, and measuring a large array of important variables that are needed to answer our questions. We estimate the causal effect of unemployment insurance on entry into self-employment but also on outcome variables related to the performance of the firm (profit, number of employees, income of the entrepreneur). In all the analyses we will control for a large set of observable characteristics (such as education, demographics, income and wealth)[2] and explicitly model the unobserved components (as a random effect). Preliminary calculations (on a 10% sample) suggest that in raw statistics there is a negative association between being insured and choosing to become self-employed. Correcting for a wide range of observables, allowing for individual

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[1] In earlier work (Ejrnæs and Hochguertel, 2011) we have successfully used this instrument for insurance when analyzing firm exits.
[2] These characteristics are found to be important in a number of previous studies see e.g. Evans and Leighton (1989) and Carrasco (1999)

specific unobserved heterogeneity and the endogeneity of insurance, the econometric estimates appear to tell the opposite: those treated to be insured are more likely to become self-employed.

Exploring this at first sight promising avenue further, quantifying the causal effect, and putting it into a larger framework is the main aim of the project. The policy implications are possibly far-reaching, as such patterns suggest an important role of UI for laying the foundations of economic dynamics. Indeed, there is academic interest as well, both on formal and informal insurance mechanisms. Holtz-Eakin, Penrod, and Rosen (1996) and Zissimopoulos and Karoly (2007) investigate with US data if the lack of health insurance prevents some potential entrepreneurs from start-up. Fan and White (2003) argue that access to the capital market coupled with the possible recourse to bankruptcy proceedings featuring asset exemptions and (partial) debt discharge constitutes a prime insurance mechanism in the United States that encourages would-be entrepreneurs to actually start up new ventures.

Looking at the Danish case will prove informative and help pointing at larger issues. First, in contrast to Fan and White, we consider a formal insurance system. Second, we acknowledge that indirect insurance mechanisms are available in Denmark as well, and the extremely rich data will allow a quantification of their importance. We think in particular of the following: Self-insurance through precautionary wealth accumulation, access to capital and credit markets, and informal insurance through inter- and intragenerational risk sharing.

There is substantive evidence in the international literature that there is a positive association between wealth and entry (see Evans and Jovanovic, 1989; Evans and Leighton, 1989; Fairlie, 1999; Quadrini, 1999, Hurst and Lusardi, 2004), and much of it is being ascribed to the importance of binding borrowing or liquidity constraints (Cagetti and De Nardi, 2006). While these are hard to disentangle with confidence from precautionary effects (Hurst *et al*, 2010), we may be able to provide indirect evidence of precautionary wealth accumulation by comparing start-ups in capital and non-capital intensive industries while controlling for industry specific risk.

Parents, siblings and spouses may provide additional financial buffers to get a small firm through dire times. In order to assess the situation convincingly, we would need to gauge the size and composition of an individual's family network, and the wealth holdings within the network. The population data allows just doing that: individuals can be linked within the family through parental identifiers available. Intergenerational transfers have been considered before, but with limited data and not in the context of insurance (Holtz-Eakin, Joulfaian, and Rosen, 1994; Blanchflower and Oswald, 1998).

The contribution of this project is twofold. First, the project will provide knowledge about the impact of the Danish UI-system on entrepreneurship and can hopefully provide new insight on e.g. how to stimulate entrance into entrepreneurship. Second, in contrast to the existing literature on entry and insurance, we are explicitly dealing with the endogeneity of the insurance choice. This enables us to identify and quantify the causal effect of insurance on entrepreneurship, which has not been done before. Although these results are obtained in a particular Danish context, they will be of interest to a broader audience.

TIME FRAME
Spring 2012:   Data setup and management, first descriptive analyses and first estimations.
Fall 2012:   First draft of the paper completed and submission for presentation at international
                conferences and workshops.
Spring 2013:   Working paper will be issued and presented at international workshops or conferences.
Fall 2013:   Submission for publication in an international economics journal.

BUDGET
The budget covers three months of "frikøb" to Mette Ejrnæs, which will enable us to work intensively on the project. Furthermore, we apply for money to allow for additional data (data on firms)[3] and for cost of setting up a new project. It is essential for the success of the project that we get the additional data on firms. Furthermore, we ask for money to cover one week stay in Amsterdam by Mette Ejrnæs and one week stay in Copenhagen for Stefan Hochguertel. Finally, we apply for money to hire a research assistant in the range of 100 hours to help with the initial data work.

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[3] Most of the data are already available through CAM's data set at the University of Copenhagen.