

Essays in Entrepreneurial and
Household Finance

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This dissertation is dedicated to the strongest woman I know, me!

Foreword

This volume is the result of a research project carried out at the Department of Finance at the Stockholm School of Economics (SSE).

This volume is submitted as a doctor's thesis at SSE. In keeping with the policies of SSE, the author has been entirely free to conduct and present his research in the manner of his choosing as an expression of his own ideas.

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Tehran, March 31, 2017

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Introduction

This doctoral thesis consists of three independent papers in entrepreneurial, household and corporate finance. The papers are self-contained and each were written with the purpose of eventually being published as a separate article in an academic journal.

The first paper, *Family Wealth and Entrepreneurship*, explores the relation between the financial resources in an individual's extended family and her decision to initiate a business and become an entrepreneur. In a frictionless capital market, personal financial resources would be uncorrelated with both the decision to enter self-employment and the scale of the business that is started. In the presence of frictions, however, self-employment is related to personal wealth and access to collateral. In such a setting, financing from family and other individuals with strong social ties can be important both because altruism lowers the cost of capital and because social connections reduce agency problems. However, family financing comes with some shadow costs, such as inducing risk aversion and impairing the role of family wealth as an insurance fund against consumption in case the business fails. These costs make family financing sub-optimal for many entrepreneurs. This paper revisits the debate by investigating whether family wealth relaxes capital market constraints and substitutes or facilitates access to formal credit.

To conduct the analyses, I build a rich database by combining three sets of administrative data; individual data for a representative sample of the Swedish population, family relations data, as well as firm data. The empirical strategy I use to isolate the financing channel from alternative channels such as ability, experience of family in entrepreneurship, network and connections and risk tolerance, is mainly based on the fact that the data allow me to measure directly many variables that capture not just the financing channel, but also the alternative channels. For example, I control for an individual's general intelligence or IQ to rule out the ability channel, experience of the relatives

in entrepreneurship to rule out the family human capital channel, whether an individual has relatives working in the finance industry or working as executives, managers, business professionals or legal professionals to control for relatives' network and connections that can be helpful in financing startups.

After controlling for individuals' observable characteristics including the variables mentioned above, I find that individuals who have wealthier extended family are more likely to engage in firm creation activities. On top of family wealth, family income also increases the likelihood of transitioning into entrepreneurship. In addition, I find that the correlation between family net worth and the decision to become an entrepreneur is much stronger in industries with high upfront investment needs where the financial constraints are more likely to be binding. These findings are consistent with the argument that a family with greater financial resources motivates entrepreneurship by providing the required capital to initiate a business. Moreover, the study shows that family not only directly invest in the startup's capital by giving money to the entrepreneur or buying equity shares, but also indirectly facilitate the entrepreneur's access to formal credit by providing collateral (using their real estate properties), or by offering guarantees (using their high income as a basis).

The second paper, *Motives for Entrepreneurial Saving: Evidence from Sweden*, is co-authored with Egle Karmaziene¹. It evaluates the motives behind higher saving rates of entrepreneurs compared to non-business-owners. We use a unique dataset that links Swedish households' wealth and income to the financial statements of their firms, and investigate how their decision to enter entrepreneurship, stay in it, or leave it affect their saving behavior.

We document that, in Sweden, entrepreneurial households start saving higher rates of their income than the rest of the population two years before starting their businesses. The difference between the saving rates of the two groups of individuals increase after the entrepreneurs initiate their firms. Next, we investigate two main motives: precautionary saving due to the high income risk in entrepreneurship, and capital accumulation due to the investment needs of the business and financial constraints. Firstly, to test the precautionary motive, we hypothesize that entrepreneurs who experience higher levels of risk in their business save their income from business at higher rates. We find that owners of unlimited liabilities in risky industries with high fluctuations

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in demand save higher proportions of their income. The legal form of their ventures, which holds the owners liable for firms' debt, enhances the precautionary saving motive. Secondly, we hypothesize that owners save more in order to accumulate capital in light of ample investment opportunities in the near future. Consistent with this hypothesis, we find that owners of limited liability firms save higher proportion of the business profits (by not distributing and consuming it) when the industry they are active in expects high investment opportunities in the subsequent year.

In the third paper, *Labor Protection Laws and Firm Volatility*, I study the effect of regulating labor market to protect employees against corporations on the performance of firms, more specifically on profitability and fluctuations in profitability (or risk) of firms. There is an ongoing debate in the literature on benefits and costs of such regulations for economic outcomes. Ex-post, the labor protection laws introduce rigidity and inefficiencies for firms. But they can also have ex-ante incentive effects on employees to be more innovative since their jobs are secured in case their innovations fail.

Theoretically, it is not clear how job security for employees affects the volatility in firms' profitability. These labor protection laws make labor a production input with fixed costs which cannot be adjusted when firms experience lower sales. This can magnify the effect of economic downturns and make the earnings more unstable. In addition, they provide protection for employees to start innovative activities which can make the sales more risky. However, firms may play safe and forgo the risky projects in anticipation of high labor costs and rigid labor markets which causes the profit to be more stable.

I use a time-series indicator of rigidity of the labor market in 21 OECD countries during 1987-2004. This indicator is a weighted average of laws related to Permanent employee contracts, temporary contracts and temporary work agencies, as well as collective dismissals, developed by Allard (2005). Since different countries in the sample has taken separate paths in regulating their labor markets, there are cross-sectional and over-time variations in the index, which allows me to employ a difference-in-difference approach to investigate the causal effect of inter-temporal and across countries changes in the employment protection legislation (EPL) on firms' performance. I add time and firm fixed effects to control for business cycle and firm-specific characteristics.

I find that strict labor-market regulations lead to statistically and economically significant increase in the volatility of firms' return on assets (ROA). In addition, a pro-labor legislation is associated with a decline in the level of return on assets, but has no significant impact on sales growth, asset growth, and asset turnover of firms. This suggest that the costly adjustment of the labor stock to sales caused by the labor protection legislation is driving the results. To address the concerns about possible contemporaneous reforms, e.g. in corporate governance, I estimate the differential effect of EPL on firm performance for firms in different industries in a triple differences design. The hypothesis is that the effect of EPL on firm volatility should be stronger in industries that labor is a more important production input since the adjustment of human capital to sales during market downturn is more costly in these industries. interacting the EPL indicator with an industry measure of labor intensity, I find that only firms in industries with high labor intensity experience more volatile performance following a pro-worker reform. In this setting, I can add the interactions of country and time as well as industry and time fixed effects to control for country and industry cycles as well as contemporaneous reforms.

The remainder of this dissertation consists of three papers introduced above, each of which makes out a separate chapter.

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