Family Wealth and Entrepreneurship

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Abstract

This paper provides evidence that family financial resources–not those of the immediate household, but those of the extended family members and close relatives–alleviate credit constraints experienced by entrepreneurs, and stimulate entrepreneurial activities. I build a rich combination of data on a representative sample of the Swedish population, their family members and the enterprises they run, and show that abundant financial resources in the family motivate initiating businesses in industries with high financial costs of entry. This finding is neither driven by inherited or acquired ability from family members, nor by valuable entrepreneurial experience of relatives. Moreover, I find that individuals with wealthier family members initiate larger businesses. The relation between the structure of financial resources in the family–liquid assets, fixed assets, and income–and the composition of startup capital–equity, debt, and loans from credit institutions– suggests that family contributes to the financing of startups directly by investing cash in firms' equity or indirectly by providing collateral and guarantee for firms' bank loans. In addition, I find that the marginal entrepreneur financed by family wealth enjoys an income gain after transitioning to entrepreneurship.

Keywords: Family Wealth, Entrepreneurship, Informal Financing, Financial Constraints, Collateral, Startup

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1 Introduction

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 (Evans and Jovanovic, 1989). 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 (Lee and Persson, 2016). However, recent empirical works suggest that informal financing is at best a modest source of capital for startups. For example, Robb and Robinson (2012) find that less than 10% of entrepreneurs in a sample of startups received any capital from their friends or family–instead bank loans were the most common source of capital. Similarly, Hurst and Lusardi (2004) report that the relation between personal wealth and entry into self-employment is mostly flat.

In this paper, I revisit this debate and investigate whether family wealth relaxes capital market constraints and substitutes or facilitates formal access to funds. To this end, I explore the connection between financial resources in the family and entry to entrepreneurship as well as startup financing. By family I refer not to the immediate household, but the close relatives outside one's household. I show that abundant financial resources in the family not only provide direct capital to finance business startups through informal financing instruments, but, more importantly, facilitate entrepreneurs' access to formal credit by providing collateral or guarantees for their business loans from credit institutions. As a result, previous literature has underestimated the importance of informal financing to entrepreneurship.

To conduct the analyses, I build a detailed and rich database by combining three sets of administrative data; individual data for a representative sample of the Swedish population, family relations data for all their relatives, as well as firm data for the enterprises they run. Controlling for household net worth as well as other characteristics such as age, gender, education, industry, and household composition, I find a positive and significant correlation between family net worth and the likelihood of entering into self-employment.[1] Individuals whose family are in the top 1 percentile of the family wealth distribution are 50-100 percent more likely to engage in firm creation activities as the individuals below the median. On top of family wealth, family income also increases the likelihood of transitioning into entrepreneurship. These findings are consistent with the

[1]The main family wealth measures used in this paper is average net worth of adults at the same or higher level in the family tree, i.e., parents, siblings, aunts and uncles, grandparents and cousins. However, the total wealth of relatives is also used as a robustness test.

argument that a family with greater financial resources motivates entrepreneurship by providing the required capital to initiate a business.

How does family financial resources stimulate new business activities? One channel is that family wealth may be a low-cost source of capital for many individuals, depending on the constraints they otherwise face in capital markets. To be sure, there are many alternative channels connecting wealth and entrepreneurship that do not hinge on access to capital. For example, talent, entrepreneurial experience of family, risk attitude and a private benefit of self-employment are important determinants of entry to self-employment and are also associated with family wealth. The detailed data on the characteristics of the individuals and their family members, as well as their firms' financial data allow me to measure these distinct channels and identify the effect of family wealth through the capital provision channel.

First, I investigate the importance of the ability channel by using IQ scores available from Swedish military conscription data. Controlling for the level of IQ slightly attenuates the correlation between family wealth/income and the probability of initiating a business, but the relationship remains economically and statistically significant. Adding the interaction of family financial variables and the IQ level, I find that family wealth is a stronger determinant of the decision to start a business for individuals with lower level of IQ. This finding is consistent with the argument that family wealth provides capital for individuals with lower human capital.

A second potential channel is the parental self-employment channel documented by Dunn and Holtz-Eakin (2000). As expected, I find that entrepreneurial experience of one's relatives is strongly associated with the individual's decision to become an entrepreneur, especially when the relatives have experience in the same industry as the entrepreneur's business. However, the relation between family wealth and starting a business remains economically and statistically significant for the group of individuals without entrepreneurial relatives. Consistent with the previous findings of the literature, I find that family wealth is a weaker determinant of launching a business among those whose relatives have entrepreneurial experience in the same industry. Therefore, the results of this analysis suggest that while entrepreneurial experience and skill sharing is an important channel through which family motivates entrepreneurship, it does not explain the positive relation between family wealth and transitioning to entrepreneurship.

Next, I examine the importance of the financing channel in driving the relation between family wealth and the propensity of launching a business. I first investigate the effect of family net worth on the probability of initiating a business in an industry with higher upfront investment needs. If

family wealth stimulates entrepreneurship by providing investment capital to start firm operations, individuals with wealthy families are expected to have a higher propensity to initiate businesses in industries with higher upfront investment needs because financial constraints are more likely to be binding in these industries. I develop a measure of entry cost for each industry and estimate the relation between family wealth and the probability of entry to entrepreneurship in different industries.

Interacting the household and family net worth with entry costs, I find that the correlation between household and family net worth and the decision to become an entrepreneur is much stronger in industries with high initial capital requirement.[2] The high wealth of an individual's family encourages firm initiation twice as much in industries with high financial cost of entry than in industries with low or medium cost of entry. Combined with the estimated negative correlation between an industry's cost of entry and the probability of launching a new business in that industry, these results further show that family wealth stimulates startup activity by providing capital and relaxing financial constraints faced by aspiring entrepreneurs.

Studying the effect of family wealth on the intensive margin of entrepreneurship, I find that entrepreneurs from wealthier families start larger businesses. An increase of 1% in the wealth of family is associated with 6 basis point change in total assets of the firm. To investigate the importance of the family financing channel in driving the result, I examine two financial instruments that family can use to finance entrepreneurial ideas. The first and less sophisticated instrument is the direct investment of family assets in the new venture by purchasing shares of the firm or lending money to the firm. Throughout this paper, I call this instrument *direct informal financing by family*. Such investment is expected to be done mainly using cash and to affect the equity and informal debt of the firm. On the other hand, family's assets can facilitate the startups's access to formal debt from credit institutions such as banks by providing collateral and guarantees for the firm's loans. Real estate properties can be pledged as collateral to receive secured bank loans. Guarantees, however, do not require pledging any assets. The guarantor promises to assume the debt obligation of a borrower if the borrower defaults, hence takes the risk that the lender is not willing to take. In this paper, I call these two financial instruments *indirect formal financing by family*.

To test these two instruments, I study the relation between the structure of family financial resources–income, liquid assets, and real estate–and the composition of startup capital–equity,

[2]Example of industries with high entry costs are hotel industry, most manufacturing industries, agriculture, and mining

debt, debt from credit institutions, and debt from other sources. Liquid assets are considered to mainly provide direct informal financing, and fixed assets can be used as collateral and contribute to indirect formal financing. Moreover, relatives with high income can indirectly facilitate access to formal capital through co-signing a loan with the entrepreneur or guaranteeing the startup's loans. Breaking total assets of the firm down into equity and debt, I find that the elasticities of equity and debt to family wealth are 20% and 7% respectively. Moreover, the businesses are financed in a manner that reflects the composition of family wealth. I find that high income of family members is associated with higher debt in the firm. In addition, high concentration of family wealth in fixed assets (measured by the value of their real estate) is associated with higher levels of loans from credit institutions in the new venture. Controlling for the level of family fixed assets, I estimate that increasing family net worth (stemming from increasing liquid assets) is associated with both higher equity and higher debt from informal resources in the firm. These findings suggest that family financial resources contribute to the firm capital by investing directly in the equity or debt of the business or by facilitating its access to formal debt from credit institutions by providing collateral and guarantees.

The estimated elasticities of the components of firm capital to the elements of family resources show that the indirect contribution of family through the collateral and guarantee channel is as important as its direct contribution through investing its assets in the firm. The aggregate elasticity of firm debt to the the availability of collateral and guarantee in the family, is 21% (8% for real estate and 13% for income), while the elasticity of firm equity to the availability of direct financing is 18%. These findings suggest that considering only the direct financing channel in the previous studies, such as in Robb and Robinson (2012), significantly underestimates the role of informal financing by family. In addition, they shed more light on how entrepreneurs gain access to formal sources of credit in the early stages of their business investments.

The estimated positive connection between financial resources in the individual's family and entry into entrepreneurship as well as startup capital can be attributed to the borrowing constraints of entrepreneurs only if family provide capital for feasible projects. Jensen et al. (2015) find that after a mortgage reform that provided more collateral for the individuals, entry to entrepreneurship increases. But the marginal business that is launched after the constraints are relaxed is of lower quality than an average existing business. Another important concern regarding family financing is its shadow costs, such as inducing risk aversion, stifling investment, and impairing family insurance funds as discussed in Lee and Persson (2016). These costs prevent entrepreneurs from taking enough risks and investing in their new ventures, and make family financing sub-optimal

for many entrepreneurs. To address the concerns regarding the shadow costs of family financing and the private benefits of entrepreneurship for wealthy individuals, I evaluate the relation between family wealth and the performance of the startup in the first four years of its operation. More specifically, I investigate the effect of family financial resources on the intensive margin of entrepreneurship using post-entry performance and survival of startups, as well as post-entry income of entrepreneurs.

First, I estimate a proportional hazard model and find that firms started by individuals with wealthier families are 20% more likely to survive in the first four years of their operations. The higher probability of survival does not come from maintaining firms with higher leverage or lower profitability for a longer period of time. Second, I study the effect of family financing on the growth of the business by comparing the investment and sales growth of the firms started by entrepreneurs with wealthier families to those of entrepreneurs with poor families. I do not find any significant difference in growth between the two groups of firms. Thus, there is no evidence that family wealth finances businesses with lower growth opportunities, or that family financing lowers the incentive to take risk as suggested by Lee and Persson (2016). Next, I compare the sales of the firms with higher probability of having been financed by family wealth with that of firms started by entrepreneurs with poor families, and find slightly lower sales for the former, although economically insignificant in magnitude. Overall, there is no support for the hypothesis that firms financed by family wealth have lower quality than firms financed by outside investors. These findings are in contrast with Zaccaria (2015), where family financing in the early stages of startup negatively affects access to later access to formal sources of capital.

Finally, I investigate whether the positive effects of family wealth on entry to and continuing in entrepreneurship leave the marginal entrant with higher income in self-employment. To this aim, I study the effect of entry into entrepreneurship on an individual's income separately for the two groups of entrepreneurs with wealthy and poor families. Estimating a model with household fixed effects, I find that transitioning to entrepreneurship has, on average, a negative effect on the income level and income growth of the household.[3] However, entrepreneurs from wealthier families experience 30% increase in their income after transitioning to entrepreneurship. Entrepreneurs with lower ability, whom I show that rely more than high ability entrepreneurs on family financing to implement their business ideas, enjoy the highest gain (about 37%) in their income. Combined with the previous findings on the performance and survival of startups, this finding suggest that

[3]This finding is consistent with Hamilton (2000), where he finds that self-employment is associated with lower income. There is, however, the concern about under-reporting of income by entrepreneurs especially in unincorporated firms.

although family wealth is an important sources of capital for individuals with low ability, there is no evidence that the family resources are invested inefficiently.

This paper relates to previous studies in three strands of the literature. First, it contributes to the research on the importance of financial constraints for entrepreneurship. Previous studies have found mixed evidence. A series of studies in the literature (led by Evans and Jovanovic (1989) and Evans and Leighton (1990), and followed by Holtz-Eakin et al., 1994) has documented strong positive correlation between personal wealth and the propensity of initiating a business, particularly after receiving a large inheritance. In addition, Adelino et al. (2015) and Schmalz et al. (2016) document the role of collateral channel in stimulating entrepreneurial activities and employment in small businesses. However, Hurst and Lusardi (2004) challenge these findings by showing that the correlation between wealth and transitioning to entrepreneurship is flat for most of the wealth distribution, and arguing that the correlation only reflects the preferences or opportunities of this group of individuals. They also find that receiving a large inheritance in the future predicts transition to entrepreneurship. I contribute to these studies in two ways: first, I show that informal sources of capital stimulate entrepreneurship by providing capital to the aspiring entrepreneurs and their startups. This finding provides additional evidence for the existence of financial constraints for entrepreneurs. Second, the findings of my paper suggest that inheritance is not a good instrument for wealth in studying entrepreneurship since family wealth is an available source of capital for aspiring entrepreneurs before the death of relatives and the transfer of the inheritance.

In addition, my paper contributes to the literature that studies the importance of family and friends as an informal source of capital on financing new ventures. The empirical findings of the literature are mixed and theory does not provide a clear guide. Bates (1997) shows that family financing is of crucial importance even in developed countries, and particularly for ethnic and minority entrepreneurs. However, in one sample of startups studied by Robb and Robinson (2012), less than 10% of individuals have received any capital from their friends and family. Studying the parental entrepreneurship channel, Dunn and Holtz-Eakin (2000) find that the effect of entrepreneurial parents on their children's decision to initiate businesses does not happen through financial channels. Zaccaria (2015) shows that informal finance from family reduces the probability of future financing from venture capitalists. In their theoretical model, Lee and Persson (2016) provide a theoretical framework to explain these empirical findings by discussing the shadow costs associated with financing from family, such as avoiding risk and restraining investment, and impairing the insurance role of family wealth. I contribute to the debate by providing evidence that

financial assistance of family members significantly increases entry to industries with high initial capital requirement. In addition, I show that wealthy relatives do not only provide direct capital to the business, but also facilitate entrepreneurs' access to the formal credit market by providing collateral and guarantee for the new venture's loans.

Finally, my paper is related to the literature that investigates intergenerational associations in wealth, income, and entrepreneurship. Charles and Hurst (2003) document a strong age-adjusted elasticity of children-parents wealth, which reflects intergenerational similarities in saving propensities. They find income, human capital and the ownership of particular assets are the main determinants of the large parent-child wealth elasticity. In addition, Aghion et al. (2016) show that the probability of becoming an inventor is correlated with parental income. They find that this correlation is mainly driven by the fact that rich parents have more educated children, and that inventing increases the annual wage rate of the inventor over a prolonged period after the invention. Using Swedish data and exploit the variations in parent-child relationships–adoptive versus biological– Lindquist et al. (2015) find that parental entrepreneurship increases the probability of children's entrepreneurship, with post-birth factors accounting for twice as much as pre-birth factors in the decomposition of the intergenerational association in entrepreneurship. I contribute to this body of literature by providing evidence for an alternative explanation for these relationships: that family financial resources enable entry into an occupation with high potential returns but high financial costs of entry.

The paper is organized as the following. Section 2 provides detailed information about the data used in this study, how the sample is created, and the descriptive statistics of the key variables used in the analyses. Section 3, 4, and 5 describe the empirical strategies adopted and the results obtained for the analyses regarding transitioning to entrepreneurship, startup capital, and entrepreneurial outcome, respectively. Finally, Section 7 delivers the concluding remarks.

2 Data, Sample, and Descriptive Statistics

2.1 Individual, Household and Firm Data

In this paper I combine and use five types of individual and household data for a random and representative sample of the Swedish population: wealth, income and demographics, occupation,

skill, and family data. In addition to that, I use a rich firm data that reports financial as well as ownership data of private firms in Sweden. In this section, I provide detailed information about these databases.

Family Data: To identify family members and relatives of the individuals, I use the Multi-generation Register (Flergenerationsregistret) which includes the data on biological as well as adoptive parents. Using this database, one can infer other types of relations such as siblings, grandparents, grandchildren, aunts and uncles, nieces and nephews, and cousins. This database allows me to retrieve the family tree for each person, and hence for each household, in the sample. In this paper, an individual's family does not include the household in which an individual resides, but rather it constitutes the extended family members who live outside the individual's household. The study includes, however, only adult relatives who are located at the same or higher level in the family tree–i.e. parents, siblings, aunts and uncles, grandparents, and cousins.

Wealth Data: Statistics Sweden (also known by its Swedish acronym SCB), had the parliamentary responsibility to collect wealth data on a household level. Statistics Sweden collects household wealth data from a variety of sources, such as the Swedish tax agency, welfare agencies, and the private sector.[4] Information on deposits, interests paid or received, dividends and securities is obtained from financial institutions. It includes non-taxable securities as well as securities owned by households below the wealth tax threshold. The dataset reports disaggregated wealth information, including holdings of worldwide assets by every individual in the sample at the end of the tax year, bank accounts, mutual funds and stocks. The contributions made during the year to private pension savings, total debt outstanding at the end of the year, and interest paid during the year are also recorded. In addition, the dataset contains information on real estate properties.

Income and Demographics: This data contains disaggregated income, including gross labor, business and capital income. Capital income consists of the income (interest or dividends) from saving accounts or financial securities as well as dividends from ownership of private companies. The database also reports the amount of tax paid on each type of income, pension income, and social benefits such as student aid, sickness benefits, and unemployment compensation. It also includes the following demographic information: age, gender, marital status, country of origin, education, as well as household composition and identification numbers, which allow me to group individuals by living unit and aggregate assets and income at the household level. Note that all the financial variables are adjusted for inflation w.r.t. Consumer Price Index in 2010. The average SEK to USD exchange rate in 2010 was 0.13.

[4]See Calvet et al. (2007) for more detailed information about the wealth data

Occupation Data: In order to identify the entrepreneurs in each firm and distinguish them from inactive owners of firms (equity investors), I use the occupation database, which reports the main occupation of individuals aged between 16 and 65. The database recognizes four main categories of occupation: gainful employment, self-employment in an unincorporated firm, self-employment in a corporation, and unemployment or non-gainful employment.[5]

Skill Data: To control for talent and ability of individuals, I use a database that reports different aspects of cognitive and non-cognitive skills for most of the Swedish male population. The data is obtained from personality and IQ tests which were required for the compulsory enlistment for the state services. All men in my sample had the obligation to take the enlistment test at the age of 18. The Swedish Defense Recruitment Agency (Rekryteringsmyndigheten) provides the data for individuals enlisted between 1983 and 2010, and Military Archives (Krigsarkivet) provides the data for individuals enlisted between 1969 and 1983. The test on cognitive skills consists of four different parts (logic, verbal, spatial, and technical comprehension) of which each is constructed from 40 questions. I use a discrete variable which aggregates the individuals' results into one score of cognitive skills. This standardized variable ranges from 1 (the lowest skill level) to 9 (the highest skill level) and follows a Stanine scale that approximates a normal distribution. I define three binary variables for each individual indicating a low (1-4), high (5-8) or very high (9) IQ score. This measure is not affected by later acquisition of skills through experience and higher education and only indicates ability obtained mainly genetically or through the mandatory school. It is novel in that it is very detailed and reveals accurate ability.

Firm Data:I use the FRIDA firm registry established by Statistics Sweden and the Swedish Finance Ministry, which consists of information on all private firms in Sweden, including incorporated firms, economic associations, sole-proprietorships, and partnerships. It contains detailed financial data–balance sheet and income statement–obtained from firms' tax returns, as well as ownership data obtained from individuals' tax returns, shares owned, dividends received, capital gains/losses made by each owner of the firm. Hence, FRIDA provides the link between firms and entrepreneurs/owners, which allows me to make connections between the financial assets of the entrepreneurs/owners and that of the firms. The data contained in FRIDA are collected by the Swedish tax agency (Skatteverket) at the end of firms' fiscal year. Statistics Sweden supplements the data received from companies and owners with data provided by other sources such as the Swedish Companies Registration Office (Bolagsverket). The supplementary information includes

[5]Gainful employment refers to an employment situation where the employee receives consistent work and payment from the employer.

firm characteristics such as industry, number of employees and location.

In addition to FRIDA, I use the firm database Serrano to obtain firm data that are not available in FRIDA–business group data, bankruptcies and liquidations, as well as mergers and acquisitions. The Serrano database is first and foremost a database of financial histories of companies. The financial data are based on financial statements collected by the Swedish Companies Registration Office. In addition, general company data are acquired from Statistics Sweden, bankruptcy information from the Swedish Companies Registration Office, and group data from PAR's group register. The Serrano database mainly covers incorporated firms in Sweden.

2.2 Sample and Variables

This study employs a random representative sample of the Swedish population containing around one million households (which covers a quarter of the population), and follows them from 2000 through 2007. For each household consisting of a couple, a head is defined as the adult with the maximum average income over the sample period. For single households, the head is the single adult. I restrict the study to households whose head is between 23 and 55 years old to eliminate students not participating in the labor force and individuals close to retirement.

Occupation variable: An individual is considered as gainfully employed if her labor income constitutes more than half of her total income (i.e. the sum of pension, student aid, unemployment benefit, labor income and business income). She is considered as an entrepreneur if she owns a business and meets some required conditions. In fact, the definition of entrepreneurship in this paper includes different types of businesses, from a small local bakery to the next Spotify.

Since owners of unincorporated firms (i.e. partnerships or sole-proprietorships) report their income from business separately from other types of income in their tax returns, I recognize an individual as an entrepreneur in an unincorporated firm if her income from business activities constitutes at least half of her total income at any year during the sample period. For owners of incorporated firms (or limited liabilities), on the other hand, the income from business activities is blended into labor or capital gain data. Therefore, the data does not allow me to calculate the exact amount of income from the business and compare it with total income. Instead, using the occupation and firm ownership databases, I define an owner of an incorporated firm as an entrepreneur if she meets at least one of the following conditions:

- In the occupation database, the owner is reported as an entrepreneur in a corporation.
- The occupation database identifies the owner as a salary earner, but she owns more than 50 percent of a firm's equity.
- The occupation database identifies the owner as a salary earner, but she owns more than 30 percent of the firm's equity and is employed in the firm.

Finally, an individual considered as not gainfully employed, if she is neither entrepreneur, nor gainfully employed. In the analyses studying the connection between the wealth of the family and the propensity of starting a business, the dependent variable is transitioning to entrepreneurship. It is a binary variable which indicates households in which no adult is entrepreneur in the current year, but at least one of the adults will transition to entrepreneurship in the subsequent year. The transitioning of any adult to entrepreneurship is considered in defining this variable instead of only that of household head to avoid any selection bias from including only successful entrepreneurs with high income.

Individual and household characteristics: I identify an individual as a student, a pensioner, or unemployed if she receives at least a quarter of her annual total income as student aid, pension or unemployment benefits, respectively. Here, total income is calculated as the sum of labor and business income, pension, unemployment benefits, and student aid. Note that capital income is excluded from total income. Disposable income is obtained from the income database. Disposable income is calculated as the sum of all types of income earned, including labor, business and capital income as well as social transfers and benefits, net of total tax paid during the year.

Net worth is measured as the total value of assets including bank deposits, holdings of financial securities, and real estate properties minus total debt at the end of the year. Financial securiies consist of stocks, bonds, derivatives, funds, money market funds except pension funds and capital insurance. It is important to note that business wealth and durable assets such as vehicles (automobiles and boats) are excluded from net worth for all individuals. Other demographic variables, i.e. age, gender, education, country of birth, county of residence, industry of employment or the business activity, and household size and composition are measured using the data obtained from the income database. High education binary variable is equal to one if an individual has studied three years or more in a higher education institute such as university or college. Immigrant binary variable indicates individuals who were not born in Sweden.

Family variables: As mentioned before, the data used in this paper includes all the family

members of the individuals in the representative sample and contains their income, demographic, wealth, occupation, and business ownership data. Family assets and income variables are calculated at household level. First, all family members of the adult(s) in a household are identified. Then, I restrict the family members to adults who do not reside in the same household and are at the same level as or at a higher level than the individual of the interest in the family tree, i.e. siblings, parents, aunts an uncles, grandparents, and cousins. The family financial variables (assets and income) are defined primarily as the average values for the relatives who meet the mentioned conditions. In other words, the variables represent per capita assets or income. The reason why I use the average value is that it does not only take into account the resources of all family members, but also is normalized w.r.t. the size of the family. When there are more individuals with potential entrepreneurship activities in the family, the demand for financial resources from rich relatives is higher, and there are lower funds available for each individual. As a robustness test, however, I use sum of financial variables across family members as well as financial assets and income of the wealthiest relative, and control for the number of family members in the regression.

Other important family characteristics used in this paper are the entrepreneurial experience of relatives, the industries they run businesses in, and their wealth in private equity. As mentioned before, the data includes the occupation of the family members and their ownership in private firms. Hence, I can identify entrepreneurial relatives, excluding those who jointly run a business with the individual of interest. The entrepreneurial relative variable is a binary variable which is equal to 1 if there is a business owner among the relatives and 0 otherwise. The entrepreneurial relative in the same industry is another binary variable that indicates whether or not any of the entrepreneurs among relatives runs a business in the same industry as the one in which the individual of interest is or has been employed. The net worth of the entrepreneurial relatives is defined as the average net worth of all the entrepreneurs among family members. The wealth of relatives in private equity is calculated as the average equity owned by relatives in private firms.

Industry initial capital requirement: To investigate the financing channel when studying the connection between family financial resources and entry into entrepreneurship, I develop an industry measure of financial costs of entry. This measure reflects the initial capital requirement in an industry and is used as a proxy for the likelihood of financial constraints being binding in an industry. It is calculated at the level of the two-digit SNI 2002 industry classification in the following way. For each industry, I identify the new ventures initiated over the period 2000-2013, exclude firms with less than 50,000 SEK in sales in their first year of operation, and calculate the industry initial capital requirement as the median capital of these new firms across the industry if

there are at least 10 startups in the industry. Based on the terciles of this variable, I categorize industries into three groups of low, medium and high cost of entry. Table A-1 reports the category of the initial capital requirement for each industry. Most manufacturing industries have medium or high cost of entry. Industries such as agriculture, mining and hotels have high initial capital requirement, and industries such as restaurants, travel agencies, and labor recruitment have low costs of entry.

The final panel includes about 3 million observations with more than 380 thousand households in each year, and 620 thousand households in total. All financial variables (income and wealth) are winsorized at 1% level in all regressions with SEK values of the variables. I believe that the data used in this paper is of a very high quality since the information comes directly from official sources such as Swedish firms, financial institutions and state agencies. Moreover, selection bias is not a problem as it includes a large, random and representative sample of the population.

2.3 Descriptive Statistics

Descriptive statistics of household and firm variables are reported in Table 1 to Table 3. According to Table 1, 11.6% of the household heads are entrepreneurs with 7.4% owning incorporated firms and 4.2% owning unincorporated firms. 85% of the rest of the sample of household heads are gainfully employed and 3.5% are not gainfully employed. 98.2% of non-entrepreneurs stay in paid employment or unemployment in the subsequent year and 1.75% transition to entrepreneurship. Table 2 outlines the descriptive statistics of individual and household characteristics of household heads. The statistics are reported separately for the two groups of households who stay wage/salary earner or unemployed in the subsequent year, and households who transition to entrepreneurship. The heads of the transitioning households are slightly older, they are more likely to be married or live with a partner, have higher education, be a male, born outside Sweden, a student, unemployed, or retired, and they have more children.

Figure 1 illustrates the statistics of the financial variables for households in the sample and their family members. Transitioning households have higher income, net worth, liquid assets, and investment in real estate. Their families have also higher income, larger net worth, liquid assets and investment in real estate. Figure 2 and Figure 3 show the proportion of households transitioning to entrepreneurship in the subsequent year for different buckets of household and family net worth, respectively. Each bucket of household net worth has a width of 500,000 SEK, and each bucket of

family net worth is 350,000 SEK wide.

Table 3 reports the descriptive statistics of legal forms and financial variables for startups initiated by the transitioning households in the sample. Financial variables of startups are calculated as their average values in the first five years of firm operation. The financial variables of firms are winsorized at the 1% level when their SEK values are used in the regressions. Table A-1 reports the list of industry categories and the number of firms initiated in each category during the sample period. The industries with the highest number of startups include construction, agriculture, retail trade, and legal, accounting and business consultancy.

3 Extensive Margin: Entry into Entrepreneurship

3.1 Family Wealth/Income and Initiating a Business

In this section, I study how family wealth affects the decision to enter entrepreneurship by estimating the following equation:

$$\begin{aligned} P(\text{Transitioning to Entrepreneurship}_{i(t+1)}) &= \alpha + \beta_1 \,\text{Family Wealth}_{it} + \beta_2 \,\text{Family Income}_{it} \\ &+ \beta_3 \,\text{Household Wealth}_{it} + \beta_4 \,\text{Household Income}_{it} + X_{it} b + \varepsilon_{it} \end{aligned} \tag{1}$$

In this equation, i indicates the household and X_{it} denotes the matrix of control variables. The equation represents a logistic model that regresses the probability of transitioning to entrepreneurship in a subsequent year on a function of family net worth and income, household net worth and income, as well as the following characteristics of the household and its head: age, age squared, gender, marital status, education, binary variables for not being born in Sweden, being a student, unemployment and retirement, as well as the number of adults and children in the household. In addition, to control for general, industry-specific and region-specific economic conditions, the regression includes industry, year, county, industry-year, and county-year fixed effects. The standard errors are clustered at household level. Since the dependent variable is transitioning to entrepreneurship in the following year, all the variables are calculated prior to the start of the business and are not affected by the engagement in the entrepreneurial activity.

To avoid any bias from the long and thick right tails of income and wealth distributions, I

follow the labor economics literature and use the inverse hyperbolic sine transformation of wealth and income variables. The coefficient of a variable transformed using inverse hyperbolic sine can be interpreted in the same way as that of a variables transformed using logarithmic scale. But unlike a logarithmic variable, the inverse hyperbolic sine is defined at zero. Another way to deal with the skewed distribution of wealth and income is to use a model with percentile binary variables, where each percentile variable indicates the observations in the corresponding percentile interval of the distribution of the original variable. It is important to highlight that the wealth and income of the household in which an individual resides are controlled for in all the regressions since they are strongly correlated with family wealth and income, as well as the decision to start a business.[6] Hence, the contribution of family financial resources are estimated above and beyond their effect through the correlation with financial resources in the household.

If financial constraints impede entry to entrepreneurship, household and family wealth as well as family income are expected to be positively correlated with the decision to start a business (Evans and Jovanovic (1989) and Lee and Persson, 2016).[7] However, it is not clear how the income of the individual and the decision to start a business are related. On the one hand, high income from employment increases the opportunity cost of entrepreneurship. As discussed in Evans and Jovanovic (1989), an individual chooses entrepreneurship over salary/wage work only if her income from business is higher than her income from employment. On the other hand, high wage/salary reflects the high ability of the individual, which in turn increases the return to entrepreneurship. Therefore, a U-shaped relation between individual's income from employment and her decision to start a business is expected. To estimate this relation, I add the square of household income to the regressions. To maintain a symmetric model of household and family financial variables, I include the square of family income to the regressions too.

Next, I investigate the relation between the propensity of starting a business and the resources of each class of relatives separately. I calculate the measures of family wealth and income separately for each group of family–depending on how close they are to the individual–and estimate their correlations with the decision to become an entrepreneur. The family classes are parents, siblings, tier-2 relatives–which includes grandparents, aunts and uncles–and cousins. The family wealth and

[6] See e.g. Evans and Jovanovic (1989) and Evans and Leighton (1990)

[7] There are two main financial instruments that family can use to provide capital to entrepreneurial businesses: the direct investment of assets in the new venture by purchasing shares of the firm or lending money to the firm, as well as the indirect investment of resources by providing collateral and guarantee. In guarantee offering, the guarantor promises to assume the debt obligation of a borrower if that borrower defaults. The income of the guarantor is usually the basis of such a contract. Therefore, family income can also be a source of capital to the startup. These instruments will be discussed in more details in section 4

income in equation (1) are replaced with the wealth and income variables of each relative class. All classes are added in the same regression to avoid any bias from the correlations between the financial resources of different classes of relatives.

Table 4 reports the estimated coefficients of the financial variables in equation (1) using two functional forms for these variables.[8] Panel A reports estimated coefficients using SEK values (linear model) of financial variables and Panel B reports the estimates using inverse hyperbolic transformation of financial variables.[9] The regression in column (1) only includes family wealth and income, and column (2) and (3) add the wealth and income of the household. Note that two measures of family wealth and income are used in the regressions in this table. In column (2), per-capita wealth and income of the family are included and the values are scaled by 100,000 SEK for an easier interpretation of the coefficients, whereas, in column (3), total wealth and income in the family are considered and the values are scaled by 700,000 SEK since an average household in the sample has about 7 eligible relatives. Column (2) and (3) include quadratic functions of the two income variables.

As shown in all four columns and both panels, individuals with relatives who have high income and wealth have higher propensity of transitioning to entrepreneurship. Depending on the specification of the model and the measure of family wealth/income considered, one standard deviation increase in family net worth (which corresponds to 700,000 SEK using the per-capita measure and 5,500,000 SEK using the total measure) is associated with 7-10 percentage increase in the propensity of initiating a business.[10] Likewise, one standard deviation increase in the family income (i.e., 80,000 SEK in per-capital measure and 1,700,000 SEK in total measure) corresponds to 1.5-7 percentage change in the propensity of becoming an entrepreneur. As shown in the table, the relation between family income and propensity of starting a business is hump-shaped. This can indicate the lower probability of entry into entrepreneurship if close relatives own and run successful businesses, perhaps due to the preference to work in the successful business of the relative with the intention of taking over the control of the firm in the future. The analysis in section 3.3 sheds more light on this argument.

In addition, wealthy individuals are more likely to initiate a business. One standard deviation increase in household wealth (which corresponds to 1,400,000 SEK) is associated with the 11-13 percentage increase in the outcome variable. The relation between household income and the

[8] Table A-3 reports the coefficients of the control variables including personal and household characteristics.

[9] When using the linear model, wealth and income variables are winsorized at 1% level to avoid the bias from large values.

[10] The average SEK to USD exchange rate in 2010 was 0.13

outcome variable, however, is U-shaped as predicted. Comparing the effect of family wealth with the effect of household wealth on the probability of transitioning using the total wealth of the family, I find that the marginal contribution of one SEK of the family wealth is five times smaller than that of one SEK of household wealth, which is a reasonable finding.[11]

The estimates of the alternative specification with binary variables for percentile intervals of each financial variable are reported in Table A-4 in the Appendix and are illustrated in Figures 4 to 7. Each graph contains two plots, estimated coefficients of binary variables on the right vertical axis and the average probabilities of transitioning to self-employment for each percentile interval on the left vertical axis. As shown in Figure 4, the individuals whose family are in the top 0.1 percentile of the family wealth distribution are more than twice as likely to engage in firm creation activities as the individuals in the bottom quartile.

Table 5 shows the results of the separate effects of financial resources of each class of relatives. Column (1) and (2) include a model with the inverse hyperbolic transformation of wealth and income variables, whereas column (3) and (4) contain SEK values of the variables. Column (1) and (3) include normalized family wealth and income w.r.t. the number of relatives in each class, and column (2) and (4) report the estimations using total wealth/income of relatives in each class. As shown in the table, the coefficients of family wealth and income decrease as the relation between the individual and the relatives in the family class gets weaker, and parents' wealth and income have the strongest effect on the probability of initiating a business.

3.2 Industry Entry Cost

One important mechanism that connects an individual's decision to initiate a business with the financial resources available in her family is the financing channel, which argues that wealthy family provide the required capital to initiate a new venture which would otherwise be impossible or unfeasible to be launched. The ideal experiment to identify this channel from other mechanisms would be to randomly distribute the resources among family members of individuals and measure the changes in their propensity to start a business. In other words, one needs an instrumental variable for family wealth that is not correlated with other determinants of entry into entrepreneurship. However, the detailed and rich data I build allow me to measure these other determinants such

[11] This comparison does not take into account the standard deviations of the variables and merely compares the magnitudes of the point estimates of the coefficients.

as ability, entrepreneurial experience in the family, and social networks of family members, and control for them in the regressions to isolate the financing channel.

In addition, I develop a measure of financial cost of entry for each industry and employ it as a proxy for the likelihood of financial constraints being binding for an aspiring entrepreneur in that industry. This measure estimates the initial capital requirement to start a business in each industry using the capital of new ventures launched during the sample period. The higher the entry cost is in an industry, the more likely the financial constraints are binding in that industry. Therefore, the propensity of starting a business in and industry with high financial barrier to entry is expected to be lower than in an industry with low cost of entry. More importantly, if wealthy family provide capital to new ventures, family financial resources are expected to be stronger determinants of starting a business in industries with high initial capital requirement. The same argument applies to the assets within the household of the would-be entrepreneur. I explain in section 2.2 how the measure is constructed. Industries such as mining, agriculture, Hotels, and most manufacturing industries have high initial capital requirements. Industries such as construction, wholesale and retail trades, land transportation, computer and related activities, and primary education have medium entry costs. Finally, restaurants, travel agencies, labor recruitment, and adult education are examples of industries with low initial capital requirements.

To estimate the distinct relation between family wealth/income and the propensity of starting a business in each type of industry, I add the interaction of family wealth/income with the binary variables of medium and high initial capital requirement to the regression in equation (1). Note that the low initial capital variable is omitted from the regression due to collinearity.[12] The estimated coefficients of the interaction terms reveal how the effect of family wealth/income on the propensity to launch a business in an industry with medium or high cost of entry is different than in an industry with low cost of entry. I include in the regression the interaction of wealth/income of the household with medium and high capital requirement variables too.

The results of this analysis are reported in Table 6. Column (1) reports the estimates of the benchmark model in equation 1. Column (2) adds the two binary variables denoting industries with medium and high initial capital requirement as well as their interactions with family and household

[12]For each household in each year, the industry initial capital requirement is defined based on the industry in which the household head is active. The industry is determined based on the company/establishment from which an individual obtains her main income. Since the sample includes non-business-owning individuals, this variable reports the industry in which an individual is employed in and not the industry of the firm an individual is going to initiate. These two industries are not necessarily the same. In this analysis, the relevant industry of interest is the one in which the new business operates. Therefore, for the transitioning household, the initial capital requirement of the industry in which the business is conducted will be considered.

wealth. Finally, column (3) augments the regression with the interaction of household and family income with entry cost binary variables. First, I find a negative and significant correlation between the probability of launching a firm and industry initial capital requirement. An individual is more than 50% (100%) less likely to initiate a business in the subsequent year in an industry with medium (high) entry cost than in an industry with low entry cost . This finding is consistent with the assumption that the financial constraints are more likely to be binding in industries with high initial capital requirement. More importantly, family wealth is a determinant of entry to self-employment only in industries with medium and high initial capital requirement. The magnitude of the relation between family wealth and initiating a business is four times larger in industries with high entry cost that in the ones with low entry cost. Similarly, the relation between family income and the the propensity to start a business is only significant for entrepreneurs launching businesses in industries with high initial capital requirement. These findings suggest that family financial resources provide the entrepreneur with the capital required for the initiation of firm operations. Similar pattern is observed for the household wealth. Wealthier households are twice as likely to start a business in an industry with high cost of entry than low cost of entry.

3.3 Alternative Channels

Family financing is not the only mechanism that can cause a relation between the wealth and income of family and the propensity of becoming an entrepreneur. For example, ability, entrepreneurial experience of family, risk attitude and a private benefit of entrepreneurship are important determinants of entry to self-employment and are also associated with family wealth. Depending on how strong these alternative mechanisms are, the interpretation of the estimates of the equation (1) can vary substantially. These alternative channels typically cannot be measured as they are unobserved. The detailed and rich data I build in this paper, however, allow me to develop reliable proxies for these variables and add them to the analysis to not only estimate their role in the decision to start a business, but also mitigate the bias in studying the contribution of family wealth as a source of startup capital.

The first variable investigated is ability, which refers to the general talent and skills of individuals including cognitive and non-cognitive skills. In all theoretical models of return to entrepreneurship, ability is assumed to affect the returns to entrepreneurship and, hence, is a determinant of the decision to start a business as shown in Evans and Jovanovic (1989). Ability, on the other hand, is affected by heritable traits–through genetic relations–and acquirable skills–through social inter-

actions; children of talented parents have high probability of being talented, and ability is shared among siblings. It is also a key factor in determining wealth and income. Therefore, a positive relation between family wealth/income and the propensity to start a business can be a reflection of the high skills of the individual. Ability is difficult to measure. Education is positively correlated with ability but it only explains a small portion of variation in ability. Besides, education is correlated with wealth and income of parents and can introduce more bias to the model. The talent proxies I use in this paper are obtained from tests that aimed to measure cognitive, non-cognitive, and leadership skills of individuals.[13]

To eliminate any bias from the correlation between family wealth and ability, I add the ability measures to equation 1. In addition, I investigate the effect of family wealth on the decision to start a business separately for individuals with different levels of talent. Family has a more accurate perception of an individual's skills, which can affect their decision to provide capital to the individual's business idea. On the other hand, talented people might have better financial records, are more likely to have a relation with a bank, can potentially come up with more promising business ideas, and may be more successful in communicating the future prospects of their projects. Hence, they are less likely to face borrowing constraints and need the investment of their family members. To test these arguments, I add to the regression the interaction of variables denoting high and very high IQ with family wealth.

Table 7 reports the results. Column (1) presents the estimates of the benchmark model with family and household wealth and income, which are similar to the findings in 4. Column (2) adds high and very high IQ variables, and column (3) augments the regression with the interactions of IQ variables and family wealth. Controlling for IQ slightly decreases the coefficients of family wealth and income. The difference, however, is not significant. This finding suggests that the results found in 4 are not driven by the high level of ability of the individuals whose relatives are wealthy. Moreover, I estimate that individuals with high (very high) IQ are about 20 (35) percent more likely to transition to entrepreneurship. This suggest that the return to entrepreneurship is higher for talented individuals. The estimates in column (3) show that individuals with lower level of talent are the main group of aspiring entrepreneurs who rely on the financial resources of their family to start their businesses. The connection between family wealth and the propensity of becoming an entrepreneur is 30% weaker for individuals with high or very high IQ than for the ones with low level of IQ. This finding provides evidence that talented individuals face lower financial constraints in raising formal capital for their business projects. However, the finding articulates

[13]The talent measures are explained in detail in section 2.1.

an important concern about family financing. Does family only support low quality entrepreneurs who have business ideas with possibly negative NPV and high probability of failure? This concern will be discussed and addressed in detail in section 5.

Next, I address the concerns about sharing of entrepreneurial skills and knowledge by wealthy family members who have experience in entrepreneurship. Entrepreneurial relatives in the family can facilitate transitioning to entrepreneurship by reducing non-financial costs of entry. For example, they can provide general knowledge about firm registration, tax arrangements, staff recruitment, etc., or industry-specific knowledge about suppliers, production, markets, etc. In addition, the presence of a successful entrepreneur in the family can affect an individual's preferences for entrepreneurship by inspiring and encouraging her to take more risks and enjoy the flexibility and financial outcome associated with entrepreneurship. Thus, the results obtained from the estimation of the equation 1 can stem from the influence of wealthy business owners in the family. This channel has been studied specifically by Dunn and Holtz-Eakin (2000), who find that, compared to the role of entrepreneurial parents in inspiring their children to initiate their business ideas, parental wealth in and of itself has a small effect on children's transition to entrepreneurship.

To control for the effect of wealthy entrepreneurial relatives, I augment equation 1 with a binary variable that takes the value 1 if there is at least one business owner in the family and 0 otherwise.[14] In addition, to shed more light on the mechanisms through which entrepreneurial relatives contribute to the decision to start a business, first I take into account whether any entrepreneurial relative runs a business in the same sector as the one an individual is employed in. Hence, I can compare the role of knowledge sharing with that of entrepreneurial preferences and inspiration in driving the results. Second, I interact family wealth with the two entrepreneurial relative variables–owning a business in any industry and in the same industry as the one the individual works in–to estimate the contribution of the entrepreneurs in the family through capital provision and non-financial channels.

The results are presented in 8. Column (1) provides the estimates of the benchmark regression with family and household financial variables. The results in column (2) show that the presence of a business owner in the family increases the likelihood of initiating a business by 30%. This effect is equivalent to endowing two and a half million SEK (equivalent to three standard deviations) to each relative or adding one and a half million SEK (equivalent to one standard deviation) to the wealth of the individual. Column (4) reports that if the relative's business operates in the

[14]Individuals initiating businesses with their family members who already own another business are excluded from the analyses.

same industry as the one in which an individual work, the effect is twice as large. These findings suggest that sharing entrepreneurial experience and skills reduces the non-financial costs of entry by providing the entrepreneurs with human capital and business knowledge. More importantly, although controlling for the presence of business owners in the family slightly decreases the coefficient of family income, it does not change the coefficient of family wealth. This suggest that the results in Table 8 are not driven by the role of rich business owners among relatives. In contrast, according to column (2) and column (5), the presence of rich and successful business owner in the family, reduces the likelihood of transitioning to entrepreneurship. One explanation is that an individual is better off working in the successful business of her family, perhaps with the intention of taking over the control of the business in the future, than initiating and running her own small business and young business. The negative coefficient on the interaction of family wealth and the entrepreneurial relative in the same industry supports this explanation.

The other channel that can lead us to find a positive relation between financial resources in the family and the propensity of starting a business is the insurance channel. As discussed in Lee and Persson (2016), due to strong altruistic relations between family members, these resources play a crucial role in providing insurance for an entrepreneur if the business fails. Thus, an individual with wealthy relatives can tolerate a higher risk because of the insurance component of family wealth. To examine whether a relation between family wealth and starting a business stems from the insurance or capital capacity of wealth, I study the effect of family wealth on the capital of new ventures (intensive margin of entrepreneurship) conditional on starting a business in section 4.

4 Intensive Margin: Startup Capital

4.1 Size of the Startup Capital

First, I investigate the relation between the wealth of family and the size of the startup capital, measured by the average total assets in the first four years of the firm's operation. When entrepreneurs face financial constraints, they are forced to invest sub-optimally in their new ventures. Relaxing the constraints, therefore, increases the size of the startup capital (Evans and Jovanovic, 1989). To study the effect of family wealth on the size of the new firms, I estimate the following regression:

$$
\begin{aligned}
Y_i = \alpha + \beta_1 \text{ Family Wealth}_j + \beta_2 \text{ Family Income}_j \\
+ \beta_3 \text{ Housheold Wealth}_j + \beta_4 \text{ Housheold Income}_j + X_{ij} b + \varepsilon_t
\end{aligned}
\tag{2}
$$

Where i indicates the firm and j indicates the household. Y_i denotes different components of firm capital; total assets, equity, total debt, debt from credit institutions and debt from other sources, and X_{ij} includes individual and household characteristics of the entrepreneur as well as fixed effects for industry, location, and birth year of the firm. Firm capital variables are defined as their average values in the first four years of the startup operation, therefore equation 2 illustrates a cross sectional analysis. To eliminate the bias from large values of financial variables, I use their inverse hyperbolic sine transformations in the regressions. As an alternative specification, instead of continuous wealth, binary variables indicating wealth in the top 30 percentiles of the distribution are used.

Table 9 reports the estimation of equation 2. The results in Panel A show that 1% increase in the wealth of family is associated with 6 basis point change in total assets of the firm. Breaking total assets of the firm down into its main components, equity and debt, I find that the elasticities of equity and debt to family wealth are 20% and 7% respectively. Further, I split total debt to debt from credit institutions and debt from other sources to estimate the relation between family wealth and each type of debt. This split is only possible for incorporated firms as the data only reports total debt for sole-proprietorships and partnerships.[15] Hence, the estimated coefficients in column (4) and (5) may not add up to the estimated coefficients in column (3). The elasticity of the firm's assets to the change in household wealth is 15%, more than twice the elasticity of the firm's assets to the change in family wealth. In contrast to family wealth, household wealth has a negative correlation with the equity of the firm. This finding suggests that wealthy individuals substitute formal debt from credit institutions with equity or informal debt.

Panel B shows that startups initiated by individuals whose family (household) wealth is in the top 30 percentiles are 16% (47%) larger than other new firms. The coefficients in column (4) of Panel B show that entrepreneurs with abundant financial resources in their family or household shy away from formal debt. This finding will be discussed with more details in the next section.

[15] In limited liabilities, investing in the equity of the firm by buying shares is a very common practice, whereas, in sole-proprietorships, there are no equity shares to be sold to the investors and debt is the only instrument that can be used to invest in the firm's capital

4.2 Composition of the Startup Capital

In this section, I investigate the importance of financing channel in driving the relation between family wealth and the capital of startups. There are different financial instruments that family can use to finance entrepreneurial ideas. Two main instruments are going to be discussed in this paper. The first and less sophisticated instrument is the direct investment of family assets in the new venture by purchasing shares of the firm or lending money to the firm. Throughout this paper, I call this instrument *direct informal financing by family*. Such investment is expected to be done mainly using cash and to affect the equity and informal debt of the firm. On the other hand, family's assets can facilitate the startups's access to formal debt from credit institutions such as banks by providing collateral and guarantees for the firm's loans. Real estate properties can be pledged as collateral to receive secured bank loans. Guarantees, however, do not require pledging any assets. The guarantor promises to assume the debt obligation of a borrower if the borrower defaults, hence takes the risk that the lender is not willing to take. In this paper, I call these two financial instruments *indirect formal financing by family*. It is important to highlight that in both types of financing the risk is beard by family members since they either invest in the equity or debt of the firm, or are liable for firms' formal debt. That is the reason I call both mechanisms family financing.

To test these two instruments, I study the relation between the structure of family financial resources–income, liquid assets, and real estate–and the composition of startup capital–equity, debt, debt from credit institutions, and debt from other sources. The motive for this exercise is that, as discussed above, each type of assets of the entrepreneur's family members are expected to provide a certain type of capital for the startup. Liquid assets, which consist of assets that can be converted into cash in a short time with little or no value loss, are considered to mainly provide direct informal financing. On the other hand, fixed assets, which are purchased for long term use and are not likely to be converted quickly into cash, can be used as collateral and contribute to indirect formal financing. Finally, relatives with high income can indirectly facilitate access to formal capital through co-signing a loan with the entrepreneur or guaranteeing the startup's loans. The underlying security to guarantee the repayment of the loan is the income and credit worthiness of the guarantor or co-borrower. To perform this analysis, I add to the regression in equation 2 other family financial variables including average family income as a proxy for access to loan guarantees or co-borrowers, average family real estate as a proxy for the amount of available collateral, and the ratio of family liquid assets to family total assets or the concentration of family wealth in liquid assets as a proxy for the amount of cash available to invest in the firm's capital.

The liquid assets and real estate properties of the entrepreneur's household are expected to provide capital to the new venture in the same manner as discussed for family assets. However, the interpretation of the estimated relation between income of the entrepreneur prior to the initiation of the firm and her firm's capital is not as straight forward. On the one hand, if the entrepreneur initiates and runs the business along with her current employment, the stable income from her job provides the desired guarantee for her business loan. On the other hand, if the entrepreneur leaves her current job to initiate a business, her salary/wage will be lost and cannot be used as a basis to receive bank loans. In this case, high income from employment can only signal the high ability of the entrepreneur, which in turn facilitates her access to external financing.

Table 10 reports the results of the analysis. Similar to the regressions in Table 9, the sample used in column (1) to (3) includes all the legal types, incorporated and unincorporated firms. Column (4) and (5), however, show the estimates for the sub-sample of incorporated firms as the source of total debt is only reported for unincorporated firms in the sample. The regressions in Panel A of the table include the wealth and income of the family and household and estimate the guarantee channel. The regressions in Panel B add family and household real estate to the regressions in Panel A to examine the collateral channel. Finally, the regressions in Panel C add to the ones in Panel A the ratio of liquid to total assets to estimate direct cash investment.

Starting with income in Panel A, I find that high family income, is associated with higher debt; increasing average income of the family by 1% is associated with 7 basis point increase in total debt of the firm. Further, I find that 1% increase in the average family income is associated with 13 basis point increase in firm's debt from credit institutions and no significant change in debt from other sources. This finding provides an evidence that relatives with high amount of income offer guarantees for the firm's bank loans or co-sign loans with the entrepreneurs. In addition, I find that startups whose owners had higher income prior to the initiation of the firm have higher level of equity and informal debt. Controlling for the net worth of the household, 1% increase in the household income of the entrepreneur is associated with 58 basis point increase in the size of the firm's equity and 29 basis point increase in informal debt of the firm. These findings are consistent with the results in Hosseini and Karmaziene (2016), suggesting that entrepreneurs save their income prior to starting their firms and invest their savings as equity or informal debt in their startups.

The results in Panel B show that high concentration of family wealth in real estate is associated with a higher level of debt from credit institutions. There is no significant correlation between family's wealth in real estate and firm's equity or debt from other sources. The elasticity of debt

from credit institutions to family wealth is 8%. Moreover, since family net worth consists of liquid and fixed assets, the estimated coefficient of family net worth while controlling for family fixed assets indicates the contribution of liquid assets to startup capital components. The results show that higher liquid assets in the family is associated with higher amount of equity in the firm and lower amount of debt firm credit institutions. The elasticities of firm equity and debt from credit institution to family liquid assets are 18% and -6% respectively. This suggests that family directly invests cash in the equity of the firm, decreasing the firm's reliance on formal capital from banks. The structure of the assets of the entrepreneur's household shows similar relation with the composition of firm capital.

The magnitudes of the elasticities of components of firm capital to elements of family resources in Panel A and B show that the indirect contribution of family through the collateral and guarantee channel is as important as its direct contribution through investing its assets in the firm. The aggregate elasticity of firm debt to the the availability of collateral and guarantee in the family, is 21% (8% for real estate and 13% for income), while the elasticity of firm equity to the availability of direct financing is 18%.

Panel C in Table 10 reports the results of an alternative method to examine the relation between the structure of family wealth and the components of firm capital. The regressions in this panel include the ratio of liquid to total assets for family and household while controlling for total wealth and income of household and family. Similar to the findings in Panel B, the results show that high concentration of family and household wealth in liquid assets is associated with higher amount of equity and lower amount of formal debt. These findings imply that high concentration of family and household wealth in real estate is associated with higher amount of debt from credit institution and lower amount of equity.

All in all, the results of the analyses in this section suggest that wealthier individuals and individuals whose relatives are wealthier start larger businesses with higher amount of capital. This increase in capital occurs through two main channels, direct and indirect financing by family. Relatives with high amount of liquid assets directly invest in the equity of the business, whereas relatives with high amount of wealth in real estate or high income provide collateral or guarantee for startups' loans from credit institutions.

5 Intensive Margin: Startup Performance

In this section, I aim to address the concerns about the quality of the marginal business initiated by an entrepreneur with a wealthy family, or as I argue in this paper, a marginal firm started with the financial assist of family members. The definition of financial constraints goes hand in hand with the viability of the project. When the frictions in the market and agency costs such as moral hazard make a business idea with positive NPV unfeasible due to high costs of financing, the entrepreneur is said to be financially constrained. In this study, the connection between financial resources in the family and entry into entrepreneurship as well as startup capital can be attributed to the borrowing constraints entrepreneurs face only if family invests in feasible projects. This concern is heightened mainly by the private benefits of owning a business (i.e. the luxury-good component of entrepreneurship) that is desirable for wealthy individuals. Jensen et al. (2015) find that after a mortgage reform that provided more collateral for the individuals, entry to entrepreneurship increases. But the marginal business that is launched after the constraints are relaxed is of lower quality than an average existing business. The firm financial data allows me to investigate the performance of firms initiated by entrepreneurs with wealthy family members to address this concern.

Another important concern regarding family financing is its shadow costs, such as inducing risk aversion, stifling investment, and impairing family insurance funds as discussed in Lee and Persson (2016). These costs prevent entrepreneurs from taking enough risks and investing in their new ventures. They make family financing unattractive and sub-optimal for many entrepreneurs. To address the concerns regarding the shadow costs of family financing and the private benefits of entrepreneurship for wealthy individuals, I study the relation between the wealth of an entrepreneur's family and the performance of the venture she initiates. The measures of performance used in this analysis are the probability of survival, investment, sales on assets, and sales growth.

Theoretically, it is ambiguous how wealthy family affect the firm's survival. Besides the negative effect of private benefits of entrepreneurship on the quality and survival of the business, the increased risk aversion of the entrepreneur induced by family financing can enhance the firm's probability of survival. In addition, wealthy relatives can bail the firm out in difficult times when the firm is close to default on its debt. To examine empirically the relation between family wealth and the survival of the business, I use a proportional hazard model (Cox regression) and regress the probability of surviving for one more year, conditional on surviving in the current period, on family wealth. A failure event, in this analysis, is defined as liquidating the assets of the firm or filing for bankruptcy.

The estimated coefficients are shown in Table 11. The independent variables are binary variables indicating observations in the top 30 percentiles in the distribution of the corresponding continuous variable. Column (1) to column (3) include the per-capita wealth of the entire family as the independent variables and column(4) to column (5) include only the wealth of parents. The estimates in column (1) show that firms with entrepreneurs whose family wealth is in the top 30 percentiles of the distribution are 20% less likely to go bankrupt or get liquidated. A similar result is found for the personal wealth of the entrepreneur.

To investigate whether the higher probability of survival is a result of maintaining low level of profitability, column (2) and (5) add a binary variable indicating low levels of return on assets (ROA) and its interaction with family and household wealth.[16] The coefficients suggest that keeping a firm with low quality alive is not responsible for the negative effect of family wealth on the probability of failure. Similarly, I examine whether high amount of personal or family wealth allow the entrepreneurs to maintain high levels of leverage in their firms for a longer period of time without defaulting on the debt. Column (3) and (6) add a binary variable indicating firms with high level of leverage and its interactions with family and household wealth.[17] I find that the higher probability of survival for firms owned by entrepreneurs with wealthy family does not come from their ability of keeping high leverage. However, firms owned by wealthy entrepreneurs have higher probability of survival because they can maintain high leverage without defaulting. the results are similar using the wealth of parents.

The relation between the entrepreneur's family wealth and her decisions to expand the business as well firm growth is debatable. Wealthy family can supply the capital required to implement growth projects.[18] On the other hand, the shadow costs attached to family financing discussed previously in this section induce negative relation between the firm's investment and family wealth. Moreover, the personal traits and preferences of entrepreneurs with wealthy family can affect the type of the businesses they initiate. They are more likely to be interested in growth rather than life-style types of businesses. To study the relation between a firm's growth/investment and the wealth of the entrepreneur's family, I employ two measures of growth, investment and sales growth. Investment is measured as capital expenditure scaled by total tangible assets to control for the size

[16]ROA is calculated as earnings before interest, tax, depreciation and amortization (EBITDA) divided by total assets. It has been used as a measure of profitability in many studies in the corporate finance literature. The binary variable *Low ROA* is equal to 1 if the ROA is less than the median ROA in the panel and 0 otherwise.

[17]Leverage is defined as debt to total assets, and if the leverage is higher than its median in the panel, the binary variable *High Leverage* is equal to 1 and 0 otherwise.

[18]There is a caveat with this argument, however, that if family financing helps entrepreneurs starting firms with optimally larger sizes, they do not need to invest more during the first few years of operation to reach the more efficient firm size.

of the firm.[19] Finally, I study the relation between firms' sales and entrepreneurs' personal and family wealth. Sales are normalized by total assets to control for the size of the firm.

Table 12 reports the results of the this analysis. The dependent variable is capital expenditure normalized by tangible asssets in column (1), sales normalized by total assets in column (2), and sales growth in column (3). The independent variables are binary variables indicating the observations in the top 30 percentiles of family and household wealth and income distributions. [20] The results show that there is no statistically significant difference between the investment (capital expenditure) and sales growth of firms owned by entrepreneurs with wealthy and poor family. However, startups owned by entrepreneurs who have high family wealth have lower level of sales on assets than other startups. The magnitude of the difference is, however, very small. In summary, I do not find any convincing evidence that family wealth finances ideas with lower quality or lower growth opportunities.

6 Further Analyses

In this section, I implement some further analyses that help us understand the mechanisms through which family wealth affects entrepreneurship and the heterogeneity in the effect w.r.t. characteristics of the individuals and relatives.

First, I investigate the role of unemployment in transitioning to entrepreneurship and how it affects the contribution of family wealth to the initiation of businesses. The incentives of individuals employed in the wage and salary sector to initiate a business is very different from those of individuals experiencing a job displacement (Fairlie and Krashinsky, 2012). In particular, job losers are likely to face lower wages than similar non-job losers if they seek re-employment in the wage and salary sector because of lost seniority, firm-specific human capital, and other job-related characteristics that raise their wages.[21] Lower potential wage among job losers increases the like-

[19] Capital expenditure is not reported specifically in the data, and is calculated as the change in tangible assets plus the annual depreciation. Sales growth in the current year is computed as the change in sales scaled by the sales in the previous year.

[20] To eliminate the bias from very large or small values of investment, sales growth and sales on assets, I include only observations where the value of the dependent variable is in the interval [-1,1]. In all three regressions, the sample is a panel of startups initiated by individuals in the representative sample during the period 2001-2007, and the performance of the firms are tracked in the first six years of operations. Standard errors are clustered at firm level.

[21] Previous studies have documented considerable wage and earnings losses associated with job displacement. See Louis S. Jacobson (1993) and Farber (2004) for reviews of the literature.

lihood of choosing self-employment, all else being equal, because of lower opportunity costs of entrepreneurship (Evans and Jovanovic, 1989). Moreover, job losers may react differently given the same wealth level because of their unwillingness to use their equity to finance business creation instead of spending it for consumption, hence may face more difficulties in obtaining loans. The stigma attached to unemployment, in addition, can impose extra borrowing constraint on individuals who lost their jobs. Taken together, a recent job loss can alter the relation between household and family financial variables and the decision to start a business.

To examine the above arguments, I estimate the relation between family wealth and entry into entrepreneurship separately for the individuals with and without recent job-loss experience.[22] Job loss can be a signal of individual's low ability, general economic downturn, or an industry's economic problems. To distinguish between the talented individuals who lost their job because of unfavorable economic conditions and individuals who lost their job due to incompetence, I use the measure of IQ and education.

I add to equation 1 a binary variable indicating individuals who recently experienced a job-loss and its interaction with family and household wealth. The results are shown in Table A-7. Column (1) reports the estimation of the benchmark regression which includes family and household wealth and income.[23] Column (2) adds to the regression in Column (1) the binary variable *job-loss* and its interaction with family and household wealth. The estimated coefficients show that unemployed individuals are more likely than workers to start a business. In addition, the effect of family and household wealth on transitioning to entrepreneurship are 140% and 60% stronger, respectively, for individuals who have recently experienced a job-loss. Column (3) adds to the regression in column (1) two job-loss binary variables for low and high ability individuals and their interactions with family and household wealth [24]. I find that individuals with high ability who lost their jobs recently are 45% more likely to transition to entrepreneurship than unemployed individuals with low ability. Moreover, compared to workers, only unemployed individuals with low ability rely more strongly on their own and their family's wealth to initiate businesses. These findings suggest

[22] I identify unemployed individuals by comparing the unemployment benefits collected by an individual during a year to the individual's total income from employment, income from business, student aid, and pension. I identify an individual as unemployed if unemployment benefits constitute at least 25% of total income of the individual. The unemployment benefit is an insurance paid to anyone who is a member of a labor union and involuntarily loses a job. If an individual quits the job voluntarily, she is eligible for the unemployment benefit if she has a strong reason to quit. Therefore, quitting a job to find another job or start a business does not secure unemployment benefit for the individual. In addition, a person who has never worked, or is not a union member is not eligible for unemployment insurance.

[23] Family and household income are not shown in the table to save space.

[24] I define an individual as high ability if she has an IQ score higher than 5 or have graduated from a higher education program.

that when unemployment is more likely to be the result of incompetence, the individual has more difficulty raising capital from formal sources, and family provides the required capital for the initiation of the business.

Second, to study whether the personal wealth of the entrepreneur and the wealth of her family are substitute or complimentary, I add to equation 1 the interaction of family and household wealth. I use binary variables indicating high values of wealth for an easier interpretation of the coefficients. The results are shown in TableA-5. The estimated coefficient of the interaction term is negative and significant, suggesting that personal and family wealth are substitutes.

Third, I examine the robustness of the results to an alternative definition of entrepreneurial businesses. This robustness test ensures that the business is providing a real service or product and is not initiated by the entrepreneur to only manage wealth or enjoy tax benefits. Table A-6 reports the estimated coefficients in equation 1. Column (1) and (3) report the estimates of the benchmark model where all new businesses are included. In column (2) and (4), a new venture is included if the firm has at least three employees at any year during the sample period. Column (1) and (2) include per-capita family wealth and income, whereas column (3) and (4) use total family wealth and income. As shown in the table, the results are robust to this alternative definition of entrepreneurial firms.

Finally, I investigate the change in the income of individuals after they transition to entrepreneurship, and the role of family financing in the return to self-employment. This analysis is carried out as a supplementary test to the analyses in section 5 to address the concerns about the quality of the projects financed by family. I study whether individuals who manage to start a business with the financial assist of their family have higher income in entrepreneurship than in paid employment. The focus of this test is on low ability individuals since the results in Table 7 show that they are the main group of individuals relying on family financing to start their businesses.

I employ a difference-in-difference approach by estimating the following equation:

$$
\begin{aligned}
P(\text{Household Income}_{it}) = \alpha &+ \beta_1 \text{ After Transition}_{it} \\
&+ \beta_2 \text{ After Transition}_{it} \times \text{Rich Family}_i \\
&+ \beta_3 \text{ After Transition}_{it} \times \text{High Ability}_i \\
&+ \beta_4 \text{ After Transition}_{it} \times \text{Rich Family}_i \times \text{High Ability}_i \\
&+ \delta_i + X_{it} b + \varepsilon_{it}
\end{aligned} \tag{3}
$$

After Transition$_{it}$ is a binary variable that is equal to 1 for all the years after the household i initiates a business, even if the firm is closed down to mitigate a survival bias, and 0 for all the periods before transitioning to entrepreneurship. Rich Family$_i$ indicates whether the value of family wealth in the last year prior to the initiation of the business is in the top 10 percentiles of the distribution. High Ability$_i$ is 1 if the entrepreneur has an IQ score higher than 5 or have graduated from a higher education program. δ_i denotes the household fixed effect and X_{it} contains a vector of household and individual characteristics of the entrepreneur. To avoid bias from large values of income, I use the inverse hyperbolic sine transformation of income. Since the family wealth and ability variables are constant for each household over time, they are omitted from the regression with household fixed effect due to collinearity.

The results are shown in Table A-8. The regression in column (1) includes only *After Transition*. Its estimated coefficient shows that the income of the household is \$7 lower for the period after transitioning to entrepreneurship than the period before transitioning. Column (2) adds to column (1) the interaction of *After Transition* and *High Ability*. The estimates show that only individuals with low ability experience a decrease of 10% in their income after transitioning to self-employment and high ability individuals do not have a significant change in their income after becoming an entrepreneur. Column (3) adds to column (1) the interaction of *After Transition* and *Rich Family*. The entrepreneurs whose family is wealthy prior to starting the business experience a significant increase of 30% in their income after transitioning to entrepreneurship. Finally, column (4) estimates equation 3 with all variables. The results show that individuals with low ability and wealthy family, who rely more than other individuals on family wealth to initiate businesses, experience the largest increase in their income (38%) after transitioning to entrepreneurship, followed by high ability individuals from wealthy families with 27% increase in their income.

7 Conclusion

Understanding the formation of new ventures is important because it is a key component of economic growth. In particular, the process by which individuals obtain the resources to turn ideas into a business is key to the study of entrepreneurship. After allocating personal capital and utilizing bootstrapping techniques, the entrepreneur may look to debt, equity, or grants for continued growth of the enterprise. Equity finance from institutions or individuals may be sought from formal sources such as venture capitalists or informal sources such as business angels. However, many entrepreneurs turn to friends or family. This is an important source of capital because many early stage enterprises could not survive without it. Research into the equity financing of entrepreneurial firms, however, has predominantly addressed venture capitalists and business angels. Yet, the largest supply of informal finance is from people who are known to the entrepreneur. This paper has attempted to fill the gaps in our knowledge about the nature and extent of family financing for new business startups.

Building a unique combination of data on a representative sample of the Swedish population, their close relatives, as well as the enterprises they run, I provide evidence that the financial resources within the family stimulates entry into entrepreneurship. Importantly, I show that the relation between family wealth and the propensity to initiate a business is more pronounced in industries with high financial cost of entry, where financial constraints are more likely to be binding. In addition, the results are not driven by the high ability of the individuals with wealthy family or the entrepreneurial experience of the wealthy relatives. I conjecture that without receiving financial assist from relatives, many individuals would not have made the transition to starting a new business and survive in entrepreneurship.

I also show that wealthy family affect the size of the firm's capital by 1) directly providing capital to the new venture and 2) facilitating its access to formal sources of capital by offering collateral and guarantees. These findings underscore the importance of collateral and guarantees provided by family in obtaining external bank debt for startups. Considering only family's direct investment of capital in businesses oversimplifies the role of family financing in business creation activities. When startups secure bank loans with guarantees and collateral, the bank is providing liquidity to the business through a debt instrument to the entrepreneur, and the provider of collateral or the guarantor is bearing the risk of failure. The distinction between the liquidity provision and risk-bearing has an important implication for our understanding of how startups are financed.

These findings shed light on the long-lasting debate surrounding the role of capital market frictions in impeding entrepreneurial activities. Providing evidence on direct and indirect investment of capital in new ventures by wealthy family, I put forward an explanation for the contradicting findings in the literature that future and past inheritance both predict transitioning to entrepreneurship. According to my findings, entrepreneurs have access to the wealth of their family members as a source of capital before any inheritance is transferred. Therefore, future inheritance is just a proxy for family wealth and family financing.

The findings of my paper, in addition, provide more solid evidence on the role of capital market constraints in limiting the scale of new businesses and, consequently, the survival of ventures, which has only been discussed briefly in the entrepreneurial finance literature. Operating with the optimal scale is a key factor in the success of entrepreneurial ventures because a sub-optimal scale can lower the return to entrepreneurship to a level below the entrepreneur's wage/salary prior to transitioning to self-employment. This violates the condition under which entrepreneurship is preferred to the wage work, which forces the individual to exit self-employment. My findings show that individuals experience larger income gain in entrepreneurship if they have enough resources in the family to initiate and operate their startups with optimal scales. Since the optimal scale of the business for high ability individuals is larger than for low ability individuals, the income of the latter benefits the most from the contribution of family to startup financing and achieving the optimal scale of the business. This finding explain the results on the survival of entrepreneurial firms. One reason that startups whose owners have wealthy family have higher probability of survival, is the high return to entrepreneurship (higher than income from employment) for the owners.

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Graphs and Tables

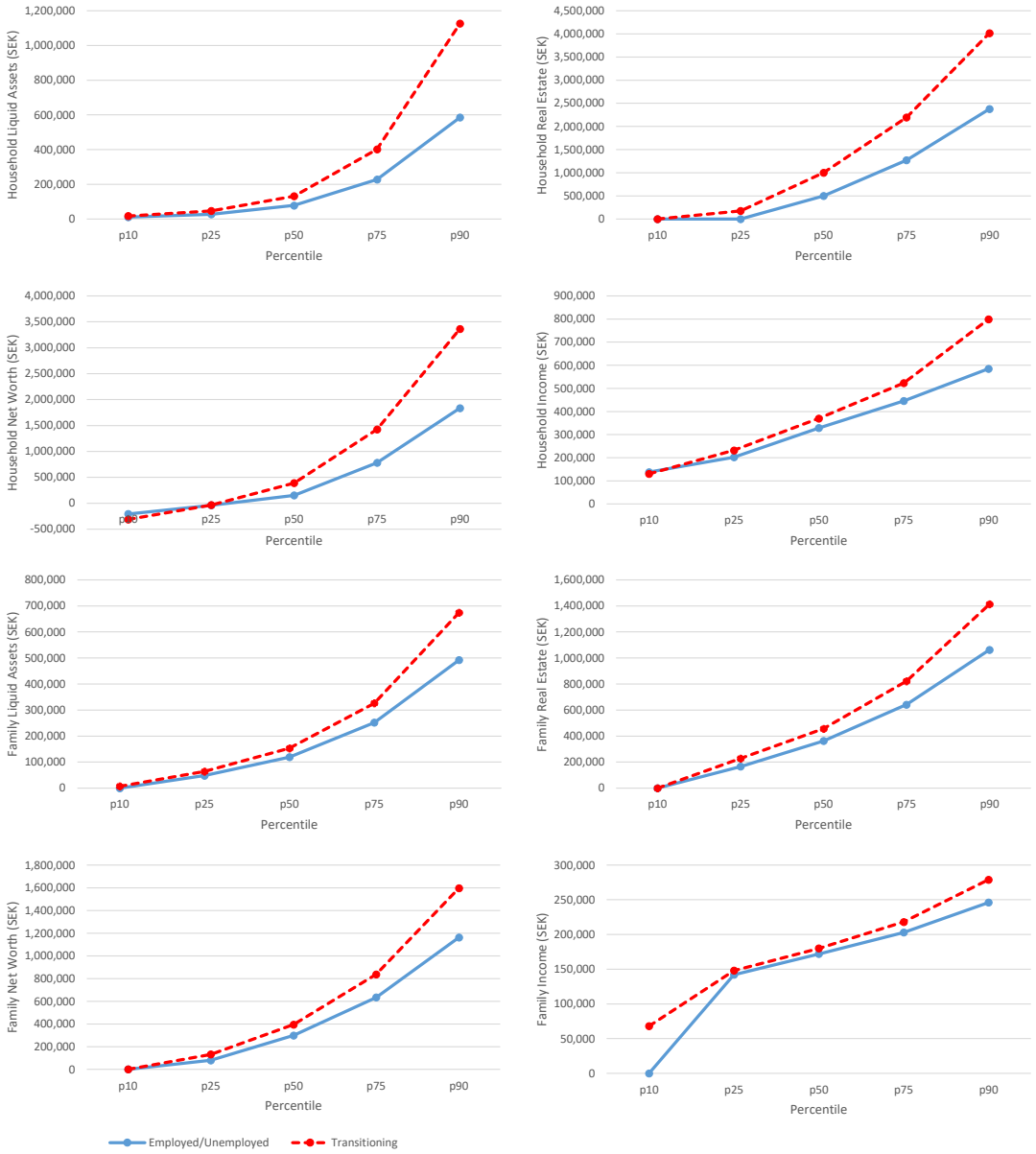

Figure 1: Descriptive Statistics of Household and Family Assets and Income
The graph illustrates different percentiles of household and family financial variables separately for the two subsamples of households transitioning to entrepreneurship and households staying employed/unemployed in the subsequent year.

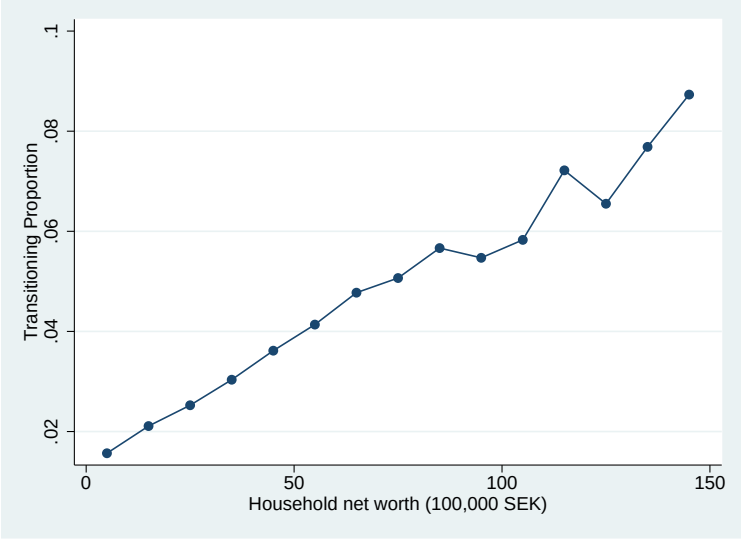

Figure 2: The Proportion of Households Transitioning to Entrepreneurship
The graph illustrates the proportion of households transitioning to entrepreneurship from unemployment or paid employment in the subsequent year for different brackets of household net worth. Each bracket of household net worth has a width of 500,000 SEK.

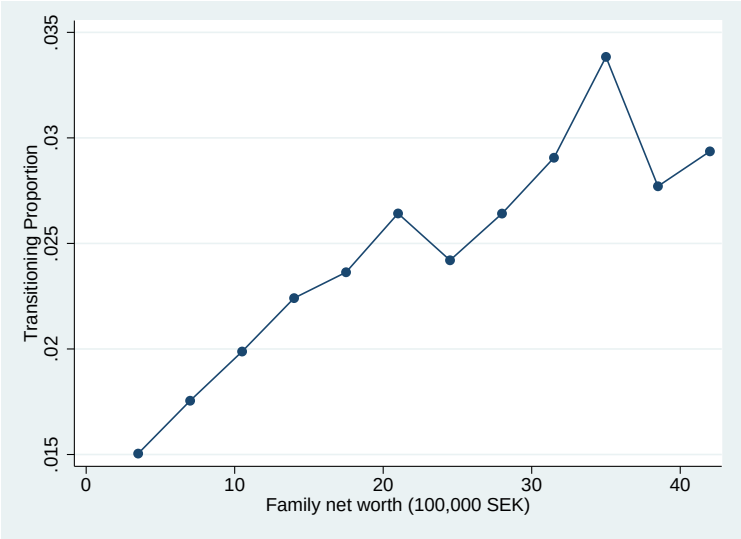

Figure 3: The Proportion of Households Transitioning to Entrepreneurship
The graph illustrates the proportion of households transitioning to entrepreneurship from unemployment or paid employment in the subsequent year for different brackets of family net worth. Each bracket of family net worth is 350,000 SEK wide.

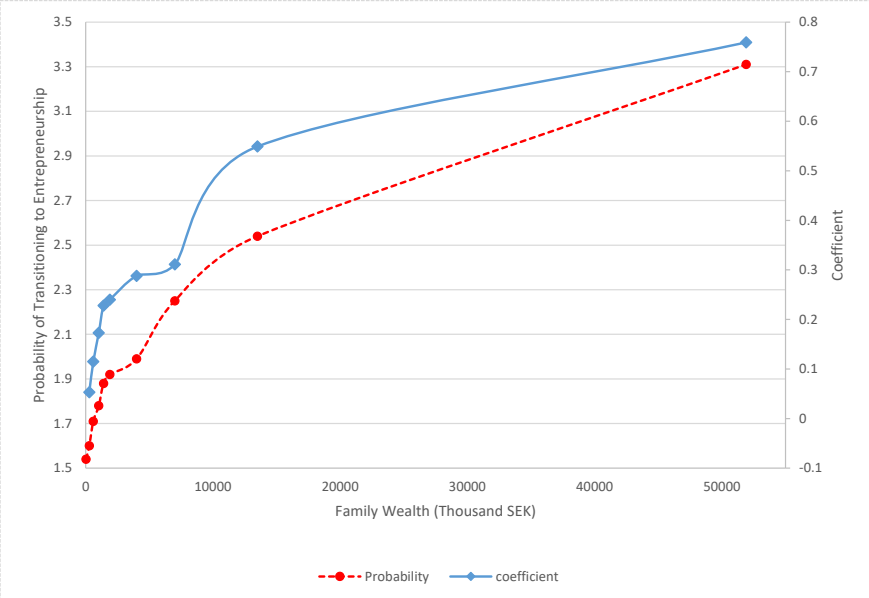

Figure 4: Family Net Worth and the Probability of Transitioning to Entrepreneurship
The graph illustrates the coefficients of the binary variables indicating different percentile intervals in the distribution of family net worth, as well as the average estimated probabilities of transitioning to entrepreneurship for households in each interval. The percentile intervals are the following: [min,25th), [25th,50th), [50th,75th), [75th,85th), [85th,90th), [90th,95th), [95th,99th), [99th,99.5th), [99.5th,99.9th), and [99.9th,max].

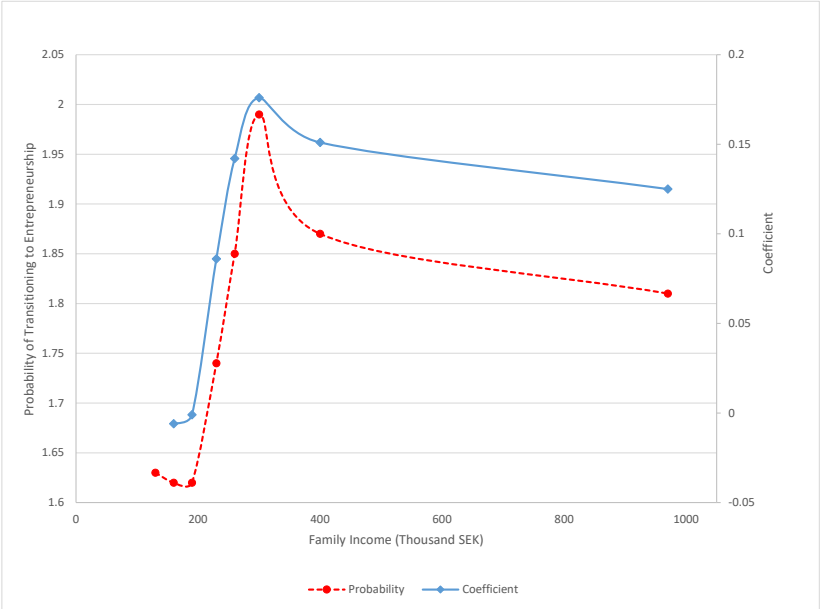

Figure 5: Family Income and the Probability of Transitioning to Entrepreneurship
The graph illustrates the coefficients of the binary variables indicating different percentile intervals in the distribution of family income, as well as the average estimated probabilities of transitioning to entrepreneurship for households in each interval. The percentile intervals are the following: [min,25th), [25th,50th), [50th,75th), [75th,85th), [85th,90th), [90th,95th), [95th,99th), [99th,max].

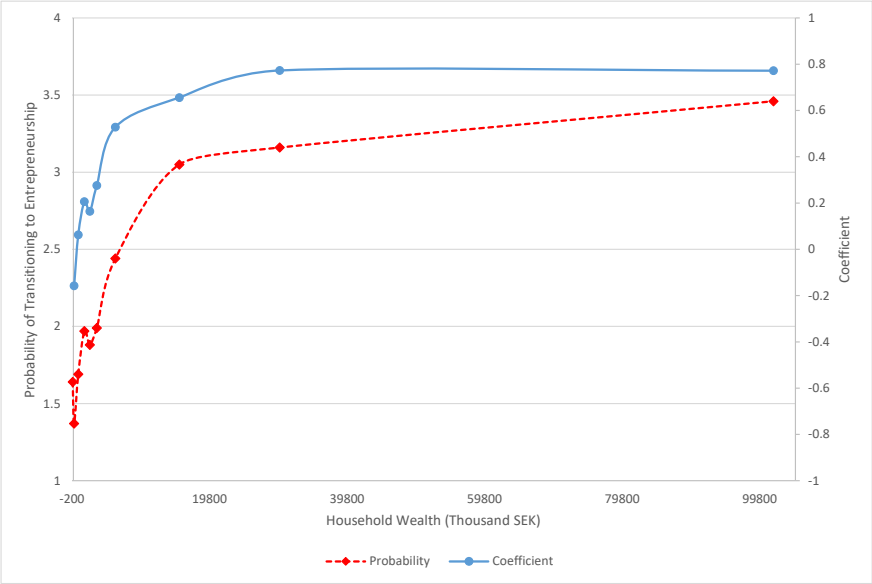

Figure 6: Household Net Worth and the Probability of Transitioning to Entrepreneurship
The graph illustrates the coefficients of the binary variables indicating different percentile intervals in the distribution of household net worth, as well as the average estimated probabilities of transitioning to entrepreneurship for households in each intervals. The percentile interval are the following: [min,25th), [25th,50th), [50th,75th), [75th,85th), [85th,90th), [90th,95th), [95th,99th), [99th,99.5th), [99.5th,99.9th), and [99.9th,max].

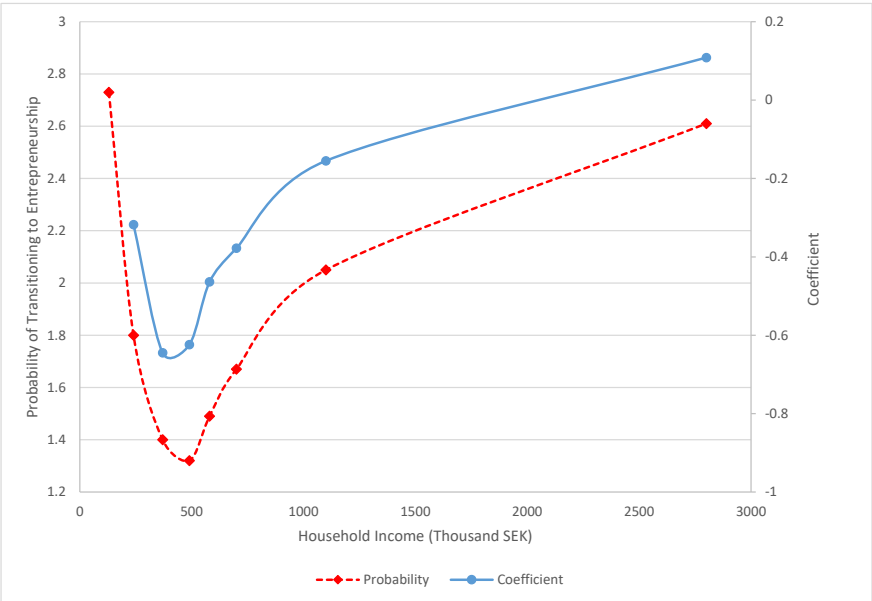

Figure 7: Household Income and the Probability of Transitioning to Entrepreneurship
The graph illustrates the coefficients of the binary variables indicating different percentile intervals in the distribution of household income, as well as the average estimated probabilities of transitioning to entrepreneurship for households in each interval. The percentile intervals are the following: [min,25th), [25th,50th), [50th,75th), [75th,85th), [85th,90th), [90th,95th), [95th,99th), [99th,max].

Table 1: Descriptive Statistics - Employment Status
The table reports the descriptive statistics of the employment status of household heads. Panel A reports the statistics of the employment status for all household heads. Panel B includes the statistics of the employment status in the following year conditional on not being entrepreneur in the current year. Gainful employment refers to an employment situation where the employee receives consistent work and payment from the employer.

	Percentage	Observation
Panel A: Employment Status at t:		
Paid employee	85	2,991,791
Entrepreneur in an unincorporated firm	4.2	146,537
Entrepreneur in an incorporated firm	7.4	260,109
Not gainfully employed	3.5	121,984
Panel B: Employment Status at $t+1$:		
Paid employment or unemployed	98.2	3,045,476
Entrepreneurship	1.75	54,276

Table 2: Descriptive Statistics - Demographics
The table reports the descriptive statistics of individual and household characteristics of household heads who are not entrepreneur. The statistics are reported separately for the two groups of household heads; those who stay unemployed or a worker in the subsequent year, and those who transition to entrepreneurship. Standard deviations are reported in parentheses.

Occupation in the subsequent year	Paid Employment or Unemployment	Entrepreneurship
Age	42.6	42.0
	(10.5)	(9.6)
Married	0.50	0.63
	(0.5)	(0.48)
Higher education	0.19	0.22
	(0.39)	(0.42)
Male	0.64	0.68
	(0.48)	(0.47)
Not born in Sweden	0.13	0.16
	(0.33)	(0.35)
Student	0.04	0.07
	(0.20)	(0.25)
Unemployed	0.04	0.10
	(0.21)	(0.30)
Retired	0.01	0.02
	(0.12)	(0.15)
Number of adults in the household	1.6	1.8
	(0.5)	(0.4)
Household size	2.2	3.3
	(1.5)	(1.4)

Table 3: Descriptive Statistics - Startup Characteristics Panel A of the table reports the proportions of legal forms of the startups initiated by households in the sample during the period 2001-2008. Panel B reports descriptive statistics of the financial variables of firms. Financial variables are calculated as their average values in the first three years of the startup operation. Observations in which the values of financial variables are in the top and bottom 1% are excluded from the sample. Standard deviations of the financial variables are reported in parentheses.

Variable	Statistics
Panel A: Legal Form	
Limited Liability	41%
Partnership	10.6%
Sole-proprietorship	48.4%
Panel B: Financials	
Total assets	1,066,000
	(2,173,000)
Total debt	680,000
	(1,535,000)
Total equity	347,000
	(767,000)
Debt from credit institution	400,000
	(1,117,000)
Sales	1,701,000
	(3,781,000)
EBITDA	237,000
	(354,000)

Table 4: Family Wealth/Income and Transitioning to Entrepreneurship

The table reports the estimates of a logistic model regressing the probability of transitioning to entrepreneurship in the following year on family net worth and disposable income. In Panel A, the SEK values of the financial variables are included, and in Panel B, the inverse hyperbolic sine transformation of the financial variables are used. In column (1) and (2), household net worth and income are excluded from the regression, but column (3) and (4) include household variables. In column (1) and (3), the measures of family variables are per-capita (normalized by the number of family), and the values are scaled by 100,000 SEK. In column (2) and (4), the total amount of family wealth and income are used and the values are scaled by 700,000 SEK. All regressions include year, industry, county, industry-year and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a household-year, and the sample includes non-business-owning households whose heads are between 23 and 55 years old over the period 2001-2007. Standard errors are clustered at the household level.

Dep. Var.	Transitioning to Entrepreneurship			
Family Measure	(1)	(2)	(3)	(4)
	Per-capita	Total	Per-capita	Total
Panel A: SEK Value	100K	700K	100K	700K
Family net worth	0.0149***	0.0158***	0.0097***	0.0115***
	(0.0012)	(0.0011)	(0.0013)	(0.0011)
Family income	0.0262**	-0.0242***	0.1343***	0.0154*
	(0.0118)	(0.0044)	(0.0223)	(0.0087)
Family income^2			-0.0142***	-0.0018**
			(0.0040)	(0.0009)
Household net worth			0.0084***	0.0092***
			(0.0006)	(0.0006)
Household income			-0.2457***	-0.2390***
			(0.0138)	(0.0139)
Household income^2			0.0131***	0.0128***
			(0.0006)	(0.0006)
Observations	2,606,257	2,606,257	2,606,257	2,606,257
Pseudo R^2	0.178	0.178	0.189	0.189
Panel B: Inverse Hyperbolic Sine Transformation				
Family net worth	0.0826***	0.0327***	0.0819***	0.0333***
	(0.0075)	(0.0049)	(0.0076)	(0.0050)
Family income	0.0782***	0.0312***	0.0809***	0.0350***
	(0.0073)	(0.0052)	(0.0074)	(0.0052)
Household net worth			0.0248***	0.0292***
			(0.0043)	(0.0042)
Household income			-0.1558***	-0.1556***
			(0.0051)	(0.0051)
Observations	2,563,922	2,563,887	2,563,920	2,563,885
Pseudo R^2	0.181	0.181	0.191	0.190
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes
Industry × Year FE	Yes	Yes	Yes	Yes
County × FE	Yes	Yes	Yes	Yes

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Family Wealth/Income, Family Relations, and Transitioning to Entrepreneurship

The table reports the estimates of a logistic model regressing the probability of transitioning to entrepreneurship in the following year on family net worth and disposable income separately for different classes of relatives. The class of tier-2 relatives includes grandparents, aunts and uncles. In column (1) and (2), the inverse hyperbolic sine transformation of the financial variables are used, whereas, in column (3) and (4), the SEK values of financial variables are included. In column (1) and (3), the measures of family variables are per-capita (normalized by the number of family), and the values are scaled by 100,000 SEK. In column (2) and (4), the total amount of family wealth and income are used and the values are scaled by 200,000 SEK since there are on average 2 relatives in each class. All regressions include year, industry, county, industry-year and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: household net worth and income, age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a household-year, and the sample includes non-business-owning households whose heads are between 23 and 55 years old over the period 2001-2007. Standard errors are clustered at the household level.

Dep. Var.	Transitioning to Entrepreneurship			
	(1)	(2)	(3)	(4)
Scale	$sinh^{-1}$	$sinh^{-1}$	100K SEK	200K SEK
Family Measure	(Per-capita)	(Total)	(Per-capita)	(Total)
Parents net worth	0.0468***	0.0347***	0.0056***	0.0042***
	(0.0070)	(0.0057)	(0.0011)	(0.0009)
Parents income	0.0522***	0.0410***	0.0525***	0.0387***
	(0.0073)	(0.0062)	(0.0111)	(0.0078)
Siblings net worth	0.0273***	0.0214***	0.0045***	0.0058***
	(0.0057)	(0.0049)	(0.0012)	(0.0011)
Siblings income	0.0268***	0.0205***	0.0280***	0.0023
	(0.0056)	(0.0049)	(0.0080)	(0.0048)
Tier-2 net worth	0.0381***	0.0246***	0.0026*	0.0008
	(0.0089)	(0.0062)	(0.0014)	(0.0008)
Tier-2 income	0.0295***	0.0171**	-0.0032	-0.0037
	(0.0090)	(0.0067)	(0.0124)	(0.0043)
Cousins net worth	0.0118	0.0078	0.0001	0.0012
	(0.0077)	(0.0062)	(0.0025)	(0.0010)
Cousins income	0.0130*	0.0075	-0.0049	-0.0010
	(0.0073)	(0.0061)	(0.0109)	(0.0025)
Household net worth	0.0241***	0.0256***	0.0079***	0.0082***
	(0.0043)	(0.0043)	(0.0006)	(0.0006)
Household income	-0.1558***	-0.1557***	-0.2458***	-0.2458***
	(0.0051)	(0.0051)	(0.0138)	(0.0139)
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes
Industry × Year FE	Yes	Yes	Yes	Yes
County × year FE	Yes	Yes	Yes	Yes
Observations	2,563,901	2,563,873	2,606,257	2,606,257
Pseudo R^2	0.191	0.190	0.085	0.085

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Family Wealth, Industry Cost of Entry, and Transitioning to Entrepreneurship

The table reports the estimates of a logistic model regressing the probability of transitioning to entrepreneurship in the following year on family net worth and disposable income, as well as industry initial capital requirement indicators. Industry variables are calculated at the level of the two-digit SNI 2002 industry classification. Medium (High) industry initial cap identifies industries with entry cost in the second (third) tercile of the distribution. Initial capital requirement in each industry is measured as the median total assets of new ventures with more than 50,000 SEK sales in that industry. Column (1) reports the estimates of the benchmark regression with family net worth and income. Column (2) adds industry initial capital requirement indicators and their interactions with family and household net worth, and column (3) adds the interations of inidustry initial capital requirement and family and household income. In all regressions, SEK values of the financial variables are used and they are scaled by 100,000 SEK. The financial variables are winsorized at the 1% level. All regressions include year, county, industry-year and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: household net worth and income, age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a household-year, and the sample includes non-business-owning households whose heads are between 23 and 55 years old over the period 2001-2007. Standard errors are clustered at the household level.

Dep. Var.	Transitioning to Entrepreneurship		
	(1)	(2)	(3)
Family net worth	0.0083***	0.0020	0.0051**
	(0.0012)	(0.0022)	(0.0024)
Family income	0.0802***	0.0526***	0.0206
	(0.0108)	(0.0114)	(0.0179)
Household net worth	0.0134***	0.0135***	0.0156***
	(0.0006)	(0.0010)	(0.0011)
Household income	-0.0270***	-0.0418***	-0.0775***
	(0.0052)	(0.0064)	(0.0117)
Medium industry initial cap		-0.3829***	-0.6131***
		(0.0203)	(0.0468)
High industry initial cap		-0.9865***	-0.9930***
		(0.0289)	(0.0706)
Medium industry initial cap × Family net worth		0.0060**	0.0036
		(0.0026)	(0.0030)
High industry initial cap × Family net worth		0.0256***	0.0135***
		(0.0033)	(0.0040)
Medium industry initial cap × Family income			0.0164
			(0.0211)
High industry initial cap × Family income			0.1694***
			(0.0282)
Medium industry initial cap × Household net worth		0.0020*	-0.0034**
		(0.0012)	(0.0014)
High industry initial cap × Household net worth		0.0024	0.0064***
		(0.0015)	(0.0018)
Medium industry initial cap × Household income			0.0773***
			(0.0123)
High industry initial cap × Household income			-0.0550***
			(0.0173)
Controls	Yes	Yes	Yes
Industry FE	No	No	No
Year FE	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Industry × Year FE	No	No	No
County × FE		Yes	Yes
Observations	2,874,155	2,507,578	2,507,578
Pseudo R^2	0.040	0.049	0.050

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: Family Wealth/Income, Talent, and Transitioning to Entrepreneurship

The table reports the estimates of a logistic model regressing the the probability of transitioning to entrepreneurship in the following year on family net worth and disposable income, as well as the IQ indicators of the household head. Column (1) includes the benchmark regression with family financial variables, column (2) adds high and very high IQ binary variables, and column (3) adds the interaction of family wealth and IQ indicators. In all regressions, income and wealth variables are scaled by 100,000 SEK and the values are winsorized at the 1% level. The IQ variable measures the g factor or the general intelligence of individuals and has an integer value between 1 and 9. An IQ value between 5 and 8 is called high, and a value equal to 9 is called very high. All regressions include year, industry, county, industry-year and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: household net worth and income, age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a household-year, and the sample includes non-business-owning households whose heads are between 23 and 55 years old over the period 2001-2007. Standard errors are clustered at the household level.

Dep. Var.	Transitioning to Entrepreneurship		
	(1)	(2)	(3)
Family net worth	0.0067***	0.0062***	0.0139***
	(0.0019)	(0.0019)	(0.0027)
Family income	0.0660***	0.0633***	0.0646***
	(0.0193)	(0.0194)	(0.0193)
High IQ		0.1093***	0.1647***
		(0.0264)	(0.0327)
Very High IQ		0.2653***	0.3270***
		(0.0543)	(0.0740)
High IQ × Family net worth			-0.0095***
			(0.0031)
Very High IQ × Family net worth			-0.0094*
			(0.0053)
Household net worth	0.0086***	0.0086***	0.0100***
	(0.0009)	(0.0009)	(0.0011)
Household Income	-0.0383***	-0.0402***	-0.0401***
	(0.0077)	(0.0078)	(0.0078)
Controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Industry × Year FE	Yes	Yes	Yes
County × FE	Yes	Yes	Yes
Observations	1,183,725	1,183,725	1,183,725
pseudo R^2	0.138	0.139	0.139

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Family Wealth/Income, Entrepreneurial Relatives, and Transitioning to Entrepreneurship

The table reports the estimates of a logistic model regressing the probability of transitioning to entrepreneurship in the following year on family net worth and disposable income, as well as the entrepreneurial experience of relatives. The SEK values of income and wealth variables scaled by 100,000 SEK are included and the values are wonsorized at the 1% level. Column (1) includes the benchmark model with family income and wealth. Column (2) adds the binary variable of entrepreneurial relative, which is equal to 1 if there is a business owner among relatives and 0 otherwise. Column (3) adds the average wealth of the entrepreneurial relatives. Column (4) adds to column (2) a binary variable which indicates whether the entrepreneurial relative runs a business in the same industry as the one in which the individual works. Column (5) adds the interactions of the entrepreneurial relative variables and family net worth. All regressions include year, industry, county, industry-year, and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: household net worth and income, age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a household-year, and the sample includes non-business-owning households whose heads are between 23 and 55 years old over the period 2001-2007. Standard errors are clustered at the household level.

Dep. Var.	Transitioning to Entrepreneurship				
	(1)	(2)	(3)	(4)	(5)
Family net worth	0.0080***	0.0079***	0.0078***	0.0077***	0.0099***
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0016)
Family income	0.0588***	0.0336***	0.0335***	0.0319***	0.0314***
	(0.0115)	(0.0118)	(0.0118)	(0.0118)	(0.0118)
Household net worth	0.0108***	0.0109***	0.0108***	0.0109***	0.0109***
	(0.0006)	(0.0006)	(0.0006)	(0.0006)	(0.0006)
Household income	-0.0116**	-0.139***	-0.0139***	-0.0128**	-0.0125**
	(0.0054)	(0.0054)	(0.0054)	(0.0054)	(0.0054)
Entrepreneurial relative		0.2824***	0.2823***	0.2252***	0.2409***
		(0.0173)	(0.0173)	(0.0183)	(0.0224)
Entrepreneurial relatives' net worth			-0.0012*		
			(0.0007)		
Entrepreneurial relative in the same industry				0.3349***	0.3989***
				(0.0291)	(0.0366)
Family net worth × Entrepreneurial relative					-0.0026
					(0.0019)
Family net worth × Entrepreneurial relative in the same industry					-0.0083***
					(0.0030)
Controls	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes
Industry × Year FE	Yes	Yes	Yes	Yes	Yes
County × Year FE	Yes	Yes	Yes	Yes	Yes
Observations	2,606,257	2,607,182	2,607,182	2,606,257	2,606,257
Pseudo R^2	0.082	0.078	0.078	0.084	0.084

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Family Wealth and the Startup Capital

The table reports the estimates of a linear model regressing startup capital components (i.e. total assets, equity, total debt, debt from credit institutions, and debt from other sources) on the family net worth of the entrepreneur. In Panel A, the inverse hyperbolic transformation of financial variables are used. Panel B includes binary variables indicating whether wealth variables are in the top 30 percentiles of their distributions. All dependent variables are measured as the inverse hyperbolic sine transformation of the average value of the variable in the first four years of the firm operation. The dependent variables are total assets in column (1), equity in column (2), total debt in column (3), debt from credit institutions in column (4), and debt from other sources in column (5). All regressions include year, industry, county, industry-year, and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: household net worth, age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a firm, and the sample includes businesses initiated by individuals in the representative sample who are 23-55 years old over the period 2001-2007.

	(1)	(2)	(3)	(4)	(5)
Dep. Var.	Assets	Equity	Debt	Bank Loan	Other Debt
Panel A: Inverse hyperbolic sine transformation of Net Worth and Income					
Family net worth	0.0625***	0.2020***	0.0712***	0.0593***	0.0210***
	(0.0151)	(0.0379)	(0.0059)	(0.0160)	(0.0052)
Household net worth	0.1491***	0.2680***	0.0992***	-0.2962***	0.0119
	(0.0113)	(0.0263)	(0.0231)	(0.0559)	(0.0217)
Panel B: Top 30th Percentile of Net Worth and Income					
Family net worth $>$ 70%	0.1617***	0.3286***	0.1532**	-0.3615**	0.0661
	(0.0357)	(0.0804)	(0.0692)	(0.1497)	(0.0524)
Household net worth $>$ 70%	0.4698***	1.1986***	0.2265***	-0.8488***	0.0908*
	(0.0345)	(0.0786)	(0.0679)	(0.1509)	(0.0487)
Controls	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes
Industry $\times$ Year FE	Yes	Yes	Yes	Yes	Yes
County $\times$ Year FE	Yes	Yes	Yes	Yes	Yes
Observations	46,346	46,346	46,346	23,442	23,442

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: Family Wealth Structure and Startup Capital Composition

Each panel of the table reports the estimates of a set of linear models regressing startup capital components (i.e. total assets, equity, debt, loans from credit institutions, and loans from other sources) on different financial variables of the entrepreneur's family and household. All dependent variables are measured as the inverse hyperbolic sine transformation of the average value of the variable in the first four years of the firm operation. The dependent variables are total assets in column (1), equity in column (2), total debt in column (3), debt from credit institutions in column (4), and debt from other sources in column (5). Panel A includes net worth and income of the family and household, panel B adds real estate to the variables in panel A, and panel C adds the household and family ratios of liquid to total assets to the regression in panel A. All regressions include year, industry, county, industry-year, and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: household net worth and income, age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a firm, and the sample includes businesses initiated by individuals in the representative sample who are 23-55 years old over the period 2001-2007.

	(1)	(2)	(3)	(4)	(5)
Dep. Var.	Assets	Equity	Debt	Bank Loan	Other Debt
Panel A: Income					
Family net worth	0.0483***	0.1863***	0.0066	-0.0267	0.0142
	(0.0148)	(0.0379)	(0.0100)	(0.0265)	(0.0091)
Family income	0.0258***	-0.0122	0.0664***	0.1289***	0.0007
	(0.0060)	(0.0165)	(0.0115)	(0.0332)	(0.0107)
Household net worth	0.0951***	0.1921***	0.0253	-0.2833***	-0.0251
	(0.0114)	(0.0268)	(0.0238)	(0.0577)	(0.0231)
Household income	0.3993***	0.5824***	0.5744***	-0.0355	0.2847***
	(0.0218)	(0.0551)	(0.0468)	(0.1204)	(0.0418)
Panel B: Real Estate					
Family net worth	0.0296*	0.1820***	-0.0176	-0.0624**	0.0111
	(0.0163)	(0.0410)	(0.0111)	(0.0285)	(0.0096)
Family RE	0.0149**	0.0011	0.0449***	0.0797***	0.0079
	(0.0058)	(0.0152)	(0.0116)	(0.0304)	(0.0090)
Family income	0.0167**	-0.0094	0.0412***	0.0763**	-0.0036
	(0.0070)	(0.0191)	(0.0130)	(0.0385)	(0.0121)
Household net worth	0.0831***	0.2548***	-0.0303	-0.3781***	-0.0167
	(0.0125)	(0.0295)	(0.0262)	(0.0617)	(0.0242)
Household RE	0.0079**	-0.0364***	0.0327***	0.0626***	-0.0056
	(0.0031)	(0.0080)	(0.0063)	(0.0163)	(0.0050)
Household income	0.3878***	0.6251***	0.5284***	-0.1342	0.2911***
	(0.0222)	(0.0564)	(0.0472)	(0.1220)	(0.0431)
Panel C: Ratio of Liquid to Total Assets					
Family net worth	0.0442***	0.1334***	-0.0068	-0.0248	0.0118
	(0.0163)	(0.0405)	(0.0105)	(0.0269)	(0.0094)
Family liquid / Total	-0.0293	0.3347***	-0.3965***	-0.8636**	-0.0535
	(0.0683)	(0.1674)	(0.1409)	(0.3409)	(0.1106)
Family income	0.2702***	-0.0105	0.0691***	0.1342***	0.0007
	(0.0612)	(0.0164)	(0.0112)	(0.0329)	(0.0107)
Household net worth	0.0773***	0.2423***	-0.0462	-0.3830***	-0.0380
	(0.0143)	(0.0323)	(0.0292)	(0.0644)	(0.0252)
Household liquid / Total	-0.0086	0.7183***	-0.4581***	-1.0239***	0.0245
	(0.0491)	(0.1199)	(0.0966)	(0.2369)	(0.0765)
Household income	0.4834***	0.7668***	0.6922***	-0.1065	0.3176***
	(0.0262)	(0.0656)	(0.0559)	(0.1347)	(0.0474)
Controls	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes
Industry × Year FE	Yes	Yes	Yes	Yes	Yes
County × Year FE	Yes	Yes	Yes	Yes	Yes
Observations	46,346	46,346	46,346	23,442	23,442

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 11: Family Wealth/Income, and the Startup Survival

The table reports the estimates of a proportional hazards model, regressing the conditional probability of startup failure on the entrepreneur's family net worth and disposable income. A failure event is defined as filing for bankruptcy or liquidating the firm's assets. In all regressions, income and wealth variables are binary variables denoting observations in the top 30 percentiles of the distribution of the corresponding variable. In column (1) to (3), family includes parents, siblings, aunts and uncles, grandparents, and cousins. In column (4) to (6) only the wealth and income of parents are included. Column (1) and (4) include family and household financial variables. Column (2) and (5) add the binary variable Low ROA, and its interaction with family and household net worth. Low ROA is equal to 1 if the ROA of the firm is less than the median ROA in the panel and 0 otherwise. Column (3) and (6) add the binary variable High Average, and its interaction with family and household net worth. High Leverage indicates a leverage (the ratio of total debt to total assets) higher than the median leverage in the panel. All regressions include industry year and county fixed effects, industry-year fixed effects, county-year fixed effects, as well as the following pre-entry individual and household characteristics of the owner: age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a firm-year, and the sample includes firms initiated by individuals between 23 and 55 years old in the representative sample over the period 2001-2007. Standard errors are clustered at firm level.

Dep. Var.	Firm Liquidation/Bankruptcy					
Family Members:	All Family			Parents		
	(1)	(2)	(3)	(4)	(5)	(6)
Family net worth $>70\%$	-0.1949***	-0.2095***	-0.2001***	-0.1508***	-0.1745***	-0.1314**
	(0.0381)	(0.0620)	(0.0595)	(0.0373)	(0.0610)	(0.0583)
Family income $>70\%$	0.0330	0.0214	0.0460	-0.0817**	-0.1049**	-0.0911**
	(0.0401)	(0.0431)	(0.0446)	(0.0411)	(0.0440)	(0.0457)
Family net worth $>70\%$ × Low ROA		0.0412			0.0126	
		(0.0706)			(0.0700)	
Family net worth $>70\%$ × High leverage			0.0369			-0.0329
			(0.0706)			(0.0697)
Household net worth $>70\%$	-0.2068***	-0.2747***	-0.0657	-0.2103***	-0.2766***	-0.0775
	(0.0379)	(0.0647)	(0.0583)	(0.0379)	(0.0644)	(0.0580)
Household income $>70\%$	-0.2119***	-0.2390***	-0.2115***	-0.1991***	-0.2246***	-0.1952***
	(0.0402)	(0.0432)	(0.0451)	(0.0403)	(0.0432)	(0.0450)
Household net worth $>70\%$ × Low ROA		0.0648			0.0696	
		(0.0752)			(0.0748)	
Household net worth $>70\%$ × High leverage			-0.2873***			-0.2663***
			(0.0743)			(0.0737)
Low ROA		0.5427***			0.5577***	
		(0.0475)			(0.0483)	
High leverage			0.2258***			0.2522***
			(0.0498)			(0.0507)
Log assets	-0.2317***	-0.2214***	-0.2186***	-0.2314***	-0.2210***	-0.2184***
	(0.0074)	(0.0075)	(0.0084)	(0.0074)	(0.0075)	(0.0084)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry × Year	Yes	Yes	Yes	Yes	Yes	Yes
County × Year	Yes	Yes	Yes	Yes	Yes	Yes
Observations	123,949	118,855	118,861	123,949	118,855	118,861
Pseudo R^2	0.037	0.031	0.025	0.037	0.032	0.025

Standard errors in parentheses
* $p<0.10$, ** $p<0.05$, *** $p<0.01$

Table 12: Family Income and Wealth, and the Startup Performance

The table reports the estimates of linear models regressing startup outcome variables on the net worth and income of the entrepreneur's family. In column (1), the outcome variables is firm investment, measured as capital expenditure scaled by total assets. In column (2), sales to total assets ratio is used as a measure of performance, and column (3) uses sales growth as a measure of performance. Only observations with dependent variables in the interval [-1,1] are included in the sample. The independent variables are binary variables indicating whether wealth and income variables are in the top 30 percentiles of their distributions. All regressions include year, industry, county, industry-year, and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: household net worth and income, age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. In addition, the regression in column (1) controls for the lagged value of the logarithm of sales. The unit of observation is a firm-year, and the panel includes the first four years of firms initiated by individuals between 23 and 55 who are in the representative sample over the period 2001-2007. Standard errors are clustered at firm level.

Dep. Var.	Capital Expenditure	Sales to Assets Ratio	Sales Growth
	(1)	(2)	(3)
Family net worth $>70\%$	-0.0069	-0.0903***	-0.0089
	(0.0056)	(0.0197)	(0.0061)
Family income $>70\%$	0.0044	-0.0171	-0.0029
	(0.0055)	(0.0195)	(0.0059)
Household net worth $>70\%$	-0.0036	-0.2632***	-0.0203***
	(0.0055)	(0.0199)	(0.0058)
Household income $>70\%$	0.0085	0.0826***	0.0311***
	(0.0061)	(0.0220)	(0.0064)
Lagged log sales	0.0402***		
	(0.0016)		
Controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Industry $\times$ Year	Yes	Yes	Yes
County $\times$ Year	Yes	Yes	Yes
Observations	27,158	47,548	41,162
R^2	0.047	0.223	0.050

Standard errors in parentheses
* $p<0.10$, ** $p<0.05$, *** $p<0.01$

Appendix

Table A-1: Industry Categories and Number of Startups
The table reports the descriptions of industries in two-digit SNI 2002 classification, as well as the number of startups initiated in each category by households in the sample during the period 2001-2008.

	Industry Description	Number of Firms	Percentage
01	Agriculture, hunting, forestry, fishing	17173	10.34
02	Mining and quarrying	91	0.05
03	Manufacture of food products; beverages and tobacco	666	0.4
04	Manufacture of textiles, textile products, leather and leather products	675	0.41
05	Manufacture of wood and of products of wood and cork, except furniture	1418	0.85
06	Manufacture of pulp, paper and paper products	50	0.03
07	Publishing and printing of books; publishing and reproduction of sound recordings; motion picture and video production	5876	3.54
08	Publishing of newspapers and magazines; radio and television activities; news agency activities	1384	0.83
09	Manufacture of coke, refined petroleum products, nuclear fuel, chemicals, chemical products man-made fibers	141	0.08
10	Manufacture of rubber and plastic products	248	0.15
11	Manufacture of other non-metallic mineral products	321	0.19
12	Manufacture of basic metals	59	0.04
13	Manufacture of fabricated metal products, except machinery and equipment	2336	1.41
14	Manufacture of machinery and equipment n.e.c.	1092	0.66
15	Manufacture of office machinery, computers, radio, television and communication equipment and apparatus	176	0.11
16	Manufacture of electrical machinery and apparatus n.e.c.	329	0.2
17	Manufacture of medical, precision and optical instruments, watches and clocks	395	0.24
18	Manufacture of motor vehicles, trailers, railway transport, also parts and accessories	207	0.12
19	Building and repairing of ships and boats	309	0.19
20	Manufacture of aircraft and spacecraft	41	0.02
21	Manufacture of furniture; manufacturing n.e.c.	1162	0.7
22	Sewage and refuse disposal, sanitation and similar activities, and Recycling	226	0.14
23	Electricity, gas and water supply	147	0.09
24	Construction	19017	11.45
25	Sale of motor vehicles	872	0.53

Table A-1 - Continued

	Industry Description	Number of Firms	Percentage
26	Maintenance and repair of motor vehicles, sale of motor vehicle parts and accessories	3649	2.2
27	Wholesale trade and commission trade, except of motor vehicles and motorcycles	8798	5.3
28	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	13255	7.98
29	Hotels, camping sites and other provision of short-stay accommodation	985	0.59
30	Restaurants, bars, canteens and catering	6557	3.95
31	Land transport and supporting activities	5651	3.4
32	Water transport and supporting activities	236	0.14
33	Air transport and supporting activities	121	0.07
34	Cargo handling and storage	72	0.04
35	Activities of travel agencies and tour operators; tourist assistance activities n.e.c.	616	0.37
36	Activities of other transport agencies	417	0.25
37	Post and courier activities	144	0.09
38	Telecommunications	107	0.06
39	Banking	3	0
40	Other financial intermediation	701	0.42
41	Insurance and pension funding, except compulsory social security	8	0
42	Activities auxiliary to financial intermediation, insurance and pension funding	1366	0.82
43	Real estate activities	6942	4.18
44	Renting of machinery and equipment without operator and of personal and household goods	1024	0.62
45	Computer and related activities	7480	4.51
46	Research and development	680	0.41
47	Legal, accounting, book-keeping and auditing activities; business and management consultancy	15385	9.27
48	Architectural and engineering activities and related technical consultancy	8069	4.9
49	Technical testing and analysis	115	0.07
50	Advertising	3293	1.98
51	Labour recruitment and provision of personnel	693	0.42
52	Investigation and security activities	337	0.2
53	Industrial cleaning	1593	0.96
54	Miscellaneous business activities n.e.c.	5891	3.55

Table A-1 - Continued

	Industry Description	Number of Firms	Percentage
55	Administration of the State and the economic and social policy of the community, central banking	9	0.01
56	Defence activities	0	0
57	Justice and judicial activities	0	0
58	Public security, law and order activities; fire service activities	15	0.01
59	Compulsory social security activities	0	0
60	Primary education, social work activities	1081	0.65
61	Secondary education	53	0.03
62	Higher education	31	0.02
63	Adult and other education	2084	1.26
64	Human health activities and veterinary activities	4319	2.6
65	Activities of business, employers, professional, political organizations, trade unions, and other membership organizations n.e.c.	23	0.01
66	Activities of religious organizations	9	0.01
67	Motion picture projection; fair and amusement park activities; museums; botanical and zoological gardens; other entertainment activities	423	0.25
68	Library and archive activities	5	0
69	Sporting activities, other recreational activities	2118	1.28
70	Other service activities	7261	4.37

Table A-2: Industry Initial Capital Requirement
The table reports the level of initial capital requirement for each category of two-digit SNI 2002 industry classification. The initial capital requirement is measured as the median capital in a new venture in the industry during the period 2000-2009. The level of the initial capital requirement (low, medium, or high) is determined based on the terciles of the Krona value of the initial capital. I require the existance of at least 10 startups in an industry during the sample period to define the initial capital requirement level for that industry.

	Industry Description	Initial Capital Requirement
01	Agriculture, hunting, forestry, fishing	High
02	Mining and quarrying	High
03	Manufacture of food products; beverages and tobacco	High
04	Manufacture of textiles, textile products, leather and leather products	Low
05	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles	Medium
06	Manufacture of pulp, paper and paper products	High
07	Publishing and printing of books; publishing and reproduction of sound recordings; motion picture and video production	Low
08	Publishing of newspapers and magazines; radio and television activities; news agency activities	Low
09	Manufacture of coke, refined petroleum products, nuclear fuel, chemicals, chemical products man-made fibres	High
10	Manufacture of rubber and plastic products	High
11	Manufacture of other non-metallic mineral products	Low
12	Manufacture of basic metals	High
13	Manufacture of fabricated metal products, except machinery and equipment	Medium
14	Manufacture of machinery and equipment n.e.c.	High
15	Manufacture of office machinery, computers, radio, television and communication equipment and apparatus	Medium
16	Manufacture of electrical machinery and apparatus n.e.c.	High
17	Manufacture of medical, precision and optical instruments, watches and clocks	Medium
18	Manufacture of motor vehicles, trailers, railway transport, also parts and accessories	High
19	Building and repairing of ships and boats	Low
20	Manufacture of aircraft and spacecraft	Medium
21	Manufacture of furniture; manufacturing n.e.c.	Low
22	Sewage and refuse disposal, sanitation and similar activities, and Recycling	Medium
23	Electricity, gas and water supply	High
24	Construction	Medium
25	Sale of motor vehicles	High

Table A-2 - Continued

	Industry Description	Initial Capital Requirement
26	Maintenance and repair of motor vehicles, sale of motor vehicle parts and accessories, sale, maintenance and repair of motorcycles and related parts and accessories	Medium
27	Wholesale trade and commission trade, except of motor vehicles and motorcycles	Medium
28	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	Medium
29	Hotels, camping sites and other provision of short-stay accommodation	High
30	Restaurants, bars, canteens and catering	Low
31	Land transport and supporting activities	Medium
32	Water transport and supporting activities	High
33	Air transport and supporting activities	High
34	Cargo handling and storage	Medium
35	Activities of travel agencies and tour operators; tourist assistance activities n.e.c.	Low
36	Activities of other transport agencies	High
37	Post and courier activities	Low
38	Telecommunications	High
39	Banking	N/A
40	Other financial intermediation	High
41	Insurance and pension funding, except compulsory social security	Medium
42	Activities auxiliary to financial intermediation, insurance and pension funding	High
43	Real estate activities	High
44	Renting of machinery and equipment without operator and of personal and household goods	Medium
45	Computer and related activities	Medium
46	Research and development	Medium
47	Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings	Medium
48	Architectural and engineering activities and related technical consultancy	Medium
49	Technical testing and analysis	Medium
50	Advertising	Low
51	Labour recruitment and provision of personnel	Low
52	Investigation and security activities	Low

Table A-2 - Continued

	Industry Description	Initial Capital Requirement
53	Industrial cleaning	Low
54	Miscellaneous business activities n.e.c.	Low
55	Administration of the State and the economic and social policy of the community, central banking	Low
56	Defence activities	N/A
57	Justice and judicial activities	N/A
58	Public security, law and order activities; fire service activities	Medium
59	Compulsory social security activities	N/A
60	Primary education, social work activities	Medium
61	Secondary education	High
62	Higher education	Low
63	Adult and other education	Low
64	Human health activities and veterinary activities	Low
65	Activities of business, employers, professional, political organizations; trade unions; and other membership organizations n.e.c.	Low
66	Activities of religious organizations	N/A
67	Motion picture projection; fair and amusement park activities; museums; botanical and zoological gardens; other entertainment activities	Low
68	Library and archive activities	N/A
69	Sporting activities, other recreational activities	Low
70	Other service activities	Low
71	Repairs and installation of machinery and equipment	N/A

Table A-3: Personal and Household Characteristics, and Transitioning to Entrepreneurship

The table reports the estimates of a logistic model regressing the probability of transitioning to entrepreneurship in the following year on family and household net worth and disposable income, as well as household characteristics or individual characteristics of the household head. All regressions include year, industry, county, industry-year and county-year fixed effects. The unit of observation is a household-year, and the sample includes non-business-owning households whose heads are between 23 and 55 years old over the period 2001-2007. Standard errors are clustered at the household level.

Dep. Var.	Transitioning to Entrepreneurship
Age	0.1843***
	(0.0095)
Age^2	-0.0023***
	(0.0001)
Male	0.1336***
	(0.0193)
Married	0.1858***
	(0.0207)
Higher education	0.1099***
	(0.0228)
Not born in Sweden	0.0984***
	(0.0265)
Student	0.4111***
	(0.0307)
Retired	0.3281***
	(0.0770)
Unemployed	0.7158***
	(0.0252)
Couple	0.8280***
	(0.0306)
Household Size	0.0358***
	(0.0074)
Family wealth/income	Yes
Household wealth/income	Yes
Industry FE	Yes
Year FE	Yes
County FE	Yes
Industry × Year FE	Yes
County × FE	Yes
Observations	2,606,257
pseudo R^2	0.085

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A-4: Family Wealth/Income Percentile and Transitioning to Entrepreneurship

The table reports the estimates of a logistic model regressing the transition to entrepreneurship from paid employment or unemployment on family net worth and disposable income. The dependent variable is transitioning to entrepreneurship in the subsequent year. In column (1), household net worth and income are excluded from the regression, but column (2) and (3) include household variables. The regressions include binary variables for each quintile of income and wealth. the binary variable indicating the first quintile of each variable is omitted due to collinearity. All regressions include year, industry, county, industry-year, and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: household net worth and income, age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. Standard errors are clustered at the household level. The unit of observation is a household-year, and the sample includes non-business-owning households whose heads are between 23 and 55 years old over the period 2001-2007.

Dep. Var.		Transitioning to Entrepreneurship	
	Bins (1000 SEK)	(1)	Average Probability (%)
Parents & siblings avg net worth:			
[25% – 50%]	150 - 420	0.0528**	1.6
		(0.0252)	
[50% – 75%]	420 - 870	0.1152***	1.71
		(0.0265)	
[75% – 85%]	870 - 1,250	0.1730***	1.78
		(0.0342)	
[85% – 90%]	1,250 - 1,600	0.2283***	1.88
		(0.0435)	
[90% – 95%]	1,600 - 2,350	0.2400***	1.92
		(0.0450)	
[95% – 99%]	2,350 - 5,820	0.2883***	1.99
		(0.0522)	
[99% – 99.5%]	5,820 - 9,300	0.3108***	2.25
		(0.1155)	
[99.5% – 25%]	9,300 - 30,300	0.5486***	2.54
		(0.1320)	
[99.9% – *max*]	> 30,300	0.7590***	3.31
		(0.2806)	
Parents & siblings avg income:			
[25% – 50%]	150 - 180	-0.0061	1.62
		(0.0251)	
[50% – 75%]	180 - 220	-0.0011	1.62
		(0.0255)	
[75% – 85%]	220 - 250	0.0859***	1.74
		(0.0328)	
[85% – 90%]	250 - 280	0.1424***	1.85
		(0.0411)	
[90% – 95%]	280 - 340	0.1758***	1.99
		(0.0423)	
[95% – 99%]	340 - 650	0.1512***	1.87
		(0.0479)	
[99% – *max*]	> 650	0.1247*	1.81
		(0.0737)	
Household net worth:			
[25% – 50%]	10 - 360	-0.1579***	1.37
		(0.0250)	
[50% – 75%]	360 - 1,260	0.0627**	1.69
		(0.0253)	
[75% – 85%]	1,260 - 2,060	0.2057***	1.97
		(0.0338)	
[85% – 90%]	2,060 - 2,820	0.1643***	1.88
		(0.0450)	
[90% – 95%]	2,820 - 4,450	0.2764***	1.99
		(0.0460)	
[95% – 99%]	4,450 - 12,590	0.5281***	2.44
		(0.0533)	
[99% – 99.5%]	12,590 - 20,560	0.6557***	3.05
		(0.1101)	
[99.5% – 99.9%]	20,560 - 63,880	0.7726***	3.16
		(0.1442)	
[99.9% – *max*]	> 63,880	0.7719***	3.46
		(0.2768)	
Household income:			
[25% – 50%]	180 - 310	-0.3184***	1.8
		(0.0346)	
[50% – 75%]	310 - 450	-0.6453***	1.4
		(0.0447)	
[75% – 85%]	450 - 540	-0.6243***	1.32
		(0.0507)	
[85% – 90%]	540 - 630	-0.4641***	1.49
		(0.0564)	
[90% – 95%]	630 - 850	-0.3785***	1.67
		(0.0576)	
[95% – 99%]	850 - 1,900	-0.1549**	2.05
		(0.0633)	
[99% – *max*]	> 1,900	0.1085*	2.61
		(0.0651)	
Controls		Yes	
Industry FE		Yes	
Year FE		Yes	
County FE		Yes	
Industry × Year FE		Yes	
County × FE		Yes	
Observations		2,399,575	
pseudo R^2		0.078	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A-5: The Interaction of Household and Family Wealth and Transitioning to Entrepreneurship

The table reports the estimates of a logistic model regressing the probability of transitioning to entrepreneurship in the following year on family and household net worth and disposable income, as well as the interaction of family and household net worth. The regression includes binary variables representing the observations in the top 30 percentiles of the distribution of the corresponding variables, year, industry, county, industry-year and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a household-year, and the sample includes non-business-owning households whose heads are between 23 and 55 years old over the period 2001-2007. Standard errors are clustered at the household level.

Dep. Var.	Transitioning to Entrepreneurship
Family net worth $>$ 70%	0.2579***
	(0.0256)
Family income $>$ 70%	0.2706***
	(0.0176)
Family net worth $>$ 70% $\times$ Household net worth $>$ 70%	-0.1396***
	(0.0331)
Household net worth $>$ 70%	0.3965***
	(0.0213)
Household income $>$ 70%	-0.2774***
	(0.0205)
Controls	Yes
Industry FE	Yes
Year FE	Yes
County FE	Yes
Industy $\times$ Year FE	Yes
County $\times$ Year FE	Yes
Observations	3,113,651
Pseudo R^2	0.075

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A-6: Robustness Test: an Alternative Definition of an Entrepreneurial Firm

The table reports the estimates of a logistic model regressing the probability of transitioning to entrepreneurship in the following year on family net worth and disposable income using two definitions of an entrepreneurial business. Column (1) and (3) report the estimates of the benchmark model where all new businesses are included. In column (2) and (4), a new venture is included only if the firm has at least three employees at any year during the sample period. Column (1) and (2) include the inverse hyperbolic sine transformation of per-capita family wealth and income, whereas column (3) and (4) use the inverse hyperbolic sine transformation of total family wealth and income. All regressions include year, industry, county, industry-year and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a household-year, and the sample includes non-business-owning households whose heads are between 23 and 55 years old over the period 2001-2007. Standard errors are clustered at the household level.

	Transitioning to Entrepreneurship			
	(1)	(2)	(3)	(4)
	Per-capita	Per-capita	Total	Total
	All Firms	Employee≥2	All Firms	Employee≥2
Family Net Worth	0.0819***	0.0837***	0.0333***	0.0406***
	(0.0076)	(0.0127)	(0.0050)	(0.0085)
Family Income	0.0809***	0.1079***	0.0350***	0.0660***
	(0.0074)	(0.0119)	(0.0052)	(0.0086)
Household Net Worth	0.0248***	0.0294***	0.0292***	0.0351***
	(0.0043)	(0.0070)	(0.0042)	(0.0069)
Household Income	-0.1558***	0.0019	-0.1556***	0.0038
	(0.0051)	(0.0321)	(0.0051)	(0.0333)
Controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes
Industry × Year FE	Yes	Yes	Yes	Yes
County × FE	Yes	Yes	Yes	Yes
Observations	2,563,920	2,557,748	2,563,885	2,557,716
pseudo R^2	0.191	0.089	0.190	0.088

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A-7: Family Wealth/Income, Unemployment and Transitioning to Entrepreneurship

The table reports the estimates of a logistic model regressing the probability of transitioning to entrepreneurship in the following year on family net worth and disposable income, unemployment binary variables and their interactions with family and household wealth. In all regressions, the SEK values of the financial variables scaled by 100,000 SEK are included and the values are winsorized at the 1% level. The coefficients of income variables are excluded from the table. The regression in column (1) includes family and household wealth and income as well as the binary variable indicating whether an individual received more than 25% of her total income as unemployment insurance in the current year. Column (2) adds the interaction of unemployment variable with family and household wealth. Column (3) includes two binary variables for unemployment indicating whether the unemployed individual has high or low ability. High Ability indicates individuals who have an IQ score higher than 5 in a 1-9 scale or have a higher education degree. In addition the interactions of unemployment variables and family/household wealth are added. All regressions include year, industry, county, industry-year and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: household net worth and income, age, gender, marital status, education, country of origin, employment status, and number of adults and children in the household. The unit of observation is a household-year, and the sample includes non-business-owning households whose heads are between 23 and 55 years old over the period 2001-2007. Standard errors are clustered at the household level.

Dep. Var.	Transitioning to Entrepreneurship		
	(1)	(2)	(3)
Family Wealth	0.0100***	0.0092***	0.0093***
	(0.0011)	(0.0012)	(0.0012)
Family Wealth × Unemployed		0.0130***	
		(0.0032)	
Family Wealth × Low Ability Unemployed			0.0135***
			(0.0037)
Family Wealth × High Ability Unemployed			0.0056
			(0.0059)
Household Wealth	0.0114***	0.0112***	0.0113***
	(0.0006)	(0.0006)	(0.0006)
Household Wealth × Unemployed		0.0065***	
		(0.0021)	
Household Wealth × Low Ability Unemployed			0.0064**
			(0.0028)
Household Wealth × High Ability Unemployed			0.0046
			(0.0033)
Unemployed	0.7755***	0.7160***	
	(0.0250)	(0.0280)	
Low Ability Unemployed			0.6718***
			(0.0304)
High Ability Unemployed			0.9755***
			(0.0648)
Controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
County FE	Yes	Yes	Yes
Industry × Year FE	Yes	Yes	Yes
County × FE	Yes	Yes	Yes
Observations	2,607,182	2,607,182	2,607,182
pseudo R^2	0.077	0.077	0.077

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A-8: Family Wealth and the Return to Entrepreneurship

The table reports the estimates of a linear model regressing household income on entrepreneurship indicator and its interaction with having wealthy family and high ability. The dependent variable in all regressions is the inverse hyperbolic sine of household disposable income. Rich family is a binary variable denoting households whose family wealth prior to the initiation of the business is in the top 10 percentiles of the distribution. High ability is defined as having an IQ score higher than 5 in a 1-9 scale or having a higher education degree. All regressions include household fixed effects. After Transition is a binary variable which is equal to 1 for all the periods after an adult in the household starts a business, even after the business is closed down or sold. Column (1) includes only After Transition, column (2) adds the interaction of High Ability and After Transition, column (3) adds to column (1) the interaction of Rich Family and After Transition, and column (4) adds to column (3) the interaction of High Ability and After Transition as well as the interaction of High Ability, Rich Family, and After Transition. All regressions include year, industry, county, industry-year and county-year fixed effects, as well as the following household characteristics or individual characteristics of the household head: household net worth and income, age, marital status, education, employment status, and number of children in the household. The unit of observation is a household-year, and the sample includes households who transition to entrepreneurship at some point during the sample period 2001-2007 and whose heads are between 23 and 55 years old. Standard errors are clustered at the household level.

Dep. Var.	Household Income			
	(1)	(2)	(3)	(4)
After Transition	-0.0673***	-0.1057***	-0.1291***	-0.1664***
	(0.0106)	(0.0118)	(0.0111)	(0.0122)
After Transition × High Ability		0.1056***		0.1065***
		(0.0188)		(0.0193)
After Transition × Rich Family			0.4359***	0.5521***
			(0.0489)	(0.0744)
After Transition × High Ability × Rich Family				-0.2251**
				(0.0977)
Controls	Yes	Yes	Yes	Yes
Household FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes
Industry × Year FE	Yes	Yes	Yes	Yes
County × FE	Yes	Yes	Yes	Yes
Observations	628,090	628,090	572,448	572,448
R^2	0.104	0.104	0.105	0.106

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$