Incorporated entrepreneurship in Norway: Propensity and endurance

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ARTICLE INFO

ABSTRACT

This study concerns the relationship between individual characteristics, the propensity to become owners of incorporated firms, and endurance as business owners. We start with a large sample of non-entrepreneurs in 2004 and identify those individuals in this cohort who became and remained majority owners of incorporated businesses between 2005 and 2016. The results indicate that individual characteristics can explain a significant proportion of the variance in the propensity to become owners of incorporated firms as well as business owner endurance. One important finding is that prior income is strongly positively related to becoming and remaining owners of incorporated firms.

1. Introduction

Most research on nascent entrepreneurs does not take the legal form of the business into account. There are, however, reasons to believe that there are large differences between entrepreneurship in incorporated and unincorporated firms, both with regard to characteristics of the individuals involved and their firms.

Shane (2014), for example, mentions several important differences between individuals who are unincorporated and incorporated self-employed in the USA. The incorporated self-employed earn much more, are more likely to have health insurance, are more likely to be male, to be white or Asian, to be in the middle of the age distribution, more likely to be American citizens, more likely to be married, proficient in English, more highly educated, and less likely to work at home.

The purpose of the present research is to use individual characteristics to predict the odds of becoming majority owners of incorporated firms and investigate how different individual characteristics relate to business owner endurance. The dependent variables of this study concern entry into majority ownership of incorporated firms and endurance as owners of such firms. Endurance as business owner is measured in two different ways: survival as business owner and the number of years as business owner.

This study has several novel contributions compared to previous studies on nascent or novice entrepreneurs and entry into self-employment. First, it concerns ownership in incorporated firms, while most previous research on business formation and entry into self-employment does not distinguish between entrepreneurship in incorporated and unincorporated businesses. Second, this study uses data from the Norwegian tax authority, while existing research in this area usually analyze population surveys. Third, we start with identifying a sample on full-time employed non-entrepreneurs and monitor subsequent entry into ownership of incorporated firms in this cohort. We chose this procedure because our focus is on individuals' entry into entrepreneurship rather than continued entrepreneurship, portfolio entrepreneurship or corporate entrepreneurship. This approach is different from most studies of new business

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formation and entry into self-employment, which typically use representative samples of the adult population. Finally, we do not only monitor entry into ownership of incorporated firms, but also exit from such ownership. There are very few previous studies that concern both entry into end exit from business ownership.

In Norway and several other countries limited liability firms (incorporated businesses or corporations) have to meet a minimum capital requirement, are obliged to submit annual accounts to the tax authorities and report any important changes in the business, including changes in ownership, top manager or board composition. For these reasons, corporations are usually larger and less likely to be part-time operations or dormant firms than sole proprietorships and partnerships. Dormant firms or "shelf companies" are therefore not likely to represent a big problem in the analysis.

Since entrepreneurs can own several firms, either sequentially or simultaneously, the present focus is on ownership in incorporated firms rather than individual firm performance. Measuring entry into and exit from ownership of incorporated firms have certain advantages compared to measures of entry into and exit from self-employment. First, firms can exist and even prosper and grow without a self-employed founder. Second, entry into self-employment and exit from such employment are not particularly good success indicators for business owners who never wanted to become self-employed in the first place. A relative high proportion of nascent entrepreneurs and self-employed actually prefer to be employed and to have a regular salaried job (Kautonen et al., 2010). For these individuals, finding suitable employment is a more desirable outcome than survival as self-employed. Third, research on labor mobility (Braunerhjelm et al., 2018), income diversification among small business owners (Carter et al., 2004) and households and in rural areas (Hoggart et al., 1995), suggests that individuals can switch between being self-employed and organizationally employed, causing inflated scores of entry into and exit from self-employment.

2. Literature review

The independent variables in this study are five different individual characteristics: age, gender, income in 2004, residence in Oslo compared to other places in Norway, and people born in Norway compared to people born in other countries. Assuming that findings from studies on nascent entrepreneurs, new business performance and entry into and exit from self-employment can be generalized to incorporated entrepreneurship, we derive hypotheses about the relationships between the various individual characteristics and the propensity to become owners of incorporated firms as well as endurance as business owner.

2.1. Age

Researchers have generally found an inverted U-shaped relationship between age, the propensity to become a nascent entrepreneur (Reynolds and Curtin, 2011) and the odds of entering into self-employment (Simoes et al., 2016). Baptista et al. (2014) found that founders between 40 and 49 years of age had the greatest chances of survival as self-employed. Since previous empirical findings suggest as inverted U-shaped relationship between age and nascent entrepreneurship, and between age and entry into and exit from self-employment we hypothesize:

H1a.   There is an inverted U-shaped relationship between age and the odds of entry into ownership of an incorporated business.

H1b.   There is an inverted U-shaped relationship between age endurance as incorporated business owner.

2.2. Gender

Reynolds and Curtin (2011) summarize the results of longitudinal studies of business creation in nine different countries (so-called PSED studies - Panel Studies of Entrepreneurial Dynamics). In all countries (Australia, Canada, China, Germany, Latvia, Netherlands, Norway, Sweden and USA), PSED researchers reported men to be more likely to become nascent entrepreneurs than females. Research on entry into self-employment also finds that women are less likely to enter into self-employment than men (Simoes et al., 2016).

There are gender differences in the preferred employment status between men and women. One Norwegian study found that 24.6% of employed men and 16.9% of employed women preferred to be self-employed, and that 22.5% of self-employed men and 37.7% of self-employed women preferred to be employees (Kolvereid, 2017). We can therefore expect a higher proportion of males than females to become business owners, and a higher proportion of discouraged entrepreneurs among women than among men.

H2a.   Males are more likely than females to become owners of incorporated businesses.

H2b.   Males have higher endurance as owners of incorporated businesses than females.

2.3. Income

According to opportunity cost reasoning (Hamilton and Harper, 1994), individuals are more likely to become entrepreneurs when the gap between expected utility of exploiting a venturing opportunity and the alternative use of their time is larger. Individuals with low opportunity cost should be more likely to exploit entrepreneurial opportunities (Amit et al., 1993). Shane (2003) argues that some individuals have so high opportunity cost that they will never exploit opportunities whereas others have so little that they will act on almost all opportunities. The opportunity cost argument suggests that individuals with higher income should be less inclined to exploit opportunities and become business owners. Research from different countries also finds that income is negatively associated with the odds of entry into self-employment. Examples include the Canadian study of Amit et al. (1995), the study of Evans and Leighton (1989)

from USA, Johansson (2000) from Finland, and Dolton and Makepeace (1990) from UK.

Another stream of research has investigated the relationship between household wealth and entry into self-employment. Researchers have generally reported a positive (but often weak) association between household wealth and the odds of entry into self-employment (Simoes et al., 2016). These findings suggest that wealthy households are more likely to enter into self-employment because own capital can be used to start a business and used as collateral for external funding. Since we use individual income rather than household wealth as the explanatory variable, we use to the opportunity cost argument and hypothesize:

H3a.   Higher prior income is negatively associated with the odds of becoming incorporated business owners.

Other researchers have investigated the relationship between prior individual wealth and business performance. An example from Norway is Hvide and Møen (2010) who found a highly significant positive relationship between wealth and start-up size and firm financial performance. We therefore hypothesize:

H3b.   Higher previous income is positively associated with endurance as owners of incorporated businesses.

2.4. Urbanization

Arthur (1990) stated that the net benefits to being in a location together with other firms increases with the number of firms in the location. Since then, the cluster or urban density premium effect has been a key feature of modern urban economics (Folta et al., 2006; Fujita and Thisse, 1996). Agglomeration refers to the geographic concentration of companies within certain industries. Rosenthal and Strange (2001) argued that urban agglomeration occurs as a result of the presence of knowledge spillovers, labor market pooling, input sharing, product shipping costs, and natural advantage. Others have argued that demand-side explanations are also of key importance for understanding the clustering of firms (Audretsch and Feldman, 2004; Feldman and Audretsch, 1999). McCann and Folta (2011) found that agglomeration effects accrued asymmetrically to firms with a deeper knowledge stock and firms that are younger. Similarly, Rigby and Brown (2015) found that most manufacturing plants in Canada benefited from co-location, but that smaller and younger firms experienced stronger productivity gains. These results suggest that location in large cluster is associated with higher entry and exit rates (McCann and Folta, 2008).

Oslo is the capital of Norway and with 673,000 inhabitants in 2018 by far the largest city in the country. Theory and empirical findings that concern urban economics predict that residence in Oslo is associated with higher rates of entry into ownership of incorporated firms, but also that residence in Oslo is associated with higher exit rates and lower endurance as business owners. We therefore hypothesize:

H4a.   Residence in Oslo is positively associated with the odds of becoming owners of incorporated businesses.

H4b.   Residence in Oslo is negatively associated with endurance as owners of incorporated businesses.

2.5. Immigrants

The propensity to start a business and enter into self-employment is very different among immigrants from different countries (Aliaga-Isla and Rialp, 2013; Clark et al., 2017). Immigrants from Asia are generally found to have higher odds of becoming entrepreneurs in their host country than immigrants from Africa. Such effects are found in studies from Canada (Hiebert, 2003), USA (Camarota, 2000, 2011), the UK (Barrett et al., 2002) and many other countries. Because of the large differences between immigrants from different countries, and because some countries are better at integrating immigrants into the economy, it is not possible to generalize about the entrepreneurial propensity among immigrants compared to the domestic population. Based on a representative sample of Norwegian new businesses established in 2002, Vinogradov and Isaksen (2008) reported that 5.7% of their sample was businesses founded by immigrants, while 7.3% of the population in Norway in 2002 were immigrants (SSB, 1993). Vinogradov and Isaksen (2008) further found that the survival rate was lower for business founded by immigrants compared to firms established by natives. Their findings suggest that immigrants are less likely to start businesses and that their survival rates are lower than those of native Norwegians.

H5a.   Norwegian natives have higher odds of becoming owners of incorporated businesses than immigrants.

H5b.   Norwegian natives have higher endurance as owners of incorporated businesses than immigrants.

3. Methodology

3.1. Data

Business founders in Norway have to register their firm and obtain an organization number before they can open a bank account for their firm and start to trade or hire personnel legally. Therefore, the identification of new businesses and new business owners is relatively easy.

The tax authority in Norway provided the data used in this study. The initial step in the data collection process involved the identification of all taxpayers in Norway who were between 25 and 50 years of age in 2004. This age interval is the same as Folta et al. (2010) used in their study of hybrid entrepreneurs, and was chosen because individuals between 25 and 50 years of age have the highest

propensity for entrepreneurship. The year 2004 was the earliest year the tax authority had complete data of shareholders in corporations. The next step was to identify all full-time employed adults who had no roles in business in 2004. According to one of the main labor unions in the country, the minimum annual salary for full-time employees in 2004 was NOK 196000[1] (Fagforbundet, 2004). We therefore required individuals to have an income in 2004 above this threshold. Further, we removed individuals who in 2004 were sole proprietors, business partners in partnerships, majority shareholders or board members in corporations. A total of 686,088 individuals in Norway satisfied these criteria.

The Norwegian tax authority has databases for shareholders in companies every year. Starting in 2005, for every year until 2016, we identified individuals who in each year were majority owners of incorporated firms (i.e. owned at least 51%).

From 2005 to 2016, 29,752 of the 686,088 individuals (4.3%) became majority owner of at least one incorporated business. The sample consists of all individuals in the country who in 2004 satisfied the selection criteria and among them all who became majority owners of limited liability businesses between 2005 and 2016. As each firm has a lead entrepreneur, it is justified to study how age, gender, income in 2004, residence and nationality influence the decision to become and remain business owners.

3.2. Measures

Entry into business ownership was coded as a binary variable (owner = 1, non-owner = 0). Survival as business owner was coded as a binary variable for people who were owners in any year between 2005 and 2015 (=1), but not in 2016 (=0). In the analysis of survival as business owner, the first measure of entrepreneurial endurance, we excluded novice entrepreneurs who became owners for the first time in 2016. The second measure of entrepreneurial endurance, years as business owner, was calculated as the number of years each individual was majority owner of at least one incorporated business between 2005 and 2016.

The independent variables include age in 2004 (measured in years), gender (1 = male), total net income before tax in 2004 (measured in NOK), residence in Oslo (=1) or not (=0), and country of birth (Norway = 1, other = 0). We also include age squared, to investigate a possible non-linear effect of age, and the number of years after 2004 it took before the individual became a majority owner of an incorporated firm for the first time. The timing of entry into business ownership for the first time is important to control for. Individuals who enter early into business ownership are more likely to have exited from business ownership than individuals who enter into business ownership at a later time. Further, individuals who enter into business ownership early are likely to remain owners for a longer time than individuals who become owners later. This variable indicates the number of years passed since 2004 to first year of entry into business ownership and can have values from 1 to 12.

3.3. Sample

The sample consists of 686,088 individuals who in 2004 were 25–50 years old and non-entrepreneurs in full-time employment. The average of the participants in 2004 was 38.9 years and 56% were male. The average income in 2004 was NOK 578,711, 10% were residents in Oslo, and 93% were born in Norway. From 2005 to 2016, a total of 29,752 (4.3%) of these individuals became majority owners of incorporated businesses. When analyzing survival as business owners in the multivariate testing of hypotheses, the 2478 persons who became owners for the first time in 2016 were excluded from the analysis, leaving 27,135 owners for the analysis, including 20,885 survivors and 6250 discouraged entrepreneurs who were not longer business owners in 2016. Excluding indirect ownership through holding companies, the average number of firms owned between 2005 and 2016 was 1.167 with a maximum of 9.

4. Results

To prepare the testing of hypotheses, we first carried out a correlation analysis. Table 1 shows the results.

Table 1 shows positive correlations between being male, prior income, residence in Oslo, and being born in Norway. The correlation between age in 2004 and entry into business ownership is negative. Being male, having high prior income and being born in Norway correlate positively with survival as business owner as well as the number of years as business owner, but the correlations between residence in Oslo and the two measures of endurance are very low.

The hypotheses that concern entry into business ownership were tested with logistic regression. We added age squared to the independent variables, to test the hypothesized curve-linear relationship between age, entry into business ownership and endurance as business owner.

As shown in the first column in Table 2, age is positively associated with entry into business ownership, while the effect of age square is under 1, supporting an inverted U-shaped relationship between age and entry into business ownership as stated in H1a. The effects of being male, being resident in Oslo and being born in Norway are positive and statistically significant in support of H2a, H4a, and H5a. Contrary to H3a, the results show a strong positive effect of having high income on the odds of entering into business ownership.

The hypotheses that concern the relationship between individual characteristics and ownership survival, the first measure of ownership endurance, were also tested using logistic regression. In addition to the independent variables and age squared, we also entered the number of years from 2004 until the first entry as business owner as a control variable, since individuals who become business owners early are less likely to survive as owners than individuals who become owners later. The results from this testing are shown in the second column in Table 2.

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[1] 1 NOK = approx. 0.12 USD.

Table 1

Descriptive statistics and correlations among the analysis variables.

	Mean	SD	2	3	4	5	6	8	9	Mean	SD
1.Years to first entry	–	–	-.118	-.060	-.116	-.017	-.040	.166	-.792	6.23	3.75
2.Age	39.94	6.35	1	−014	.187	-.019	.014	-.007	.110	38.59	6.13
3.Male	0.559	.50	-.026	1	.142	-.045	.037	.061	.089	.837	.30
4.Income 2004 in NOK	578,711	281,676	.110	.286	1	.120	.020	.065	.146	726,517	594,136
5.Residence in Oslo	.100	.30	-.034	-.028	.084	1	-.119	.003	.014	.128	.33
6.Born in Norway	.929	.26	.017	-.011	.012	-.156	1	.047	.058	.932	.25
7.Ever owner	.043	.20	-.045	.119	.165	.019	.002	–	–	–	–
8.Survival	–	–	–	–	–	–	–	1	.286	.770	.42
9.Years as owner	–	–	–	–	–	–	–		1	5.67	3.69

Note: The descriptive statistics on the left and the correlations lower left triangle concern the entire sample (n = 686,088). All correlations in the lower left triangle are statically significant at p ≤ .05 (two-tailed). The descriptive statistics on the right and the correlations in the higher right triangle concern business owners (n = 29,752) except for correlations with survival where n = 27,135 since individuals who entered into business ownership for the first time in 2016 are excluded. All correlations on the right ≥0.014 are statistically significant at p ≤ .05 (two-tailed test).

Table 2

Prediction of entry into business ownership, survival as business owner and owner endurance in years.

Dependent variable	Entry	Survival	Endurance in years
Predictors	Exp(B)	Exp(B)	Beta
Years to first entry	–	1.142*	-.781*
Age	1.107*	1.159*	.284*
Age Squared	.998*	.998*	-.276*
Male	3.325*	1.438*	.035*
Prior income in 100 K NOK	1.138*	1.049*	.048*
Residence in Oslo	1.171*	1.022ns	-.001ns
Born in Norway	1.107*	1.614*	.024*
−2 Log likelihood	225151	28068	–
Cox & Snell R Square	.028	.044	–
Nagelkerke R Square	.095	.067	–
Adj. R Square	–	–	.632
F	–	–	7313*

Note: n = 608,088 for entry, n = 27,135 for survival, and n = 29,752 for endurance in years. * indicates p ≤ .001; ns = not significant.

The results reported in the second column in Table 2 indicate that there is an inverted U-shaped relationship between age and survival as business owner, in support of H1b. The effects of being male, having high prior income, and being born in Norway are positive and statistically significant in support of H2b, H3b, and H5b.

In the next tests of hypotheses H1b, H2b, H3b, H4b, and H5b, we entered all the same explanatory variables as before, but used the number of years as business owners as the dependent variable in a regression. We here also included the number of years from 2004 to the first entry as business owner because individuals who become owners early are likely to have been owners longer than those who enter into business ownership later. The results from the regression analysis are shown in the third column in Table 2.

As shown in the third column in Table 2 age is positively related to endurance as business owner, while age squared has a negative effect. This indicates an inverted U-shaped relationship between age and endurance. Being male, having high prior income, and being born on Norway are all positively and statistically significantly related to the number of years as business owners. These findings support H1b, H2b, H3c, and H5b. Hypothesis H4b, which suggested that residents in Oslo should have lower endurance as business owners, is not supported.

5. Discussion

5.1. Overview of findings

The findings indicate that there is an inverted U-shaped relationship between age and entry into business ownership and between age and both measures of endurance as business owners. Men are more likely to become business owners than women, and men have higher endurance as business owners than women. The findings further indicate that there is a positive relationship between prior income and the odds of entry into business ownership and between prior income and endurance as business owner. Residents in Oslo are more likely to become business owners than residents outside Oslo, but residence in Oslo has no effect on business ownership endurance. Finally, people who are born in Norway have higher odds of becoming business owners than immigrants, and Norwegian natives who become business owners have higher endurance as business owners than business owners born in another country.

When comparing the results reported here to previous research, it is important to be aware of some differences between this study and many previous studies. First, previous research often link individual characteristics of the entrepreneur (such as age, gender, education and experience) to business outcomes even though the business is a team effort. This study avoids this problem by only including

majority owners. Second, this study uses the individual rather than the business as the unit of analysis giving credit to multiple business owners. Entrepreneurs often survive longer as business owners than one would be inclined to believe when the unit of analysis is the business. Third, many previous studies include both incorporated and unincorporated entrepreneurs. Such studies try to generalize, but entrepreneurship in incorporated and unincorporated firms is clearly different (Herranz et al., 2017).

5.2. Industry differences

To check the sensitivity of the findings for endurance as business owner with regard to industry, we used the first NACE code reported by the business owners. Unfortunately, NACE codes were missing for 8991 owners. We created dummy variables for manufacturing, business-to-business services (B2B), and business-to-consumer (B2C) services and entered them into the regression along with the independent variables. The findings with regard to the independent variables were robust. All industries were positively associated with years of owner endurance, but having missing values for industry was significantly negatively related to years of owner endurance. We also coded industry with regard to the intensity of labor, knowledge and capital. Again, all the hypotheses received support. However, business owners in knowledge and capital intense industries had longer owner endurance than business owners in labor intense industries.

5.3. Implications for practice and theory

The strong relationship between prior income and ownership in incorporated businesses reported here suggests that there may be liquidity constraints to becoming and remaining owners of incorporated firms. This finding is important because it can indicate economic inefficiencies and serve to justify the provision of government grants, loans and guarantees to nascent entrepreneurs with good ideas but little money (Fairlie and Krashinsky, 2012). Since income in 2004 correlates positively with all the other independent variables, differences in income and wealth can explain some of the lower propensity to become owners of incorporated firms and some of the lower endurance as business owners among women, young people, residents outside Oslo and immigrants. The findings reported here offer justification for government support to individuals with low income, women, young people, residents in rural areas and immigrants with good and profitable venture ideas who aspire to become owners of incorporated firms.

An important implication for research from this study is that we should be careful when theorizing, generalizing and drawing conclusions from studies of nascent entrepreneurs and self-employment when legal form is not taken into account. The results presented here suggest that opportunity cost reasoning is poorly suited to explain and predict entrepreneurship in incorporated firms. This study also questions the frequent use of self-employment as a proxy for entrepreneurship in economic research. Self-employment in unincorporated firms is more common than self-employment in corporations, but incorporated entrepreneurs are more important to the economy than unincorporated entrepreneurs since they tend to operate larger businesses, accumulate more wealth and be more productive (Herranz et al., 2017).

5.4. Limitations and future research directions

This study has several limitations. We have focused on ownership and have made no distinction between start-ups from scratch and acquisitive entries. It is likely that some of the business owners are part-time entrepreneurs. It is also possible that some of the discouraged entrepreneurs have not exited from business ownership, but have reduced their ownership share and are not longer majority owners. Our analysis is based on business ownership between 2005 and 2016. The choice of time period influences the results. For example, the impact of age and income in 2004 will decrease the longer the time horizon. This means that the results presented here probably underestimate the importance of age and prior income.

With regard to constraints of generality (Simons et al., 2017), readers should be aware that Norway has a business registration regime that requires new firms to be registered before they can start trading or hiring employees legally. Therefore, the findings reported here might not be generalizable to countries with other ways of registering new incorporated firms. The costs involved with starting a new incorporated firm also varies between countries and many countries specify a minimum equity requirement for such firms. We expect that the positive relationship between income and the propensity to enter into ownership of incorporated firms will be stronger the higher the costs involved with start-up or entry into ownership of such firms. Moreover, gender differences and the composition of the immigrant population is likely to vary between countries. Therefore, gender and immigrant status may have different effects on ownership in incorporated firms in different countries.

The results reported here suggest several avenues for future research. We know relatively little about novice owners of incorporated firms and their ventures and about factors that are associated with successful careers as incorporated firm owners and wealth creation. Examples of interesting research questions include: What are the advantages and disadvantages of starting a career as incorporated businesses owner in a team? Are owners of incorporated firms able to learn from prior failure? Are some owners unfit for entrepreneurial careers and best advised to become regular employees? In order to succeed as multiple business owners, should the characteristics of the initial businesses be different from later businesses? Should novice entrepreneurs choose to enter existing industries with known technology and markets and only become innovative and launch more novel ventures later in their careers? How do multiple business owners develop their firm portfolio over time? What are the characteristics of successful firm portfolios?

6. Conclusion

The costs involved with generating representative samples of nascent entrepreneurs from population surveys are very high, and the loss of respondents in follow-ups often prevents useful multivariate analyses of business outcomes (Samuelsson, 2011). Studies of entry into and exit from self-employment usually analyze data from general-purpose population surveys and are rarely truly longitudinal. We hope that this study will spur researchers to carry out future studies of entrepreneurship in incorporated firms using reliable secondary data from tax records and business registers in countries where such data is available.

Declaration of interest

None.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jbvi.2019.e00120.

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