Chapter 13
Entrepreneurial Risk Without Return? Empirical Evidence from Self-Employed Accountants in Germany

Robert Rieg

Abstract Economic theories of entrepreneurship state that the higher risks of self-employment should be compensated by higher profits compared to income earned by those being on the payroll of firms. Yet, this seems not always the case given the evidence provided in this chapter: Self-employed accountants in Germany earn on average less than full-time employees. Only a minority earns higher profits. The evidence is reconciled with economic theory of entrepreneurship through considering situational and preferential causes. Firstly, self-employed accountants face lower risks than other professions; secondly they compensate lower earnings with higher preferences for independence and autonomy. A further factor yet not often considered in entrepreneurship research is the service portfolio offered. Accountants can influence their returns through the services they offer. A significant amount of the respondents chose less profitable services. The paper contributes to the literature on economic analysis of entrepreneurship in providing evidence not available before and on stressing the importance of evaluating peculiarities of professions as well as contexts in order to understand decisions for self-employment.

13.1 Introduction

The purpose of this paper is twofold: first, to test the claim that entrepreneurs should earn a risk premium compared to employees, second, to explain the test results with the specific situation and preferences of self-employed accountants.

Economic theory explains decisions for self-employment compared to be employed by a firm through cost-benefit considerations. Since income risks are

R. Rieg (✉)
Aalen University School of Management & Business Sciences, Aalen, Germany

Reussensteinstrasse 10, Ostfildern 73760, Germany
e-mail: robert.rieg@htw-aalen.de

higher for self-employed, risk-neutral or risk-averse individuals would expect higher income compared to their previous or similar employments at firms. The difference is called risk premium. While in general true, this paper provides evidence that self-employed accountants do not earn a risk premium, even after controlling for several context factors.

An important goal of scholarly discussion of entrepreneurship is to understand decision-making of individuals in starting a business and the contingency factors influencing such decisions (Audretsch 2012). Scholars apply a multitude of approaches to analyse decision-making, motivation and contingencies of nascent and incumbent entrepreneurs. Yet, only empirically tested and grounded theories can inform scholars and practitioners. Empirical studies like the paper at hand contribute to the growth in insight.

The specific contributions of the paper are as follows: decisions for self-employment are, consistent with the literature, driven not only by profitability compared to paid employment but also by other considerations as well as perceived benefits of autonomy and satisfaction. The study adds a further context factor to the literature: profitability may be influenced by the specific risk situation of a certain profession. While business cycles in general and especially the latest recession around the years 2010–2012 may influence the overall business climate, it seems that the accounting profession was less affected by that.

Previous studies on the relation of risk and return for self-employed individuals compared with paid employment focused on large diverse samples mainly from the USA (for example Hamilton 2000). Their results do not support the notion of higher returns as a compensation of higher risks for entrepreneurs, to the contrary. Yet, it is not plausible to assume a time- and scale-invariant relation: samples at different points in time with different subgroups in a sector and of different cultural and political contexts could reveal different results.

Accounting is one profession where we could expect higher returns for self-employed individuals given higher entry qualifications than a lot of other professions or activities and increased complexity of accounting regulations which should transform in more valued services.

After developing hypotheses we constructed a conceptual model and derived a multiple linear regression model for empirical testing. We tested the regression model with data from a survey on self-employed accountants. The results show that median profit per capita for self-employed accountants is lower than gross income of fully employed accounting staff. We explain this by (a) the lower risks compared to other professions and jobs, (b) the pursuit of autonomy and higher job satisfaction in self-employment and (c) the relatively low-priced services ("commodities") offered by many accountants.

The paper contributes to the literature of economic entrepreneurial theory three-fold: (a) it shows that risks of self-employment are not per se higher than for fixed-term employments, one should carefully evaluate the specific situation of the targeted area of self-employment; (b) latent entrepreneurs may consider additional factors and weigh them differently in their decisions to start a business. Preferences may vary between individuals; (c) effects of service portfolio on profitability.

In total while economic theory of entrepreneurship maybe a valid description in general, specific details have to be analysed in order to understand and explain self-employment decisions more fully.

13.2   Theoretical Backgrounds

13.2.1   Theories of Self-Employment Decisions-Making

Audretsch (2012) states the multitude of approaches and perspectives of entrepreneurial research. One category in entrepreneurial research is the focus on the organisational context and its prevalent theoretical framework of income choice: individuals make decisions for or against self-employment by weighing cost and benefits of self-employment versus paid employment (Douglas and Shepherd 2002). That raises two subsequent questions: What factors influence such a decision and do self-employed experience the expected benefits after their decision?

The literature mentions plenty of contingent factors which can be grouped in (a) personal characteristics like education or self-perception as entrepreneur, (b) firm-specific characteristics like amount of working hours or starting a business with others and (c) environmental characteristics like industry, regulation or cost of starting a business (Cholotta and Drobnič 2009).

Looking past an initial decision to begin with self-employment, some argue the main success factor of entrepreneurs is their survival in business (van Praag 2003). Yet, economic theory sets the hurdle higher: self-employed individuals should earn a profit on average higher than with paid employment because of the higher uncertainty they face (Ravi Kanbur 1982). The literature offers several explanations for the so-called income differential between self-employed and paid employed (Hamilton 2000):

Investment and agency: cross-sectional differences exist due to better exploitation of an individual's social and human capital investment by her while lack of agency reduces steepness of income profiles compared to paid employment.

Matching and learning: individuals match their abilities (self-selection) to areas where it fits better or learn to adapt to such an area and quit respectively if it does not fit.

Superstar: due to minor differences amplified over time, some can earn extremely more than others which attract followers, but only a minority will be superior. The median income could then be lower than for paid employed individuals.

Compensation: lower earnings are compensated by other benefits like independence, autonomy, job satisfaction.

Return on entrepreneurship and self-employment is more volatile and its distribution is extremely skewed compared to paid employment (Hall and Woodward 2010; van Praag and Versloot 2007). According to Hamilton (2000) the median entrepreneur earns less than her paid counterpart. He explains the negative income differential explained mainly by compensating factors for income i.e. self-employed sacrifice income for other benefits.

However, the evidence is inconsistent, study results depend on samples chosen, time frames and sectors (Parker 2009). Most studies focus on a large and diverse group of self-employed and do not distinguish different professions which could result in differing evidence (Hamilton 2000). Especially freelancers and self-employed in service industries are seen as gap in entrepreneurial research (Kitching and Smallbone 2012).

Additionally, we hypothesise the impact of the services offered on profitability. Since business can and do offer different products and services, their profitability will differ depending on their service and product portfolio. A more detailed look into such portfolio decisions is necessary to understand profit dispersion of self-employed. This focus seems to be an open research question.

We focus on self-employed in accounting for two reasons: (1) Accountants are a homogeneous group regarding qualification, general services offered, economic and political situation, differences concerning the proposed factors influencing profitability should more easily recognisable. (2) Accounting professionals are one of a group of freelancers and service professionals which are seen as a gap in entrepreneurial research (Kitching and Smallbone 2012). For practical reasons and because it offers a perspective different from the often researched US samples, we will focus on accountants in Germany.

13.2.2 Self-Employment in Accounting

External accountants, be it self-employed individuals as well as firms, provide external business advice for firms and not-for-profit organisations (see e.g. Bennett and Robson 1999; Gooderham et al. 2004). Their service portfolio consists mainly of accounting tasks, auditing and tax advisory as well as general consulting. The accounting tasks consist of bookkeeping, i.e. entry of transactions, preparation of preliminary P&L statements, year-end accounting and preparation of financial statements (Everaert et al. 2010).

The main research stream on external accounting services concentrates on the auditing function (e.g. Niemi 2004); much lesser research focuses on tax accounting services, at least from an organisational point of view. The least researched group comprises self-employed accountants who do not offer—or are not allowed to offer—auditing and tax advisory services. This is especially true for German accounting firms and accountants.

We exclude auditors (or public accountants) and tax advisors for the high level of regulations (Baker et al. 2001) and highly challenging nationwide exams. Both form high market entry barriers and restrict the number of market participants which reduces competition and risks of service provision. Given that, the profitability of public accountants and tax advisors is less driven by market forces. Additionally, since their services are defined by law and firms are required by law to mandate them, there is only a low degree of freedom for their service portfolio. Yet, a high degree of freedom in making such decisions is central to our research and we focus

on external accountants who do not offer auditing and tax advisory—in the following referred to as self-employed accountants.

Concerning accounting services for self-employed accountants, their services are defined in part by the regulation for tax advisors (StBerG, short for Steuerberatergesetz, law on tax advisors). By law, self-employed accountants are allowed to offer (§6 no. 3 and 4 StBerG): (1) entry of transactions regarding debtors, creditors, exchange of goods and services (bookkeeping) and (2) payroll accounting.

They are not allowed by law to prepare annual reports (balance sheet, income statement) or preliminary and final turnover tax returns. But, since there is no regulation in Germany concerning cost accounting and general business consulting, they are free to offer additional services of these kinds. So they have a certain degree of freedom in making services decision.

Compared to around 12,000 public accountants and more than 70,000 tax advisors in Germany the number of self-employed accountants is estimated around 20,000 in contrast to more than 150,000 full-paid employees in accounting (BVBC e.V., personal communication).

The specific risk situation of accountants seems to be different from that of other self-employed for several reasons. Although many European countries including Germany, albeit to a lesser degree, faced a recession starting from 2009, demand for accounting services remained on a constant level or even grew. This is in part explainable by the trend for more regulation and more complexity in accounting standards which in turn benefits specialised professionals and reduces the number of small- and medium-sized firms willing or being able to employ paid accountants.

13.2.3 Hypotheses

The previous discussions led to two hypotheses. The first hypothesis proposes a positive income differential for self-employed accountants; the second hypothesis proposes factors moderating the magnitude and direction of this income differential.

Hypothesis H1: median income of self-employed in accounting is higher than paid employed. Rationale: given the higher risks of self-employment, they should be compensated by higher income. Since income distribution is skewed and not normal it is more appropriate to compare median values.

Income could be measured by profit but since profit is prone to discretionary decisions of self-employed we will compare at first revenue as an indicator of market performance. Subtracting a median cost margin of all respondents will allow to calculate the median profit.

Hypothesis H2: Income of self-employed is moderated by additional contingency factors. These factors are autonomy (Hamilton 2000; Carsrud and Brännback 2011), experience in self-employment, measured in years (Robinson and Sexton 1994; van Praag et al. 2013), gender (Gottschalk and Niefert 2013) and service portfolio offered.

13.3   Methodology and Data

13.3.1   *Statistical Inference*

13.3.1.1   Hypothesis 1: χ^2-Test

Since the sample we surveyed consisted only of self-employed accountants and we want to compare returns for self-employed to paid employed individuals we have to compare the results of our survey with other survey data. Here we use the data of the latest survey on salaries of paid employed accountants of the BVBC e.V. in 2012.

The statistical inference is based on the test of equality of both surveys, i.e. a χ^2-test for the two groups of data. The null hypothesis is that both groups earn the same.

13.3.1.2   Hypothesis 2: Multivariate Regression

Given one dependent variable (sales or profit) and several independent variables which can interact we chose to apply multivariate regression. An a priori power test with $\alpha = 0.05$, $\beta = 0.95$, a medium effect size and five predictors results in a required sample size of $n = 138$ (calculated with G*Power 3.1.5, see Faul et al. 2007).

The regression equation reads as follows:

$$Sales = \beta 1 + \beta 2 * motivation + \beta 3 * Experience + \beta 4 * gender + \beta 5 * low\_portfolio + \beta 6 * high\_portfolio.$$

Motivation is a dummy variable which captures the answers for the main motivation to start a business: higher income (value 1) or autonomy (2) or both (3).

The services offered are divided into two groups: one with low hourly rates consists mainly of typical bookkeeping activities; it is named low_portfolio. The second consists mainly of consulting and management accounting services with significantly higher hourly rates; it is named high_portfolio.

13.3.2   *Sample, Questionnaire, Data and Survey Procedure*

Since our target population is accounting professionals we could resort to a long-standing cooperation with a professional association of financial and management accountants in Germany (BVBC—Bundesverband der Bilanzbuchhalter und Controller). With them we conducted several surveys on different matters over the years. One of these surveys concerned self-employed accountants: it was performed for the third time in 2012. In the 2012 survey, we focussed on testing the hypotheses mentioned before. Base year for the data was 2011.

We developed the questionnaire in spring 2012 and did a pretest with several accountants. After changes and suggestions were incorporated, the association BVBC sent a link to the online survey via e-mail in June 2012 to its members who are self-employed. The self-employed can take part in a mailing list, it encompasses around 900 members. The members had 3 weeks to fill in the questionnaire and were reminded once. To increase participation several prizes were offered (books, attending seminars for free).

In total, 176 respondents filled in the questionnaire though not all of them completely; so some statistics will show lower sample sizes due to missing data.

13.4   Main Results

13.4.1   Descriptive Statistics

Nearly a half of all respondents work in financial accounting (47 %), while only 9 % concentrate solely on management accounting tasks, 16 % do both and a further 29 % provide other services. Fifty-five percent of all respondents were male, 45 % female. Most of the respondents have long-standing experiences as self-employed as well as working as paid employee.

An interesting analysis is the range of services offered by the respondents (see Fig. 13.1). As is indicated in Fig. 13.1, many self-employed accountants concentrate on bookkeeping and related services. These are also those which have lower rates to charge to clients that the services in the lower part.

Comparing the previous surveys with the actual one, we can see from Table 13.1 an increase in revenues which should lead to an increase in profits as well. The compound average growth rate for median revenue is 3.6 % per year. The several surveys showed a steady upward trend in prices, revenues and profits. There were no signs of a weak economic condition affecting profitability or the overall situation of accountants in Germany.

13.4.2   Test Results Hypothesis 1: Income Differential

We compare the revenue per capita for self-employed with a median of 40.000 EUR and the gross income of paid employed with a median value of 45.000 EUR. The χ^2-test on equality results in a value of 14.05 (df = 16) which is higher than the critical χ^2 value of 9.3 on a 1 %-statistical significance level, so there is a large probability for differences between both groups. The χ^2 value can be transformed into the effect size w (Cohen 1988); here the value is 0.21 which can be seen as a small to medium effect. The differences and effects are higher when we compare the net earnings before tax per capita to gross income. Given a median return on sales
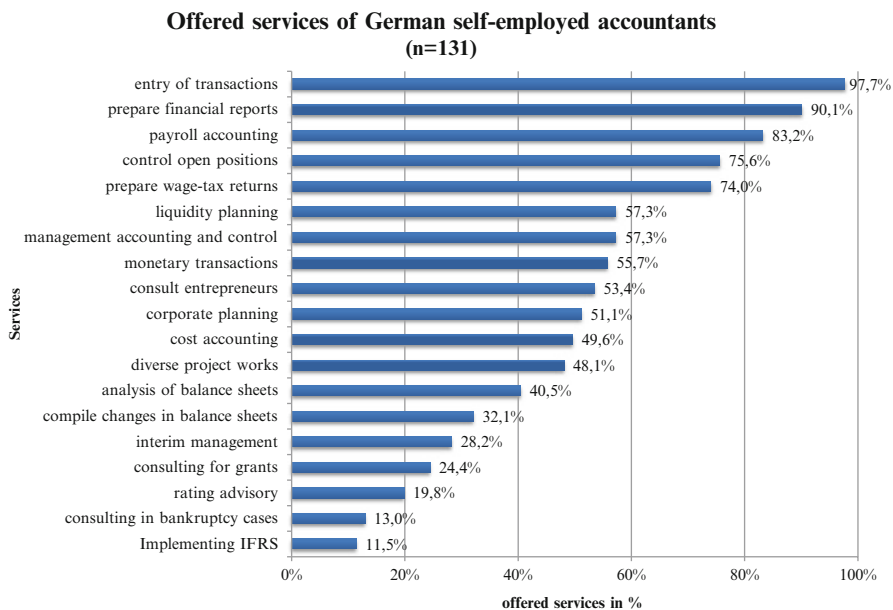
**Offered services of German self-employed accountants
(n=131)**

Fig. 13.1 Services offered by respondents

Table 13.1 Revenue trend for self-employed accountants

Base year of survey	2005	2008	2011
Average revenue [EUR]	38,170	44,787	53,330
Median revenue [EUR]	35,000	40,000	43,250
Sample size [no.]	116	58	96

(earnings before tax/revenue) of 51 %, the median self-employed accountant would receive a profit before earnings of around 21.000 EUR. Clearly, hypothesis 1 is refuted, there is a large and negative income differential for self-employed accountants.

13.4.3 Test Results Hypothesis 2: Contingency Factors

The test for multiple regression yields a coefficient of determination (R^2) of 0.024, so the regression explains only 2.4 % of all variance, this is equivalent to Cohens $d = 0.16$ which indicates a small effect. Considering the skewed distribution this could be interpreted as a signal to use other regression techniques.

The partial correlation coefficients for the independent variables are: (1) less profitable services −0.032, i.e. a weak negative influence on revenue, (2) highly profitable services with 0.063, i.e. a weak positive influence on revenue, (3) gender:

−0.173, i.e. a medium negative influence on revenue which means that female accountants earn less than male accountants, (4) motivation: +0.140, i.e. a medium influence of independence on revenue and (5) experience as self-employed (0.097) has nearly no influence.

The correlations between these variables show that female accountants are more motivated by independence than male ones; highly profitable services are offered more often by male accountants. Yet, one should be cautious in interpretation, since the values of correlations are rather small.

13.5   Discussion

The aim of the study was to shed light on the economic situation and decision-making of self-employed accountants, a profession not empirically analysed in detail. Main results are the negative income differential and the modest influence of several dependent variables on per capita revenue. This seems surprising given the notion of "return on expertise" and "return on education" but it is consistent with studies focusing on larger samples (van Praag and Versloot 2007). Several explanations are possible for the negative income differential: accounting services may have become "commodities" so one cannot charge high rates anymore as may have been true in the past. Self-employed may have started their business with higher income expectations and then adapt to a lower income and justify that in some sense with their feeling of independence.

While economic theory suggests higher risks for self-employment, our results are not in line with that notion. Given the steady increase in prices, revenue and profits over the years (see Table 13.1) the evidence may hint to equal or lower risks of self-employment compared to paid employment. For example, the economic weakness and tendencies of recession is not showing up in the data, to the contrary.

A limitation of the study is the statistics employed. The regression results should be viewed with caution since the skewness of revenue and profit data distorts regression results. Further analysis should apply advanced methods to avoid biases, for example, quantile regression.

References

Audretsch D (2012) Entrepreneurship research. Manag Decis 50(5):755–764

Baker CR, Mikol A, Quick R (2001) Regulation of the statutory auditor in the European Union: a comparative survey of the United Kingdom, France and Germany. Eur Account Rev 10(4):763–786

Bennett RJ, Robson PA (1999) The use of external business advice by SMEs in Britain. Entrepren Reg Dev 11(2):155–180

Carsrud A, Brännback M (2011) Entrepreneurial motivations. What do we still need to know? J Small Bus Manag 49(1):9–26

Cholotta K, Drobnič S (2009) Wann ist eine Gründung erfolgreich? Facetten und Faktoren objektiven Erfolges in kleinen Unternehmen. Z KMU Entrepren 57(34):239–258

Cohen J (1988) Statistical power analysis for the behavioral sciences. Lawrence Erlbaum Associates, Hillsdale, NJ

Douglas EJ, Shepherd DA (2002) Self-employment as a career choice: attitudes, entrepreneurial intentions, and utility maximization. Entrepren Theor Pract 26(3):81–91

Everaert P, Sarens G, Rommel J (2010) Using transaction cost economics to explain outsourcing of accounting. Small Bus Econ 35(1):93–112

Faul F, Erdfelder E, Lang A, Buchner A (2007) G*Power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences. Behav Res Methods 39(2):175–191

Gooderham PN, Tobiassen A, Døving E, Nordhaug O (2004) Accountants as sources of business advice for small firms. Int Small Bus J 22(1):5–22

Gottschalk S, Niefert M (2013) Gender differences in business success of German start-up firms. Int J Entrepren Small Bus 18(1):15–46

Hall RE, Woodward SE (2010) The burden of the nondiversifiable risk of entrepreneurship. Am Econ Rev 100(3):1163–1194

Hamilton BH (2000) Does entrepreneurship pay? An empirical analysis of the returns to self-employment. J Polit Econ 108(3):604–631

Kitching J, Smallbone D (2012) Are freelancers a neglected form of small business? J Small Bus Enterprise Dev 19(1):74–91

Niemi L (2004) Auditor size and audit pricing: evidence from small audit firms. Eur Account Rev 13(3):541–560

Parker SC (2009) The economics of entrepreneurship. Cambridge University Press, Cambridge

Ravi Kanbur SM (1982) Entrepreneurial risk taking, inequality, and public policy: an application of inequality decomposition analysis to the general equilibrium effects of progressive taxation. J Polit Econ 90(1):1–21

Robinson PB, Sexton EA (1994) The effect of education and experience on self-employment success. J Bus Venturing 9(2):141–156

van Praag CM (2003) Business survival and success of young small business owners. Small Bus Econ 21(1):1–17

van Praag CM, Versloot PH (2007) What is the value of entrepreneurship? A review of recent research. Small Bus Econ 29(4):351–382

van Praag CM, van Witteloostuijn A, van der Sluis J (2013) The higher returns to formal education for entrepreneurs versus employees. Small Bus Econ 40(2):375–396