

## **Micro Data on Entrepreneurship: Munich and Leipzig Founder Studies**

By Josef Brüderl, Thomas Hinz and Rolf Ziegler

### **Introduction**

Entrepreneurship has become a central issue in a variety of academic disciplines such as industrial and regional economics, labor economics, sociology, organizational theory, and psychology. International journals (e.g. *Small Business Economics*, *Entrepreneurship and Regional Development*) have been established and contributions to them attract readers in academia and policy as well. The issue of creating new businesses is important for the ongoing debate on political strategies to support economic growth and innovation and to reduce unemployment. It is obvious that this debate should be informed by empirical studies on entrepreneurship.

However, empirical work in this interdisciplinary field is often troubled by data problems. Studies are frequently based on small numbers or few industries. On the other hand, entrepreneurship data that cover many industries are usually derived from official or commercial registers and therefore restricted to a small number of variables (for two examples in this series see Wagner 2000, and Almus et al. 2000). Finally, research on new businesses is mainly based on cross sectional designs (exceptions are the two data sets just mentioned). Therefore, studies on entrepreneurial success often face severe selection problems because only surviving firms are sampled.

The data sets described in this paper avoid these shortcomings since they have been gathered with a representative sampling strategy from total cohorts of newly founded firms in two German regions (upper Bavaria with the central city of Munich and the western part of Saxonia with Leipzig as the central town). Several years after founding not only founders of still existing enterprises but also those of firms meanwhile closed were confronted with extensive face to face interviews thus avoiding survivor bias. In short, the Munich and Leipzig Founder Studies offer rich data on cohorts of newly founded businesses in two German regions. In addition, both data sets are available as public use files.

The paper is structured in three sections. Firstly, we describe the Munich Founder Study, the blueprint for the subsequent Leipzig counterpart. Readers are given an overview on the variables gathered. Secondly, specific features of the Leipzig Study are described. In the third section, we introduce some research topics for which both data sets have been used so far. We also give an illustration: comparing firm growth across regions. Finally, we address questions of data comparability and access.

## 1. Munich Founder Study

Since the late 1980ies a group at the Institute for Sociology at the University of Munich<sup>1</sup> focused its research on the topic of newly founded businesses. Research was driven by different theoretical approaches, e.g. human capital theory, social network theory, population ecology (for an overview: Brüderl et al. 1998, chapter 2). With the help of several grants by the Deutsche Forschungsgemeinschaft<sup>2</sup> the research group was able to gather own data with rich information on new businesses.

The basic aim was to arrive at a representative sample for a selected regional setting that gives information on business development for the first four years of newly founded firms after they entered the marketplace. The focus was on business success and its determinants. After finishing an initial study on the basis of official registration data (the main results can be found in Brüderl and Schüssler 1990) the research group decided to conduct its own retrospective survey. From the registration data the addresses of all businesses founded in 1985 and 1986 in upper Bavaria (N=28,646) were known.<sup>3</sup> In a first step a stratified random sample (N=6170) was drawn from this population: businesses de-registered until 1990 were oversampled because their willingness to cooperate was supposed to be lower than for surviving businesses. After checking addresses for correctness 5,129 businesses (83% of 6,170) remained in the address pool. The sampling procedure, updating of addresses and fieldwork is described in detail in Preisendörfer and Ziegler (1990).

During four months in 1990, 1,849 interviews could be realized (mostly with the person who registered the business). Hence, the response rate is 30 percent (1,849 out of 6,170). Taking neutral non-response into account the

---

<sup>1</sup> Members of the research group were Rolf Ziegler (principal investigator), Josef Brüderl, Peter Preisendörfer, Monika Jungbauer-Gans, Walter Kiefl, Rudolf Schüssler, and Gabriele Wiedenmayer.

<sup>2</sup> Grant numbers Zi 207/5 and Zi 207/7-1, Zi 207/7-2.

<sup>3</sup> The research group cooperated with the Munich Chamber of Commerce (Industrie- und Handelskammer München und Oberbayern) where all newly founded businesses have to be registered under German law. Failing firms have to de-register.

adjusted response rate is 39 percent. Compared to other surveys on the basis of business registration data this seems to be remarkably high. Because information on the total number of registrations is available a weighting factor can be calculated to adjust the interview data to the marginal distributions of the registration data.

Information gathered in the Munich Founder Study covers a broad field. Variables can be arranged in four categories:

- (1) Concerning *business success* (which is often the most interesting 'dependent variable') there is information on the date of firm exit (if de-registered until 1990), on employment and sales (with information for each year within the observation period), and on some subjective indicators (e.g. personal satisfaction of the founder with the development of his business).
- (2) Some important variables informing about the *characteristics of the business* are branch of industry, legal form, sum of start-up capital, sum of outside capital, sources of outside capital, number and background of business partners, full time vs. part time business, originally new firm vs. take over, and business strategy.
- (3) Regarding *characteristics of the founder* there is information on age, sex, educational background, employment history before founding the business, family of origin, support through social networks, and entrepreneurial attitudes.
- (4) Finally, *environmental characteristics* include: regional setting, clients and suppliers, market situation (e.g. competitive pressure, relevance of innovation for market segment).

## 2. Leipzig Founder Study

While the field work of the Munich Study was conducted, the former GDR dissolved and the process of German unification was on top of the political agenda. A central element of the accompanying economic transformation in East Germany was the creation of a small business sector. The research group in Munich decided to start a project that should focus on new businesses in a region of East Germany. After some practical investigations it was decided that the region of Leipzig in Saxonia offered the chance for a research project using a comparable design to the Munich Founder Study. An additional grant by DFG enabled the research group to start the project in 1992.<sup>4</sup>

---

<sup>4</sup> Grant numbers: Zi 207/8-1 and Zi 207/8-2. Additional researchers joined the group: Thomas Hinz and Christoph Bühler in Munich, and Siegfried Siebenhüner,

Information gathered for the East-German region is similar to the blueprint study in Munich. However, there are some deviations. In Leipzig, a *prospective panel design* was used: businesses founded in 1991 were followed until 1995. Because the creation of small private businesses in the former GDR was characterized by a combination of originally new firms and privatized firms of the socialist economy the research group decided to enlarge the sampling population by *craftsmen businesses* (Handwerksbetriebe). As in other socialist economies, there was a state-controlled sector of small private craftsmen businesses and larger cooperatives. During the economic transformation these firms tried to restructure and entered the market economy. Further, in the Leipzig Founder Study a special form of 'new' firms is included: "split offs" from businesses with a socialist past.

At the beginning of 1992, the Leipzig Chamber of Commerce (Industrie- und Handelskammer, IHK) and the Leipzig Chamber of Craftsmen Business (Handwerkskammer, HWK) delivered all available information on registrations from July to December 1991 (3,416 from IHK and 746 from HWK) to the research group. From the total number of 4,162 registrations, 2,011 businesses responded to a questionnaire (response rate: 48%). A broad majority agreed to be interviewed (78%). A stratified random sample of 840 addresses (with branch of industry and regional setting as stratification criteria) was drawn from the subset of cooperative founders and 742 interviews could be conducted in 1992. Two years later, a follow-up questionnaire with the purpose to prepare the second wave of interviews was sent to the firms already interviewed in 1992 yielding 625 responses. In 1995, second and final interviews were conducted with 624 business founders. Compared to the Munich study, the selection process of participants is more complicated but it is possible again to calculate weighting factors on the basis of the registration data.

Most of the variables were measured in the same way as in the Munich Study. The Leipzig counterpart covers the four groups of variables listed above. However, there were some modifications:

- (1) Because an important topic in the East-German region is the conversion of (human) capital acquired in the socialist past, *employment history* of founders was measured with more detail (e.g. position in hierarchy, type of firm the founder worked for). In case of a business shut down, founders were asked for their employment status after closing the business.
- (2) The shortage of private capital in East-Germany was one of the big problems for establishing a small business sector. In the Leipzig Founder

---

Frigga Dickwach, and Steffen H. Wilsdorf in Leipzig. Principal investigators were: Rolf Ziegler, Peter Preisendörfer (University of Munich) and Steffen H. Wilsdorf (University of Leipzig).

Study, the sources of outside capital were studied more accurately (with a special focus on *public support programs*).

- (3) In the second wave of interviews, *social networks* became a focus. There is information on the size and the composition of the support network at the time of founding and at the time of the interview. The same information is available for the customer / client network.

### 3. Research Topics

The data gathered in both studies have been used for a variety of research questions. In both regions the *determinants of business success* were at the center of the research interest. Brüderl et al. (1992, 1998) use the Munich data to investigate the factors that affect the success (mainly survival and growth) of new firms. A similar study that uses the Leipzig data is presented by Hinz (1998). These studies present comprehensive overviews of the work done by the research group on the two data sets. Additional, more specific topics are covered by the following works. The *employment effects* of new firms are analyzed in Brüderl et al. (1993) and Hinz and Ziegler (2001). Closely related is the question “who are the dynamic capitalists?” which Brüderl and Preisendörfer (2000) try to answer. The positive effects of *network support* are investigated by Brüderl and Preisendörfer (1998) and Bühler (2001). Members of the research group also focused on the chances of *new businesses founded by women* (Jungbauer-Gans and Preisendörfer 1992; Dickwach and Jungbauer-Gans 1995). Finally, the *relevance of individual aspirations* (Hinz and Ziegler 1999), and the effects of *solid planning* (Jungbauer-Gans and Preisendörfer 1991) on success were topics analyzed.

In the following we want to present an example for a study done with these data. Ziegler (2000) provides a comprehensive comparison of firms founded in Munich and Leipzig. Among other things he studies the growth process of newly founded firms in both regions. As mentioned above, both data sets include information on the number of employees for every year the firm was in existence (expressed in full-time equivalents including the founder). Figure 1 describes employment growth over the first four years for both data sets. In Munich the average number of employees increases from 2.3 to 3.7 (a 61% increase), whereas in Leipzig employment growth is higher: here the average number increases from 3.9 to 6.9 (77%). Similarly, yearly information on sales is available. Again we can see that sales growth is more pronounced in Leipzig: 247% versus 136% in Munich. Obviously, new firms in the East outperform those in the West. On the first glance this is somewhat surprising. However, many new firms in the East received

generous public funding and entered an “empty” market, what might explain this finding.

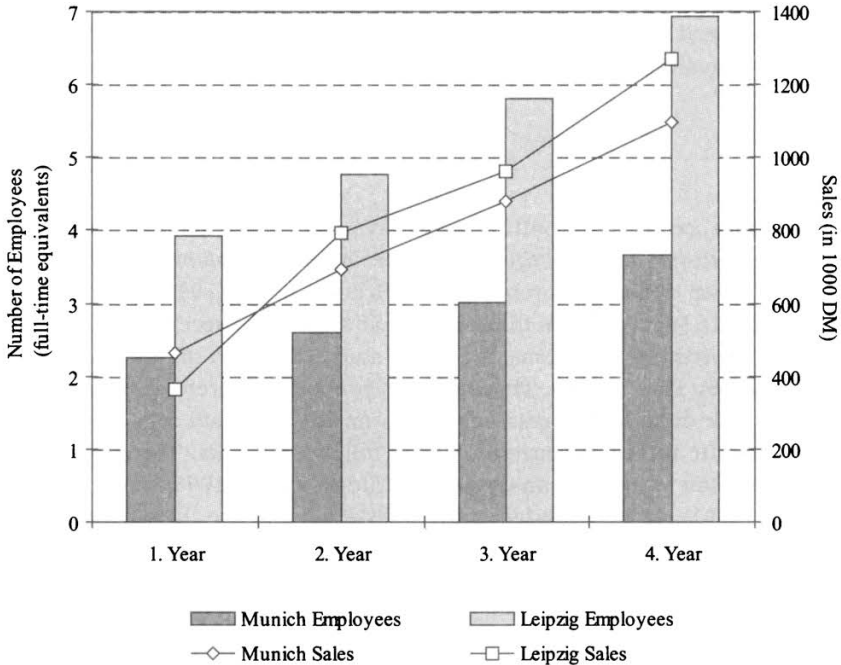


Figure 1: Growth of the IHK-firms over the first 4 years

#### 4. Data Access and Teachers Corner

If one wants to use both data sets for comparative analyses, a few points should be kept in mind: (1) Both regions represent relatively favorable economic environments compared to other parts of West and East Germany. Therefore, conclusions on Germany in general should be drawn carefully. (2) Additionally, the *different time cohorts* under focus limit the comparability of both studies. In the Leipzig case, data collection took part at an extremely favorable moment of history. New businesses entering the market in 1991 could profit from a situation of high demand for construction, consumer goods and services and a relatively low number of competitors. (3) Comparisons should be restricted to *businesses registered at the Chamber of Commerce*, craftsmen businesses in Leipzig should be excluded. (4) In descriptive analyses, researchers should use the *weighting factors* to adjust for the different sampling and selection processes.

Data access for both studies is very easy. Interested scholars only need to order data and codebooks at the ZA (<http://www.gesis.org/ZA/>; Munich: ZA-nr. 2652; Leipzig: ZA-nr. 3374). There is a small fee for codebooks and discs/CD-ROMs. The Munich data is organized in one single file whereas the Leipzig data consist of different files which can be matched by an identification number. Network data from Leipzig is written in a table format, i.e. for each reported network contact there is one row in the data.

Researchers interested in entrepreneurship and small business development are invited to use the data sets of the Munich and Leipzig Founder Studies for their own purposes.<sup>5</sup> In case of further questions concerning the data, users may contact the members of the primary research group who will be happy to consult and assist whenever possible. Finally, there are no restrictions to use the data for teaching purposes. The data are especially suited for event history (survival) and panel analyses (growth). Further, the Leipzig data contain data on the network of every founder, what makes it possible to use the methods of network analysis.

## References

- Almus, Matthias / Engel, Dirk / Prantl, Susanne* (2000): The ZEW Foundation Panels and the Mannheim Enterprise Panel (MUP) of the Centre for European Economic Research (ZEW), *Schmollers Jahrbuch 120*, 301–308.
- Brüderl, Josef / Bühler, Christoph / Ziegler, Rolf* (1993): Beschäftigungswirkung neugegründeter Betriebe, *Mitteilungen aus der Arbeitsmarkt- und Berufsforschung 26*, 521–528.
- Brüderl, Josef / Preisendörfer, Peter* (1998): Network Support and the Success of Newly Founded Businesses, *Small Business Economics 10*, 213–225.
- (2000): Fast Growing Businesses, *International Journal of Sociology 30*, 45–70.
- Brüderl, Josef / Preisendörfer, Peter / Ziegler, Rolf* (1992): Survival Chances of Newly Founded Business Organizations, *American Sociological Review 57*, 227–242.
- (1998<sup>2</sup>): *Der Erfolg neugegründeter Betriebe. Eine empirische Studie zu den Chancen und Risiken von Unternehmensgründungen*. Berlin: Duncker und Humblot (Betriebswirtschaftliche Schriften Heft 140; first edition 1996).
- Brüderl, Josef / Schüßler, Rudolf* (1990): Organizational Mortality: The Liabilities of Newness and Adolescence, *Administrative Science Quarterly 35*, 530–547.
- Bühler, Christoph* (2001): *Die strukturelle Eingebundenheit neugegründeter Unternehmen*. Opladen: Leske und Budrich.

---

<sup>5</sup> In publications references should be made: „Data have been collected under the direction of Rolf Ziegler (Munich Founder Study) and Rolf Ziegler, Peter Preisendörfer and Steffen Wilsdorf (Leipzig Founder Study) and were funded by the Deutsche Forschungsgemeinschaft.“

- Dickwach, Frigga / Jungbauer-Gans, Monika* (1995): Betriebsgründerinnen in Ostdeutschland. *Soziale Welt* 46, 70–91.
- Hinz, Thomas* (1998): Betriebsgründungen in Ostdeutschland. Berlin: edition sigma.
- Hinz, Thomas / Ziegler, Rolf* (1999): Gründungsmotive und Unternehmenserfolg, Mitteilungen aus der Arbeitsmarkt- und Berufsforschung 32, 423–432.
- (2001): Employment Effects of Newly Founded Businesses, in: *Riphahn, Regina T. / Snower, Dennis J. / Zimmermann, Klaus F.* (eds.): *Employment Policy in Transition. The Lessons of German Integration for the Labor Market*. Heidelberg: Springer, 103–124.
- Jungbauer-Gans, Monika / Preisendörfer, Peter* (1991): Verbessern eine gründliche Vorbereitung und sorgfältige Planung die Erfolgchancen neugegründeter Betriebe, *Zeitschrift für Betriebswirtschaftliche Forschung* 43, 987–996.
- (1992): Frauen in der beruflichen Selbständigkeit: Eine erfolgversprechende Alternative zur abhängigen Beschäftigung? *Zeitschrift für Soziologie* 21, 61–77.
- Preisendörfer, Peter / Ziegler, Rolf* (1990): Adressenaktualisierung und Feldverlauf einer Studie über Gründung und Erfolg von Kleinbetrieben, *ZUMA-Nachrichten* 27, 93–108.
- Wagner, Joachim* (2000): Firm Panel Data from German Official Statistics, *Schmollers Jahrbuch*, 120, 143–150.
- Ziegler, Rolf* (2000): *Vom Marx zum Markt. Chancen und Risiken betrieblicher Neugründungen in den neuen Bundesländern*. München: Verlag der Bayerischen Akademie der Wissenschaften.