

## 4 New Business Formation by Industry over Space and Time<sup>1</sup>

### 4.1 Introduction

There is little doubt that new business formation plays an important role in the process of economic development (Fritsch and Mueller 2004; van Stel and Storey 2004; Carree and Thurik 2003).<sup>2</sup> Each new business or market entry represents a challenge to the incumbents and, consequently, may generate significant incentives for improvements. The determinants of new business formation have been investigated theoretically and empirically in a number of ways. Most empirical studies in this field are cross-sectional analyses of different industries or regions.<sup>3</sup> Longitudinal analyses of new business formation processes are rather rare.<sup>4</sup> A severe shortcoming of these analyses is that most of them are limited to only one category of influence – industry, space or time – and tend to neglect other factors. The types of influences that are accounted for is mainly due to the approach chosen. For example, cross-sectional analyses limited to the industry level can only investigate the role of industry characteristics (e.g., minimum efficient size, capital intensity) but not regional determinants such as popula-

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<sup>1</sup> This Chapter is based on Fritsch M, Falck O (2007) New Business Formation by Industry Over Space and Time: A Multidimensional Analysis. *Regional Studies* 41: 157-172. Reproduced with kind permission of Taylor & Francis, <http://www.informaworld.com>.

<sup>2</sup> In this chapter, we use the term “new business” as the overall category for both new firm headquarters and new subsidiaries. Our empirical data include these two categories of new entities.

<sup>3</sup> For an overview of cross-sectional studies of industries see Evans and Siegfried (1994) and Geroski (1995). The evidence of interregional analyses is summarized in Reynolds et al. (1994).

<sup>4</sup> The only longitudinal analyses of new firm formation that we are aware of are Keeble et al. (1993), Johnson and Parker (1996), Sutaria (2001) as well as Sutaria and Hicks (2004).

tion density or workforce qualifications. Without accounting for the regional dimension, however, in the case of such industry-level studies, reliable results cannot be attained if the importance of a certain factor, such as innovation conditions, varies significantly across regions. Additionally, if certain regional conditions stimulate new business formation in some industries but deter start-ups in other industries, the effect of space on the formation of new businesses cannot be adequately assessed by means of an interregional approach that does not account for different industries.<sup>5</sup> Moreover, empirical analyses should include multiple years to control for the possibility that the effect of the different determinants changes over time, and, more particularly, to account for the impact of factors that mainly have an influence on the macro or the national level, such as variation of wages, capital user cost, and overall demand.

As far as we know, such a comprehensive approach which simultaneously analyzes the influence of industry, space, and time on new business formation processes has not yet been conducted, presumably because of limitations in the available data. The available time-series are rather short, differentiation by industry is often rudimentary, and there are hardly any data supporting meaningful spatial categories. This shortcoming may be the cause of the mixed and partly contradictory results that have been found, particularly, in studies across industries (cf. Evans and Siegfried 1994; Geroski 1995). Based on a unique dataset, which was compiled from German Social Insurance Statistics (see Fritsch and Brixey 2004, for details), we use a multidimensional approach to analyze the effects of the three groups of determinants – industry, space, and time – simultaneously. The data cover the period from 1983 to 1997 and provides information on the number of new businesses in each year within 52 private sector industries and 74 regions. The estimates enable us to assess the relative importance of the three types of determinants for new business formation processes. The results should be much more reliable than those found by analyzing only one or two categories of factors.

We begin with a brief outline of the main hypotheses and empirical findings about the determining factors in the decision to set up a business in a certain industry and region (section 4.2). This is followed by an overview of new business formation in West Germany during the period under review (section 4.3). Section 4.4 introduces the basic analytical approach and compares the variation of the number of start-ups over the three analytical dimensions: industry, space, and time. The analysis of relationships is reported in section 4.5. In section 4.6, we discuss the results of our

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<sup>5</sup> Audretsch and Fritsch (1999) provide some empirical evidence on the industry component of regional new business formation processes.