4 Venture capital financing and strategic competition

Equity financing is modeled when cash flows and asset values are not verifiable. Investors have enforceable property rights to the firm’s assets, but cannot prevent insiders (managers or entrepreneurs) from capturing cash flow.

Stewart Myers (2000)

In this chapter we first point out the financing alternatives for small and medium sized firms. Our analysis follows the financial growth cycle (see Berger and Udell 1998), which indicates the type of financing (debt or equity) a young firm receives at various stages of its life. The financial growth cycle states that newly founded firms are typically not eligible for bank loan financing due to the lack of collateral and reputation. Instead, a young firm has to rely on private equity or venture capital financing. We assume that the young firm has an innovative idea and needs external funding to realize a product innovation.

Equity financing has long been a neglected area of research, some scholars called it even uninteresting. Since the 1990s, however, public attention has focused on entrepreneurial enterprises which are considered as the engine of economic growth. New ventures create employment and spur innovation. Product innovation and productivity gains - particularly in the high-tech, information and life science areas – are vitally dependent on a flourishing entrepreneurial sector. Moreover, with the creation of the Neuer Markt (the German stock exchange for young high-tech firms) on March 10th, 1997, in Frankfurt, financial investors in these start-up firms now have an institutionalized exit channel to cash out their financial engagement. In the last years, venture capital financing, therefore, has become a field of special interest.

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1 This stands in contrast to the Poitevin (1989) model (see 2.2.3), which states that young firms rely on debt financing.
The chapter is organized as follows: In the Introduction (4.1) we describe the financial growth cycle of a young firm. After this, we point out the special characteristics of venture capital financing, which is an important source of funding for growth-oriented start-up firms. In section (4.2) we analyze the bilateral contracts between a young firm and a venture capital company. The main question of the models that we examine below is how control and ownership rights are distributed in the contractual arrangements. To our great surprise, none of these papers takes the competitive environment of the start-up firm into account. Many start-up ventures fail, however, because strategic reactions from competitors have not been taken into account. In section (4.3) we, therefore, analyze venture capital financing of an innovation project in the framework of industrial organization: We formalize the idea of market entry and competition between the start-up entrepreneur and an incumbent of the same industry. If the venture capital-backed firm successfully enters the market, it will face dynamic price competition with the incumbent firm. As a next step, we analyze how the incumbent’s strategic reactions will influence the financial contracting between the young firm and its equity investor. We show that if the incumbent engages in strategic competition or predation, venture capital companies will prefer to finance later-stage investments. In this case it will become much harder for the young firm to obtain venture capital financing at all. Section (4.4) summarizes our results.

4.1 Introduction

In the introduction we describe the sources of small business finance and illustrate the stylized facts of venture capital financing.

4.1.1 The financial growth cycle

The financial growth cycle paradigm states that different capital structures are optimal at different stages of a growing firm. The financial growth cycle describes the various sources of small business finance and how the type of financing varies with firm size, age, and information availability. As the small business grows, financial needs and options change. Figure 4.1 shows this in a stylized fashion in which firms lie on a size/age/information continuum.