Chapter 16
R&D Activities in Family Firms

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ABSTRACT

This chapter investigates R&D investment in publicly listed family firms, and highlights the distinctions between these and non-family firms. The empirical study draws on data on German firms and their level of R&D expenditure between 2001 and 2012. The study finds that family firms spend more on R&D than non-family firms, confirming findings from the literature that long-term business orientation, superior performance and entrepreneurial success are characteristics of family firms. The research helps explain the differences between the R&D investment activities of family and non-family firms and contributes to the understanding of R&D activities of family firms, suggesting that family ownership is responsible for their strong entrepreneurial and innovation orientation.

INTRODUCTION

The research and development activity, or more precisely investments in research and development (R&D), is of the utmost extremely importance to the entrepreneurial and innovation orientation of firms, and plays a major role in the economic growth of countries. Historically, the economic importance of innovation was underlined by Schumpeter (1939) who argued that the creative entrepreneur is indispensable to assuring the growth of capital. Since then, the technological innovation of firms has become a topic of increasing interest in empirical research, and it has been shown that R&D investments have a positive impact on economic growth (Corrado, Hulten, & Sichel, 2009; Goel & Ram, 1994), firms' value (Cho, 1998) and performance (Anderson & Reeb, 2003; Hill & Snell, 1988).

Family firms represent a large number of businesses in the economy. For example, family-owned and family-controlled firms account for approximately 90% of incorporated business in the United States (Poza, 2010). Moreover, one-third of the S&P 500 corporations are family firms (Anderson & Reeb, 2003). In East Asian countries, over two thirds of the firms are controlled by founding families or individuals (Claessens, Djankov, Fan, & Lang, 2002). In the United Kingdom, the family business sector is estimated to represent 75%

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of all enterprises, including about 10% of listed firms (Poutziouris, 2006). More than 60% of all German firms with a revenue of over one million euros belong to the group of family firms (Klein, 2000). Family firms and their role in the economy have been widely debated in academic literature. Technological innovation and R&D investment in family firms is a relevant research area because theoretical frameworks and empirical reasons justify the analysis of how R&D investment in family and non-family firms differs.

Some previous empirical studies suggest that a firm's ownership structure affects R&D investment but provide controversial evidence (e.g., Di Vito, Laurin, & Bozec, 2010; Francis & Smith, 1995; Hill & Snell, 1988; Yafeh & Yosha, 2003). Others find that family firms invest less in R&D than non-family firms (Block, 2012; Chen & Hsu, 2009; Munari, Oriani, & Sobrero, 2006; Muñoz-Bullón & Sanches-Bueno, 2011). On the other hand, some studies contradict these findings and indicate that firms with a higher level of family ownership spend more on R&D investments than non-family firms (Chrisman & Patel, 2012; Block, 2009). To be more precise, we have limited knowledge about family-controlled firms' use of R&D expenditure as an indicator of entrepreneurial innovation *vis-à-vis* that of non-family firms.

The question of R&D investment in family firms is particularly important in light of the lack of recent studies and given its significant consequences for technological innovation and entrepreneurial orientation in firms, as well as their economic growth. Our main research question is therefore: are family firms spending more on R&D than non-family firms? Our study addresses the family business model and investment decisions, which is an issue of increasing interest to practitioners and scholars in the corporate fields. Family firms account for such a large percentage of the corporate sector worldwide that it is extremely important to examine the effects of family control on specific corporate dimensions (La Porta, Lopes-de-Silanes, & Shleifer, 1999).

The empirical analysis was based on German data for 2001-2012. Germany is an interesting setting to study the R&D spending in family firms for the following reasons. First, family firms are of great relevance to the German economy. For example, 90,431 out of 107,094 of firms in the manufacturing industry are family firms led by a member of the owner family (Guidice, 2011). Second, historically family members in Germany family businesses have carried considerable responsibility for the managing of their firms. Unlike other European countries such as Italy or the United Kingdom, family firms are entirely managed by one of the family members. Finally, the German economy is of significant importance worldwide and is among the largest contributors to global gross domestic product. This explains our choice of the German context to examine the level of R&D spending as characteristic to the strong entrepreneurial orientation of family firms. A multivariate statistical analysis was performed with classical regression techniques. We find that family firms spend more on R&D than non-family firms. Our findings are consistent with the literature and indicate that family firms are characterized by long-term business orientation, superior performance and entrepreneurial success (Miller, Steier, & Le Breton-Miller, 2003).

This study makes several contributions to the literature. First, it contributes to the understanding of R&D activities of family listed firms in relation to that of non-family firms in the German context. We show that R&D spending is higher in family firms than in non-family firms. Little is known about the R&D investment in continental European firms because most empirical evidence is based on US data (Block, 2009, 2012; Chrisman & Patel, 2012; Francis & Smith, 1995). Our results provide an explanation for the strong entrepreneurial orientation of listed family firms in Germany. Second, we contribute to the corporate governance literature by paying special attention to identifying (i.e. family vs. non-family) the largest shareholders in the company rather than analyzing