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On the determinants of SME capital structure in Central and Eastern Europe: A dynamic panel analysis

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ABSTRACT

The purpose of this paper is to test how firm characteristics affect SMEs' capital structure using a unique dataset of micro, small, and medium-sized firms (SMEs) in Central and Eastern Europe (CEE). We carry out a panel data analysis of 3175 SMEs from seven CEE countries during the period 2001–2005, modeling the leverage ratio as a function of firm specific characteristics hypothesized by capital structure theory. By using the cash flow as an explanatory variable, we test some of the predictions of the pecking order theory. According to this theory, firms with more available internal funds should use less external funding. We do find strong evidence in favor of the pecking order theory, given that there is a negative and significant correlation between profitability and leverage. When we control for other firm specific characteristics such as future growth opportunities, liquidity, sales growth, size and assets structure, the cash flow is found to be a strong determinant of firm leverage. We also argue that the determinants of firm leverage may be considerably different depending on firms' size and age. The empirical results show that cash flow coefficient remains negative and statistically significant only for medium-sized firms, thus suggesting that larger firms with sufficient internal funds use less external funding than comparable smaller firms. We obtain similar results when we estimate the model by firm age; older firms demonstrate similar behavior as larger firms.

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1. Introduction

This paper explores the main determinants of capital structure in small and medium-sized enterprises in Central and Eastern Europe. An increasing body of literature indicates that small and medium-sized enterprises (SMEs) are of major importance for macroeconomic growth. During much of the past decade SMEs in Europe have seen an impressive growth. Between 2002 and 2008, SMEs in the EU-27 grew strongly and turned out to be the job engine for much of the European economy. The number of SMEs increased by 2.4 million (or 13 percent), whereas the number of large enterprise increased by only 2000 (or 5 percent).[2] This growth was also reflected in employment figures; in absolute numbers, 9.4 million jobs were created in the SME-sector in the same period.[3]

There are regional differences in SME presence in Europe. The old Member States (EU-15) account for 80 percent of the total number of enterprises in EU-27 and the new Member States (EU-12) for 20 percent. In both regions, SMEs make up the vast majority of enterprises in the non-financial business economy. Differences in the employment share of SMEs and in average enterprise size are quite small. However, across individual countries there is a large diversity in average firm size, as well as in the employment share of SMEs (EC, 2010, p. 18). The determinants of this diversity include differences in per capita income, sector structure, outsourcing and off-shoring, and culturally or institutionally-based occupational preferences for self-employment.[4] Although the average enterprise size is similar in the two regions, the discrepancy in average enterprise size across countries within both groups is large (varying between 3 and 12 occupied persons per enterprise in EU-15, and between 3 and 18 in EU-12).

Despite the importance of SMEs for job creation and production, most of the SME literature points to the fact that small and medium firms face higher barriers to external financing than large firms, which limits their growth and development (Ardic et al., 2011). Numerous studies that use firm-level survey data demonstrate that access to finance and the cost of credit do not only pose barriers to SME financing, but also constrain SMEs more than large firms (Pissarides, 1999). Small firms find it difficult to obtain commercial bank financing, especially long-term loans, for a number of reasons, including lack of collateral, difficulties in proving creditworthiness, small cash flows, inadequate credit history, high risk premiums, underdeveloped bank–borrower relationships and high transaction costs (IFC, 2009). A recent study by Beck et al. (2008) finds that smaller firms and firms in countries with underdeveloped financial and legal systems use less external finance, based on data from a firm-level survey in 48 countries.[5]

A growing body of research literature deals with debt policy decisions of firms. Although there are many previous empirical studies on financing decisions of large and listed companies, much less attention is paid to the small firms sector, especially in transition economies, given that their growth and prosperity are potentially subjected to different constraints and contingencies, related to the specific economic conditions in these countries (see e.g., Hutchinson and Xavier, 2006 for Slovenia, Klapper et al., 2006 for Poland, and Gatti and Love, 2008 for Bulgaria). This paper, therefore, adds to the existing empirical literature by investigating the specific determinants of debt policy decisions of firms in transition economies. By doing so, we explain how firm characteristics affect SMEs' capital

[2] See 'European SMEs under Pressure', Annual Report on EU SMEs 2009, European Commission, p. 6.

[3] The typical European firm is a micro firm. There are about 1.4 million small enterprises, representing 7 percent of the stock. About 1 percent (or 226,000) of enterprises are medium-sized. On average, an enterprise in the EU provides work for 6.4 persons; by comparison, the number of occupied persons per enterprise in the US is 5, while it is 11 in Japan.

[4] The general tendency over the period 2002–2008 is that both the average firm size and the number of SMEs in EU-12 increases and the average enterprise size of large firms in this region decreases, signalling a higher importance of small scale. This latter trend is probably related to the rapid transition that most of these economies went through in the past two decades, creating many new market opportunities for emerging entrepreneurs.

[5] Studies that focus on a specific country report similar results. Binks and Ennew (1997) find that the main constraints to growth of SMEs in the UK include management, labor skills, regulation and lack of access to finance; Hutchinson and Xavier (2006) compare the cases of a leading transition country, Slovenia and an established market economy, Belgium, and find that the SME sector in Slovenia remains underdeveloped, mainly due to the inability to raise external finance. Studies by Anderson and Kegels (1997), Budina et al. (2000), Gros and Suhrcke (2000), and Konings et al. (2003) all indicate that this appears to be the case in most of Central and Eastern Europe.