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SMEs capital structure determinants during severe economic crisis: The case of Greece

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Abstract: The objective of this paper was to explore whether and how the main capital structure determinants of SMEs affected capital structure determination in different ways during the years of economic crisis. We used panel data of 8,052 SMEs operating in Greece during 2009–2012. We found that the effect of capital structure determinants on leverage does not change in an environment of economic crisis; larger SMEs continued to show higher debt ratios, the relationship between profitability and tangibility of assets with leverage continued to be negative, and growth was positively related to leverage.

Subjects: Corporate Finance; Financial Management; Small Business Management

Keywords: corporate finance; financial leverage; capital structure; Greek firms

JEL classifications: G3; G32

1. Introduction

Small and medium enterprises (SMEs) play an important role in the economic activity of every country. In Europe, more than 99% of all European businesses are SMEs, providing two-thirds of the private sector jobs and contributing to more than half of the total value-added.[1] They are the backbone

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PUBLIC INTEREST STATEMENT

The way small firms finance themselves is an academic area that has attracted much of research during the last decades. However, little is known regarding how the factors that affect the SMEs' choice to get financing from, are affected by changes in the macroeconomic environment. This is a first attempt to explore whether and how the main capital structure determinants of SMEs affect capital structure determination in different ways, during the years of economic crisis, taking the paradigm of Greek SMEs. Using a comparison-based approach, our main finding is that the effect of capital structure determinants on leverage does not change in an environment of economic crisis.

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of the European economy, being primarily responsible for wealth and economic growth, and play a key role in innovation and R&D. Consequently, the capital structure determination procedure of SMEs has attracted much research interest over the last two decades, during which time research has focused upon investigating the particularities of small enterprises in their capital structure determination.

These particularities derive from the facts that (1) capital structure theory, and the theory of finance in general, were not developed with the small business in mind (Ang, 1991) and (2) small businesses are not "scaled-down versions" of large businesses (Cressy & Olofsson, 1997). Michaelas, Chittenden, and Poutziouris (1999) were the first to try and relate the different theoretical attributes to small firms. Focusing on financing, Beck, Demirgüç-Kunt, and Maksimovic (2005) concluded that younger and smaller firms report higher financing obstacles, while Beck, Demirguckunt, and Maksimovic (2008) found that small firms use less external finance, especially bank finance. Apart from the size criterion, literature has also investigated whether there are country differentiations in SMEs' capital structure determination. Hall, Hutchinson, and Michaelas (2004), Daskalakis and Psillaki (2008) and Psillaki and Daskalakis (2009) showed that firm-specific rather than country specific facts explain differences in SMEs' capital structure choices.

The role of the SMEs, especially when they are the backbone of an economy, becomes controversial during and after an economic crisis. Despite substantial development of the capital structure literature, there is relatively weak evidence on how SMEs' capital structure determination is affected during an economic crisis. Before the global financial crisis, little attention was paid to the effects of macroeconomic conditions on capital structure choices, as Hackbarth, Miao, and Morellec (2006) denote, even at the level of large enterprises. After the recent global financial crisis however, researchers tried to investigate how macroeconomic conditions influence capital structure determination and corporate financial performance in general. Cook and Tang (2010) found that firms adjust their leverage toward a target faster in good macroeconomic states relative to bad states. Ameer (2012) investigates whether local macroeconomic variables influence the numbers of IPOs in an emerging market, Malaysia, and finds that the monetary policy has a direct impact on capital markets and that central bank intervention propagates IPO cycles. These conclusions are similar to those of Korajczyk and Levy (2003) who found that macroeconomic conditions are significant for issue choice for financially unconstrained firms, whose issue choice coincides with periods of favorable macroeconomic conditions. Last, Mokhova and Zinecker (2014) explore the influence of macroeconomic factors on corporate capital structure in seven European countries and find that external determinants of capital structure play an important role in the financial decision-making process. The authors also denote as an interesting finding that Greece who suffered from the Global Financial Crisis to a greater extent and was marked down in the world developing indexes, has the weakest relations.

However, none of the above-mentioned studies focused on SMEs. The only study that directly combines the determinants of capital structure in economic recession of a developed country is that of Proença, Laureano, and Laureano (2014), who report a downward tendency on Portuguese companies' debt ratio levels during the financial crisis, admitting that due to the limitation in the longevity of the sample, the impact of the financial crisis was not as evident as expected.

Motivated by the above issues, we have explored whether and how the main capital structure determinants of SMEs affect leverage in different ways, during the years of economic crisis. We chose for this analysis the case of Greece. The choice of Greece adds to the particularity of this research effort, since the country simultaneously gathers the following characteristics: (1) a developed economy, member of a community of developed economies in terms of financial infrastructure, (2) a country which is hit perhaps most severely by the economic crisis, and (3) a country where the SMEs sector is much more important when compared to other economies in EU-28. To the authors' knowledge, this is the first attempt to empirically investigate how SMEs' capital structure

determination changes during a period of economic crisis, using data from the published financial statements of SMEs.

Our main contribution in the relevant literature is that the main firm-specific characteristics, known as the capital structure determinants do not seem to be affected by changes in the macroeconomic environment and more specifically in an environment of economic crisis. In addition, we have identified a downward trend to the companies' debt ratios, size, and growth is positively related to leverage, while profitability and tangibility show a negative relationship. Our results and conclusions coincide with those of Proença et al. (2014), who also report that the impact of the financial crisis was not as evident as expected.

The remainder of the paper is as follows. Section 2 presents the financing literature of small firms focusing on the determinants of firms' leverage. Section 3 refers to the data and the methodology employed. Section 4 presents the empirical results, while Section 5 concludes the paper.

2. The financing literature and SMEs capital structure determinants

Capital structure theory begins with the Modigliani and Miller (1958) paradox of "capital structure irrelevance," where firm value is not affected by its financing mix. Since then, corporate finance literature has grown enormously and basically distinguishes between two main theoretical approaches: (1) the trade-off theory, (2) the pecking order theory. The core of the trade-off theory refers to the balancing process of benefits of debt (tax shield, reduction of agency costs of equity, lower issuance costs) and costs of debt (direct and indirect financial distress costs, rising agency costs of debt) which leads to the concept of an optimal capital structure. The second was developed mainly by Myers (1984) and Myers and Majluf (1984), based mainly on informational asymmetries, and states that firms do not typically aim at a target debt ratio, but their financing decisions follow a hierarchy, with a preference for internal over external finance and for debt over equity. Asymmetric information has generated various other approaches such as the signaling theory by Ross (1977), and the market timing approach developed by Lucas and Mcdonald (1990) and Korajczyk, Lucas, and McDonald (1992).[2]

As mentioned in the introductory section though, SMEs present distinct specificities that must be considered. For example, there are actually no (or very few) agency costs of equity, because managers are, most likely, also the owners of the SMEs. On the other hand, agency costs of debt may be severe, because the level of asymmetric information between shareholders and lenders is considerably high (Ang, 1992; van der Wijst, 1989) which leads lenders to require guarantees materialized in collateral (Frank & Goyal, 2009; Harris & Raviv, 1990; Scott, 1977). Thus, firms with tangible assets are expected to have better access to debt financing and thus exhibit higher debt ratios.

H1: Level of tangible assets will be positively related to debt

However, Hall et al. (2004) and Sogorb-Mira (2005) find a negative relationship between short-term debt and the level of tangible assets and a positive relationship between long-term debt and leverage, because SMEs that employ large holdings of tangible assets may be related with a stable source of internally generated returns. Bearing in mind that short-term financial obligations are usually more often used as an indirect means of financing by SMEs than long-term debt, a negative relationship could be observed.

H1bis: Level of tangible assets will be negatively related to debt

The size of the firm is always an important determinant because larger enterprises are more diversified and are expected to go bankrupt less often than smaller ones (Ang, Chua, & Mcconnell, 1982; Frank & Goyal, 2009; Pettit & Singer, 1985). It is also worth noting that this positive relationship between size and leverage seems to go beyond institutional characteristics. For example, Hanousek and Shamshur (2011) study capital structure determination from seven Eastern European countries

and find a positive and highly significant effect between size and leverage, while their findings regarding other determinants are not so robust. Therefore, larger firms are expected to show higher levels of financial leverage.

H2: Size will be positively related to debt

Myers (1977) argues that growth opportunities can produce moral hazard effects and can push firms to take more risk, thus firms with growth potential will tend to have lower leverage. This may explain why firms with important growth opportunities will be considered as risky and face difficulties in raising debt capital on favorable terms:

H3: Growth will be negatively related to debt

On the other hand, Michaelas et al. (1999) argue that growth will push firms into seeking external financing, as firms with high growth opportunities are more likely to exhaust internal funds and require additional capital. Consequently:

H3bis: Growth will be positively related to debt

Risk is also considered as another important determinant of financial leverage under the financial distress approach. Specifically, riskier firms, in terms of earnings volatility, will have to confront relatively higher levels of difficulty in accessing debt financing (DeAngelo & Masulis, 1980; Titman & Wessels, 1988). This negative expected relationship is also explained in the pecking order perspective: firms with high volatility on earnings will try to accumulate cash to avoid under-investment issues in the future.

H4: Risk will be negatively related to debt

Asymmetric information provides another theoretical approach of capital structure determination, mainly via the pecking order theory, which is a consequence of information asymmetries between insiders of the firm and outsiders. Specifically, internal funds have no informational costs, which are very high when issuing new capital, whereas debt lies in an intermediate position. Thus, a negative relationship between leverage and profitability should be expected (Booth, Aivazian, Demirguc-Kunt, & Maksimovic, 2001; Frank & Goyal, 2009; Rajan & Zingales, 1995). Focusing on SMEs, this theory is especially appropriate (Ang, 1991; Holmes & Kent, 1991; Watson & Wilson, 2002), for a number of reasons. First, these firms are often opaque and have important adverse selection problems that are explained by credit rationing and therefore bear high information costs (Psillaki, 1995), considerably higher than large enterprises, where information asymmetry is lower. Furthermore, SMEs are usually managed by owners whose main objective is to minimize the intrusion in their business and avoid the discipline inherent in financing options other than internal funds. That is why internal funds will lie in first place of their preference of financing. If internal funds are not sufficient, SMEs will prefer debt to new equity mainly because debt means lower levels of intrusion and, most importantly, lower risk of losing control and decision-making power than new equity. There is strong evidence that their financing decisions follow a hierarchy, with a preference for internal over external financing and for debt over equity (Daskalakis & Psillaki, 2008; Michaelas et al., 1999; Psillaki & Daskalakis, 2009.

H5: Profitability will be negatively related to debt

3. Data and methodology

3.1. Data—Greece

We apply our model for SMEs operating in Greece during 2009–2012, during a period in which economic contraction in Greece was severe. Specifically, 20% of the Greek GDP was lost until 2012,

Table 1. Main sample descriptive statistics

	Debt ratio (%)	Asset structure (%)	Turnover (ln)	Growth (%)	Profitability (%)	Risk
Mean	54.31	74.80	14.099	−0.99	−0.16	139,504
Median	54.97	58.78	14.18	−2.70	0.45	43,770
Maximum	1,760.26	1,759.15	18.20	1,815.35	118.44	14,967,502
Minimum	0.00	0.00	9.90	−95.84	−761.13	1
Std. Dev.	37.94	68.04	1.53	26.66	13.21	330,681

unemployment reached 25%, and credit expansion has been constantly negative. Greek SMEs have borne the brunt of the economic crisis when SME employment fell by 27% and almost one in four (more than 205 000) of the SMEs that existed in 2008 closed down, reducing the total volume of business, measured in added value, by a third of its 2008 levels.[3] This downward trend slowed down in 2013.

We extracted values from the accounts of the financial statements and computed ratios related to capital structure based on the relevant literature. We used balanced panel data of Greek SMEs over the four-year period of 2009–2012. As per standard practice, we excluded firms from financial and insurance companies. All data were extracted from the ICAP database. All firms included in our sample fulfill the criteria of an SME as described in the EC definition.[4] We also set a lower limit of €18,000 of total assets and €20,000 of total turnover (per year) to avoid unrealistically low outliers. A few companies of our sample present negative equity as the legislation in Greece is not very strict on forcing companies to raise more own funds when many losses are accumulated. We decided not to extract these companies from our sample, although we conclude in a few extreme values, as companies with negative equity (meaning debt over 100% of the assets) continue operating and remain part of an economy in recession. The final sample contains 8,052 SMEs resulting in 32,208 observations. Table 1 (Section 4: Empirical results) present descriptive statistics of our data.

3.2. Methodology

Panel data methodology (Wooldridge, 2010) combines time series with cross-sectional data; this type of data thus refer to multidimensional data frequently involving measurements over multiple time periods. Given that capital structure determination is a dynamic procedure and not a static one, the use of panel data allows us to account for this dynamic nature, capturing SMEs capital structure determination during the most severe four years of economic contraction in the country. There are several econometric advantages associated with the use of panel models in comparison to the cross-sectional models employed in most capital structure studies. First the use of panel data reduces collinearity among the explanatory variables thus improving the efficiency of econometric estimates. Second, panel data models can take into account a greater degree of the heterogeneity that characterizes firms.

Our panel is considered as "typical" (Greene, 2003) in the sense that there are large numbers of cross sectional units and only a few periods (four periods). Our hypothesis of interest is that the capital structure of the firm expressed by the ratio of total liabilities to total assets is determined by its asset structure, its size, growth rate, profitability, and risk:

$$\mathrm{DR}_{i,t} = \beta_0 + \beta_1\,\mathrm{AS}_{i,t} + \beta_2\mathrm{SIZE}_{i,t} + \beta_3\,\mathrm{GROWTH}_{i,t} + \beta_4\,\mathrm{PROFIT}_{i,t} + \beta_5\,\mathrm{RISK}_{i,t} + \varepsilon_{i,t} \tag{1}$$

where $DR_{i,t}$ is the total debt to assets ratio of firm i at time t, $\mathrm{AS}_{i,t}$ the asset structure firm i at time t, $\mathrm{SIZE}_{i,t}$ the size of firm i at time t, $\mathrm{GROWTH}_{i,t}$ the growth rate of total assets of firm i between time t and $t-1$, $\mathrm{PROFIT}_{i,t}$ the profitability of firm i at time t, $\mathrm{RISK}_{i,t}$ the risk of firm i at time t and $e_{i,t,}$ the error term.

The debt ratio ($DR_{i,t}$) is defined as the ratio of total liabilities divided by the total assets of the firm (e.g. Rajan & Zingales, 1995). Total liabilities include leasing, accounts payable, and accounts receivable, namely the trade credit which is an important means of finance for SMEs. For this reason we considered this broader definition. Total liabilities contain both long-term and short-term liabilities. Following the empirical hypotheses formulated in Section 3, the first determinant of capital structure we consider is the asset structure of the firm ($AS_{i,t}$). We measure asset structure as the ratio of tangible assets divided by the total assets of the firm (e.g. Frank & Goyal, 2003; Rajan & Zingales, 1995; Titman & Wessels, 1988). The next explanatory variable we use is the size of the firm ($SIZE_{i,t}$). Size is computed as the logarithm of sales (e.g. Ozkan, 2001; Rajan & Zingales, 1995; Titman & Wessels, 1988). The third determinant of capital structure we use refers to firm's growth ($GROWTH_{i,t}$), calculated as the annual change on earnings. The next variable we consider is profitability ($PROFIT_{i,t}$). We measure profitability by pre-interest and pre-tax operating surplus divided by total assets (e.g. Fama & French, 2002; Titman & Wessels, 1988). Finally, we consider the effect of risk ($RISK_{i,t}$) on the firm's capital structure. Several authors have included a measure of risk as an explanatory variable of the leverage level (Booth et al., 2001; Mackie-Mason, 1990; Titman & Wessels, 1988). We measure risk as the squared deviation of each year's earnings before taxes from the period average (Castanias, 1983; Mackie-Mason, 1990.

The estimation method that we use is Period SUR (Seemingly Unrelated Regression)-pooled EGLS (Estimated Generalized Least Squares) (Wooldridge, 2010). This method corrects for both arbitrary period serial correlation and period heteroskedasticity between the residuals for a given cross section. Standard errors and covariances are calculated with (Panel Corrected Standard Error) cross section weights (PCSE) to obtain robust estimate of the cross section residual (contemporaneous) covariance matrix.

4. Empirical results

Table 1 shows the main descriptive statistics of our sample per variable. Average debt ratio is 54.31%, almost identical to the median (54.97%) meaning that the typical Greek SME in our sample is being financed almost half by equity and half by debt. The average asset structure is at 74.80%, relatively higher than the median (58.78%) meaning that high values of asset tangibility seem to affect the distribution of this ratio to our sample. Average turnover is at around €1.3 m., which is a relatively small number, showing that our sample consists mainly of micro firms (employing less than 10 employees), as according to the EU definition, firms that report a turnover lower than 2 m are micro firms. This is to be expected as 92% of all enterprises in the EU are micro, and the respective percentage for Greece is 96%. However, the impact of the crisis is obvious when looking at growth rates and profitability ratios. Both are negative in our study (−0.99% and −0.16%), while the respective figures for previous studies for Greek SMEs before the crisis are 19.3 and 7.6%, respectively (i.e. in Psillaki & Daskalakis, 2009). Regarding risk, an interesting conclusion seems to be that there are some firms in our sample that are of relatively high risk, which is the main reason for the large difference between the mean and the median of this ratio.

We also report averages per variable per year to describe the gradual evolution of crisis during our period (Table 2).

Table 2. Averages per variable, per year

	Debt ratio (%)	Asset structure (%)	Turnover (ln)	Growth (%)	Profitability (%)	Risk
2009	54.82	69.54	14.27	2.09	2.00	169,468.65
2010	54.68	72.76	14.17	−1.60	0.32	111,741.05
2011	54.30	75.21	14.07	−2.53	−0.90	119,631.73
2012	53.42	81.68	13.89	−1.92	−2.07	157,176.02

Looking at the annual statistics we draw some interesting conclusions. First, the debt ratio is gradually decreasing. Assuming that total assets are also decreasing, the decreasing rate of the debt ratio means that the rate of decrease in total liabilities is higher than the respective rate of total assets, concluding that SMEs do face severe external financing constraints. This finding is consistent with Balios, Eriotis, Fragoudaki, and Giokas (2015), who examine the efficiency of Greek retail SMEs in a period of high fluctuation in economic activity (growth and recession) and conclude that, among other things, there was an increase in the equity to liabilities ratio of SMEs during the economic crisis. It is interesting however to denote that this result coincides with Proença et al. (2014), who report a downward tendency on Portuguese companies' debt ratios levels during the financial crisis.

Second, the asset structure is gradually increasing. This is rather not due to a relative increase in tangible assets of SMEs. Rather this should be attributed to the fact that the value of tangible assets is decreasing at a lower rate to that of total assets. Furthermore, the size of the firms (based on their turnover) is gradually decreasing; this is an expected outcome during the years of a crisis, and consistent with the next finding that growth rates, are negative, for the last 3 out of a total of 4 years from 2009–2012. Additionally, SMEs' profitability is also decreasing, turning negative toward the end of our sample period, a result that is also expected. Last, risk is fluctuating without a given trend.

Table 3 presents the results of the econometric analysis. In our study, we find a negative relationship between asset structure and leverage. Thus, firms that maintain a large proportion of tangible assets in their total assets tend to use less debt than those which do not. Size is positively related with leverage, meaning that larger firms have higher debt ratios. Firm's growth is also positively related to leverage, meaning that firms with high growth rates seek external financing and are financed with debt. Profitability is negatively related to leverage, namely firms that generate relatively high internal funds, generally tend to avoid gearing. This finding is consistent with the pecking order theory which argues that firms prefer internal financing to external. Finally, risk is not statistically significant in our study.

What is more important though is that if we compare our results with respective studies conducted for SMEs in Greece before the crisis, we get identical results regarding the relationships between the debt ratio and the regressors. Specifically, if we compare our results to those of Psillaki and Daskalakis (2009), all variables which are statistically significant as explanatory variables for the

Table 3. Econometric results

Dependent variable: Debt ratio				
Method: Panel EGLS (Period SUR)				
Cross section weights (PCSE) standard errors & covariance (d.f. corrected)				
Variable	**Coefficient**	**Std. error**	**t-Statistic**	**Prob.**
Constant	−0.327	0.072	−4.509	0.000
Asset structure	−0.051	0.008	−6.442	0.000
Size	0.065	0.005	12.549	0.000
Growth	0.038	0.012	3.172	0.002
Profitability	−0.861	0.130	−6.615	0.000
Risk	−728 × 10−9	9.17 × 10−9	−0.794	0.427
Weighted statistics				
R^2	0.232	Mean dependent var		0.568
Adjusted R^2	0.232	S.D. dependent var		1.366
S.E. of regression	0.961	Sum squared resid		29,752.31
F-statistic	1,948.043	Durbin–Watson stat		1.899
Prob. (*F*-statistic)	0			

debt ratio in both studies, namely, asset structure, size, and profitability, show the same relationship between each one and the debt ratio. Furthermore, risk is not statistically significant in both regressions, while the only difference is with regards to growth, which is significant in our sample and not significant in their study. Summing up, it seems that the main capital structure determinants continue to affect leverage in similar ways prior to and during the crisis.

Our aim however goes beyond restricting the conclusions of this paper to Greece alone, using the country as perhaps the best up-to-date example of a western type economy in severe economic crisis. Cotei and Farhat (2011) provide a substantial literature review describing worldwide patterns in capital structure. They conclude that firm-specific factors are identified as the main determinants of leverage ratios, even though non-firm-specific factors do seem to affect capital structure decisions, attributing these changes to legal traditions and financial market structures. Generally, on the one hand, there are studies arguing that cross-country differences in SME capital structure are likely, due to firm rather than country-specific effects (Daskalakis & Psillaki, 2008; Hall et al.,2004; Psillaki & Daskalakis, 2009). On the other hand, studies show that firms in countries with common law traditions have a higher speed of capital structure adjustments, when compared with civil law traditions (Oztekin & Flannery, 2012) and that in bank-based economies (such as the German and Japanese), firms have close ties with their creditors, and therefore they adjust slowly to their target leverage without incurring substantial agency costs (Antoniou, Yilmaz, & Krishna, 2008). Focusing on SMEs, Jõeveer (2013) also finds that the share of leverage variation related to country-specific unobservable factors is approximately 10% attributing that change in domestic macroeconomic variables and/or financial institutions can change a firm's financial structure. During the period that the data refers to, Greece was a civil law developed[5] country and therefore it is in this context that the conclusions of this study should be considered. We rely on the conclusions of the above-mentioned studies to assume that the specificities of the Greek context should not be considered as a determinant itself; rather, it is the crisis of the Greek economy that may change the context and this is the main objective that we investigate in this paper. Our results show that the relationship between the regressors and the debt ratio does not seem to change during the financial crisis.

5. Conclusions

In this paper we explore whether and how the main capital structure determinants of SMEs affect leverage in different ways, during the years of economic crisis. We apply our model to 8,052 SMEs operating in Greece during 2009–2012, that is during a period in which economic contraction in Greece was severe.

Our aim, however, goes beyond restricting the conclusions of this paper to Greece alone. According to the literature, firm-specific factors are identified as the main determinants of leverage ratios, even though non-firm-specific factors do seem to affect capital structure decisions, but the extent of this impact is relatively limited. In any case, it seems that in countries that share a similar legal system, firm-specific factors become more important. We rely on the conclusions of several studies to assume that the specificities of the Greek context should not be considered as a determinant itself; rather, it is the crisis of the Greek economy that may change the context and this is the main objective that we investigate in this paper.

Our results show that leverage is negatively related to asset structure and profitability, positively related to size and growth, while risk is not statistically significant in our study. The negative relationship between the debt ratios and profitability is in line with the pecking order theory, suggesting that Greek SMEs prefer to finance their investments internally rather than externally. Our finding regarding the negative relationship between leverage and asset tangibility, is also in line with the pecking order theory, in the sense that SMEs that employ large holdings of tangible assets may be related to a stable source of internally generated returns, as Hall et al. (2004) and Sogorb-Mira (2005) denote. Our result that size is positively related is in line with the majority of capital structure literature, denoting that larger firms use more debt. Last, firms with high growth rates seek external financing and are financed with debt.

However, our most interesting conclusion is that the effects of capital structure determinants on leverage do not change in an environment of economic crisis. Specifically, our results regarding the effect of capital structure determinants on firm leverage are identical to results from studies exploring this issue for Greek SMEs prior to the crisis (Daskalakis & Psillaki, 2008; Psillaki & Daskalakis, 2009); larger SMEs continue to show higher debt ratios, while the relationship between profitability and tangibility of assets with leverage continues to be negative. What is more interesting though is that our results and conclusions coincide to those of Proença et al. (2014), who also investigate the impact of the financial crisis on SMEs' capital structure determination and report that this impact was not as evident as expected.

Our results imply that the main firm-specific characteristics, known as the capital structure determinants do not seem to be affected by changes in the macroeconomic environment. This does not mean that the firm's financial leverage is not affected; as a matter of fact, we have identified a downward trend to the companies' debt ratios. But it does mean that the nature of the impact of each determinant to capital structure does not seem to be affected by changes in the macroeconomic environment. This may have interesting practical applications for financial institutions, when evaluating their credit policies to SMEs in different macroeconomic environments, as it implies that their credit assessment, based on the respective ratios should not be changed.

We however identify a main limitation in our study. This limitation derives from the fact that the economic crisis in Greece was not over when these results were generated. It would be interesting to investigate a longer period of data after the crisis ends and the economy starts growing again. It would also be interesting for future researchers to simultaneously investigate the same issue of whether the change of macroeconomic environment affects capital structure determination of SMEs in several European countries, so as to explore in depth whether there are country-specific factors.

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Notes
1. European Commission (2015); Annual Report on European Commission (2014, p. 15): SMEs start hiring again, pp. 1–167, available in: http://ec.europa.eu/growth/smes/business-friendly-environment/performance-review/index_en.htm#annual-report
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