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The effect of internationalization on firm capital structure: A meta-analysis and exploration of institutional contingencies

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ABSTRACT

Despite extensive research on the relationship between internationalization and firm capital structure, findings in this research area remain inconclusive. In this paper, we review the literature on the internationalization–capital structure relationship and investigate its direction, effect size, and multiple contingencies through a meta-analysis of 31 studies with a grand total of 223,658 firm observations and at least two separate samples each. Our cumulative evidence indicates lower debt ratios of multinational corporations compared to domestic corporations, in line with arguments of increased risk and agency costs in international operations. We extend our analysis to institutional characteristics in firmsö home countries and find that much of the existing variation in study findings can be explained using theory arguments on firm risk in internationalization. We contribute to an integration of international business and finance literature and point to directions for future research on determinants of the internationalization–capital structure relationship and its multiple contingencies.

1. Introduction

Optimal firm capital structure – the combination of debt and equity – is of key strategic importance for firm competitiveness and profitability (Barton & Gordon, 1987; Gallo, 2015). It is also strongly related to firm risk under dominant capital structure theories (Myers, 1984). As firms increase their exposure to external risk, for example through investments in volatile countries, they are required to reduce their financial risk, that is, the amount of debt, to manage the probability of default and to maximize firm value. Consequently, the question of whether and how optimal firm capital structure changes with internationalization, and, hence, how total firm risk and internationalization relate, has been of interest to international business (IB) scholars for several decades (Bowe, Filatotchev, & Marshall, 2010). Notions that general capital structure models (e.g. Modigliani & Miller, 1958; Myers, 1977) "may be inadequate" in the context of internationalization due to its particular risks (Burgman, 1996, p. 563; see also Chkir & Cosset, 2001; Desai, Foley, & Hines, 2004; Lee & Kwok, 1988) have promoted the development of a distinct research field on capital structure in IB studies. The significance of this field is emphasized by 65 articles with almost 1000 citations[1] published on the topic in top IB journals alone as of this writing.

However, despite the topic's substantial academic and economic relevance and roughly three decades of inquiries, empirical evidence on how internationalization affects capital structure remains inconclusive. Diverging conclusions are mostly caused by different streams of theoretical argumentation as to how risk, and thus optimal capital structure, changes with increasing internationalization. On one hand, some authors argue for increased risk inherent in multinational corporations (MNCs) as opposed to domestic corporations (DCs), as a result of political risk in foreign markets, exchange rate risk, and, in particular, agency costs incurred for increased complexity, information asymmetry, and monitoring costs for both MNCs and investors (e.g. Akhtar & Oliver, 2009; Lee & Kwok, 1988). This risk increase, in turn, puts MNCs at a disadvantage compared to DCs and leads to lower debt ratios of MNCs. On the other hand, several scholars postulate the opposite effect. They argue that MNCs benefit from a risk decrease and hence from the ability to incur higher debt ratios in comparison to DCs (e.g. Mansi & Reeb, 2002; Mittoo & Zhang, 2008). This line of argumentation is based on MNCs' diversification of revenue streams through their presence in different country markets. More diversification of risk resulting from presence in several countries reduces operating risk for an MNC, an advantage that pure DCs cannot exploit. In turn, less operating risk enables MNCs to assume more financial risk – which increases debt

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[1] This result is based on a keyword search in the IB journal landscape as defined by Tüselmann et al. (2016) via Thomson's Web of Science database as of 10 March 2017.

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ratios in MNCs (Chkir & Cosset, 2001; Mittoo & Zhang, 2008). A third stream of research has pointed to strong firm-level interdependencies in this relationship, eventually arguing for no direct relationship between internationalization and capital structure (Akhtar, 2005). In sum, IB scholars have recently acknowledged the field as underexplored and inconclusive in its current state (Bowe et al., 2010). This renders integrative reviews on it a particularly valuable research avenue.

Along with the inconclusive results on the direction of the internationalization–capital structure relationship, little attention has yet been devoted to factors that have brought these results about. Whereas previous studies have controlled for primarily firm-level and industry factors such as firm size (Akhtar & Oliver, 2009), firm profitability (Chen, Cheng, He, & Kim, 1997; Chkir & Cosset, 2001) and industry development (Burgman, 1996), other contingencies remain underexplored. The investigation, for instance, of how MNC and DC home-country context or study-setting factors have influenced past results remains incomplete. This is surprising, as IB theory proposes several theoretical avenues explaining how home-country characteristics, internationalization, and firm financing are related (e.g. Bell, Filatotchev, & Aguilera, 2014; Bell, Filatotchev, & Rasheed, 2012). Works in this stream of literature include home-country characteristics such as cross-national differences in governance systems in firms' home and host countries (Aguilera & Crespi-Cladera, 2016; López de Silanes, La Porta, Shleifer, & Vishny, 1998) or the quality of the institutional environment in the home country (Lindner, Müllner, & Puck, 2016).

In this study, we unveil a clearer picture of inconsistent past findings. In that vein, we review and analyze past literature on the internationalization–capital structure relationship and aim at disentangling its key determinants. We conduct a meta-analysis to clarify the average effect of internationalization on capital structure across previous studies. Then, we conduct a meta-regression to test and extend predictions from the "upstream-downstream hypothesis" of firm capital structure (Kwok & Reeb, 2000) about variation in the effect of internationalization on capital structure depending on firms' home country. Finally, we investigate the influence of study-setting factors for the internationalization–capital structure relationship. With this three-pronged approach, we conceptually argue how institutional contingencies and study-setting factors have brought about diverging findings in previous studies and provide empirical evidence for our propositions. We contribute to literature on international finance in IB in four ways. First, we synthesize existing evidence on the internationalization–capital structure relationship in a meta-analysis. Consequently, we enable strong quantitative conclusions on the argued relationship at the center of the "risk diversification–risk increase" trade-off of internationalization, that is, the trade-off between risk-increasing and risk-decreasing effects of internationalization. Second, we analyze and discuss contextual contingencies related to firm home countries and study-setting factors that have influenced past results. We test and extend predictions from the "upstream-downstream hypothesis" of firm risk (Kwok & Reeb, 2000) in the context of firm capital structure and find evidence for a moderating effect of firms' home-country institutions on the internationalization–capital structure relationship. Third, we respond to recent calls to promote meta-analytical research in IB studies and consolidate evidence on one of its most researched questions with yet inconclusive results (Kirca & Yaprak, 2010; Zhao, Luo, & Suh, 2004). Fourth, through both our meta-analytical and qualitative review of works, we provide ideas for future research directions. We thereby enable future studies to go beyond estimation of effect direction and size and to investigate other underlying firm-, industry- and country-level factors that influence capital structure in internationalized firms.

2. Theory and hypotheses development

As stated above, different streams of theoretical argumentation lead to diverging conclusions for how internationalization affects capital structure. To understand these lines of argumentation, we review literature from the spheres of finance and IB in this section. Some authors argue that MNCs can benefit from diversifying risk internationally (e.g. Mansi & Reeb, 2002; Mittoo & Zhang, 2008), whereas others argue that internationalization leads to increased risk (e.g. Akhtar & Oliver, 2009; Lee & Kwok, 1988). The most prevalent theoretical approach to explain firm capital structure depending on firm internationalization in previous studies is trade-off theory (e.g. Chen et al., 1997; Joliet & Muller, 2013; see also Fama & French, 2002, for a general discussion). The objective of this section is twofold. First, we briefly discuss core premises of trade-off theory and its predictions regarding differing conclusions for the internationalization–capital structure relationship. Second, we argue for contextual contingencies to moderate the internationalization–capital structure relationship and derive corresponding hypotheses on how these have influenced past results.

In our study, we refer to the relationship between capital structure (i.e. the composition of firm capital comprising debt and equity) and firm internationalization (i.e. the degree of firm international operations) as the *internationalization–capital structure relationship* in theoretical propositions. In hypotheses, measurement, and result descriptions, we refer to the same relationship as the *internationalization–debt ratio relationship,* as we specifically measure debt ratio to proxy for capital structure. The hypotheses in our meta-regression, comparably to moderators in linear regression analysis, are set up to predict the moderating effect of contextual contingencies on the internationalization–debt ratio relationship in past studies. For instance, a negative moderation effect of contingency A on the internationalization–debt ratio relationship indicates decreased debt ratios for internationalized firms (MNCs) compared to non-internationalized firms (DCs) under high levels of contingency A, and vice versa. Hypotheses on moderation effects have been denoted in a similar way in past studies applying meta-regression (e.g. DeChurch & Mesmer-Magnus, 2010; Rosenbusch, Brinckmann, & Müller, 2013).

2.1. Theory of international capital structure

Trade-off theory. The main assumption of the trade-off theory of capital structure is that firms consider capital structure decisions as a trade-off between benefits from interest tax shields and disadvantages from costs of potential financial distress (Brealey, Myers, & Allen, 2011; Mansi & Reeb, 2002). Interest tax shields denote the tax-deductibility of debt, which decreases taxable incomes. Costs of potential financial distress refer to pre-bankruptcy costs and actual costs of liquidation. Consequently, capital structure depends strongly on the expected cost of financial distress (Joliet & Muller, 2013). Risk of financial distress results (apart from the financial risk incurred directly by taking on debt) from business risk, which signifies the risk related to future business operations of the company (Akhtar & Oliver, 2009). Business risk thereby influences capital structure, with high levels of business risk inducing higher expected cost of financial distress, resulting in lower debt ratios, and vice versa (Chen et al., 1997; Joliet & Muller, 2013). Concerning the internationalization–capital structure relationship, international operations represent a key driver of business risk in MNCs. There are two sides to the argumentation – risk diversification and risk increase – as well as several factors that influence this trade-off.

Risk diversification. On one hand, it can be argued that MNCs can take advantage of the chance to diversify their business internationally and hence reduce the risk of financial distress (Lee & Kwok, 1988; Rugman, 1976). Consequently, MNCs can take on more debt, assuming that they can lower their earnings variability by diversifying business internationally (Mansi & Reeb, 2002; Shapiro, 2013; Singh & Nejadmalayeri, 2004).

Risk increase. On the other hand, international operations are subject to liabilities of foreignness (Bell, Filatotchev, & Rasheed, 2012; Zaheer, 1995). These liabilities lead to disadvantages for MNCs compared to local incumbents and higher business risk. As a consequence, increased business risk results in higher expected cost of financial distress, which