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The impact of internationalisation through export growth on debt financing in construction firms: Evidence from the Americas

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ABSTRACT

Objective: This study investigates the impact of internationalisation on the indebtedness of construction companies in the Americas. We measured internationalisation as the share of exports in total revenues, reflecting a firm's engagement in cross-border sales.

Research Design & Methods: The analysis utilised panel data from 132 construction firms across 13 American countries. We employed fixed and random effects models.

Findings: International firms show distinct debt financing patterns, with firm size positively influencing debt levels, especially in long-term debt. Internationalisation moderates the impact of firm-specific factors on capital structure. For international firms, asset tangibility positively affects long-term debt, contrasting with domestic firms, where this relationship is negative. Country-specific factors have a stronger impact on the capital structure of international firms than on domestic firms.

Implications & Recommendations: As both the country context and the degree of internationalisation influence financing decisions, firms pursuing international expansion must adapt their financing strategies accordingly.

Contribution & Value Added: This research uniquely investigates how internationalisation moderates the relationship between firm- and country-specific factors and the indebtedness of construction companies in the Americas – a sector and regional context that previous studies largely overlooked.

Article type: research article

Keywords: corporate finance; construction companies; financial leverage; international companies; financing decisions; panel data analysis

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INTRODUCTION

Internationalisation, measured by the share of exports in total revenues, brings both opportunities and threats in all dimensions of a company's activities. This particularly applies to shaping the capital structure, which is a combination of debt and equity. The literature emphasises that capital structure significantly influences a firm's profitability and competitiveness (Barton & Gordon, 1987) and closely links to firm risk (Myers, 1984). An increase in a company's exposure to external risks – for example by expanding operations into countries with low economic stability – requires a compensatory reduction in financial risk. This process involves reducing debt to a level that leads to minimising the probability of insolvency while maximising the firm's value. For this reason, traditional theories explaining capital structure formation (*e.g.*, Modigliani & Miller, 1963; Myers, 1977) may inade-

quately account for the complexities of international operations, where companies face unique risks like political instability, currency fluctuations, and regulatory variability (Chkir & Cosset, 2000; Desai *et al*., 2004). Despite extensive research, the impact of internationalisation on capital structure remains inconclusive (Lindner *et al.,* 2018). This ambiguity underscores the importance of industry-specific analyses, particularly for the construction sector, which has distinctive financing challenges. This is primarily due to differences in theoretical perspectives on changes in risk levels and, consequently, changes in capital structure resulting from increased internationalisation.

The literature contains a substantial number of studies on capital structure across companies in various industries. The differences between these industries encourage a case-by-case approach. Therefore, the construction sector also requires a separate analysis (Pinto *et al.,* 2023). Research on the construction industry mainly focuses on technical issues, meaning that studies on management and finance are a marginal part of the academic literature on this sector. Most studies on the capital structure of construction firms concentrate on the empirical verification of the main theories concerning capital structure, namely the pecking order and trade-off theories, and their influencing factors (*e.g.*, Choi *et al.,* 2014; Nguyen & Tran, 2020; Mazur *et al.*, 2023; Nalurita, 2017). Some studies emphasise the role of the relationship between capital structure and profitability (*e.g.*, Wassie, 2020; Oyewobi *et al.,* 2013), while others stress the importance of the industry effect (*e.g.*, Gunardi *et al.*, 2020; Feidakis & Rovolis, 2007; Atakul & Gundes, 2020). To the best of our knowledge, only one study (Chung & Cheah, 2006) addresses internationalisation as a factor influencing the capital structure of construction companies. The findings of these authors align with those observed for companies operating across other industries. Specifically, multinational construction companies exhibited lower levels of leverage compared to those operating solely within their domestic markets.

The literature highlights the complex relationship between internationalisation and capital structure, with contrasting perspectives. Some studies suggest that internationalisation increases firm risk due to factors such as political uncertainty, exchange rate fluctuations, and agency costs, leading to a lower reliance on debt, particularly long-term debt (Reeb *et al.*, 1998; Burgman, 1996). Other authors argue that internationalisation enhances risk diversification, access to global capital markets, and tax efficiency, resulting in higher debt levels (Mansi & Reeb, 2002; Mittoo & Zhang, 2008). These contrasting findings highlight the necessity of investigating internationalisation as a determinant of capital structure, including indebtedness, in sectors with unique financing requirements, such as construction – the focus of the current study. Precisely speaking, we examined the internationalisation-leverage nexus in the construction sector based on evidence from the Americas.

The construction sector possesses several distinctive features that justify a focused examination. First, it is capital-intensive and project-based, requiring substantial funding for multi-year contracts. It faces long investment cycles, payment delays, and seasonality effects, which increase reliance on external financing. Second, the sector shows exposure to high levels of risk, including price volatility, demand fluctuations, and administrative delays. These risks affect financing choices and the debt policy. Third, the specifics of international contracts further complicate financial management. Cross-border operations involve currency risk, regulatory differences, and the need to maintain liquidity across multiple markets. These characteristics may affect the internationalisation-leverage relationship differently than in less capital-intensive, more stable industries. For these reasons, the construction sector requires dedicated analyses that will account for its particularities and enable a better understanding of the mechanisms shaping financial decisions in the context of international expansion.

While previous studies on internationalisation in other industries provided valuable insights, its role in shaping the leverage level of construction firms still awaits investigation. Moreover, the moderating role of internationalisation on traditional capital structure determinants, such as firm size, profitability, and asset tangibility, remains underexplored. Finally, the influence of country-specific factors, especially in the Americas, where financial systems and market conditions vary significantly, calls for further investigation. Therefore, this study distinguishes itself by incorporating geographical heterogeneity. We analysed firms from both Americas, representing both the developed markets, notably the United States of America and Canada, and the developing markets – Argentina, Brazil, Colombia, Costa Rica, Mexico, and Trinidad. This allowed for a deeper understanding of institutional influences

on the firms' debt financing decisions and a two-context comparison. On developed markets, access to external financing is broad and cheaper; on emerging markets, constraints and higher debt costs make internal funding more prominent. This diversity helped us test whether internationalisation has a similar financing effect irrespective of market development. The comparative design research that contrasted results for U.S. construction firms with those from other countries enabled the measurement of country-specific factors on debt financing choices. The U.S. market, highly developed and competitive, served as a reference point. This market features strong financial system depth, broad instrument availability, and high internationalisation, revealing mechanisms that might be invisible in purely emerging-market samples. Finally, cross-country coverage improved representativeness and the generalisability of conclusions while preventing a single-country context from informing the results.

Together, these aspects of the research scope, namely the focus on indebtedness and the geographical and sector specificity, underscore the study's originality, advancing the understanding of how internationalisation dynamics unfold in capital-intensive and geographically diverse construction firms, and how these dynamics shape firm-level financial strategies. The research objective was to determine whether and to what extent internationalisation impacts the level of debt financing in construction companies. While capital structure consists of both equity and debt, this research focused specifically on the debt component, which plays a critical role in financing large-scale construction projects.

The article is organised into five main sections. The introduction outlines the theoretical background and identifies the research gap concerning the relationship between internationalisation and debt financing in construction firms. The literature review summarises prior findings on capital structure determinants and internationalisation theories. The methodology section presents the sample, data sources, variables, and econometric approach. The results and discussion section reports the empirical findings and interprets them in light of firm- and country-level determinants. The paper concludes with key implications, theoretical contributions, and directions for future research.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Capital structure has undergone extensive examination over decades, with foundational theories exploring the balance between equity and debt and identifying factors that influence optimal leverage levels. Modigliani and Miller (1958) posited that on perfect markets, capital structure does not affect firm value. In a later work (1963), they introduced the tax shield benefit of debt, especially relevant for capital-intensive construction firms that rely on external financing for large projects. The trade-off theory (Kraus & Litzenberger, 1973) refines this by balancing tax benefits against the elevated financial distress risks inherent in construction due to project complexity and seasonality. Financing choices must therefore account for higher operating risk and potential liquidity strain, which limits excessive borrowing. The pecking order theory (Myers & Majluf, 1984) suggests firms prioritise internal funds before debt and equity, whereas the agency theory (Jensen & Meckling, 1976) frames capital structure as a response to conflicts between managers, owners, and creditors. For construction firms, international projects strengthen these theoretical tensions given the higher risks, monitoring challenges, and liquidity pressures.

Internationalisation theories provide complementary perspectives. The Uppsala model (Johanson & Vahlne, 1977) conceptualises internationalisation as incremental. In construction, this often means starting with smaller export-based contracts and later establishing subsidiaries on high-demand markets. The transaction cost theory (Williamson, 1985) emphasises governance costs on foreign markets. In construction, these costs are high due to project specificity and regulatory adaptation, shaping entry modes and project financing. Dunning's paradigm (Dunning, 1988) links expansion to ownership, location, and internalisation advantages. For construction, the advantages of location and ownership are particularly important; these include growing infrastructure markets and experience in large projects respectively. All the above frameworks suggest that internationalisation is not just a market entry but a process that interacts with financing choices through risk, control, and resource allocation, all relevant to construction's international expansion.

Literature presents conflicting views on internationalisation's impact on multinational firms' capital structure. Some studies argue that multinational firms face higher risks because of political uncertainty,

currency volatility, and rising operational costs stemming from geographical and operational complexity (Reeb *et al.*, 1998; Akhtar & Oliver, 2009). These risks lead to a perception of multinational firms as less creditworthy compared to domestic firms, resulting in reduced overall and long-term debt levels, even when the debt financing costs are low (Burgman, 1996; Reeb *et al.*, 2001; Khaw, 2019; Chen *et al.*, 1997; Doukas & Pantzalis, 2003; Lindner *et al.*, 2018). This aligns with the pecking order theory, which prioritises internal financing to mitigate financing costs and agency conflicts (Myers, 1984; Jensen & Meckling, 1976). Consequently, geographical diversification offers internal funds at cheaper costs, further reducing reliance on external debt (Gonenc & de Haan, 2014). The agency theory explicates the challenges in monitoring dispersed management, elevating information asymmetry and agency costs, which depress leverage too (Doukas & Pantzalis, 2003). Firms may misuse free cash, increasing the cost of debt and reducing financial leverage (Chen *et al.*, 1997). Contrarily, other scholars reported that internationalisation enhances firms' ability to diversify operational risk and access global capital markets, enabling them to assume higher leveraging consistent with the trade-off theory (Mansi & Reeb, 2002; Mittoo & Zhang, 2008; Modigliani & Miller, 1963). Additionally, subsidiaries in tax-favourable locations amplify tax shield advantages, further incentivising debt (Gonenc & de Haan, 2014; Chen *et al.*, 1997; Doukas & Pantzalis, 2003).

Beyond internationalisation, firm-specific factors such as profitability, size, asset structure, and country-level institutional contexts substantially influence leverage, explaining variation across geographies (Lindner *et al.*, 2018; Pacheco, 2016; Edward & Marciano, 2019; Akhtar, 2005). For instance, U.S. multinational firms hold more debt than their Canadian counterparts, partly due to differential capital market access (Mittoo & Zhang, 2008). Recent evidence also identified a rise in zero-leverage policies among multinational firms aiming for financial flexibility amid cross-border challenges (Chatzivgeri *et al.*, 2023).

Combining capital structure and internationalisation theories aims to explain how foreign expansion influences financing decisions, particularly in capital-intensive sectors like construction. First, internationalisation indeed increases external financing needs due to upfront investments required for projects abroad, involving additional logistics and regulatory compliance costs. Second, cross-border activities introduce additional risks such as foreign exchange volatility or political instability, which affect the firm's cost of capital and willingness or capacity to take on leverage. Next, experienced international contractors often gain better access to financing because their reputation and revenue diversification lower the perceived credit risk and agency costs. Finally, the relationship between internationalisation and leverage can be non-linear. Leverage tends to increase initially to support growth and expansion, but as foreign operations mature and generate steady cash flows, firms may reduce leverage due to improved internal funding capacity and risk management. As indicated, the literature provides two opposing theoretical perspectives on how internationalisation affects corporate leverage. International expansion introduces risk factors leading to more conservative financing, particularly by reducing long-term debt ratios. However, access to multiple markets enables firms to leverage operational and financial benefits to increase debt capacity. The present study aimed to clarify these conflicting viewpoints by focusing on construction firms across diverse American countries. We employed a nuanced empirical approach that integrated the interplay of internationalisation with firm- and country-specific factors. The findings advance the theoretical understanding of how internationalisation shapes financing strategies – in particular, how companies manage debt within the context of international operations and institutional heterogeneity.

Based on the identified gaps and the distinct characteristics of construction firms, we formulated the following literature-supported hypotheses to explore how internationalisation affects the debt financing patterns in this sector:

- **H1:** Internationalisation impacts the debt levels of construction companies in the Americas.
- **H2:** Internationalisation moderates the influence of firm-specific factors on the debt levels of construction companies in the Americas.
- **H3:** Country-specific factors have a stronger effect on the debt levels of internationally active construction companies compared to non-internationalised firms.

These hypotheses aimed to deepen the understanding of how internationalisation interacts with firm-specific and country-specific factors in shaping the indebtedness of construction firms in the Americas. By addressing these aspects, the study contributes to filling the existing research gap and offers

insights relevant to both academics and practitioners. This evidence has important implications for managerial practices relating to capital structure optimisation and economic policy within the sector.

RESEARCH METHODOLOGY

The analysed sample consisted of 132 construction firms operating across 13 countries in the Americas, covering both developed and developing economies. Approximately half of the sample comprised firms from highly developed markets such as the U.S. and Canada, while the remainder represented emerging or developing markets, including Argentina, Brazil, Colombia, Costa Rica, Mexico, and Trinidad. Table 1 presents the distribution of companies across different countries, with the firms classified by their internationalisation level. The data distinguishes between firms operating solely on domestic markets and those involved in international operations. We sourced the data from the Thomson Reuters database and compiled them between July and September 2024.

Table 1. Sample structure

Country	Number of companies		
	Total	Internationalised	Non-internationalised
Argentina	8	5	3
Bolivia	1	1	0
Brazil	13	13	0
Canada	9	3	6
Chile	13	7	6
Columbia	5	2	3
Costa Rica	1	0	1
Ecuador	1	1	0
Jamaica	1	0	1
Mexico	14	7	7
Peru	5	3	2
Trinidad	1	0	1
United States	60	30	30
Total	132	72	60

Source: own study based on Thomson Reuters.

The sample structure demonstrates substantial variation in internationalisation levels among countries. Some of them, like Brazil, show a complete absence of internationalised companies; others, such as the U.S. and Mexico, exhibit a balanced distribution. This reveals differing market orientations and approaches to international expansion strategies.

Table 2 presents the variables used in the analysis, along with their definitions and formulas. The dependent variables represent three different debt maturities considered in the analysis, while the explanatory variables capture firm growth, size, asset tangibility, profitability of assets and equity, financial liquidity, tax burden, operating risk, non-debt tax shields, and asset intangibility. The selection of variables relied on prior studies well established in the literature (Koralun-Bereźnicka *et al.*, 2024). This methodological approach enabled the comparability of findings. We performed the empirical analysis on an unbalanced panel, covering annual data from 2000 to 2023.

The dependent variable in this study was leverage, measured through ratios that reflected the proportion of debt in total financing. This focus enabled an assessment of how internationalisation affected the firms' reliance on external funding. Using the notations described in Table 2, the proposed model assumed the following form:

$$Y_{it} = f(X_{1it}, \dots, X_{10it}, Z_{1it}, \dots, Z_{12it}, \xi_{it}) \quad (1)$$

where the total respective amount of debt (D), long-term debt (LD), or short-term debt (SD) represents the endogenous variable Y. Table 2 describes the model's exogenous variables, $X_{1it}, \dots, X_{10it}$. Finally, the variables Z_1, …, Z_{12} are dummy variables which took the value of 1 when the company came

from the country selected or 0 in other cases, in the order given in Table 2. In the first step of the empirical analysis, we tested the stationarity of the panel series. We also used the fixed effects estimator and the random effects estimator. Then, we selected the best version of the model based on three tests. The first one, namely the joint significance test, allowed us to test whether the pooled ordinary least squares (OLS) method was adequate in favour of the fixed effects alternative. The second one, the Breusch-Pagan Lagrange multiplier test, let us check whether the pooled OLS method was adequate in favour of the random effects alternative. The third one, the Hausman test, showed whether the random effects model was consistent or whether the fixed effect model was more adequate. The subscript $_i$ denotes the number of the company under consideration, $_t$ means the number of the period (year), and ξ is the random component.

Table 2. Description of variables used in the analysis

Character	Symbol	Name	Formula
Dependent	D	Total debt	Total liabilities / total assets
	LD	Long-term debt	Long-term liabilities / total assets
	SD	Short-term debt	Short-term liabilities / total assets
Explanatory	GR	Firm growth	Revenue growth rate
	SIZE	Firm size	Ln (total assets)
	TANG	Asset tangibility	Tangible assets / total assets
	ROA	Profitability of assets	Net income / total assets
	ROE	Profitability of equity	Net income / equity
	LIQ	Financial liquidity	Current assets / current liabilities
	TAX	Tax burden	Gross profit / net profit
	RISK	Operating risk	EBIT growth rate
	NDTS	Non-debt tax shields	Depreciation / total assets
	ATRR	Asset intangibility	(Fixed assets – tangible assets) / total assets

Source: own study.

RESULTS AND DISCUSSION

The analysis provided clear evidence that internationalisation affects the debt financing patterns of construction companies in the Americas. Its influence is visible in the overall leverage, the maturity structure of debt, and the way firm- and country-specific factors translate into financing choices.

Table 3 presents the correlation coefficients among the variables. While some significant associations emerged, most relations proved weak, indicating that reliable inference required multivariate models. The regression analyses that followed provided more detailed insights.

Table 3. Correlation coefficients between variables

Vbr.	D	SD	LD	GR	SIZE	TANG	ROA	ROE	LIQ	TAX	RISK	NDTS	ATRR
D	1	*0.993*	*0.704*	-0.001	*-0.235*	*-0.037*	*-0.305*	0	-0.019	-0.006	0.001	-0.002	*-0.044*
SD		1	*0.461*	-0.001	*-0.216*	-0.033	*-0.31*	0.001	-0.017	-0.005	0.001	-0.03	*-0.04*
LD			1	-0.003	*-0.244*	*-0.052*	*-0.234*	-0.002	-0.026	-0.015	0.003	*0.058*	*-0.047*
GR				1	-0.007	0.015	0.001	0	-0.004	-0.003	*-0.877*	-0.011	0
SIZE					1	*-0.104*	*0.164*	-0.013	*-0.045*	0.035	-0.006	*-0.172*	*0.231*
TANG						1	0.024	0.016	*-0.102*	-0.002	-0.009	*-0.204*	*-0.51*
ROA							1	0.01	0.01	0.004	-0.001	*-0.094*	0.032
ROE								1	-0.006	-0.002	0	*-0.093*	-0.005
LIQ									1	-0.024	0.01	*-0.046*	-0.009
TAX										1	0.004	0	-0.007
RISK											1	0.016	0.002
NDTS												1	*0.284*
ATRR													1

Source: own study.

The models explaining debt measures underwent estimation first for the full sample and then for the two groups of countries – with and without internationalisation – as pooled models, including a dummy variable for internationalisation but without country-specific dummy variables. The internationalisation dummy proved significant only for the total debt measure. Due to the article's scope, we do not report the detailed results here. In the next step, we re-estimated these models for the same three groups of countries – the full sample and countries with and without internationalisation – as pooled models, this time incorporating country-specific dummy variables. However, we excluded the internationalisation dummy variable due to the excessive number of variables relative to the number of observations. In all cases, the pooled model proved the most suitable, as confirmed by the panel tests. Tables 4-6 show the results. Only variables that were statistically significant at least in one of the models appear in the tables.

Table 4 reports the determinants of total debt.

Table 4. Estimates of the panel regression of D with country-specific factors for the full sample

Variables	All companies	Internationalised	Non-internationalised
Const.	0.643***	0.479***	77.403***
GR	0.103***		
SIZE		0.014***	-5.684***
TANG	-0.177***	-0.169***	-13.799***
ROA	-0.123***		-0.032***
ROE	0.018***	-0.001**	
LIQ	-0.024***	-0.051***	
NDTS	-0.637*	-0.925**	
ATRR		0.065*	
Argentina		0.135***	
Brazil	0.197***		
Canada	0.073**	0.121***	
Columbia		-0.098***	
Costa Rica		-0.130***	
Ecuador	-470.661***		
Trinidad		0.105*	
R^2	0.161	0.336	0.159
DW	1.702	1.398	1.889
Joint significance test stat.	1.261	0.608	0.837
Breusch-Pagan test stat.	0.690	N.a.	N.a.
Hausman test stat.	21.774	13.537	18.822

Note: *)**)***) – statistical significance at the level of 0.1, 0.05, or 0.01; #) the null hypothesis rejected at the 0.05 significance level. The U.S. served as the reference country for the country-specific factors.
Source: own study.

Firm growth showed a positive association with leverage in the full sample, suggesting that expansion stimulates reliance on external funding. Yet, this link disappeared for both international and domestic firms when considered separately, pointing to heterogeneity in financing strategies. Firm size proved a decisive factor: for internationalised companies, it raised the leverage, reflecting their greater ability to access global capital markets, while for non-internationalised firms, the relationship was negative, consistent with the constraints of domestic credit systems. Asset tangibility reduced leverage in all groups, but internationalised firms showed a unique pattern: one can leverage intangible assets in financing, likely because global lenders recognise their collateral value. Profitability, measured by ROA, decreased leverage in most models, in line with the pecking order theory, but it was insignificant among internationalised firms, suggesting that access to diverse funding substitutes for internal resources. Differences in country-specific factors strengthened these observations, with several significant deviations among international firms but virtually none among domestic ones.

Table 5 focuses on short-term debt.

Table 5. Estimates of the panel regression of LD with country-specific factors for the full sample

Variables	All companies	Internationalised	Non-internationalised
Const	0.747***	0.625***	70.740***
GR	0.045***	0.025**	
SIZE	-0.010***		-5.224***
TANG	-0.501***	-0.494***	-12.424**
ROA	-0.094***		-0.035***
ROE	0.014***		-0.857*
LIQ	-0.038***	-0.060***	
NDTS	-0.648***	-0.553*	
ATRR	-0.430***	-0.381***	
Argentina	0.081***	0.216***	
Brazil	0.096***		
Canada	0.042*	0.047***	
Chile	0.027**	0.0172*	
Columbia		-0.036**	
Costa Rica		-0.036**	
Ecuador	-206.126***		
Jamaica		0.153**	
Mexico		-0.029**	
R^2	0.376	0.611	0.155
DW	1.652	1.066	1.914
Joint significance test stat.	1.032	0.881	0.901
Breusch-Pagan test stat.	0.011	N.a.	N.a.
Hausman test stat.	3.605	20.211	18.524

Note: *)**)***) – statistical significance at the level of 0.1, 0.05, or 0.01; #) the null hypothesis rejected at the 0.05 significance level. The U.S. served as the reference country for the country-specific factors.
Source: own study.

Growth positively related to short-term borrowing in internationalised firms, reflecting their greater access to credit for expansion, whereas no such effect emerged among domestic firms. Size reduced reliance on short-term debt in the full sample and in domestic firms, likely because larger firms can secure longer maturities. For internationalised companies, however, size was not a significant determinant, suggesting that the scale advantage operates mainly in the long-term segment. Tangibility consistently reduced short-term borrowing across all groups, supporting the view that tangible assets better align with long-term financing. Profitability, especially ROA, reduced short-term debt for the full sample and domestic firms but lost importance for internationalised ones. Liquidity similarly decreased short-term debt among internationalised companies, which can rely on internal resources, but was not significant for domestic firms. Non-debt tax shields and intangibility also mattered mainly for internationalised firms, while country-specific factors once again underlined the role of institutional environments in shaping access to short-term credit.

Table 6 addresses long-term debt.

The patterns here are distinct. For internationalised firms, size proved positively associated with long-term leverage, confirming that scale provides access to global financing instruments. In contrast, size negatively related to long-term debt for domestic firms, suggesting their preference for equity or internal funds when large enough. Tangibility showed opposing effects: it discouraged long-term borrowing among domestic firms but supported it for internationalised firms, where one can pledge tangible assets abroad. Profitability again reduced leverage for the full sample and domestic firms, but not for international ones, consistent with their broader financing choices. Non-debt tax shields and intangibility gained importance in internationalised firms, reflecting their ability to utilise diverse collateral and tax advantages. Finally, strong country-specific factors appeared only for internationalised companies, while domestic firms remained bound to local financing patterns.

Table 6. Estimates of the panel regression of LD with country-specific factors for the full sample

Variables	All companies	Internationalised	Non-internationalised
Const	4.245***	-0.138***	7.402***
GR		-0.035**	
SIZE	-0.284***	0.014***	-0.552***
TANG	-0.749**	0.322***	-1.076*
ROA	-0.059***		-0.092***
ROE	0.001**	-0.000**	
NDTS		0.899*	
ATRR		0.459***	
Argentina		-0.074***	
Brazil	1.410***		1.732***
Canada	-0.727*	0.070***	
Columbia		-0.057***	
Costa Rica		-0.202***	
Mexico		0.056***	
Trinidad		0.135**	
R^2	0.116	0.420	0.182
DW	1.949	1.525	1.966
Joint significance test stat.	1.054	0.563	0.754
Breusch-Pagan test stat.	N.a.	N.a.	N.a.
Hausman test stat.	23.718	11.633	15.381

Note: *)**)***) – statistical significance at the level of 0.1, 0.05, or 0.01; #) the null hypothesis rejected at the 0.05 significance level. The U.S. served as the reference country for the country-specific factors.
Source: own study.

Overall, the findings highlighted two contrasting financing logics. Internationalised firms pursue strategies shaped by scale, collateral diversification, and sensitivity to institutional environments. Their access to global markets enables them to secure long-term financing and to use both tangible and intangible assets in debt negotiations. Domestic firms, in contrast, remain constrained by limited financial depth, showing conservative borrowing patterns with greater reliance on short-term debt and stronger dependence on profitability and liquidity. These results suggest that internationalisation not only changes the indebtedness level but also alters the relevance of classical determinants of capital structure, while amplifying institutional influences.

CONCLUSIONS

This study demonstrated that internationalisation primarily influences debt financing decisions in the case of construction companies in the Americas, focusing on its role both as a determinant and as a moderating factor. The analysis provided insights into the unique financing behaviours of internationally active and non-internationalised firms within the construction sector, addressing the three proposed hypotheses.

The results provided partial support for H1, showing that internationalisation impacts the debt level. This aligns with the trade-off theory of capital structure, which suggests that international firms leverage the tax advantages and broadened access to diverse capital sources available on global markets. Larger, multinational construction firms typically fund extensive projects with long durations using stable, long-term financing, reflecting their capacity to manage associated risks and the need for liquidity across multiple currencies and jurisdictions. By contrast, non-internationalised firms, often constrained by limited financial market development and information asymmetry, show a preference for lower leverage and a dominance of short-term debt. This reflects their greater difficulty in accessing external financing and their higher sensitivity to local economic fluctuations. Moreover, the positive association between firm size and leverage among internationalised firms further supports the notion

that scale and international presence contribute to enhanced borrowing capacity. The negative or insignificant relationship for non-internationalised firms highlights the role of institutional and market constraints in domestic settings. Simultaneously, we confirmed no statistically significant impact after splitting debt into short- and long-term maturities. This suggests that the role of internationalisation becomes less pronounced when considering debt maturities separately.

The analysis supported H2, revealing that internationalisation moderates the impact of firm-specific factors on the capital structure. As suggested by the agency and trade-off theories, internationalisation alters risk profiles and financing opportunities, affecting how firm characteristics like size, profitability, and asset structure translate into debt financing decisions. For internationally active firms, the relationships between the capital structure and several firm-specific factors such as size, tangibility, and profitability differed considerably from those observed in non-internationalised firms. For instance, while size positively influenced long-term debt among internationalised firms, it had a negative impact on non-internationalised firms, likely reflecting the enhanced borrowing capacity of larger firms operating on global markets. Similarly, asset tangibility, which typically reduced reliance on debt for non-internationalised firms, positively influenced the use of long-term debt in internationally active firms, revealing the role of internationalisation in shaping collateral utilisation strategies.

The findings also supported H3, highlighting the significant role of country-specific factors in shaping the capital structure of internationally active construction firms, whereas such factors were negligible for non-internationalised firms. The differences in debt levels observed across countries likely stem from variations in financial systems, tax regulations, and market conditions. In contrast, non-internationalised firms, operating primarily within their domestic financial constraints, showed minimal variation attributable to country-specific factors. Institutional theory and empirical findings highlight that firms operating across multiple countries navigate varied legal, financial, and macroeconomic environments, which amplifies the role of country-level determinants in their capital structure choices.

To sum up, the results of this study align with the literature, which highlights the ambiguous nature of the relationship between internationalisation and capital structure, in particular company indebtedness. While some studies suggest that internationalisation leads to higher debt levels due to better access to global capital markets (Mansi & Reeb, 2002; Mittoo & Zhang, 2008), others indicate that increased risk and diversification can reduce reliance on debt (Reeb *et al.*, 1998; Burgman, 1996; Chung & Cheah, 2006). Our research implicates theory. The higher leverage observed among internationalised firms concurs with the trade-off theory, where the tax benefits of debt and access to diversified capital markets enable greater debt-incurring capacity. These firms often engage in long-term contracts requiring stable financing instruments, which explains the prominence of long-term debt in their capital structure. This supports the notion that a larger scale and geographical diversification reduce information asymmetries and address agency costs, as postulated by the agency theory. Conversely, domestic firms with no international exposure showed conservative financing patterns, characterised by lower overall leverage and the predominance of short-term debt. Such behaviour is consistent with the pecking order theory and reflects limited access to external capital, informational opacity, and heightened sensitivity to local financial market imperfections. The negative relationship between firm size and leverage among domestic firms suggests that institutional barriers on less developed markets may constrain growth opportunities. The influence of firm-specific factors, such as profitability, asset tangibility, and liquidity, and of country-specific factors underscores the critical interplay between microeconomic and macroeconomic determinants in shaping financing decisions. Particularly, the differential impact of asset tangibility on debt for international versus domestic firms highlights how collateral valuation and lender confidence vary across contexts.

These contrasting findings suggest the need for further research, as the industry-specific characteristics and market conditions of the construction sector shape financial decisions. The results of this research highlight the importance of internationalisation as a determinant and moderator of indebtedness for construction firms too. Both the country context and the internationalisation degree shape financing choices. Developed-market and internationalised firms rely more on debt and show more stable, diversified funding; in turn, developing-market and purely domestic firms main-

tain lower leverage and higher short-term debt. Although internationalisation emerged as a significant factor influencing total debt, its impact on debt maturity structures remained limited. Moreover, we observed some deviations from classical theory, for instance the lack of significant influence of profitability on debt among international firms. These deviations suggest that strategic financing decisions in internationalised firms incorporate a broader set of considerations including risk management, access to internal funds, and currency exposure.

From a theoretical viewpoint, the findings enrich the ongoing debate on capital structure by situating firm-level financial behaviour within the broader institutional and international frameworks. They call for integration of traditional financial theories with insights from institutional economics, international business, and strategic management, advocating a multi-dimensional approach to understanding financing strategies. In practical terms, construction firms aiming for international expansion should strategically balance the benefits of diverse funding sources against emerging risks, while policymakers on emerging markets could focus on developing financial infrastructures to support longer-term financing, thereby fostering competitiveness in the global arena.

Limitations and Future Research

When considering the study's results and their implications for managerial practice and policy, one should pay attention to certain limitations. First, we restricted the analysis to construction companies operating in 13 countries across the Americas, which limited the findings' generalisability to other regions. Second, the sample covered annual data from 2000 to 2023 and thus may have been sensitive to specific macroeconomic cycles, trends on capital markets, and policy changes over this period. Third, the research relied exclusively on firm-level financial statements, without incorporating qualitative information such as managerial decision-making processes or unique local regulatory contexts. Fourth, the model did not capture all possible determinants of the capital structure, including alternative financing sources or hybrid capital instruments. Fifth, considerable heterogeneity in the level of internationalisation and financial market maturity among the included countries may have affected the precision of cross-country comparisons. Finally, as the empirical analysis remained limited to the construction sector, one cannot readily extrapolate the results to other capital-intensive industries with different asset structures.

Future research could expand the analysis to include construction firms from other regions and sectors, enabling a broader generalisability assessment of the observed relationships. Integrating the above-mentioned qualitative data – such as managerial perspectives, strategic motivations, or institutional factors – could provide deeper insights. Next, longitudinal studies capturing the effects of changing macroeconomic conditions, policy environments, and market cycles could enhance the robustness of empirical findings. Finally, comparative analyses involving other capital-intensive industries, such as capital-intensive infrastructure, may clarify the sector-specific versus universal determinants of financing strategies among internationally active firms.

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Conflict of Interest

The authors declare that the research took place in the absence of any commercial or financial relationships which one could construe as a potential conflict of interest.

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