Article

New Evidence on National Culture and Corporate Financing: Does Institutional Quality Matter?

Haifeng Hu and Minjing Qi *

Business School, Beijing Normal University, No. 19, Xinjiekouwai Street, Beijing 100875, China
* Correspondence: minjingqi007@gmail.com

Abstract: The purpose of this paper is twofold. First, to examine the dynamic impact of national culture on corporate financing in the context of seven Asian countries using a two-step GMM model, and second, to assess the moderating role of institutional quality on the relationship between culture and corporate financing. To achieve these objectives, a unique sample of seven Asian countries from the period of 2002 to 2018 was employed. The empirical results reveal that firms operating in countries that encourage individualism, masculinity, and uncertainty avoidance tend to use higher leverage in their operations. Individualism encourages autonomy in decision making and managers from such cultures engage in more risky decisions, while masculinity focuses on competition and suggests that males have a higher tendency for risk preference than females when undertaking financial decisions. In addition, firms from high uncertainty avoidance societies are more driven to engage in the use of leverage to obtain benefits via tax saving, whereas firms in higher power distance countries are less reliant on leverage. Our findings are consistent with our expectations, as well as supporting the existing literature on the issue. Further, the positive culture–leverage nexus is significantly and positively moderated by institutional quality. The findings are robust to alternative procedures (i.e., alternative proxies for culture and corporate financing, reduced sample size, and alternative estimation model), contribute to the existing literature, and have implications for potential policymakers.

Keywords: national culture; corporate financing; institutional quality

1. Introduction

Corporate financing remains a puzzle in the finance literature and has received considerable attention in the recent past. At the firm level, managers often pay particular attention to viable sources of funds because it directly affects corporate existence and reputation in the market [1]. Dating back to the seminal work of Ref [2], researchers and practitioners alike are interested in understanding the determinants of corporate financing from various perspectives. Theoretically, firm-level factors and country-level factors normally identify the core driving forces that significantly shape firms' financing decisions [3].

Recently, scholars and academics agreed that national culture is an important factor that influences the financial decisions of firms [4,5], whereas several empirical studies have also emerged that present various explanations in support of national culture. The empirical significance of these studies, however, remains largely inconclusive and contradictory for two reasons [6,7]. First, evidence to date on culture's relevance in corporate financing, although abundant, is empirically inconsistent in published results, which might be due to the use of different samples, econometric techniques, and timeframes. For instance, previous studies failed to take into account the dynamic nature of the culture–corporate financing association. As a result, we believe that overlooking the dynamic nature of this relationship in empirical work warrants more attention. Another point of view is based on institutional theory, which postulates that the governance quality of the country plays a crucial role in safeguarding investors'/creditors' rights, which significantly affects the

firm's financial behavior, implying that institutional differences are the key reason for such inconsistency in results [8,9]. Ref. [10] also claimed that "differences in capital structure may be contributed by institutional differences. His results indicate that institutions may significantly influence firms' capital structure decision and that agency and monitoring problems, while existing in every country, may create different outcomes" [11]. Although prior studies on corporate financing include various aspects of governance quality, none simultaneously analyze the formal and informal country level determinants of leverage.

In this paper, we aim to answer two important questions. First, we aim to examine the impact of national culture on corporate financing using a two-step generalized method of moments (GMM) model in the context of seven Asian countries, namely China, India, Indonesia, Japan, Malaysia, the Philippines, and Thailand, and second, we aim to assess the moderating role of institutional quality on the relationship between culture and capital structure decisions. We capture the moderating effect of institutional quality on the culture–leverage nexus by creating an institutional quality index, a major innovation of this study. To achieve these objectives, we employed a unique dataset of 928 non-financial listed firms over a period of 17 years (2002–2018) across seven Asian countries. To the best of our knowledge, this is the first attempt to explore the direct and indirect effect of national culture on firms' corporate financing decisions. In addition, there is no prior study on the issue dedicated to these countries.

The findings show that firms use more leverage financing in countries with higher degrees of individualism, masculinity, and uncertainty avoidance, and lower leverage in countries with higher power distance, and affirm that capital structure is not homogenous in the sample countries. The positive impact of culture on corporate financing demonstrates that, as claimed in the empirical literature, debt serves as a disciplinary tool that firms use to reduce internal agency conflicts as a consequence of opportunistic manager behavior, who misallocate firm resources to build their personal empires. The results further reveal that power distance and debt financing are inversely correlated, supporting the conventional wisdom that managers in such cultures are less autonomous and follow corporate strategy and engage in net present value (NPV) projects for the shared benefits of all stakeholders [12]. Similarly, the estimated relationship between culture and capital structure is positively driven by institutional quality, implying that firms have great incentive to use debt financing in their operations when they operate in more institutionally developed countries. The overall findings are consistent with the agency conflict theory and institutional theory.

The results of this paper yield several contributions to the literature. First, the evidence concerning culture and corporate financing decisions are inconsistent, and most of the existing research is established based on a single-country context. Our empirical investigations broadened the current research on the culture–capital structure nexus in the context of Asian economies, which provides an interesting context for this subject matter. Second, while the direct link between culture and capital structure is examined, their inconsistent outcomes may suggest that this relationship could be explained by institutional factors, which is a novelty of this study. Some relevant studies—for instance, a recent paper by [13]—show that firms with more involvement in earnings manipulation kept more leverage, while this positive association is attenuated by strong institutions. More recently, Ref. [14] shows that the changes in long-debt structure in response to financial crisis are significantly greater in countries with an effective legal system and financial development. Our paper complements these studies by displaying that the positive nexus between culture and capital structure is augmented by the institutional quality. Thus, the findings of this paper not only fill this essential vacuum in the literature, but also have substantial implications for policymakers and other stakeholders.

The rest of the paper is ordered as follows. The literature review, followed by research hypotheses, are discussed in Section 2. Section 3 covers the research methods, including data descriptions, variables, and econometric specifications. Section 4 covers the empirical results, along with detailed discussions. Section 5 concludes the paper.

2. Literature Review and Hypothesis Development

2.1. Determinants of Corporate Financing

Prior literature highlighted several firm-specific and country-specific determinants of financing decisions, grounded in several theories. For instance, the trade-off theory predicts that companies with substantial growth opportunities have lower debt levels to avoid the higher cost of financial distress. The model presented by Ref. [15] portrays that firms should maintain a lower debt capacity for a higher growth opportunity, which denotes that higher-growth firms rely more on equity financing. Tangibility is another essential determinant of capital structure, since the value that assets generate primarily depends on the nature of the assets. Intangible assets, from an agency standpoint (e.g., [16], are easily substituted into riskier assets and can be misappropriated. Tangible assets, however, diminish the agency risk of the lender when used as collateral. Moreover, high tangibility alleviates information asymmetry, thus making the choice of equity financing more favorable for firms with more tangible assets [17] and eventually driving down debt financing. In line with the "static trade-off theory," there should be a positive correlation between profitability and leverage, since highly profitable firms face low financial distress costs and the tax advantage of holding debt is more desirable. This relationship is evidenced in recent empirical studies [18,19].

Regarding firm size, Ref. [20] observed that capital structure adjustment is responsive and relies on firm siz. Another set of studies contends that highly liquid firms have the advantage of lower equity costs, which implies that such firms prefer equity financing instead of debt financing, thereby resulting in a negative association between liquidity and capital structure [21,22]. Other researchers have examined the determinants of capital structure, e.g., Ref. [23] and Ref. [24] concluded that liquidity, profitability, and tangibility (firm size) negatively (positively) determine the capital structure. Ref. [25] investigated firm- and country-specific factors of the capital structure. Findings based on French, Greek, and Italian SMEs show that firm size is positively correlated with capital structure at the firm level, while tangibility and profitability are negatively correlated. Moreover, country-specific institutional and legal systems also influence capital structure decisions.

Even though prior empirical and theoretical literature has widely investigated the determinants of corporate financing, the issue remains unsettled. Among the existing studies on corporate financing, culture has been primarily acknowledged as a vital factor; therefore, its significance in corporate financing decisions cannot be overlooked. Although culture is an intangible concept, it can reflect several aspects of firm financing decisions. National culture constitutes a group of people who share ideas and practices. It is also referred to as the "collective programming of the mind, which differentiates members of one group from members of another group" [26,27]. In light of the substantial research conducted on national culture, we use Ref. [26] "four cultural dimensions" to analyze the impacts of national culture. The four basic components are individualistic culture, power distance culture, masculinity culture, and uncertainty avoidance culture [28]. The ratings given to each country on each of these four components are not absolute numbers, but rather indicate the relative status of the country in comparison to other countries. Ref [29] further extended the culture framework and presented six cultural elements in recent research. These cultural dimensions include power distance, individualism, masculinity, uncertainty avoidance, long-term and short-term orientation, and indulgence. This research investigates [26] due to the scarcity of data from relevant jurisdictions and the higher reliability of the four-factor dimensions' results.

The institutional framework presented by Ref. [30] shows that the way business practices in a certain context are adopted reflect the values of their respective cultures. Management and leadership studies have traditionally incorporated cultural dimensions; however, the adaptation of cultural dimensions to financial studies has been minimal. Using employee assessments, Ref. [26] was able to build cultural dimensions, which were often preferred above a comparable index produced by Schwartz [31]. Although national culture has a significant impact on corporate financing, the findings of previous empirical

research have not been able to establish a consistent result on the hypothesized link between these variables [32–34]. Although most relevant research reported a link between national culture and leverage adjustment [35], national culture, and dividend policy [36], both findings are empirically ambiguous. In addition, Ref [4,7,37] each gave a comprehensive set of data for one of the four cultural dimensions, which included power distance culture, individualistic culture, masculine culture, and uncertainty avoidance culture.

Ref. [38] conducted extensive in-depth research investigating the effects of national culture on the capital structure of 42 countries. In addition, Ref. [39] researched the five factors of national culture that are associated with both short-term and long-term capital structure decisions. They empirically tested their findings on a sample of 5968 businesses from five different industries and 33 different countries between 2009 and 2017. Their interpretations of the data did not surprise us, since most of those findings were repeated in subsequent research conducted by [40]. It is possible to find further research on the national cultural dimensions that affect SMEs [41,42], as well as Ref. [34] research on national culture with agency costs, governance, and capital structure, all of which are less important and relevant to our study. Despite this, none of this significant research was able to especially focus on the impact of four dimensions of national culture on corporate financing. In the forthcoming sections, we discuss in more depth the four national culture dimensions related to corporate financing in this study and develop our hypotheses.

2.2. Hypothesis Development

This section illustrates the hypotheses of this study with a description of Hofstede's culture dimensions, namely, individualism, power distance, masculinity, and uncertainty avoidance. We used these dimensions to develop our hypotheses.

2.2.1. Individualism and Corporate Financing

Individualism means how much a society values the individual's role over the group's role. Individualism is the choice for a social structure that is less interconnected, in which each person shares the goal of self-reliance and service to members of their immediate family. Individualism may also be defined as the rejection of collectivism. Corporate managers in societies that place a strong emphasis on individualism have a propensity to prioritize their self-interests and the welfare of their employees, which indicates that they favor maintaining a low level of debt [43,44]. Contrarily, Ref. [45]) argues that in individualistic societies, people are more over-confident and over-expectant regarding the future. Managers in such individualistic societies are generally risk-takers and prioritize debt over equity during financing decisions. Therefore, companies influenced by such cultures exhibit higher agency costs and maintain high leverage levels to nullify the adverse effects of agency costs [38]. Generally, most businesses choose collective societies characterized by a strong sense of solidarity and a feeling of social well-being. However, individualism as a component of national culture shows that businesses in countries with a high level of individualism have a greater tendency to accomplish their objectives independently and do not want to adhere to the standards of others [46]. However, firms that operate in cultures with a strong emphasis on individualism are forced to endure the high cost of information asymmetry in the case of equity. This results in increased financing costs and compels firms to rely more on debt financing [47]. As a result, for this investigation, we propose that individualism and corporate financing have a positive relationship.

Hypothesis 1 (H1): *There is a positive relationship between individualism and corporate financing.*

2.2.2. Power Distance and Corporate Financing

The power distance scores reflect the distribution of power and the degree to which those with less power accept their unequal allocation. Moreover, power distance determines how reliant its leaders and subordinates are on one another. Countries have a high power distance score when selecting the most secure kind of funding; managers look for funds

with a lesser risk of going bankrupt. According to research carried out by [48], countries with a larger power gap also tend to exhibit high transaction costs, which reflect a lower degree of trust and the presence of opportunistic behaviors. Countries with low power distance cultures encourage more internal debt in the process of making financial decisions for firms [49], which helps to lessen the overall influence of asymmetric information on the decision-making approach [50]. There is a negative association between power distance and corporate finance characteristics such as market value, leverage, and how it impacts the subsidiary debt ratio, according to research that has been documented in the literature and carried out in different countries [51–53]. However, owing to the consultative structure of financing, borrowers in low power distance countries would prefer to utilize more finance. In addition, firms with a high power distance tend to have lower transaction costs and cultivate cultures with low levels of risk-taking. A lower propensity for risk-taking makes it more difficult to meet the demand for financing by affecting the activities that generate a need for financing, such as entrepreneurial innovation. On the other hand, this practice makes it more difficult to meet the supply of financing due to a lower tendency for risk-taking. As a result, we anticipate that countries with a significant power distance will have a lower level of corporate financing. Considering the above debate, we propose the following hypothesis:

Hypothesis 2 (H2): *There is a negative relationship between power distance and corporate financing.*

2.2.3. Masculinity and Corporate Financing

According to Ref [26], the cultural characteristic of masculinity is characterized by assertiveness, competition, incentives, and acknowledgement of performance. Values associated with men, such as assertiveness and competition, stand in contrast to values that are seen to be associated with women, such as modesty, caring, trust, and an absence of conflict. In the 21st century, these views of femininity could seem too traditional. On the other hand, in recent research, Ref. [46] says they are more social–cultural than individual cultural characteristics, based on the gap between men's and women's values in each nation. The idea that a male is more naturally predisposed to achieve financial performance is widespread [54]. Countries with a greater degree of masculinity will prioritize productivity, intellectual independence, and conflict above solidarity, collaboration, and moral responsibility [55]. In a perfect scenario, most firms would encourage a lack of masculinity. As a result, a negative association between masculinity and debt ought to be expected. Ref [4] presented the other viewpoint, demonstrating a positive association between short-term debt and masculinity.

Nevertheless, Ref. [55] support our view that short-term debt is acceptable. When seen as a whole, the usage of external debt might be interpreted as the chance for stakeholder involvement, profitability, and the debt itself. As a result, it is unclear if the level of masculinity in a particular culture has a positive or negative relationship with corporate financing (short-term and long-term debt). This leads us to our fourth hypothesis, which lacks a clear direction:

Hypothesis 3 (H3): *There is a positive relationship between masculine culture and corporate financing.*

2.2.4. Uncertainty Avoidance and Corporate Financing

Uncertainty avoidance reflects the degree to which a society is risk-averse and can be measured by its propensity to avoid uncertainty [56]. It originates with the inherent unpredictability of the future and continues by describing the degree to which societies and the people that comprise them try to avoid it. Ref. [29] suggested three methods to deal with uncertainty. These methods include using technology to cope with natural uncertainties, legislation to adjust to human behavioral uncertainties, and religion to cope with other types of uncertainties. According to Ref. [57], debt costs grow higher when there is a

greater degree of uncertainty, while, as stated by Ref. [58], countries with high uncertainty avoidance will be more likely to support an appropriate flow of information, controls on risk-taking, and collective welfare. The most prominent examples of theories that aim to explain the phenomena are those that pertain to capital structure. These theories include the agency theory and the trade-off theory. Many firms, scared of taking on excessive risk, find that relatively high levels of uncertainty lead to reduced debt financing. However, uncertainty avoidance may, in certain situations, positively impact corporate financial decisions, according to some research. For instance, Ref. [59] asserts that corporate finance is a technique that assists high uncertainty avoidance societies in maintaining order. As a result, it is usually assumed that attempting to eliminate ambiguity would have a mixed effect. Therefore, we propose a positive relationship between uncertainty avoidance and corporate financing:

Hypothesis 4 (H4): *There is a positive relationship between uncertainty avoidance and corporate financing.*

2.2.5. Moderating Impact of Institutional Quality

The cornerstone of sustainability is institutional quality, which has been identified as the primary pillar of sustainable development. "Institutional theory suggests that institutions play an important role in a market economy to facilitate market interactions by lowering transaction and information costs" [60]. There is ample literature that provides convincing evidence on the effect of institutional quality on corporate decisions, specifically on financial decisions in the long run. Ref. [61] stressed that there is still more work to be done to fully understand how the macroeconomic and regulatory framework influence corporate financing decisions.

Since the pioneering work of Ref. [62], scholars extensively examined the nexus between quality of institution and corporate financing and concluded that variation in capital structure policies is contingent on the legal and financial systems of the country [8,63–66], to name a few. A sound institutional environment not only safeguards creditors and investors' rights, but at the same time leads to lower financial costs. Higher-quality institutions reduce creditors' risk premiums on the cost of capital by believing that they will be able to recoup their investment in case of liquidation [67]. Similarly, countries with a strong institutional quality facilitate access to external financing and subsequently improve firms' competitiveness [68]. On the other hand, rational investors limit their supply of funds to countries with weaker governance quality [69]. Ref. [65] investigate whether cross-country institutional differences matter for capital structure adjustment. Their investigations demonstrate that capital adjustments are significantly sensitive to country-specific legal and financial decisions. Ref. [70] claimed that, as the country's governance improves, the companies' cash-holding requirements diminish since they will be able to acquire external funds with more favorable conditions whenever they need it. The empirical findings also assert that institutional factors such as the tax system and bankruptcy laws [62], financial institutions [71], legal origin and corruption [64] investor protection [72,73], and the rule of law and regulatory effectiveness [74] significantly determine corporate financing decisions.

In a similar vein, [8,75] illustrated that better accounting standards and enhanced judicial efficiency are the result of strong institutional quality and the development of corporate governance, as well as transparency [76,77], information asymmetry [72], and agency problems [71]. There are two streams of literature regarding the influence of institutional quality on capital structure decisions. One stream is that companies utilize financial leverage as a disciplinary mechanism to curb agency costs [3] and institutional quality would be a costless substitute for leverage as it also reduces agency costs [13]. With respect to these arguments, one can infer that strong institutional quality will likely attenuate the culture and capital structure nexus. The second view holds that a better institutional environment mitigates the severity of agency costs, resulting in a declining of cash holding and an increase in long-term debt [69]; therefore, strong institutions are

positively correlated with long-term debt. Likewise, Ref. [65] reported that financial and legal institutional quality facilitates firms in setting target leverage. Apart from directly influencing capital structure, some recent studies also confirmed the moderating effect of institutional dimensions. For example, Ref. [14] show that the sensitivity of leverage to financial crisis is significantly greater in countries with effective institutional factors such as legal structure and financial development. Thus, the opposing proposition is that if the institutional quality functions as the complement of debt financing because of its negative influence on the cost of financing, then we may expect that the institutional quality augments the link between culture and capital structure. Thus, the following hypothesis is established based on the above theoretical and empirical findings:

Hypothesis 5 (H5): *Institutional quality plays a significant negative (positive) moderating role between national culture and corporate financing.*

3. Data and Methodology

3.1. Data

We employed annual financial data for the period of 2002–2018 to explore the impact/s of institutional quality on the relationship between national culture and corporate financing decisions. Our sample consists of seven Asian countries, namely, China, India, Indonesia, Japan, Malaysia, the Philippines, and Thailand. We selected these countries because their stock markets have experienced numerous regularity reforms and are still in the early stages of development, except for Japan, which provides substantial options for corporate financing compared to their developed counterparts [78]. These seven countries are also different from one another in terms of "rate of growth, maturity of financial markets, the size of each economy, capital market liberalization and degree of development". Japan is a developed economy while the others are emerging markets. We eliminated firms that (1) have missing values for key variables, or (2) are from the financial industry and utility industry since the financial behavior and accounting information of these firms are different from non-financial firms [79]. This process yielded 928 unique firms and 15,605 firms' annual observations.

Financial data have been obtained from the DataStream database. The database provides financial and accounting information of the firms and has been widely used in prior studies. National culture data are from the studies of [46] and [80]. Institutional quality data collected from World Governance Indicators. Further, data on GDP, inflation, and foreign direct investment (FDI) are from the website of world bank (https://databank.worldbank.org/source/world-development-indicators (accessed on 23 July 2022). All continuous variables are winsorized at 5% to mitigate the impact of the outliers.

3.2. Variables Descriptions

3.2.1. Corporate Financing

Even though numerous measures of debt financing are employed in the literature, the existing literature nevertheless failed to give a unanimous definition of corporate financing. Following the previous literature [81–84], we consider five indicators of corporate financing: book leverage (Blev), equity leverage (Eqlev), long-term debt (LTD), short-term debt (STD), and market leverage (Mlev). Book leverage is computed as total debt scaled by book value of assets. Equity leverage (Eqlev) is measured as the ratio of equity financing to total assets. Long-term debt is defined as the ratio of long-term debt to total assets. Short-term debt (STD) is measured as short-term borrowing to total assets. Market leverage (Mlev) is measured as the ratio of total assets minus book value of equity plus market capitalization to total assets. In addition, we used the ratio of total debt to total equity as an alternative proxy for robustness of our results.

3.2.2. National Culture

The explanatory variable in this study is national culture. The existing literature has used the different dimensions of national culture of [29]. However, there is a lack of agreement among researchers regarding which culture dimension to use. Thus, disagreement over the common definition of proxies is not surprising and depends on the objective of the study. Following the existing literature [85–87], we use four of the six [29] culture dimensions that are commonly found in the corporate finance literature, including individualism versus collectivism (Idv), power distance (Pdi), uncertainty avoidance (Uai), and masculinity (Mas). These four culture dimensions are considered a benchmark, reliable and valid proxies that represent national culture [88]. In addition, these were the initial four dimensions developed by Hofstede, but a fifth dimension (long-term orientation) as well as a sixth dimension (indulgence) were later added. Hofstede's [26,46] cultural dimensions are arguably the "most accepted and broadly measures of culture", which have a real impact on managers' attitudes towards decision making [35,40,85,89–91], among others. Each country has been assigned a score on each of the dimensions and higher scores reflect a larger effect of a particular variable in a certain country.

3.2.3. Institutional Quality

Institutional quality, an unobservable variable, is an essential driver of external finance. Measuring institutional quality is not straightforward and involves numerous trade-offs. In this study, we consider six institutional quality indicators including voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption, each with a score from -2.5 to $+2.5$. Higher (lower) score implies a higher level of institutional quality in a country. Moreover, Ref. [92] claim that governance quality indicators are inherently subject to higher correlation, which does not allow us to employ these variables together in a single model. Thus, following Refs. [66,93] we created a composite index of institutional quality (IQ) by taking the average of six indicators mentioned above to capture the impact of country-level governance. Theoretically, we anticipate a positive effect of IQ on corporate borrowing since a better-quality institution reduces the cost of capital and facilitates the use of debt financing [66,74].

3.2.4. Control Variables

To avoid model misspecification and to minimize the omitted variables biases, we controlled a set of firm-specific and country-specific variables that are associated with corporate financing decisions. These variables are commonly employed in the literature, including firm size, measured by natural log of firm assets; liquidity, computed as current assets to current liabilities; growth opportunities, defined as the sum of the equity market value plus total debt to total assets; assets tangibility, measured as net property, plant, and equipment to total assets [94]; profitability, defined as return on assets (ROA); while dividend payout is ratio of dividend to net income. Similarly, capital expenditure is the ratio of capital expenditure to total assets. GDP is GPD growth (annual %), inflation is the consumer price index process (annual), and foreign direct investment (FDI) is the foreign direct investment, inflows % to GDP. The descriptions of all variables are reported in Table 1.

Table 1. Data source and variables description.

Variables Name	Description	Source
Book leverage (BkLev)	Ratio of total debt to book value of assets	DataStream
Equity financing	Ratio of equity financing to total assets	As above
Long-term debt (LTD)	Ratio of long-term debt to total assets	As above
Market leverage (MLev)	Ratio of total assets less book value of equity plus market capitalization to total assets	As above
Short-term debt (STD)	Ratio of short-term debt to total assets	As above
National culture		
Institutional quality index (IQ)	Defined as political stability and absence of violence + control of corruption + the rule of law + regulatory quality + government effectiveness + voice and accountability/6.	Author's calculation
Firm size	Natural log of total assets	As above
Liquidity	Ratio of current assets to current liabilities	As above
Growth opportunities (Tobin Q)	Defined as the ratio of market value of total assets to book value of total assets.	As above
Profitability	Return on assets	DataStream
Tangibility (TANG)	Measured as tangible assets to total assets	As above
Dividend payout	Ratio of dividend to net income	As above
Capital expenditure (Capexp)	Capital expenditure to total assets	As Above
GDP growth	GDP growth (annual%)	World Bank
Inflation	Inflation, consumer price index process (annual)	As Above
FDI	Foreign direct investment, inflows % to GDP	As Above

3.3. Economatric Model

Our primary goal is to investigate the nexus between the national culture and corporate financing decisions of a firm. To capture this intuition, we specify the following dynamic empirical model, which includes lagged value of debt financing as an explanatory variable since financing behavior is persistent over time (In many situations, the cause-and-effect relationship between the dependent variable(s) and independent variables is dynamic over time. For example, when a firm's current leverage policy is determined by their past performance or leverage policy). The advantage of using dynamic model over static model is that it allows us to capture the dynamic behavior of the variable(s) and ignoring such dynamic relationship may produces misleading estimates. The functional form of dynamic model is as follows.

$$CF_{it} = \beta_0 + \beta_1 \, CF_{it-1} + \beta_2 \text{Culture}_{it} + \sum \beta_n \text{CONTROL}_{it} + \varepsilon_{it} \tag{1}$$

where CF_{it} is corporate financing of the company measured by five proxies (i.e., Lev1, Blev, LTD, STD, and Mlev) in country i at time t. It is worth noting that we accounted for each corresponding proxy (model) of the dependent variable during the analysis. CF_{it-1} is the lagged value of dependent variable in country i and time t. Culture_{it} denotes the culture in the host country i and time t. CONTROL_{it} represent firm-specific and country-specific variables including firm size (size), liquidity, growth opportunity, ROA, assets tangibility, dividend payout, capital expenditure, GDP growth, inflation, and FDI in the country i in time t. β_0 denotes the intercept, $\beta_1 + \ldots \beta_n$, represent coefficients of independent and a set of control variables. $\varepsilon_{i,t}$ is the disturbance term.

Further, to test the interaction effect of the quality institution (IQ), we developed the following model:

$$CF_{it} = \beta_0 + \beta_1 \, CF_{it-1} + \beta_2 \text{Culture}_{it} + \beta_3 \text{IQ}_{it} + \beta_4 (\text{Culture}_{it} \times \text{IQ}_{it}) + \sum \beta_n \text{CONTROL}_{it} + \varepsilon_{it} \tag{2}$$

Equation (2) incorporates an interaction term ($\text{Culture}_{it} \times \text{IQ}_{it}$) between culture and quality of institution. The definition of other variables remains the same as Equation (1).

3.4. Econometric Estimator

We investigated the impact of national culture and institutional quality on corporate financing decisions using panel data methodology. Panel data methodology was inherently susceptible to heteroscedasticity, endogeneity, unobservable variables, and reverse causality problems caused by unobserved time-invariant firm heterogeneity which had to be properly addressed before doing the empirical analysis [95,96]. Thus, using OLS on Equation (1) might result in an inconsistent and biased estimate. One plausible solution to such a problem was to apply fixed effect with robust standard error. Despite controlling the unobserved heterogeneity, fixed effect may result in inconsistent and biased estimates if culture–financial decisions are endogenously determined. In addition, Ref [97] claimed that using first lagged of corporate financing CF_{it-1} on the right side of Equation (1), the traditional OLS, fixed effects, and random effects estimation will not only yield inconsistent results but also result in a misleading conclusion. Consequently, Equation (1) was estimated using a dynamic generalized method of moments (GMM) estimator. This strategy can efficiently deal with the problems describe above and produce more efficient and consistent results.

GMM has proven to be more effective in analyzing the relationship between culture and financing. Two distinct GMM approaches—difference GMM [98] and system GMM [99])—have emerged in the finance literature. The former takes the first difference of regressor to resolve the unobserved effects. However, when the dependent variable is close to a random walk and the explanatory variables are persistent over time, the first-difference GMM is subject to weak instrumental variable and small samples bias [99,100]. Ref [99] developed a system GMM that simultaneously addresses the drawback of first differencing and performs better when the sample size is finite [101]. The validity of system two-step GMM is subject to two conditions: no second-order correlation, and validity of instruments. To meet these conditions, the autocorrelation test proposed by [98] and Sargan–Hansen test of over-identification must be valid.

4. Results and Discussion

4.1. Descriptive Statistics and Correlation Analysis

The descriptive statistics for the variables utilized in the study are shown in Table 2. It reveals that, on average, firms use 49.8%debt finance in their operations. Long-term debt and short-term debt have mean values of 5.203 and 1.571, respectively. Long-term debt is fourth times larger than short-term debt, demonstrating that long-term debt is more accessible than short-term debt in the sample countries. The average market leverage is 9.536, indicating that corporations rely more on debt funding. Power distance (PDI) and masculinity (MAS) have average values higher than 60, whereas uncertainty avoidance (UAI) has a mean value close to 60. The mean value of individualism (IDV) is less than 40. The mean and standard deviation of the quality institutional index (IQ) are 76.423 and 17.344, respectively. In terms of the control variables, the table shows that firms are considerably larger, have higher asset returns, pay higher dividends, have more tangible assets, have a higher mean of liquidity, spend more on capital projects, and grow faster. The average value of inflation and GDP is 2.07 and 5.188, respectively. FDI net inflows average 6.811 percent of GDP, with a low of −0.254 and a high of 58.519.

Meanwhile, we performed the Pearson rank correlation analysis, and the results are shown in Table 3. The results reveal that a majority of the correlation coefficients have modest magnitudes. However, we notice that the coefficients among culture dimensions are higher than the absolute value of 0.7, which restrict us to not using them together in one model.

Table 2. Descriptive statistics.

	Mean	Std. Dev.	Max	Min	p25	Median	p75
(1) Leverage	0.498	0.902	4.003	0.03	0.098	0.253	0.42
(2) Equity-to-asset	0.435	0.246	2.002	−0.933	0.264	0.434	0.611
(3) Long-term leverage	5.203	5.474	19.201	1.04	1.072	2.349	9.023
(4) Stort-term leverage	1.571	1.255	12.095	1.095	1.103	1.103	1.43
(5) Market leverage	9.536	6.939	30.000	0.008	2.51	13	13
(6) IDV	33.127	12.342	48.000	14	20	26	46
(7) PDI	69.015	14.024	104.000	54	54	68	80
(8) Mas	71.32	19.078	95.000	34	57	66	95
(9) Uai	55.702	28.382	92.000	29	30	40	92
(10) IQ	76.423	17.344	90.100	23.489	79.598	84.712	87.264
(11) Firm size	14.316	2.74	20.693	5.142	13.688	14.914	15.967
(12) ROA	0.641	2.66	11.203	−0.1	−0.069	−0.047	−0.001
(13) Dividend payout	9.183	3.996	38.995	2.032	6.692	6.692	11.203
(14) Tangibility	2.992	0.172	3.004	0.011	3.004	3.004	3.004
(15) Liquidity	2.698	1.897	27.413	0.045	1.813	2.333	3.032
(16) Capital expenditure	2.628	2.806	16.923	0	0.333	1.978	3.659
(17) Growth opportunity	12.955	19.047	103.032	0.042	0.042	2.751	19.29
(18) Inflation	2.07	2.699	13.109	−2.983	−0.009	1.623	3.609
(19) Log of GDP	5.188	1.473	7.591	2.673	3.747	5.514	6.608
(20) FDI	6.811	12.267	58.519	−0.254	0.381	1.929	4.004

4.2. Baseline Results

Table 4 exhibits the results of the system GMM estimator with robust standard errors, where the dependent variable is corporate financing. We accounted for each dimension of culture in a separate regression. It is observed that the lagged dependent variables in all models (1–5) are positive and statistically significant at the 1%, which infers that past debt policy influences current debt policy and supports the notion that corporate financial policy is a dynamic process. In addition, it can be noted that we do not concentrate on market leverage during our discussion because market leverage is considered an unreliable indicator for determining financial policy since it is heavily caused by market fluctuation. See further: [102,103]. Further, the diagnostics tests, namely AR (1), confirm the first-order correlation in each specification, but there is no evidence of second-order autocorrelation (AR2). The *p*-values Hansen J statistics are statistically insignificant at the 5% level, implying that our instruments are robust, and all models are correctly specified.

Models (1)–(3) list the outcomes of book leverage, equity financing, and market leverage, respectively, whereas Model (4) and (5) show the outcomes of long-term debt and short-term debt, respectively. The results show that individualism, masculinity, and uncertainty avoidance all have positive signs, but power distance is inversely related to corporate financing, suggesting that all these dimensions have a significant role in determining corporate financing, but their effect and directions are different. The coefficient of individualism (IDV) is statistically and highly significant at the 1% level in Model 3, while in other models' the coefficients are significant at the 5 % level. The findings reveal that agency conflict is more severe in highly individualistic societies and managers from societies that value individualism pursue their self-interests rather than shareholders' interests. Consequently, firms used debt financing as a disciplinary tool to reduce internal agency conflicts because of managers' opportunistic behavior. Ref. [104] also argued that agency problems are more common in countries with high individualism levels; firms from individualistic countries are expected to raise debt in order to reduce agency costs. Ref. [105] also revealed that agency costs are likely to be higher when people act individually than "if people move in groups".

Table 3. Correlation analysis.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1) leverage	1.000																			
(2) Equity to asset	0.244[a]	1.000																		
(3) Long term leverage	−0.134[a]	−0.118[a]	1.000																	
(4) Stort-term leverage	−0.047[a]	−0.163[a]	0.009	1.000																
(5) Market leverage	0.116[a]	0.316[a]	0.378[a]	−0.130[a]	1.000															
(6) IDV	−0.065[a]	−0.062[a]	−0.149[a]	0.067[a]	−0.113[a]	1.000														
(7) PDI	0.103[a]	0.100[a]	0.278[a]	−0.129[a]	0.232[a]	−0.631[a]	1.000													
(8) Mas	0.080[a]	0.026[a]	0.219[a]	−0.063[a]	0.217[a]	−0.740[a]	0.733[a]	1.000												
(9) Uai	0.103[a]	0.047[a]	0.422[a]	−0.101[a]	0.374[a]	−0.784[a]	0.784[a]	0.848[a]	1.000											
(10) IQ	0.008	−0.024[a]	−0.179[a]	0.058[a]	−0.133[a]	−0.491[a]	0.095[a]	0.566[a]	0.217[a]	1.000										
(11) firm size	0.113[a]	0.262[a]	0.329[a]	0.114[a]	0.345[a]	−0.049[a]	0.120[a]	0.074[a]	0.162[a]	−0.070[a]	1.000									
(12) ROA	−0.005	−0.033[a]	0.074[a]	0.114[a]	0.035[a]	−0.042[a]	0.025[a]	0.010	0.037[a]	−0.010	0.041[a]	1.000								
(13) Dividend payout	0.088[a]	−0.043[a]	−0.086[a]	−0.032[a]	−0.052[a]	−0.117[a]	0.072[a]	0.112[a]	0.139[a]	0.046[a]	−0.215[a]	0.131[a]	1.000							
(14) Tangibility	0.005	0.018[b]	−0.058[a]	0.026[a]	−0.049[a]	−0.044[a]	0.107[a]	0.091[a]	0.019[b]	0.207[a]	−0.016[b]	−0.036[a]	−0.001	1.000						
(15) Liquidity	0.220[a]	0.583[a]	−0.096[a]	−0.115[a]	0.187[a]	−0.045[a]	0.087[a]	0.015	0.033[a]	−0.032[a]	0.107[a]	0.035[a]	−0.001	0.007	1.000					
(16) Capital expenditure	−0.027[a]	−0.051[a]	0.426[a]	−0.143[a]	0.297[a]	−0.110[a]	0.320[a]	0.251[a]	0.418[a]	−0.147[a]	0.051[a]	0.025[a]	0.057[a]	−0.035[a]	−0.082[a]	1.000				
(17) Growth Opportunity	−0.077[a]	−0.201[a]	0.589[a]	−0.010	0.368[a]	−0.169[a]	0.310[a]	0.292[a]	0.442[a]	−0.081[a]	0.294[a]	0.132[a]	−0.013	−0.083[a]	−0.127[a]	0.402[a]	1.000			
(18) Inflation	−0.019[b]	0.070[a]	−0.092[a]	−0.017[b]	−0.075[a]	0.460[a]	−0.240[a]	−0.546[a]	−0.451[a]	−0.585[a]	0.070[a]	−0.017[b]	−0.092[a]	−0.113[a]	0.065[a]	−0.106[a]	−0.132[a]	1.000		
(19) Log of GDP	0.062[a]	0.049[a]	0.297[a]	−0.094[a]	0.235[a]	−0.542[a]	0.396[a]	0.605[a]	0.536[a]	0.349[a]	0.182[a]	0.064[a]	0.042[a]	−0.100[a]	0.040[a]	0.275[a]	0.345[a]	−0.380[a]	1.000	
(20) FDI	−0.050[a]	0.044[a]	−0.280[a]	0.059[a]	−0.301[a]	0.051[a]	−0.358[a]	−0.392[a]	−0.481[a]	0.261[a]	0.008	0.022[a]	−0.113[a]	0.038[a]	0.026[a]	−0.337[a]	−0.286[a]	0.145[a]	0.018[b]	1.000

This table shows the correlation analysis between variable of interest. [a] significant at 1 per cent level, [b] significant at 5 percent level.

Table 4. Regression results using two step GMM.

Variable	Model 1 Equity to Total Assets (Lev1)				Model 2 Total Debt to Total Assets (Blev)				Model 3 Market Leverage (Mlev)			
Lev$_{t-1}$	0.827 ***	0.469 ***	0.730 ***	0.850 ***								
	−0.096	−0.173	−0.191	−0.113								
Blev$_{t-1}$					0.217 ***	0.863 ***	0.199 ***	0.193 ***				
					−0.071	−0.115	−0.074	−0.074				
Mlev$_{t-1}$									0.625 ***	0.499 ***	0.627 ***	0.694 ***
									−0.067	−0.086	−0.075	−0.084
Individualism	0.029 **				0.364 **				14.002 ***			
	−0.013				−0.177				−2.291			
Power distance		−0.060 ***				−0.133 **				−13.971 **		
		−0.017				−0.057				−5.755		
Masculinity			0.034 **				0.173 **				6.790 ***	
			−0.016				−0.072				−1.4	
Uncertainty avoidance				0.012 **				0.132 **				2.024 **
				−0.001				−0.061				−1
Firm size	0.030 **	0.108 ***	0.134 ***	0.036 ***	0.274 **	0.111	0.315 ***	0.234 **	6.543 ***	9.361 **	5.065 **	3.822
	−0.013	−0.025	−0.037	−0.013	−0.112	−0.068	−0.109	−0.114	−2.11	−4.544	−1.988	−3.582
ROA	−0.02	−0.107 **	−0.139 **	−0.016	−0.019	−0.001	−0.013	−0.057	−15.278 **	−9.156 **	−8.662	−3.681
	−0.035	−0.048	−0.067	−0.04	−0.044	−0.054	−0.045	−0.05	−6.487	−3.935	−6.116	−2.161
Dividend payout	−0.019	−0.028 **	−0.078 ***	−0.009	−0.295 ***	−0.012	−0.303 ***	−0.327 ***	2.085 **	1.719	2.132 ***	3.469 ***
	−0.01	−0.014	−0.026	−0.008	−0.097	−0.035	−0.101	−0.105	−0.958	−1.383	−0.824	−1.07
Capital expenditure	−0.004 **	0.013 ***	0.018 ***	−0.001	−0.089 ***	−0.011	−0.123 ***	−0.072 ***	−1.801 **	−1.597 ***	−1.762 ***	−0.196
	−0.002	−0.004	−0.006	−0.001	−0.023	−0.008	−0.026	−0.025	−0.563	−0.379	−0.507	−0.386
Liquidity	0	−0.011	−0.043	0.003	−0.213 ***	0.003	−0.223 ***	−0.235 ***	−5.710 **	0.793	0.389	1.077
	−0.011	−0.025	−0.041	−0.012	−0.074	−0.056	−0.076	−0.09	−2.885	−1.976	−0.937	−1.749
Growth opportunity	0.004	−0.001	−0.007	−0.002	−0.055 **	−0.027	−0.053	−0.059 ***	−4.114 ***	−1.660 ***	−2.802 ***	−2.396
	−0.004	−0.01	−0.011	−0.003	−0.026	−0.015	−0.033	−0.023	−0.883	−0.569	−0.718	−1.536
Tangibility	−0.016	0.023	0.039	0.017	−0.185	0.031	−0.159	−0.275	0.223	0.875	0.573	0.24
	−0.013	−0.013	−0.023	−0.01	−0.335	−0.159	−0.363	−0.379	−1.618	−1.366	−1.524	−1.736
Inflation	0	0	0.0021	0	−0.012	0.051	−0.009	−0.024	1.257	1.917 ***	1.389	−1.136 **
	−0.003	−0.014	−0.026	−0.002	−0.024	−0.026	−0.026	−0.026	−1.101	−0.71	−1.301	−0.469
Ln_GDP	−0.076	−0.213	0.196	−0.188 ***	0.323	−0.477 **	0.431	0.373	−72.125 ***	−71.796 ***	−67.367 ***	−72.958 ***
	−0.066	−0.126	−0.102	−0.062	−0.883	−0.199	−0.913	−0.896	−15.058	−15.435	−13.064	−24.928
FDI	0.015 **	−0.009 **	−0.01	0.012 **	0.0101 ***	−0.025	0.092 **	0.113 ***	−1.196	−2.765 ***	−1.139	−2.473
	−0.006	−0.004	−0.007	−0.005	−0.0206	−0.017	−0.021	−0.023	−0.747	−0.78	−1.184	−1.609
Constant	−0.549	3.292	−5.77 ***	−0.102	−5.643	11.537 **	−4.341	−1.411	22.76	1368.124 ***	−36.379	257.532 **
	−0.488	−2.011	−1.77	−0.29	−6.113	−5.443	−5.39	−4.664	−111.252	−422.506	−113.771	−116.153
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	NO	No	NO	NO	NO	No	No	No	No	NO	NO	NO
Observations	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642
AR(1)	0.403	0.066	0.026	0.572	0	0.001	0	0	0.28	0.239	0.299	0.0979
AR(2)	0.818	0.712	0.465	0.82	0.313	0.138	0.323	0.246	0.434	0.605	0.475	0.554
Hansen test	0.129	0.346	0.767	0.142	0.196	0.319	0.235	0.342	0.27	0.517	0.16	0.178
No of instruments	24	24	24	24	21	21	21	21	17	21	21	24

Variable	Mode 4 Long-Term Debt (LTD)					Model 5 Short-Term Debt (STD)		
LTD$_{t-1}$	0.339 **	0.302 **	0.277 **	0.432 ***				
	−0.146	−0.125	−0.14	−0.112				
STD$_{t-1}$					0.313 ***	0.154	0.113	0.280 ***
					−0.055	−0.124	−0.099	−0.043
Individualism	0.706 **				0.258 **			
	−0.308				−0.125			
Power distance		−0.512 **				−0.43		
		−0.204				−0.377		
Masculinity			0.497 ***				0.748 **	
			−0.174				−0.374	
Uncertainty avoidance				0.162 ***				0.107 **
				−0.05				−0.044
Firm size	0.967	1.274 **	1.002 **	0.595 ***	0.216 **	1.352	1.333 **	0.193
	−0.498	−0.577	−0.48	−0.213	−0.108	−0.748	−0.602	−0.102
ROA	0.306	0.014	0.338	−0.023	0.165	0.408	−0.002	0.001
	−0.796	−0.303	−0.917	−0.123	−0.172	−0.446	−0.001	0
Dividend payout	−0.185	−0.242	−0.168	−0.169 **	−0.061	−0.313	−0.358 **	−0.076
	−0.125	−0.129	−0.13	−0.067	−0.035	−0.181	−0.17	−0.044
Capital expenditure	0.024	−0.008	−0.037	0.051	0.018	0.046	−0.114	0.009
	−0.032	−0.028	−0.038	−0.028	−0.014	−0.071	−0.063	−0.01
Liquidity	−0.137	−0.043	−0.129	−0.246	−0.119	−0.241	−0.452	−0.067
	−0.136	−0.087	−0.141	−0.137	−0.07	−0.158	−0.24	−0.053
Growth opportunity	0.276 ***	0.304 ***	0.310 ***	0.241 ***	0.034	0.198	0.091	0.045 **
	−0.09	−0.077	−0.092	−0.087	−0.027	−0.159	−0.054	−0.023
Tangibility	0.151	0.319	0.111	0.075	−0.063	0.224	0.052	−0.026
	−0.165	−0.221	−0.179	−0.097	−0.044	−0.227	−0.13	−0.061
Inflation	−0.064	−0.052	0.014	−0.05	−0.041	−0.187	−0.018	−0.068
	−0.123	−0.088	−0.097	−0.087	−0.053	−0.2	−0.071	−0.039
Ln_GDP	−2.328	−2.511	−2.223	−0.655	−0.495	−2.999	−3.931	−1.330 **
	−1.678	−1.648	−1.592	−0.934	−0.376	−1.722	−2.214	−0.595
FDI	−0.02	−0.034	−0.041	0.016	−0.017	−0.007	0.126	0.219 **
	−0.061	−0.037	−0.058	−0.049	−0.024	−0.085	−0.167	−0.108
Constant	−23.621 ***	33.885	−32.244 ***	−15.080 **	−9.450 **	23.341	−40.964	−3.227
	−9.103	−18.175	−11.5	−6.051	−4.61	−29.451	−21.921	−2.506
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	NO	No	NO	NO	NO	No	No	No
Observations	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642
AR(1)	0.454	3.36×10^{-8}	0.532	0	0.302	0.0679	0.0219	3.13×10^{-9}
AR(2)	0.36	0.984	0.452	0.42	0.0638	0.569	0.236	0.219
Hansen test	0.13	0.307	0.282	0.187	0.0638	0.334	0.968	0.24
No of instruments	20	25	20	25	24	17	18	18

This table shows the findings of moderating variable–institutional quality using two-step GMM estimator. Robust standard errors are in parentheses: *** significant at 1 per cent level, ** significant at 5 per cent level.

Additionally, we find that individualism has also a positive effect on debt maturity, measured by long-term debt to total assets and short-term debt to total assets. We note that the effect of individualism on long-term debt is relatively stronger than that on short-term, indicating that firms in individualistic societies emphasize the use of long-term debt over short-term debt, and consistent with the findings of [4,40]. Precisely, our estimate reveals that larger firms use more long-term debt, since long-term debt increases risk-shifting incentives when the firm is far from default. Ref. [3] also highlighted that individualism encourages higher risk taking. Higher risk taking may result in higher leverage in the capital structure, resulting in a higher financial leverage. Our results, also consistent with the recent study of [39], reveal that firms from collectivist cultures (low IDV) are less likely to be prone to risk, and, hence, use more short-term debt than long-term debt and vice versa.

We found that, across all models, power distance is inversely connected with leverage and debt maturity (see Table 3), which corroborates with Hypothesis H2. The adverse relationship between power distance and leverage reveals that managers in higher power distance cultures are more likely to follow corporate strategies and engage in NPV projects in order to protect their reputations in the job market and enhance their personal status with stakeholders. In addition, conventional wisdom also suggests that individuals in high power distance cultures will have less autonomy to deviate from corporate policies, since high levels of control tend to encourage conservatism within organizations [12,106]. Similarly, the relationship between power distance and debt maturity leads to the conclusion that firms in highly conservative cultures tend to employ shorter-term debt rather than long-term debt to discipline the opportunistic behavior of corporate managers. Our findings are in line with the theoretical prediction that businesses in high power distance societies depend more on short-term debt and employ less debt overall [31,40].

The relationship between masculinity and debt is positive as hypothesized, showing that a masculinity-driven culture in countries facilitates the use of more debt in corporate capital structure, with a preference of higher short-term debt than long-term debt. Higher masculinity is associated with more aggressive behaviors that influence corporate decisions. Our findings are congruent with the study of [33], who document that societies with a higher score on MAS are positively associated with bank leverage.

In addition, we discover that uncertainty avoidance is positively linked with corporate debt financing and debt maturity, respectively, which supports Hypothesis 4. This implies that firms in countries with higher levels of uncertainty avoidance have higher ratios of long-term debt to total asset book value. Our results corroborate with the study of [31], who report similar results and contradict other studies in the area [107].

Consistent with the existing literature, we find that larger firms have better reputations, lower bankruptcy and monitoring costs, suffer less from asymmetric information, and have better credit quality than their smaller counterparts; therefore, they use more debt in their capital structure [4,64,102]. Dividend payouts have a negative relation with leverage which revealed that managers may halt dividend payout to shield their self-interests in firms [108]. Profitability, proxied by ROA, showing that profitable firms tend to borrow less, which is aligned with the argument of pecking order that firms favor internal funding over external debt finance. Capital expenditures and growth opportunities are inversely correlated with leverage because of the agency cost of debt [109]. In addition, Model 2 shows that liquidity has a negative association with leverage, consistent with pecking order theory, suggesting that firms with more liquid assets have lower leverage ratios, as they tend to employ internal resources to fund their projects [110]. Furthermore, we observe that growth opportunities and leverage have a negative relationship, supporting Ref. [103] argument that managers of indebted firms with growth opportunities may not pursue profitable projects if the success of such projects solely benefit debt holders, which causes an underinvestment problem [111]. The pecking order theory argues that investors demand a high premium when lending funds to high-growth firms [112]. In such situations, borrowing firms may not use debt capital since it directly increases the overall cost of capital. Contrary to our expectations, we find that debt financing is inversely correlated with GDP growth, indicating that firms prefer to use less debt

financing as countries grow. Surprisingly, inflation and foreign direct investment have no effect on corporate financing.

4.3. Role of Institutional Quality

This section further examines the impact of national culture on corporate financing conditional on institutional quality. Our focus here is on the interaction between national culture and institutional quality. Specifically, we created four interaction terms between institutional quality and each dimension of national culture (i.e., individualism × IQ, power distance × IQ, masculinity × IQ, and uncertainty avoidance × IQ). Table 5 shows the estimated findings of Equation (2), using the same empirical strategy as that employed for our baseline models. Consistent with our predictions, we find that the coefficients of interaction terms in all models have a positive and significant effect on corporate financing, indicating that the potential impact of national culture on corporate financing is positively moderated by institutional quality. This finding supports Hypothesis 5 that managers have a great opportunity to use debt financing in their operations when they operate in more institutionally developed countries. The results also support the view that the nature of the country's creditor rights induces managers to undertake positive NPV projects even when they are excessively borrowing [113]. Strong institutions are imperative for financial stability, which provides an ideal platform for creditors to extend their capital to potential projects. Ref [114] also affirmed that investors feel safer in countries that have strong investor protections and, thus, increase their fund availability.

4.4. Robustness Check

We considered several procedures to ensure that our primary results are not susceptible to different estimating methodologies. We first used an alternative proxy of corporate financing defined as the ratio of total debt to total equity (D eqty), alternative measures of national culture obtained from Ref. [115], and an alternative estimation method—random effect (RE) to test our main hypotheses. This technique will allow us to link the results to those of previous research that used a single measure of the dependent variable. We used the same method as Ref. [116] and regressed our dependent variable (D eqty) on four cultural dimensions: individualism, (IDV_TK), power distance (PDI_TK), masculinity (MAS_TK), and uncertainty avoidance (UAI_TK). These are revised versions of Hofstede's measures that have recently been adopted in cultural studies. The estimated results reported in columns 1–4 of Table 6 confirm that power distance exhibits a negative and statistically significant relationship with corporate financing, and individualism, (IDV_TK), masculinity (MAS_TK), and uncertainty avoidance (UAI_TK) are positively associated with debt financing. "Differences in other reported results may be explained by the claim made by [117], according to which cultural dimension meanings differ significantly from Hofstede's dimensions". Next, our initial results might be subject to endogeneity or the reverse causality problem. To address this concern, we used the two-stage least squares regression model (2SLS) with instrumental variables (IV). One advantage of 2SLS is that it produces more robust and consistent results if there exist endogenous variables in the model. Furthermore, the IV estimator requires a valid instrument that is correlated to national culture but not to debt financing.

We choose "British Rule" as our first instrument, which is consistent with earlier research by [118] and [54]. British authority meets both of the criteria for a valid instrument and, defined as a categorical variable, takes the value of 1 "if a country has historically been under British rule" and zero otherwise [119]. Columns 5–11 of Table 6 list the empirical results of 2SLS, which are in line with our basic model. Finally, China and Japan constitute 77% of the observations in the full sample, which is likely to cause biases in our results (see Appendix A, panel b). Therefore, to avoid such problem we dropped Chinese and Japanese firms from the main sample and re-ran the analysis to ensure that our results were robust with a reduced sample. The estimated findings of the reduced sample are presented in Table 7, consistent with those reported in Table 3, confirming that individualism, masculinity, and uncertainty avoidance all have positive impacts, but power distance has a negative impact on corporate financing. Thus, we infer that our key findings are consistent and stable across different techniques.

Table 5. Moderating effect of institutional quality (IQ).

Variable	Model 1 Equity to Total Assets (Lev1)				Model 2 Total Debt to Total Assets (Blev)				Model 3 Market Leverage (Mlev)			
Lev_{t-1}	0.859 ***	0.766 ***	0.908 ***	0.762 ***								
	−0.078	−0.085	−0.015	−0.038								
$Blev_{t-1}$					0.485 ***	0.530 ***	0.507 ***	0.512 ***				
					−0.042	−0.031	−0.034	−0.04				
$Mlev_{t-1}$									0.207 ***	1.101	0.229 ***	0.368 **
									−0.049	−0.598	−0.048	−0.145
Individualism × IQ	0.003 ***				0.007				0.040 ***			
	−0.001				−0.004				−0.012			
Power distance × IQ		0.000 ***				0.005 ***				0.148 **		
		0				−0.002				−0.071		
Masculinity × IQ			0.000 **				0.003 **				0.009 **	
			0				−0.001				−0.004	
Uncertainty avoidance × IQ				0.000 **				0.006 **				0.001
				0				−0.002				−0.008
Individualism	−0.074 **				−0.411				−2.579 **			
	−0.035				−0.285				−1.038			
Power distance		−0.031 ***				−0.312 **				−8.784 **		
		−0.008				−0.137				−3.631		
Masculinity			−0.012				−0.225				0.204	
			−0.008				−0.121				−0.955	
Uncertainty avoidance				−0.016 **				−0.445				−0.074
				−0.008				−0.228				−0.776
IQ	−0.115 ***	−0.028 ***	−0.023 **	−0.011 **	−0.181	−0.233 **	−0.145	−0.241	0.07	−9.161 **	−0.513	1.006
	−0.034	−0.007	−0.01	−0.005	−0.098	−0.093	−0.08	−0.14	−0.449	−4.144	−0.518	−0.555
Firm size	0.046	−0.009	0.006	0.018 **	0.354 **	0.371 ***	0.333 ***	0.401 **	0.679	3.250 **	2.043	0.599
	−0.028	−0.005	−0.007	−0.008	−0.141	−0.128	−0.12	−0.185	−0.409	−1.281	−1.319	−0.515
ROA	0.001	−0.004	−0.028 ***	−0.004 **	0.093	0.044	0.06	0.023	−0.939	0.197	−0.762 **	1.742
	−0.014	−0.004	−0.01	−0.002	−0.079	−0.035	−0.075	−0.092	−0.539	−0.771	−0.32	−1.02
Dividend payout	−0.026	−0.013	−0.013 **	0.005	−0.051	−0.044 **	−0.045	−0.070 **	−1.612 ***	1.108	−0.163	−2.930 **
	−0.013	−0.009	−0.005	−0.009	−0.028	−0.019	−0.024	−0.029	−0.578	−0.568	−0.991	−0.884
Capital expenditure	−0.001	0.007	−0.023	0.007	0.183	0.348 **	0.265 **	0.277*	−0.461	3.017	0.13	0.303
	−0.027	−0.008	−0.013	−0.017	−0.159	−0.116	−0.121	−0.149	−0.4	−1.93	−0.836	−0.218
Liquidity	−0.047 **	0.006	0.001	0.017 ***	0.001	0.006	0	0.03	0.012	0.049	0.27	0.661 ***
	−0.024	−0.006	−0.006	−0.005	−0.049	−0.043	−0.046	−0.079	−0.395	−0.543	−0.357	−0.194
Growth opportunity	−0.029 ***	−0.004	−0.005 ***	−0.003 ***	−0.090 **	−0.036	−0.070 **	−0.091 **	0.380 ***	−0.62	−0.008	−0.355
	−0.009	−0.002	−0.001	−0.001	−0.042	−0.019	−0.027	−0.043	−0.142	−0.35	−0.107	−0.209
Tangibility	0.029 **	0.003 **	0.004	0.002	−0.008	−0.028	−0.01	−0.028	−0.506 **	0.707	−0.2	−1.246 ***
	−0.013	−0.001	−0.006	−0.001	−0.031	−0.018	−0.022	−0.032	−0.249	−0.539	−0.178	−0.285
Inflation	−0.014	−0.003 **	0	−0.003	0.006	0.028	0.038	0.041 **	0.279	−1.33	0.031	0.381

Variables	Model 4 Long-Term Debt (LTD)				Model 5 Short-Term Debt (STD)			
LTD_{t-1}	0.609 ***	0.437 ***	0.424 ***	0.671 ***				
	−0.182	−0.144	−0.103	−0.097				
STD_{t-1}					−0.309 ***	0.311 ***	0.237 ***	0.322 ***
					−0.06	−0.033	−0.068	−0.052
Individualism × IQ	0.019 **				0.052 ***			
	−0.01				−0.016			
Power distance × IQ		0.019				0.003 ***		
		−0.01				−0.001		
Masculinity × IQ			0.010 **				0.005 **	
			−0.004				−0.002	
Uncertainty avoidance × IQ				0.016 ***				0.003
				−0.005				−0.001
Individualism	−1.361				−1.483 **			
	−0.787				−0.655			
Power distance		−2.265 **				−0.112		
		−0.934				−0.062		
Masculinity			−0.678				−0.215	
			−0.469				−0.158	
Uncertainty avoidance				−1.657 ***				−0.245 **
				−0.589				−0.108
IQ	−0.209	−1.229	−0.490 ***	−0.651 ***	−1.741 ***	−0.206 ***	−0.262	−0.163
	−0.227	−0.725	−0.184	−0.312	−0.574	−0.072	−0.185	−0.087
Firm size	1.306 ***	1.25	1.655 ***	0.982	2.465 ***	0.110 ***	−0.376	0.115
	−0.487	−0.653	−0.588	−0.643	−0.559	−0.037	−0.257	−0.101
ROA	0.408	−0.023	−0.001	0	−0.044	−0.025*	0.327	−0.032
	−0.478	−0.338	−0.003	−0.003	−0.138	−0.013	−0.223	−0.041
Dividend payout	−0.553 **	−0.16	−0.568	−0.400 ***	0.11	0.126 **	0.076	−0.028
	−0.259	−0.127	−0.324	−0.086	−0.146	−0.051	−0.136	−0.031
Capital expenditure	0.287	0.275	0.184	0.991	−0.798 ***	−0.180 ***	−2.377 ***	−0.404
	−0.682	−0.455	−0.574	−0.506	−0.214	−0.051	−0.835	−0.281
Liquidity	−0.36	−0.369	−0.393 ***	0.347	−1.207 ***	−0.030 ***	−0.306 **	−0.062
	−0.217	−0.206	−0.146	−0.207	−0.404	−0.011	−0.123	−0.052
Growth opportunity	0.028	0.105	0.118	0.04	−0.416 ***	0.010 ***	−0.012	−0.012
	−0.077	−0.103	−0.071	−0.085	−0.148	−0.003	−0.038	−0.017
Tangibility	−0.103	0.1	−0.006	−0.034	0.504 ***	−0.01	−0.008	0.016
	−0.118	−0.281	−0.095	−0.095	−0.191	−0.011	−0.095	−0.022
Inflation	−0.012	−0.04	−0.041	0.018	−0.308 **	0.032*	0.198	0.006
	−0.073	−0.166	−0.046	−0.081	−0.126	−0.017	−0.172	−0.023
Ln_GDP	−1.586	0.072	−0.006	2.987	−11.621 ***	0.169	−1.559	0.428

Table 5. *Cont.*

Variable	Mode 1 Equity to Total Assets (Lev1)				Model 2 Total Debt to Total Assets (Blev)				Model 3 Market Leverage (Mlev)			
	−0.008	−0.001	−0.003	−0.003	−0.025	−0.018	−0.02	−0.021	−0.434	−0.852	−0.136	−0.227
Ln_GDP	−0.326	−0.01	−0.083	−0.003	−1.221 **	0.641	−0.578	−1.419	−8.968 ***	0.973	−14.222	0.151
	−0.188	−0.028	−0.045	−0.021	−0.62	−0.424	−0.431	−0.764	−2.728	−7.983	−7.895	−1.314
FDI	0.010 **	0.001	−0.007 ***	−0.004 **	−0.01	−0.052 ***	−0.039 **	−0.03	0.21	−0.984 **	−0.328	−0.216 ***
	−0.005	−0.001	−0.002	−0.002	−0.012	−0.014	−0.015	−0.017	−0.232	−0.494	−0.638	−0.066
Constant	3.729 ***	3.361 ***	1.439 ***	0.569	13.027	5.628	10.538	24.126	69.687 **	428.741 **	1.973	46.869
	−1.379	−0.654	−0.537	−0.393	−9.593	−8.987	−6.536	−14.838	−31.871	−202.61	−53.645	−47.304
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	NO	No	NO	NO	NO	No	NO	NO	NO	No	NO	NO
Observations	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642
AR(1)	0.00985	2.81×10^{-7}	0.15	6.32×10^{-7}	0.00746	0	0.000757	4.78×10^{-6}	1.74×10^{-8}	0.0556	0	1.25×10^{-5}
AR(2)	0.183	0.955	0.603	0.695	0.434	0.138	0.232	0.269	0.402	0.882	0.48	0.119
Hansen test	0.802	0.0823	0.2	0.131	0.688	0.587	0.559	0.511	0.398	0.298	0.18	0.491
No of instruments	41	37	46	45	31	31	36	31	21	16	21	19

Variables	Model 4 Long-Term Debt (LTD)					Model 5 Short-Term Debt (STD)		
FDI	−2.497	−1.87	−3.27	−3.231	−3.075	−0.158	−0.946	−0.422
	−0.187	−0.143	0.186	−0.015	−0.146 ***	−0.006	−0.145	−0.005
	−0.168	−0.079	−0.225	−0.114	−0.054	−0.005	−0.082	−0.018
Constant	17.215	132.419 **	11.514	48.457 **	47.336	4.697	26.139 ***	10.59
	−18.258	−59.285	−21.344	−24.638	−27.786	−5.05	−10.112	−6.336
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	NO	No	NO	NO	NO	No	NO	NO
Observations	14,642	14,642	14,642	14,642	14,642	14,642	14,642	14,642
AR(1)	0.0384	3.92×10^{-7}	0.00417	7.27×10^{-11}	0.0182	0	0.0889	5.32×10^{-7}
AR(2)	0.901	0.547	0.671	0.514	0.711	0.101	0.241	0.12
Hansen test	0.742	0.472	0.369	0.19	0.462	0.446	0.707	0.314
No of instruments/groups	21	21	21	26	41	62	21	51

This table shows the findings of examining the relationship between national culture and corporate financing, which were estimated by two-step GMM estimator. Robust standard errors are in parentheses: *** significant at 1 per cent level, ** significant at 5 per cent level.

Table 6. Robustness check using RE and 2SLS.

Variables	RE				2SLS							
	Debt to Equity	Debt to Equity	Debt to Equity	Debt to Equity	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage
Individualism (IDV_TK)	2.599 **					0.559 ***						
	(1.337)					(0.061)						
Power distance (PDI_TK)		−0.554 **						−2.035 ***				
		(0.285)						(0.223)				
Masculinity (MAS_TK)			1.113 **							3.252 ***		
			(0.572)							(0.356)		
Uncertainty avoidance (UAI_TK)				0.262 **								6.551 ***
				(0.135)								(0.270)
Firm size	−0.020 ***	−0.020 ***	−0.020 ***	−0.020 ***	−0.006 ***	0.029 ***	−0.003 ***	0.019 ***	0.004 ***	0.012 ***	0.001	0.026 ***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.001)	(0.004)	(0.000)	(0.004)	(0.001)	(0.003)	(0.001)	(0.004)
ROA	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000 ***	−0.000	0.000	−0.000	0.001 ***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dividend payout	0.006 ***	0.006 ***	0.006 ***	0.006 ***	−0.008 ***	0.014 ***	−0.002 ***	0.006 ***	0.005 ***	−0.008 ***	−0.006 ***	0.054 ***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.000)	(0.002)	(0.000)	(0.001)	(0.000)	(0.002)	(0.000)	(0.002)
Capital expenditure	0.006	0.006	0.006	0.006	−0.035 ***	0.042 ***	−0.012 ***	−0.002	0.030 ***	−0.075 ***	−0.023 ***	0.218 ***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.001)	(0.006)	(0.000)	(0.006)	(0.001)	(0.011)	(0.001)	(0.010)
Liquidity	−0.001	−0.001	−0.001	−0.001	−0.013 ***	0.026 ***	−0.002 ***	0.013 ***	0.004 ***	0.006	−0.009 ***	0.074 ***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.001)	(0.004)	(0.000)	(0.004)	(0.001)	(0.004)	(0.001)	(0.005)
Growth opportunity	−0.006 ***	−0.006 ***	−0.006 ***	−0.006 ***	−0.004 ***	−0.003 ***	−0.001 ***	−0.008 ***	−0.000 ***	−0.004 ***	−0.003 ***	0.021 ***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)
Tangibility	0.068 ***	0.068 ***	0.068 ***	0.068 ***	0.006 ***	0.058 ***	−0.001 ***	0.060 ***	−0.003 ***	0.072 ***	−0.000	0.022 ***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.000)	(0.002)	(0.000)	(0.002)	(0.000)	(0.003)	(0.000)	(0.002)
Inflation	−0.163 ***	−0.163 ***	−0.163 ***	−0.163 ***	−0.009 ***	−0.021	−0.006 ***	−0.038 ***	−0.018 ***	0.033 ***	0.021 ***	−0.179 ***
	(0.030)	(0.030)	(0.030)	(0.030)	(0.001)	(0.012)	(0.000)	(0.013)	(0.001)	(0.010)	(0.001)	(0.013)
Ln_GDP	−0.775 ***	−0.775 ***	−0.775 ***	−0.775 ***	−0.112 ***	−0.169 ***	−0.036 ***	−0.305 ***	0.090 ***	−0.523 ***	−0.129 ***	0.341 ***
	(0.013)	(0.013)	(0.013)	(0.013)	(0.002)	(0.014)	(0.000)	(0.026)	(0.001)	(0.049)	(0.002)	(0.027)
FDI	0.004 **	0.004 **	0.004 **	0.004 **	0.002 ***	0.004 ***	0.007 ***	0.020 ***	0.011 ***	−0.029 ***	−0.007 ***	0.044 ***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.000)	(0.001)	(0.000)	(0.002)	(0.000)	(0.003)	(0.000)	(0.002)
British Rule					0.751 ***		0.206 ***		0.129 ***		0.007 ***	
					(0.006)		(0.001)		(0.004)		(0.000)	
Constant	2.505	19.626 ***	14.142 ***	16.296 ***	5.580 ***	13.588 ***	3.102	23.440 ***	3.712 ***	4.637 ***	4.624 ***	−12.947 ***
	(7.555)	(1.267)	(1.575)	(0.488)	(0.026)	(0.429)	(0.006)	(0.719)	(0.017)	(1.378)	(0.018)	(1.339)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wald chi(2) statistics	885.61 ***	3133.84 ***	1942.99 ***	7618.35 ***								
Observations	15,556	15,556	15,556	15,556	15,556	15,556	15,556	15,556	15,556	15,556	15,556	15,556
R-sq (within)	0.151	0.131	0.144	0.159	0.679	0.318	0.859	0.318	0.596	0.318	0.661	0.389

The robustness of the result is presented in this table. Robust standard errors are in parentheses: *** significant at 1 per cent level, ** significant at 5 per cent level.

Table 7. Reduced sample.

Variables	Model 1 Equity to Total Assets (Lev1)				Model 2 Total Debt to Total Assets (Blev)				Model 3 Market Leverage (Mlev)			
Lev$_{t-1}$	0.593 *** (−0.021)	0.343 ** (−0.173)	0.518 *** (−0.108)	0.407 *** (−0.14)								
Blev$_{t-1}$					0.478 *** (−0.01)	0.685 *** (−0.142)	0.470 *** (−0.013)	0.489 *** (−0.013)				
Mlev$_{t-1}$									0.158 *** (−0.021)	0.240 *** (−0.046)	0.193 *** (−0.029)	0.188 *** (−0.05)
LTD$_{t-1}$												
STD$_{t-1}$												
Individualism	0.025 ** (−0.012)				0.052 *** (−0.016)				0.525 ** (−0.217)			
Power distance		−0.026 *** (−0.009)				−0.505 ** (−0.22)				−0.845 ** (−0.417)		
Masculinity			0.015 *** (−0.005)				0 (−0.017)				0.487 *** (−0.177)	
Uncertainty avoidance				0.011 ** (−0.004)				0.031 ** (−0.012)				0.217 ** (−0.092)
Firm size	0.019 *** (−0.004)	0.023 *** (−0.007)	0.022 *** (−0.006)	0.022 *** (−0.006)	0.047 *** (−0.009)	0.182 (−0.103)	0.073 *** (−0.019)	0.040 *** (−0.014)	0.355 *** (−0.083)	0.772 *** (−0.265)	1.057 *** (−0.187)	0.497 *** (−0.209)
ROA	0.473 *** (−0.089)	0.224 (−0.187)	−0.003 ** (−0.001)	−0.017 *** (−0.005)	0.004 (−0.008)	−4.21 (−2.94)	0.13 (−0.524)	−1.553 ** (−0.605)	−0.003 (−0.093)	−0.093 (−0.159)	−0.091 (−0.131)	−0.004 (−0.163)
Dividend payout	−0.003 *** (−0.001)	−0.005 (−0.003)	−0.006 *** (−0.002)	−0.004 (−0.002)	0.038 *** (−0.004)	−0.021 (−0.044)	0.013 *** (−0.004)	0.022 *** (−0.003)	−0.220 *** (−0.066)	0.03 (−0.038)	−0.250 ** (−0.107)	0.033 (−0.051)
Capital expenditure	0 (−0.001)	−0.003 (−0.002)	0.001 (−0.001)	0 (−0.001)	−0.013 ** (−0.006)	0.028 (−0.055)	−0.014 (−0.022)	−0.002 (−0.009)	0.057 (−0.049)	−0.029 (−0.151)	0.104 (−0.099)	0.024 (−0.131)
Liquidity	0.037 *** (−0.009)	0.045 *** (−0.016)	0.030 ** (−0.014)	0.058 *** (−0.019)	0.001 (−0.001)	−0.192 ** (−0.081)	0.003 (−0.003)	−0.003 (−0.002)	−0.01 (−0.269)	−0.243 (−0.306)	−0.545	0.369 (−0.313)
Growth opportunity	0.005 *** (−0.001)	0.006 (−0.003)	0.004 ** (−0.002)	0.005 ** (−0.002)	0.037 ** (−0.015)	0.261 (−0.158)	0.033 (−0.033)	0.158 *** (−0.034)	0.183 *** (−0.026)	0.012 (−0.047)	0.071 (−0.042)	0.121 (−0.064)
Tangibility	0.001 (−0.003)	−0.002 (−0.003)	0 (−0.003)	−0.003 (−0.004)	−0.007 ** (−0.003)	−0.039 (−0.048)	−0.020 *** (−0.006)	−0.010 ** (−0.004)	0.029 ** (−0.011)	0.004 (−0.017)	0.013 (−0.046)	0.014 (−0.046)
Inflation	−0.001 (−0.001)	−0.001 (−0.002)	−0.001 (−0.001)	−0.002 (−0.002)	0 (−0.003)	0.137 ** (−0.055)	−0.004 (−0.005)	−0.009 (−0.005)	−0.025 (−0.036)	−0.025 (−0.063)	−0.067 (−0.061)	−0.053 (−0.061)
Ln_GDP	−0.041 ** (−0.02)	−0.135 ** (−0.062)	−0.130 *** (−0.05)	−0.115 ** (−0.052)	−0.021 (−0.048)	−0.749 (−0.664)	−0.387 ** (−0.169)	−0.252 (−0.145)	−1.517 *** (−0.445)	−3.265 (−2.346)	−5.066 *** (−1.933)	−3.262 ** (−1.38)
FDI	−0.004 (−0.004)	0.01 (−0.006)	0.004 (−0.005)	−0.001 (−0.062)	0.006 (−0.011)	−0.052 (−0.089)	0.005 (−0.021)	0.030* (−0.016)	0.012 (−0.118)	−0.074 (−0.193)	−0.108 (−0.196)	−0.331 (−0.224)
Constant	−0.893 ** (−0.435)	2.438 *** (−0.92)	−0.559 *** (−0.21)	−0.298 ** (−0.122)	−2.851 *** (−0.619)	48.246 ** (−21.232)	−2.042 *** (−0.682)	−1.125 *** (−0.414)	−18.531 ** (−8.758)	66.972 (−35.708)	−14.276 ** (−5.654)	−10.675 (−6.016)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	NO	No	NO	NO	NO	No	No	No	No	NO	NO	NO
Observations	3138	3138	3138	3138	3138	3138	3138	3138	3138	3138	3138	3138
AR(1)	0.033	0.038	0.042	0.023	2.36×10^{-7}	0.00017	1.67×10^{-7}	1.47×10^{-7}	1.23×10^{-10}	3.19×10^{-9}	0	6.61×10^{-9}
AR(2)	0.934	0.607	0.739	0.842	0.34	0.51	0.341	0.39	0.85	0.374	0.765	0.507
Hansen test	0.422	0.876	0.117	0.52	0.492	0.944	0.747	0.709	0.0773	0.0725	0.357	0.0743
No of instruments/groups	75/198	72/198	95/198	95/198	96/198	23/198	81/198	93/198	96/198	94/198	71/198	97/198

Variables	Model 4 Long-Term Debt (LTD)				Model 5 Short-Term Debt (STD)			
LTD$_{t-1}$	0.356 *** (−0.016)	0.153 *** (−0.017)	0.365 *** (−0.019)	0.335 *** (−0.04)				
STD$_{t-1}$					0.553 *** (−0.03)	0.492 *** (−0.102)	0.421 *** (−0.01)	0.516 *** (−0.096)
Individualism	0.554 ** (−0.222)				0.128 *** (−0.033)			
Power distance		−0.134 *** (−0.051)				−0.155 ** (−0.076)		
Masculinity			0.294 *** (−0.067)				0.022 ** (−0.01)	
Uncertainty avoidance				0.541 ** (−0.209)				0.074 **
Firm size	0.116 ** (−0.052)	0.166 *** (−0.038)	0.362 *** (−0.099)	0.525 *** (−0.25)	0.004 (−0.019)	0.109 ** (−0.05)	0.049 *** (−0.009)	−0.035 (−0.057)
ROA	−0.172 *** (−0.055)	0.023 (−0.045)	−3.075 ** (−1.301)	0.097 (−0.425)	−1.247 (−0.679)	−3.622 ** (−1.752)	−1.012 *** (−0.318)	−3.347 (−2.083)
Dividend payout	−0.038 (−0.021)	−0.036 (−0.04)	−0.051 *** (−0.02)	0.019 (−0.127)	−0.044 ** (−0.021)	−0.008 (−0.018)	−0.009 *** (−0.003)	−0.024 (−0.017)
Capital expenditure	0.103 (−0.056)	0.054 (−0.056)	0.131 ** (−0.017)	0.121 (−0.156)	−0.036 *** (−0.044)	0.005 (−0.044)	−0.015 (−0.009)	−0.001 (−0.001)
Liquidity	0.359 *** (−0.085)	0.309 *** (−0.108)	−0.483 *** (−0.171)	−0.437 (−0.327)	−0.070 *** (−0.018)	−0.117 (−0.097)	−0.078 ** (−0.015)	−0.066 (−0.054)
Growth opportunity	0.060 *** (−0.015)	0.618 *** (−0.013)	0.084 *** (−0.024)	0.084 *** (−0.032)	−0.001 (−0.007)	−0.026 ** (−0.012)	−0.004 (−0.003)	−0.019 (−0.014)
Tangibility	0.01 (−0.007)	0.017 (−0.017)	−0.093 *** (−0.018)	−0.297 *** (−0.107)	0.001 (−0.003)	−0.007 (−0.005)	−0.003 (−0.004)	−0.001 (−0.005)
Inflation	−0.031 (−0.019)	−0.016 (−0.017)	−0.063 ** (−0.018)	0.119 (−0.171)	0.037 *** (−0.009)	0.019 (−0.012)	0.019 *** (−0.005)	0.031 (−0.018)
Ln_GDP	−0.526 *** (−0.107)	−0.411 ** (−0.193)	−2.977 *** (−0.684)	−4.289 ** (−2.047)	−0.132 (−0.089)	−0.54 (−0.375)	−0.203 (−0.109)	−0.627 (−0.376)
FDI	−0.456 *** (−0.084)	−0.099 (−0.07)	−0.326 *** (−0.089)	−1.344 *** (−0.446)	0.039 (−0.026)	0.083 (−0.054)	0.015 (−0.017)	0.065 (−0.046)
Constant	19.825 *** (−3.907)	−10.393 *** (−3.286)	−1.278 (−3.098)	1.026 (−4.697)	−4.425 *** (−1.122)	12.804 ** (−6.306)	−0.001 (−0.272)	−2.465 (−1.254)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	NO	No	NO	NO	NO	No	No	No
Observations	3138	3138	3138	3138	3138	3138	3138	3138
AR(1)	0	0.001	0	0	1.06×10^{-6}	3.01×10^{-5}	7.27×10^{-7}	1.45×10^{-5}
AR(2)	0.45	0.746	0.654	0.464	0.0662	0.0909	0.102	0.0762
Hansen test	0.204	0.691	0.178	0.26	0.696	0.233	0.77	0.59
No of instruments/groups	98	92	97	27	83	97	89	83

The reduced sample results (excluding China and Japan from our main sample) are reported in this table. Robust standard errors are in parentheses: *** significant at 1 per cent level, ** significant at 5 per cent level.

5. Conclusions

Viable sources of financing are imperative for sustainable business operations because they not only stimulate corporate value, but at the same time decrease the overall cost of capital. Managers of firms often strive for and undertake various measures to ensure funds availability and synthesize various corporate decisions that reduce financial constraints. Various factors of corporate financing and their cause and consequences have been discussed in the literature. However, the recent research has identified national culture as the key driving force that directly affects capital structure decisions. However, the impact of national culture on corporate decisions, particularly on capital structure decisions, remains restricted and mostly confined to a single country. Based on the inconclusive findings of the prior studies, there was a pressing need to investigate how national culture impacts corporate financing decisions and whether such a relationship is moderated by intuitional quality, which has not been thoroughly examined in prior literature. Thus, the current study aims to empirically investigate the impact of national culture and the quality of institutions on corporate financing decisions during the period from 2002 to 2018 in seven Asian counties using a two-step system GMM estimator. The results suggest that the use of leverage financing is higher in countries with higher degrees of individualism, masculinity, and uncertainty avoidance and lower in countries with higher power distance. The results also establish that institutional quality positively moderates the culture–corporate financing nexus. The results are robust to alternative measures of national culture, corporate financing, and reduced sample size, as well as different estimation procedures. Consequently, our results add a unique insight into the existing literature by showing that national culture significantly drives capital structure decisions. This study also provides a precise description of the above relationship by taking institutional quality as the key determinant of the moderating effect. Our research provides several implications to potential stakeholders and policymakers.

Nevertheless, our study has some limitations that must be considered in future research. First, we mainly considered four culture dimensions of [29] and did not account for other dimensions (such as long-term orientation and intensity of religiosity) which does not allow the generalization of the results. Second, our primary focus was on the impact of national culture and institutional quality on corporate financing in the context of seven Asian countries. Consequently, other variables, such as stock market growth, business reputation, corporate governance, and alternative options of financing (public and bank financing) in the sample counties may have an impact on association between national culture and financial leverage. Last but not least, more in-depth investigation is required to incorporate a cross-country sample of both listed and non-listed firms.

Appendix A

Panel A. Country Level Summary Statistics													
	China		India		Indonesia		Japan		Malaysia		Philippines		Thailand	
Variables	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Std
(1) Leverage	0.387	0.73	0.648	1.034	0.484	0.865	0.598	1.049	0.478	0.876	0.298	0.161	0.502	0.747
(2) Equity-to-asset	0.415	0.271	0.403	0.222	0.443	0.263	0.466	0.226	0.445	0.241	0.406	0.164	0.411	0.198
(3) Long-term leverage	1.736	0.953	7.462	6.317	7.337	3.681	8.063	5.999	1.609	0.549	10.126	6.464	8.633	6.196
(4) Stort-term leverage	1.785	0.853	1.933	2.244	1.111	0.099	1.296	1.224	1.279	0.215	1.929	2.061	1.932	2
(5) Market leverage	5.77	6.631	11.964	5.6	11.458	4.19	13.125	5.14	3.513	5.398	12.549	7.437	12.658	6.365
(6) IDV	74.374	5.989	54	0	54	0	66.043	17.993	77	0	94	0	64	0
(7) PDI	22.344	2.495	46	0	46	0	39.743	11.589	48	0	32	0	20	0
(8) Mas	61.78	4.492	95	0	95	0	79.2	21.458	56	0	64	0	34	0
(9) Uai	29.531	0.499	92	0	92	0	73.931	24.583	40	0	44	0	64	0
(10) IQ	85.214	2.999	85.893	2.094	85.893	2.095	72.573	19.411	44.369	1.927	39.595	2.949	46.156	5.386
(11) Firm size	13.582	3.211	14.198	2.324	13.725	2.227	15.236	2.077	13.688	2.749	14.278	2.119	14.468	1.4
(12) ROA	0.515	2.404	0.535	2.381	0.489	2.239	0.87	3.081	0.366	2.013	0.037	0.885	0.741	2.797
(13) Dividend payout	8.801	2.792	10.819	6.355	11.215	0.516	9.013	4.166	8.125	2.963	9.012	4.65	11.321	6.675
(14) Tangibility	3.004	0	3.004	0	3.004	0	2.973	0.278	3.004	0	3.004	0	3.004	0
(15) Liquidity	2.558	2.139	2.441	1.139	2.864	1.571	2.922	1.886	2.76	1.56	2.383	1.041	2.371	1.031
(16) Capital expenditure	0.811	1.025	3.676	2.814	3.162	1.331	4.504	3.024	0.568	0.95	3.002	2.205	2.538	2.025
(17) Growth opportunity	1.391	2.195	13.087	12.423	60.214	24.678	22.482	19.849	0.564	0.729	13.02	7.596	10.8	7.619
(18) Inflation	2.195	2.053	0.18	0.922	0.18	0.923	1.864	3.031	6.571	2.73	3.85	1.848	2.203	1.821
(19) Log of GDP	4.491	0.978	6.609	0.017	6.609	0.017	5.971	1.405	3.052	0.19	3.305	0.175	3.637	0.164
(20) FDI	15.433	15.743	0.26	0.219	0.26	0.219	0.994	1.256	1.706	0.715	1.58	0.789	2.798	1.1

Panel B. No. of observations per country				Panel C: Annual No. of firms					
Country	No of observations	Country	No of observations	Year	No of firms	Year	No of firms	Year	No of firms
	Percent		Percent	2002	920	2008	920	2014	915
China	6273 / 40.198	Malaysia	731 / 4.68	2003	920	2009	919	2015	915
India	1309 / 8.39	Philippines	335 / 2.15	2004	920	2010	918	2016	915
Indonesia	544 / 3.49	Thailand	463 / 2.97	2005	920	2011	918	2017	915
Japan	5950 / 38.13			2006	920	2012	918	2018	916
				2007	920	2013	916		

References

1. Bekaert, G.; Harvey, C.R. Emerging markets finance. *J. Empir. Financ.* **2003**, *10*, 3–55. [CrossRef]
2. Modigliani, F.; Miller, M.H. The cost of capital, corporation finance and the theory of investment. *Am. Econ. Rev.* **1958**, *48*, 261–297.
3. Li, K.; Griffin, D.; Yue, H.; Zhao, L. How does culture influence corporate risk-taking? *J. Corp. Financ.* **2013**, *23*, 1–22. [CrossRef]
4. Zheng, X.; El Ghoul, S.; Guedhami, O.; Kwok, C.C. National culture and corporate debt maturity. *J. Bank. Financ.* **2012**, *36*, 468–488. [CrossRef]
5. Çolak, G.; Gungoraydinoglu, A.; Öztekin, Ö. Global leverage adjustments, uncertainty, and country institutional strength. *J. Financ Int.* **2018**, *35*, 41–56. [CrossRef]
6. Lemma, T.T.; Negash, M. Institutional, macroeconomic and firm-specific determinants of capital structure: The African evidence. *Manag. Res. Rev.* **2013**, *36*, 1081–1122.
7. Rashid, M.; Hj Johari, D.S.N.K.P.; Izadi, S. National culture and capital structure of the Shariah compliant firms: Evidence from Malaysia, Saudi Arabia and Pakistan. *Int. Rev. Econ. Financ.* 2020; *in press*. [CrossRef]
8. La Porta, R.; Lopez-de-Silanes, F.; Shleifer, A.; Vishny, R.W. Law and finance. *J. Political Econ.* **1998**, *106*, 1113–1155. [CrossRef]
9. Kirch, G.; Terra, P.R.S. Determinants of corporate debt maturity in South America: Do institutional quality and financial development matter? *J. Corp. Financ.* **2012**, *18*, 980–993. [CrossRef]
10. Wald, J.K. How firm characteristics affect capital structure: An international comparison. *J. Financ. Res.* **1999**, *22*, 161–187. [CrossRef]
11. Chen, J.J. Determinants of capital structure of Chinese-listed companies. *J. Bus. Res.* **2004**, *57*, 1341–1351. [CrossRef]
12. Gaganis, C.; Pasiouras, F.; Voulgari, F. Culture, business environment and SMEs' profitability: Evidence from European Countries. *Econ. Model.* **2019**, *78*, 275–292. [CrossRef]
13. An, Z.; Li, D.; Yu, J. Earnings management, capital structure, and the role of institutional environments. *J. Bank. Financ.* **2016**, *68*, 131–152. [CrossRef]
14. Demirgüç-Kunt, A.; Peria, M.S.M.; Tressel, T. The global financial crisis and the capital structure of firms: Was the impact more severe among SMEs and non-listed firms? *J. Corp. Financ.* **2020**, *60*, 101514. [CrossRef]
15. Barclay, M.J.; Morellec, E. On the debt capacity of growth options. *J. Bus.* **2006**, *79*, 37–60. [CrossRef]
16. Jensen, M.C.; Meckling, W.H. Theory of the firm: Managerial behavior, agency costs and ownership structure. *J. Financ. Econ.* **1976**, *3*, 77–132. [CrossRef]
17. Harris, M.; Raviv, A. The theory of capital structure. *J. Financ.* **1991**, *46*, 297–355. [CrossRef]
18. Strebulaev, I.A. Do tests of capital structure theory mean what they say? *J. Financ.* **2007**, *62*, 1747–1787. [CrossRef]
19. Vătavu, S. The impact of capital structure on financial performance in Romanian listed companies. *Procedia Econ. Financ.* **2015**, *32*, 1314–1322. [CrossRef]
20. Kumar, S.; Colombage, S.; Rao, P. Research on capital structure determinants: A review and future directions. *Int. J. Manag. Financ.* **2017**, *13*, 106–132. [CrossRef]
21. Sharma, P.; Paul, S. Does liquidity determine capital structure? Evidence from India. *Glob. Bus. Rev.* **2015**, *16*, 84–95. [CrossRef]
22. Dang, T.L.; Ly Ho, H.; Dzung Lam, C.; Thao Tran, T.; Vo, X.V. Stock liquidity and capital structure: International evidence. *Cogent Econ. Financ.* **2019**, *7*, 1587804. [CrossRef]

23. Sheikh, A.N.; Wang, Z. Determinants of capital structure: An empirical study of firms in manufacturing industry of Pakistan. *Manag. Financ.* **2011**, *37*, 117–133.
24. Imtiaz, F.; Mahmud, K.; Mallik, A. Determinants of capital structure and testing of applicable theories: Evidence from pharmaceutical firms of Bangladesh. *Int. J. Econ. Financ.* **2016**, *8*, 23–32. [CrossRef]
25. Psillaki, M.; Daskalakis, N. Are the determinants of capital structure country or firm specific? *Small Bus. Econ.* **2009**, *33*, 319–333. [CrossRef]
26. Hofstede, G.H. *Culture's Consequences: International Differences in Work-Related Values*; Sage: Thousand Oaks, CA, USA, 1980.
27. Hofstede, G. The business of international business is culture. *Inte BusRev.* **1994**, *3*, 1–14. [CrossRef]
28. Hofstede, G.; Hofstede, G.J.; Minkov, M. *Cultures and Organizations: Software of the Mind*; Mcgraw-Hill: New York, NY, USA, 2005; Volume 2.
29. Hofstede, G. *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations*, 2nd ed.; Sage: Thousand Oaks, CA, USA, 2001.
30. Williamson, O.E. The new institutional economics: Taking stock, looking ahead. *J. Econ. Lit.* **2000**, *38*, 595–613. [CrossRef]
31. Arosa, C.M.V.; Richie, N.; Schuhmann, P.W. The impact of culture on market timing in capital structure choices. *Res. Int. Bus. Financ.* **2014**, *31*, 178–192. [CrossRef]
32. Boubakri, N.; Mirzaei, A.; Samet, A. National culture and bank performance: Evidence from the recent financial crisis. *J. Financ. Stab.* **2017**, *29*, 36–56. [CrossRef]
33. Haq, M.; Hu, D.; Faff, R.; Pathan, S. New evidence on national culture and bank capital structure. *Pac.-Basin Financ. J.* **2018**, *50*, 41–64. [CrossRef]
34. Fauver, L.; McDonald, M.B. Culture, agency costs, and governance: International evidence on capital structure. *Pac.-Basin Financ. J.* **2015**, *34*, 1–23. [CrossRef]
35. Orlova, S.; Harper, G. National culture and leverage adjustments. *Rev. Behav. Financ.* **2021**, *14*, 410–435. [CrossRef]
36. Zheng, C.; Ashraf, B.N. National culture and dividend policy: International evidence from banking. *J. Behav. Exp. Financ.* **2014**, *3*, 22–40. [CrossRef]
37. Chang, C.-H.; Lin, S.-J. The effects of national culture and behavioral pitfalls on investors' decision-making: Herding behavior in international stock markets. *Int. Rev. Econ. Financ.* **2015**, *37*, 380–392. [CrossRef]
38. Antonczyk, R.C.; Salzmann, A.J. Overconfidence and optimism: The effect of national culture on capital structure. *Res. Int. Bus. Financ.* **2014**, *31*, 132–151. [CrossRef]
39. Mogha, V.; Williams, B. Culture and capital structure: What else to the puzzle? *Int. Rev. Financ. Anal.* **2021**, *73*, 101614. [CrossRef]
40. Chui, A.C.; Lloyd, A.E.; Kwok, C.C. The determination of capital structure: Is national culture a missing piece to the puzzle? *J. Int. Bus. Stud.* **2002**, *33*, 99–127. [CrossRef]
41. Abbasi, K.; Alam, A.; Du, M.A.; Huynh, T.L.D. FinTech, SME efficiency and national culture: Evidence from OECD countries. *Technol. Forecast. Soc. Chang.* **2021**, *163*, 120454. [CrossRef]
42. Pedrini, M.; Bramanti, V.; Cannatelli, B. The impact of national culture and social capital on corporate social responsibility attitude among immigrants' entrepreneurs. *J. Manag. Gov.* **2016**, *20*, 759–787. [CrossRef]
43. El Ghoul, S.; Guedhami, O.; Kwok, C.; Shao, L. National culture and profit reinvestment: Evidence from small and medium-sized enterprises. *Financ. Manag.* **2016**, *45*, 37–65. [CrossRef]
44. Boubaker, S.; Rouatbi, W.; Saffar, W. The Role of Multiple Large Shareholders in the Choice of Debt. *Financ. Manag.* **2017**, *46*, 241–274.
45. Van den Steen, E. Rational overoptimism (and other biases). *Am. Econ. Rev.* **2004**, *94*, 1141–1151. [CrossRef]
46. Hofstede, G. The GLOBE debate: Back to relevance. *J. Int. Bus. Stud.* **2010**, *41*, 1339–1346. [CrossRef]
47. Silwal, P.P. Corporate cultures and financial performance: The mediating role of firm innovation. *Cogent Bus. Manag.* **2022**, *9*, 2010480. [CrossRef]
48. López-Duarte, C.; González-Loureiro, M.; Vidal-Suárez, M.M.; González-Díaz, B. International strategic alliances and national culture: Mapping the field and developing a research agenda. *J. Wor Bus.* **2016**, *51*, 511–524. [CrossRef]
49. Curtis, M.B.; Conover, T.L.; Chui, L.C. A cross-cultural study of the influence of country of origin, justice, power distance, and gender on ethical decision making. *J. Int. Acc. Res.* **2012**, *11*, 5–34. [CrossRef]
50. Chen, C.-J.; Guo, R.-S.; Wang, S.-H.; Lin, H.-H. Power distance diversification, ownership structure, and business group performance. *J. Bus. Res.* **2022**, *151*, 70–85. [CrossRef]
51. Zhang, J.F. Cultural diversity and capital structures of multinational firms. *R. Corp Financ.* **2022**; *in press*. [CrossRef]
52. Frijns, B.; Dodd, O.; Cimerova, H. The impact of cultural diversity in corporate boards on firm performance. *J. Corp. Financ.* **2016**, *41*, 521–541. [CrossRef]
53. Gleason, K.C.; Mathur, L.K.; Mathur, I. The interrelationship between culture, capital structure, and performance: Evidence from European retailers. *J. Buss. Res.* **2000**, *50*, 185–191. [CrossRef]
54. Shao, L.; Kwok, C.C.; Zhang, R. National culture and corporate investment. *J. Int. Bus. Stud.* **2013**, *44*, 745–763. [CrossRef]
55. Bedendo, M.; Garcia-Appendini, E.; Siming, L. Cultural preferences and firm financing choices. *J. Financ. Quant. Anal.* **2020**, *55*, 897–930. [CrossRef]
56. Frijns, B.; Gilbert, A.; Lehnert, T.; Tourani-Rad, A. Uncertainty avoidance, risk tolerance and corporate takeover decisions. *J. Bank. Financ.* **2013**, *37*, 2457–2471. [CrossRef]

57. Tran, Q.T. Economic policy uncertainty and cost of debt financing: International evidence. *N. Am. J. Econ. Financ.* **2021**, *57*, 101419. [CrossRef]

58. Góis, A.D.; Augusto, G.; de Lima, S.F.; de Sousa, N.A.; Malacrida, M.J.C. The effect of national culture on the relationship between IFRS adoption and the cost of equity capital. *J. Int. Account. Res.* **2018**, *17*, 69–85. [CrossRef]

59. Tran, Q.T. Corruption and corporate risk-taking: Evidence from emerging markets. *Int. J. Emerg. Mark.* **2020**. [CrossRef]

60. North, D.C. *Institutions, Institutional Change, and Economic Performance*; Cambridge University Press: New York, NY, USA, 1990.

61. Boot, A.W.A.; Thakor, A.V. Can relationship banking survive competition? *J. Financ.* **2000**, *55*, 679–713. [CrossRef]

62. Rajan, R.G.; Zingales, L. What do we know about capital structure? Some evidence from international data. *J. Financ.* **1995**, *50*, 1421–1460. [CrossRef]

63. Gonzalez, V.M.; González, F. Influence of bank concentration and institutions on capital structure: New international evidence. *J. Corp. Financ.* **2008**, *14*, 363–375. [CrossRef]

64. Fan, J.P.; Titman, S.; Twite, G. An international comparison of capital structure and debt maturity choices. *J. Financ. Quant. Anal.* **2012**, *47*, 23–56. [CrossRef]

65. Öztekin, Ö.; Flannery, M.J. Institutional determinants of capital structure adjustment speeds. *J. Financ. Econ.* **2012**, *103*, 88–112. [CrossRef]

66. Matemilola, B.T.; Bany-Ariffin, A.N.; Azman-Saini, W.N.W.; Nassir, A.M. Impact of institutional quality on the capital structure of firms in developing countries. *Emerg. Mark. Rev.* **2019**, *39*, 175–209. [CrossRef]

67. Belkhir, M.; Maghyereh, A.; Awartani, B. Institutions and corporate capital structure in the MENA region. *Emerg. Mark. Rev.* **2016**, *26*, 99–129. [CrossRef]

68. Mahmood, Y.; Rashid, A.; Rizwan, F.; Ahmad, M. The role of macroeconomic and institutional factors in creating corporate financial flexibility. *Manag. Decis.* **2021**, *59*, 732–746. [CrossRef]

69. Çam, İ.; Özer, G. Institutional quality and corporate financing decisions around the world. *N. Am. J. Econ. Financ.* **2021**, *57*, 101401. [CrossRef]

70. Seifert, B.; Gonenc, H. Creditor rights, country governance, and corporate cash holdings. *J. Int. Financ. Manag. Account.* **2016**, *27*, 65–90. [CrossRef]

71. Demirgüç-Kunt, A.; Maksimovic, V. Institutions, financial markets and firm debt. *J. Financ. Econ.* **1999**, *54*, 295–336. [CrossRef]

72. Alves, P.F.P.; Ferreira, M.A. Capital structure and law around the world. *J. Multinatl. Financ. Manag.* **2011**, *21*, 119–150. [CrossRef]

73. Cho, S.S.; El Ghoul, S.; Guedhami, O.; Suh, J. Creditor rights and capital structure: Evidence from international data. *J. Corp. Financ.* **2014**, *25*, 40–60. [CrossRef]

74. Awartani, B.; Belkhir, M.; Boubaker, S.; Maghyereh, A. Corporate debt maturity in the MENA region: Does institutional quality matter? *Int. Rev. Financ. Anal.* **2016**, *46*, 309–325. [CrossRef]

75. Kim, J.B.; Shi, H.; Zhou, J. International Financial Reporting Standards, institutional infrastructures, and implied cost of equity capital around the world. *Rev. Quant. Financ. Acc.* **2014**, *42*, 469–507. [CrossRef]

76. Bruno, V.; Claessens, S. Corporate governance and regulation: Can there be too much of a good thing? *J. Financ. Intermediation* **2010**, *19*, 461–482. [CrossRef]

77. Doidge, C.; Karolyi, G.A.; Stulz, R.M. Why do countries matter so much for corporate governance? *J. Financ. Econ.* **2007**, *86*, 1–39. [CrossRef]

78. Hussain, A.; Akbar, M. Dividend policy and earnings management: Do agency problem and financing constraints matter? *Borsa Istanb. Rev.* **2022**, *22*, 839–853. [CrossRef]

79. Ayaz, M.; Mohamed Zabri, S.; Ahmad, K. An empirical investigation on the impact of capital structure on firm performance: Evidence from Malaysia. *Manag. Financ.* **2021**, *47*, 1107–1127. [CrossRef]

80. House, R.J.; Hanges, P.J.; Javidan, M.; Dorfman, P.W.; Gupta, V. (Eds.) *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*; Sage Publications: New York, NY, USA, 2004.

81. Vega-Gutierrez, P.L.; López-Iturriaga, F.J.; Rodriguez-Sanz, J.A. Labour market conditions and the corporate financing decision: A European analysis. *Res. Int. Bus. Financ.* **2021**, *58*, 101431. [CrossRef]

82. Liao, Z. Is environmental innovation conducive to corporate financing? The moderating role of advertising expenditures. *Bus. Strategy Environ.* **2020**, *29*, 954–961. [CrossRef]

83. Ayturk, Y. The effects of government borrowing on corporate financing: Evidence from Europe. *Financ. Res. Lett.* **2017**, *20*, 96–103. [CrossRef]

84. Al-Fayoumi, N.A.; Abuzayed, B.M. Ownership structure and corporate financing. *Appl. Financ. Econ.* **2009**, *19*, 1975–1986. [CrossRef]

85. El Ghoul, S.; Zheng, X. Trade credit provision and national culture. *J. Corp. Financ.* **2016**, *41*, 475–501. [CrossRef]

86. Berger, A.N.; Li, X.; Morris, C.S.; Roman, R.A. The effects of cultural values on bank failures around the world. *J. Financ. Quant. Anal.* **2021**, *56*, 945–993. [CrossRef]

87. Khan, M.A.; Gu, L.; Khan, M.A.; Meyer, N. The effects of national culture on financial sector development: Evidence from emerging and developing economies. *Borsa Istanb. Rev.* **2022**, *22*, 103–112. [CrossRef]

88. Alcántara-Pilar, J.M.; Del Barrio-García, S. Antecedents of attitudes toward the website: The moderating role of long-term orientation and individualism. *Cross Cult. Manag.* **2015**, *22*, 379–404. [CrossRef]

89. Ullah, S.; Agyei-Boapeah, H.; Kim, J.R.; Nasim, A. Does national culture matter for environmental innovation? A study of emerging economies. *Technol. Forecast. Soc. Chang.* **2022**, *181*, 121755. [CrossRef]

90. Díez-Esteban, J.M.; Farinha, J.B.; García-Gómez, C.D. How does national culture affect corporate risk-taking? *Eurasian Bus. Rev.* **2019**, *9*, 49–68. [CrossRef]

91. Chen, Y.; Dou, P.Y.; Rhee, S.G.; Truong, C.; Veeraraghavan, M. National culture and corporate cash holdings around the world. *J. Bank. Financ.* **2015**, *50*, 1–18. [CrossRef]

92. Escaleras, M.; Chiang, E.P. Fiscal decentralization and institutional quality on the business environment. *Econ. Lett.* **2017**, *159*, 161–163. [CrossRef]

93. Adusei, M.; Sarpong-Danquah, B. Institutional quality and the capital structure of microfinance institutions: The moderating role of board gender diversity. *J. Inst. Econ.* **2021**, *17*, 641–661. [CrossRef]

94. Wahba, H. Debt and financial performance of SMEs: The missing role of debt maturity structure. *Corp. Ownersh. Control.* **2013**, *10*, 266–277. [CrossRef]

95. Wooldridge, J.M. *Econometric Analysis of Cross Section and Panel Data*; MIT Press: Cambridge, MA, USA, 2010.

96. Wintoki, M.B.; Linck, J.S.; Netter, J.M. Endogeneity and the dynamics of internal corporate governance. *J. Financ. Econ.* **2012**, *105*, 581–606. [CrossRef]

97. Baltagi, B.H. Panel data forecasting. *Handb. Econ. Forecast.* **2013**, *2*, 995–1024.

98. Arellano, M.; Bond, S. Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Rev. Econ. Stud.* **1991**, *58*, 277–297. [CrossRef]

99. Blundell, R.; Bond, S. Initial conditions and moment restrictions in dynamic panel data models. *J. Econom.* **1998**, *87*, 115–143. [CrossRef]

100. Blundell, R.; Bond, S. GMM estimation with persistent panel data: An application to production functions. *Econom. Rev.* **2000**, *19*, 321–340. [CrossRef]

101. Roodman, D. A note on the theme of too many instruments. *Oxf. Bull. Econ. Stat.* **2009**, *71*, 135–158. [CrossRef]

102. Frank, M.Z.; Goyal, V.K. Capital structure decisions: Which factors are reliably important? *Financ. Manag.* **2009**, *38*, 1–37. [CrossRef]

103. Myers, S.C. Determinants of corporate borrowing. *J. Financ. Econ.* **1977**, *5*, 145–175. [CrossRef]

104. Jensen, M.C. Agency costs of free cash flow, corporate finance, and takeovers. *Am. Econ. Rev.* **1986**, *76*, 323–329.

105. Davis, J.H.; Schoorman, F.D.; Donaldson, L. Toward a stewardship theory of management. *Acad. Manag. Rev.* **1997**, *22*, 20–47. [CrossRef]

106. Thompson, J.D. *Organizations in Action*; McGraw Hill: New York, NY, USA, 1967.

107. Wang, D.; Esqueda, O.A. National cultural effects on leverage decisions: Evidence from emerging-market ADRs. *Res. Int. Bus. Financ.* **2014**, *31*, 152–177. [CrossRef]

108. Su, Z.Q.; Fung, H.G.; Huang, D.S.; Shen, C.H. Cash dividends, expropriation, and political connections: Evidence from China. *Int. Rev. Econ. Financ.* **2014**, *29*, 260–272. [CrossRef]

109. Huang, K.; Shang, C. Leverage, debt maturity, and social capital. *J. Corp. Financ.* **2019**, *54*, 26–46. [CrossRef]

110. Li, L.; Islam, S.Z. Firm and industry specific determinants of capital structure: Evidence from the Australian market. *Int. Rev. Econ. Financ.* **2019**, *59*, 425–437. [CrossRef]

111. Nnadi, M.; Surichamorn, V.; Jayasekera, R.; Belghitar, Y. Empirical analysis of debt maturity, cash holdings and firm investment in developing economies. *Int. J. Financ. Econ.* **2021**, *27*, 3345–3372. [CrossRef]

112. Myers, S.C.; Majluf, N.S. Corporate financing and investment decisions when firms have information that investors do not have. *J. Financ. Econ.* **1984**, *13*, 187–221. [CrossRef]

113. Acharya, V.V.; Amihud, Y.; Litov, L. Creditor rights and corporate risk-taking. *J. Financ. Econ.* **2011**, *102*, 150–166. [CrossRef]

114. Shah, A.; Shah, H.A.; Smith, J.M.; Labianca, G. Judicial efficiency and capital structure: An international study. *J. Corp. Financ.* **2017**, *44*, 255–274. [CrossRef]

115. Tang, L.; Koveos, P.E. A framework to update Hofstede's cultural value indices: Economic dynamics and institutional stability. *J. Int. Bus. Stud.* **2008**, *39*, 1045–1063. [CrossRef]

116. Labidi, C.; Laribi, D.; Ureche-Rangau, L. National culture and socially responsible fund flows. *Emerg. Mark. Rev.* **2021**, *46*, 100751. [CrossRef]

117. Hofstede, G. What did GLOBE really measure? Researchers' minds versus respondents' minds. *J. Int. Bus. Stud.* **2006**, *37*, 882–896. [CrossRef]

118. Licht, A.N.; Goldschmidt, C.; Schwartz, S.H. Culture, law, and corporate governance. *Int. Rev. Law Econ.* **2005**, *25*, 229–255. [CrossRef]

119. Treisman, D. The causes of corruption: A cross-national study. *J. Public Econ.* **2000**, *76*, 399–457. [CrossRef]