The Cultural Diversity of the Board of Directors and Capital Structure

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Abstract: *Cultural characteristics and personal values can play a significant role in financial decision-making process, alongside economic factors. This study contributes to the existing literature by investigating the impact of cross-cultural board members on capital structure decisions in publicly traded firms in Turkey. Using panel data methodology to analyze the capital structures of these firms between 2011 and 2020, we found that firms with at least 30% cross-cultural representation on their boards tend to borrow more than firms with less diverse boards. Similarly, firms with at least one cross-cultural board member borrow more than firms managed entirely by locals. These findings are significant in contributing to the understanding of the role of cultural diversity in financial decision-making and offer practical implications for firms aiming to optimize their capital structures. The results remain robust even after alternative regression specifications and other corporate financing decisions have been considered.*

1. Introduction

Firms typically finance their operations through equity, liabilities, or a combination of both[1]. The decision of whether or not to borrow, and how much to borrow, is one of the most important policy decisions facing firm management. While corporate finance theories suggest that this decision should serve the goal of maximizing the value of the firm, existing studies have shown that firms' financing decisions are significantly influenced by micro and macro-level factors, including intangible concepts such as culture and belief systems (Kumar, Page, & Spalt, 2011; Baxamusa & Jalal, 2014; Aggarwal & Goodell, 2014). The intuition offered in these studies is that the decisions taken by the individuals who make up the board of directors are influenced by the culture they belong to.

While the capital structure of Turkish firms has been studied extensively (e.g., Karasahin & Kucuksarac, 2016; Tekin & Polat, 2020), most studies have focused on the effects of either macro or micro-level variables. Despite the growing importance of cross-cultural diversity in the boardrooms of Turkish firms, there is a lack of empirical research on how this diversity affects the firms' borrowing decisions. In contrast, researchers around the world have moved beyond classical theories to explain corporate decisions (e.g., Aggarwal & Goodell, 2014; Jiang et al., 2015). Classical theories primarily concentrate on the economic

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rationale behind the decision, which is to maximize corporate value, and largely overlook the behavioral aspects of agents. This is a significant gap in the literature, given that cross-cultural diversity in the boardroom has been shown to have a positive impact on firm performance and governance in other countries (e.g., Abukosim et al., 2014). Therefore, there is a pressing need for empirical research that explores how cross-cultural diversity in the boardroom affects Turkish firms' borrowing decisions. Such research can contribute to a better understanding of the factors that influence firms' capital structure and inform policymakers and practitioners about the potential benefits of promoting cross-cultural diversity in the boardroom.

Therefore, this study aims to extend the existing literature by focusing on the effects of cross-cultural board members (CCBM) on the capital structure of publicly traded firms in Turkey[2]. Specifically, we compare the leverage decisions of firms that have CCBM on their boards to those that do not. To ensure robustness, we also separately explore financial debt (bank loans and debt securities) and trade credit borrowing decisions. To obtain further robust results, sample firms are categorized into three groups based on their board composition. The first group consists of firms that have at least one CCBM, while the second group includes firms in which the ratio of CCBM to the total number of board members is equal to or exceeds 30%. The third group comprises firms that are managed by local board members.

Our analysis indicates that firms with CCBMs tend to exhibit a higher tolerance for financial risk, as evidenced by their greater reliance on financial and trade debt. Specifically, we found that such firms had significantly higher levels of leverage compared to firms without cross-cultural representation on their boards. This result holds even after controlling for a range of relevant firm and industry characteristics, suggesting that board diversity may play a key role in shaping firms' financial risk-taking behavior.

Prior research on this issue typically utilizes data from international firms or firms from different regions (e.g., Kumar et al., 2011; Baxamusa & Jalal, 2014). However, the reliability of the statistical procedures employed in these studies is not conclusive due to the intercorrelation between macro indicators such as regional development, economic structure, legal system, and shareholder rights. This intercorrelation may result in similar effects on borrowing, making it challenging to discern the effect in cross-country samples. In this regard, it is noteworthy that all firms included in the present dataset are based in Turkey. This implies that these firms are equally likely to utilize the available financial facilities and benefit from legal regulations in similar ways. Therefore, this study provides robust evidence regarding the impact of CCBM on borrowing decisions in Turkey.

This study contributes to the current literature on capital structure. Previous research on this topic has predominantly concentrated on economic factors (Frank & Goyal, 2003; Flannery & Rangan, 2006). However, recent studies have revealed that non-economic factors can also significantly impact a firm's capital structure. For instance, the composition of a board of directors in terms of its size and structure (e.g., Tarus & Ayabei, 2016; Younas & Kassim, 2020; Vijayakumaran & Vijayakumaran, 2019), as well as the religion (Aggarwal & Goodell, 2014) and cultural background (Chui, Lloyd, & Kwok, 2002; El Ghoul & Zheng, 2016) of decision-makers, are some examples of such factors. While various studies have examined this issue by comparing results across different countries (e.g., Kumar et al., 2011; Baxamusa & Jalal, 2014), our research stands out by analyzing the presence of CCBM in Turkish firms, which is an area that has not yet been explored.

This study makes an additional contribution to the existing literature by demonstrating the substantial impact that the presence of CCBM has on the capital structure of Turkish firms. This finding is particularly noteworthy since the majority of research on this topic has been conducted in developed Western economies (as cited in previous paragraphs). Given that Turkey is one of the major developing economies, it represents an ideal case study, particularly as numerous foreign board members are employed in a number of Turkish firms. Our results reveal that having at least one CCBM on the board can make a significant difference in financing decisions.

In the remainder of the study, relevant capital structure theories are provided in Section 2, the data and methodology are introduced in Section 3, the findings are reported in Section 4, and lastly, a conclusion and a brief discussion of the findings are provided in Section 5.

2. Literature Review

2.1. An Overview of Capital Structure Theorems

Capital structure theories are economic frameworks that explain how companies choose to finance their operations, investments, and growth. These theories describe how firms determine the right mix of debt and equity financing, and how this mix can impact the company's cost of capital, profitability, and risk. Capital structure decisions can potentially have a significant impact on a firm's financial performance and value. The primary goal of a firm, which is to maximize shareholder wealth or maximize the value of the firm, is often used as a framework to analyze and evaluate capital structure decisions, as these decisions can affect the firm's ability to generate profits, pay dividends, and increase shareholder value. Therefore, capital structure theories are developed to provide guidance and insights into how firms can optimize their financing mix to achieve their primary goal of maximizing shareholder wealth or firm value.

Agency Theory: It posits that conflicts of interest can arise between corporate directors and investors (Jensen, 1986: 323). Corporate directors may be incentivized to expand the firm beyond its optimal size due to their desire for greater control and higher compensation. To mitigate equity-related agency costs, agency theory offers several recommendations. Firstly, managers' share ownership in the firm should be increased to align their interests with those of the shareholders (Jensen & Mekling, 1976: 306). Secondly, higher dividend payments can reduce internal revenues and lead to more borrowing from external sources (Rozeff, 1982: 250). Lastly, increasing debt financing can decrease total equity financing and reduce conflicts between managers and shareholders (Crutchley & Hansen, 1989: 36).

Pecking Order Theory: According to this theory, firms follow a financing hierarchy that minimizes information asymmetry. Myers and Majluf (1984) offer arguments to understand different patterns of how companies raise capital, such as their inclination to use their own resources and their tendency to favor borrowing instead of selling shares when they need external funding. The study includes six recommendations under the condition that the firm manager has full information. Firstly, it is more beneficial for a firm to finance its financing needs externally using debt rather than stock issuance. Secondly, assuming that a firm has exhausted its cash flows and low-risk debt facilities, it may forgo investment opportunities rather than issue risky securities for investment opportunities. Thirdly, a firm can use securities or reserve borrowing to meet its investment needs by restricting dividends. Fourthly, if the firm needs to recoup cash by selling stocks or other risky securities, the firm should not pay dividends. Fifthly, if the firm issues stocks to finance its investments, the price of the stock will fall even if everything else remains constant. But if the firm borrows secured debt to finance its investments, the stock price will not fall. Lastly, the combination of a firm with abundant financial comforts, such as large amounts of cash, marketable securities, or the ability to lend without default risk, with a firm that does not have these will increase the combined value of the firm.

Trade-off Theory: In Modigliani and Miller's perfect world of capital markets, leveraging can offer significant benefits to companies. By borrowing, firms can reduce their tax liability, which, in turn, increases cash flow to the firm, and this increased cash flow can be shared between both debt holders and shareholders (Modigliani & Miller, 1958). Additionally, the theory assumes that shareholders bear the majority of risk within a firm, which means that increasing leverage does not necessarily result in a higher cost of financing (Miller & Modigliani, 1963). In fact, as a company's leverage increases, the average cost of borrowing may decrease, which can, in turn, boost the firm's value (Ross, 1973). Managers should, therefore, favor debt financing over equity since the value of the levered firm equals the value of the unlevered firm plus the present value of the tax shield (Luigi & Sorin, 2009: 316-317).

Modigliani and Miller's tradeoff theory underscores the importance of tax shields, suggesting that firms with high cash flows are more likely to increase their debt ratios to benefit from the tax shield. However, the more a company borrows, the closer it gets to bankruptcy. Therefore, firms that can manage debt without triggering the risk of bankruptcy are more likely to borrow more. For instance, firms with significant tangible assets, a high stock of liquid assets, and a large size are more likely to tolerate high leverage (Karasahin &

Kucuksarac, 2016; Karakoç, 2020). Hence, these variables are expected to be positively associated with borrowing decisions.

On the other hand, the pecking order theory of capital structure, formulated by Myers and Majluf (1984), emphasizes the issue of information asymmetry in the process of obtaining external funds. The theory posits that firms rely primarily on internal revenues for financing. Due to the severity of the asymmetric information problem, management prefers debt over equity financing via security issuance only after exhausting internal sources available to the company. Therefore, firms with lower information asymmetry are more likely to rely on external sources. For example, large firms, which are less likely to suffer from information asymmetry (Chae, 2005), can borrow more. Moreover, existing liquid assets and internal revenues reduce the need for borrowing (Tekin & Polat, 2020) and hence are likely to be negatively correlated with leverage.

Finally, the agency cost theory of Jensen (1986) suggests that firms with high internal sources, such as cash flow and a significant stock of liquid assets available for the use of management, should borrow more to prevent the unproductive use of these resources. Therefore, cash flow and liquidity should be positively correlated with borrowing decisions.

Frank and Goyal (2003) posit that as larger firms gain a greater reputation, they encounter less adverse selection and enjoy greater ease in issuing equity as compared to smaller firms. They further estimate that tangible assets demonstrate a negative correlation within the financial hierarchy. Given their ease of collateralization, valuation, and liquidation in times of financial distress, tangible assets pose a lower risk of bankruptcy compared to intangible assets (Antoniou, Guney & Paudyal, 2008).

According to Fama and French (2002: 3), the pecking order theory stipulates that higher tax shields will lead, all other factors held constant, to a rise in profitability and a corresponding decrease in debt financing and leverage ratios. As per this theory, free cash flow is the main source of financing, thereby leading to a reduction in leverage. Margaritis and Psillaki (2007) demonstrate that profitable firms tend to have higher taxable income, lower bankruptcy risk, and reduced borrowing costs, all of which provide an incentive to increase borrowing.

2.2. Non- Economic Factors Affecting Capital Structure

Tomes (1984) began his article by asserting that "economics is fundamentally atheistic. Religious beliefs, practices, and behaviors play no role in the life of the economic man (homo economicus)." In other words, economic agents design and organize their activities solely to maximize monetary gain. Accordingly, the primary objective of a manager is to maximize firm value and to determine the optimal capital structure that helps to achieve this goal. Although the principle of how a firm's capital structure should be determined is unambiguous, the effects of non-economic factors on such a financial decision have piqued interest.

Religion: Although this study is ultimately about the effects of culture on financial decisions, the concept of culture has been strongly influenced by religion (e.g., Guiso, Sapienza, & Zingales, 2006; Clark & Lelkes, 2019). Therefore, first, we discuss some of the studies that focus on the effects of religion on financing decisions. Previous studies have indicated a correlation between individual religiosity and risk aversion. For instance, Miller and Hoffmann (1995) concluded that risk attitudes and danger perceptions are negatively associated with individual culture. According to Guiso et al. (2006), individuals raised with religious beliefs tend to maintain similar lifestyle preferences, even if they reject religion in adulthood. Barro and McCleary (2003: 37) argued that macroeconomic development is negatively correlated with church attendance. Based on these premises, current research is examining whether religion or denomination influences firms' economic activities. Likewise, Osoba (2003) demonstrated that risk-averse individuals tend to attend church more frequently than risk-seeking individuals, and this relationship is believed to influence organizational behavior. Firms located in countries with high levels of religiosity, as measured by church attendance rates, tend to exhibit lower risk exposure, as demonstrated by differences in returns on equity or assets (Hilary & Hui, 2009). Meanwhile, several studies, such as Kumar et al. (2011) and Baxamusa and Jalal (2014), have

empirically investigated the impact of various branches of Christianity on firm leverage in the United States. They find that firms located in Catholic-majority states prefer debt financing over equity.

Culture: Culture refers to the set of beliefs, values, and socially accepted rules regulating life that have been transmitted from one generation to the next without significant changes (Guiso et al., 2006: 23). This definition highlights the enduring nature of culture, which is intended to stay and does not change much according to situations and conditions. Even as people's lives undergo significant changes, they strive to maintain their culture, which shapes their way of life across generations. For instance, Chui et al. (2002) examined the impact of culture on borrowing decisions across 22 countries and discovered that firms in certain countries consistently borrow less than those in the rest of the sample. Similarly, Giuliano (2004) demonstrated that cultural heritage influences the living arrangements of families in the United States, in addition to economic conditions. Zheng et al. (2012) argue that culture affects the terms of contracting by serving as an informal constraint that impacts the incentives and decisions of individuals involved in market transactions. They provide empirical evidence of this impact on corporate debt structures across 40 countries. In a recent study, El Ghoul and Zhang (2016) explored a potential connection between cultural values and trade credit financing decisions. They contend that cultural values influence business negotiations and transactions, and as such, are impacted by culture.

Recently, there has been a growing interest in studying the effects of non-economic factors on financial decisions (e.g., Muller & Philippon, 2005; Kumar et al., 2011; Baxamusa & Jalal, 2014). The empirical evidence highlighting the presence of a correlation between human beliefs, values, background, and economic decisions is beyond doubt. Therefore, in this study, we aim to test the validity of the following proposition:

Hypothesis: *The attitude towards borrowing differs based on the presence of cross-cultural board members of a firm.*

3. Data and Methods

The primary objective of this study is to examine the impact of CCBMs on financing decisions. Using the data of publicly traded firms in Turkey is well-suited to achieve this objective due to several reasons. Firstly, the sample of Turkish publicly traded firms used in this study operate in various non-financial industries, making the current dataset diverse and representative. Secondly, in 13 firms, the number of CCBM constitutes at least 30% of the total board members, while 34 firms have at least one CCBM on their board. For the purpose of this study, only managers from Europe and North America are considered cross-cultural, and their cultural orientation is confirmed by their respective companies[3]. According to Hofstede's (2001) cultural dimensions, Turkey is associated with higher levels of collectivism/individualism, power distance, and uncertainty avoidance, while displaying lower levels of masculinity/femininity when compared to European and North American countries. Detailed scores on these four cultural dimensions are presented in Table 1 and serve as a valuable reference for interpreting the results of this study.

Table 1. Hofstede Cultural Dimension Scores on Turkey and Selective Major Cross-Culture Countries

Countries	Individualism/ Collectivism	Power Distance	Uncertainty Avoidance	Masculinity/ Femininity
Turkey	63	66	85	45
United States	9	40	46	62
United Kingdom	11	35	35	66
Germany	33	33	65	66
France	29	68	86	43
Canada	20	39	48	52

The scores are taken from Hofstede (2001).

Hofstede's cultural dimensions have been used extensively in cross-cultural research and have become a widely recognized way of understanding cultural differences around the world. Scores for each dimension are based on survey data collected from different countries and range from 0 to 100. Sizable differences in these scores, for example in individualism vs. collectivism, as seen in Table 1, may mean that people from one culture prioritize personal goals and autonomy, while people from the other culture prioritize group harmony and loyalty (for further details see Hofstede, 2001).

The balance sheet and income statement data utilized in this study belong to publicly traded non-financial, non-holding firms listed on Borsa Istanbul in Turkey and were obtained through the DataStream data provider. The management and ownership structure information for these companies was acquired from www.kap.org.tr. The original dataset contained 1680 firm-year observations from 168 non-financial firms, covering the years 2011-2020. During the data handling process, one percent of the series was removed from both ends to prevent extreme values from impacting the results. Negative sales, negative assets, balance sheet data greater than total assets, and balance sheet data less than zero were eliminated. As a result of these procedures, 1087 observations of 158 non-financial firms remained for analysis.

In line with the hypothesis stated in Section II, this study examined the effect of cross-cultural elements on the financing structure, as presented in Equation 1.

$$Debt_{it} = \beta_i + \beta_1 Culture_i + \beta_n X_{it} + \mu_i + \varepsilon_{it} \qquad (1)$$

where $Debt_{it}$[4] denotes the level of debt held by firm *i* on its balance sheet at time *t*. To obtain robust results, we employed several dependent variables, including total liabilities, total short-term debt, financial debt, and trade debt. Financial debt, e.g., bank loans, and debt securities, is the most important external source of funding and is thus the first financial source to be analyzed to explore any differences in borrowing policies. Nevertheless, they are not the only source. Trade credit (hereafter TC), which arises from the purchase of goods on credit, is the second-largest item among borrowed funds and finances an average of 13% of a firm's assets, as shown in Table 3. TC is often mentioned in the literature as an alternative to financial loans (see, for example, Karakoç, 2022). If a firm's borrowing decisions are influenced by the cultural characteristics of its managers, it is natural to expect this to be reflected in alternative borrowing instruments. Therefore, in the second part of the empirical analysis, TC is included as the dependent variable in Equation 1. Furthermore, we include equity in the analysis as another dependent variable. Financial debt, trade debt, and equity account for more than 76 percent of the average firm's total funds (details are in Table 3) and are widely recognized as key components of a company's capital structure. The findings obtained in these analyses will lead to a more reliable conclusion.

$Culture_i$ is a binary variable used to indicate the existence of cross-cultural members on firms' boards. Two dummy variables have been assigned: one for cases where there is at least one CCBM on the board of directors, and the second for cases where the number of CCBMs of a firm accounts for at least 30% of the board. By doing so, the presence of CCBMs can be effectively considered. The underlying assumption of the analysis is that the board members, who are all local, will make different decisions from the boards with cross-cultural members. The positive and significant coefficients of the dummy variables representing the presence of foreign members can reveal the differences, if any, in the financing structure of firms due to the presence of these members.

Table 2. Variable Definitions

Dependent Variables		
Total debt	Long + short-term liabilities	$\text{Total debt}_{it}/\text{TotalAssets}_{it}$
Short debt	Short-term liabilities	$\text{Short debt}_{it}/\text{TotalAssets}_{it}$
Financial debt	Bank borrowings and securitized borrowings (long and short term)	$\text{Financial debt}_{it}/\text{TotalAssets}_{it}$
Trade credit	Credit purchases (accounts payable)	$\text{Trade debt}_{it}/\text{TotalAssets}_{it}$
Explanatory Variables		
Liquidity	Cash and cash equivalents	$Liquid_{it}/\text{TotalAssets}_{it}$
PPE	Net property, plant, and equipment	$PPE_{it}/\text{TotalAssets}$
Cashflow	Net income + depreciation	$Cashflow_{it}/\text{TotalAssets}_{it}$
Size[5]	Natural logarithm of total assets	$ln(\text{TotalAssets})_{it}$
ROA	Earnings before interest and taxes (EBIT)	$ROA_{it}/\text{TotalAssets}_{it}$
Culture Variables		
CCBM	Dummy for Cross-cultural board members	= 1 if the number of CCBM>0, otherwise 0.
$CCBM > 0.30$	Dummy for the ratio of CCBM to the total members	= 1 If $CCBM\ ratio > 0.30$ otherwise 0

It should be noted that 34 firms satisfy the condition for the CCBM dummy while only 13 qualify for the $CCBM > 0.30$ dummy variable (for details, see Table 3). The current sample consists of a total of 158 firms, after excluding outliers. Among these, 34 firms have at least one foreign member on the board, 13 firms have more than 30% cross-cultural members, and the remaining firms have no CCBM. The proportion of foreign members on the board varies between 0% to 70% of the total number of members. Similar results are expected from both variables, as they describe a comparable relationship. However, the second dummy variable pertains to situations where the number of CCBMs is at least 30% of the total board members, which suggests a greater likelihood of their influence on decisions made during meetings (Vijayakumaran & Vijayakumaran, 2019).

X_{it-1} represents the lagged value of the rest of the explanatory variables in the equation. The existing literature (e.g., Frank & Goyal, 2003; Flannery & Rangan, 2006; Karasahin & Kucuksarac, 2016; Karakoç, 2020) has identified total assets size, fixed assets amount, liquidity level, profitability, and EBIT as important variables that have a direct impact on borrowing decision. These variables are considered determinants of a firm's access to foreign funding and are thus included as explanatory variables based on empirical and theoretical arguments in the literature. Detailed information on these variables is presented in Table 2. Equation 1 is analyzed using the pooled OLS panel data analysis method, in accordance with the studies of El Ghoul and Zheng (2016) and Wang and Esqueda (2014). This method estimates the effect of variables by pooling the data across all individuals and time periods, and a regression model is fit to the entire dataset. All estimations are conducted with industry and time dummies to account for the variation across times (see Wooldridge, 2010). Furthermore, all regression analyses are run in Stata with the 'robust' option, which produces corrected standard errors for estimated coefficients to account for heteroscedasticity and autocorrelation (Stata 16 Base Reference Manual, 2019, pp. 455-456)[6].

A stationarity test was applied to the series (see Table A1 in the Appendices for the results). The dataset is an unbalanced panel and there may be missing observations between 2011 and 2020 in each cross-section. Therefore, a Fisher-type (Choi, 2001) stationarity test that takes into account these characteristics of the data was applied. According to the results of the test, there is no evidence of unit roots in the series.

The sample was partitioned into three groups, and the descriptive statistics and sectoral breakdown of the sample firms are presented in Tables 3 and 4, respectively. The first group comprises firms with no cross-cultural board members, the second group comprises firms with at least one cross-cultural member, and the third group comprises firms where more than 30% of the members are cross-cultural. A two-sided t-test was performed with the null hypothesis being that the mean leverage ratio of the first group equals that of the second group, and the mean leverage ratio of the second group equals that of the third group (H_0: $\mu_1 = \mu_2$). The results show that the leverage ratios are significantly different from each other. Firms with at least one cross-cultural member have higher debt than firms without any cross-cultural members, and this ratio increases significantly with the increase in the number of cross-cultural members. Similarly, firms with

CCBMs have significantly higher levels of liquidity and profitability than firms without cross-cultural members. The same tests were conducted for trade debt, and the results indicate that the means of all three groups were also significantly different from each other. As shown in Table 3, the average leverage is approximately 14% for all firms. This implies that for every ₺100 worth of assets in a firm, ₺14 is financed by financial debt. However, this ratio ranges between 1% and 73% after excluding outliers.

Table 3. Descriptive Statistics

Firms with no Cross-Cultural Board Member					
Variable	Obs	Mean	Std. Dev.	Min	Max
Debt	772	0.140	0.140	0.001	0.736
Trade debt	772	0.132	0.134	0.001	1.325
Liquidity	772	0.081	0.096	0.001	0.550
Equity	772	0.482	0.231	0.001	0.904
PPE	772	0.370	0.241	0.001	0.985
Cashflow	772	0.045	0.086	-1.38	0.703
Size	772	13.08	1.732	7.922	18.51
ROA	772	0.085	0.117	-1.342	0.660
Firms with at least one cross-cultural board member					
Variable	Obs	Mean	Std. Dev.	Min	Max
Debt	225	0.160	0.144	0.001	0.643
Trade debt	225	0.145	0.109	0.013	0.634
Liquidity	225	0.110	0.106	0.001	0.579
Equity	225	0.418	0.172	0.049	0.852
PPE	225	0.320	0.182	0.001	0.932
Cashflow	225	0.045	0.086	-0.224	0.320
Size	225	13.58	2.051	8.698	18.61
ROA	225	0.098	0.076	-0.160	0.361
Firms where at least 30 percent of the board members are from cross-culture					
Variable	Obs	Mean	Std. Dev.	Min	Max
Debt	90	0.177	0.168	0.001	0.633
Trade debt	90	0.170	0.132	0.013	0.634
Liquidity	90	0.125	0.115	0.003	0.579
Equity	90	0.362	0.165	0.080	0.710
PPE	90	0.303	0.214	0.001	0.932
Cashflow	90	0.063	0.064	-0.228	0.234
Size	90	13.93	1.942	10.49	18.61
ROA	90	0.089	0.065	-0.160	0.218
All Firms					
Variable	Obs	Mean	Std. Dev.	Min	Max
Debt	1087	0.154	0.142	0.001	0.736
Trade debt	1087	0.139	0.122	0.001	1.325
Liquidity	1087	0.096	0.101	0.001	0.579
Equity	1087	0.468	0.220	0.001	0.904
PPE	1087	0.345	0.212	0.001	0.985
Cashflow	1087	0.049	0.082	-0.228	0.706
Size	1087	13.41	1.876	7.92	18.61
ROA	1087	0.087	0.082	-0.184	0.380

Financial debt, trade debt, equity, liquidity, PPE, Cashflow, and ROA are scaled by total assets. Size is the natural logarithm of total assets.

Table 4. Sectoral Breakdown of Firms

	Obs	Weight
+		
Sectors	Obs	Weight
Manufacturing	9	0.71
Technology	2	0.14
Electricity gas and water/steam	1	0.07
Information and communication	1	0.07
Sum	13	100%
Firms with at least one cross-cultural board member		
Sectors	Obs	Weight
Manufacturing	26	0.77
Technology	4	0.11
Electricity gas and water/steam	2	0,06
Information and communication	1	0.03
Agriculture and animal production-related service activities	1	0.03
Sum	34	100%
Firms with no cross-cultural board member		
Sectors	Obs	Weight
Manufacturing	77	0.62
Technology	8	0.08
Wholesale and retail trade	8	0.06
Education, health, sports, and other social services	6	0.05
Mining and quarrying	4	0.03
Hotels and restaurants	4	0,03
Transportation and storage	4	0.03
Information and communication	5	0.04
Electricity gas and water/steam	3	0.02
Administrative and support service activities	2	0.02
Construction and public works	2	0.02
Real estate activities	1	0.01
Sum	124	100%

Table A2 in the Appendices displays the correlations between the variables. The results indicate a high correlation between the variables of interest, namely CCBM and CCBM>0.30, and the dependent variables, financial debt, trade debt, and equity. However, we did not observe any significant correlation among the explanatory variables that could invalidate the results.

4. Empirical Analysis and Findings

4.1. The Case of Financial Debt

As stated previously, the primary aim of this study is to investigate the impact of CCBM on the decision-making process regarding corporate borrowing. We analyzed Equation 1 using pooled panel data. The results of this analysis are presented in Table 5, with the robust standard errors shown in parentheses. To ensure that the results are not the product of a random correlation among explanatory variables, we first regressed the dependent variable against only the variable of interest. The CCBM dummy variable survived this test and was then included along with the rest of the control variables.

Table 5. Regression Results with Long and Short-Term Liabilities

Dependent variables	Total Liabilities				Total short-term debt			
	1	2	3	4	5	6	7	8
Liquidity		-0.165		-0.174*		-0.195***		-0.202***
		(0.102)		(0.102)		(0.074)		(0.074)
PPE		-0.152***		-0.152***		-0.282***		-0.281***
		(0.038)		(0.038)		(0.034)		(0.034)
Cashflow		-0.238***		-0.238***		-0.655***		-0.654***
		(0.041)		(0.041)		(0.039)		(0.039)
Size		0.063**		0.063**		0.081**		0.081**
		(0.002)		(0.002)		(0.004)		(0.004)
ROA		0.632***		0.632***		.232***		.232***
		(0.037)		(0.037)		(0.347)		(0.347)
CCBM	0.03***	0.03***			0.038	0.004		
	(0.000)	(0.000)			(0.010)	(0.012)		
CCBM > 0.30			0.066***	0.062***			0.016***	0.017***
			(0.018)	(0.021)			(0.004)	(0.007)
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# obs	1.055	1.055	1.055	1.055	1.055	1.055	1.055	1.055
# firm	158	158	158	158	158	158	158	158
R^2	0.02	0.31	0.02	0.31	0.02	0.27	0.02	0.27

The table presents the output for the OLS estimation specified in Equation 1. Robust standard errors are given in parentheses and ***, **, * denote significance levels of 1%, 5%, and 10%, respectively. All estimations include a constant, industry and time dummies. The dependent variables are total debt and total short-term debt, liquidity is cash plus cash-equivalents, PPE is net fixed assets, Cashflow is net income + depreciation, size is the natural logarithm of total assets, and ROA is operating income. All relevant variables are scaled by total assets. For a detailed description of the variables, see Table 2.

The findings show that the coefficients for the dummy variable indicating the presence of at least one CCBM among the total members are 3% and 6.6%, presented in the first and third columns of the table, respectively. These coefficients are positive and statistically significant at the 1% level. Similarly, the coefficients for the CCBM ratio dummy, which indicates cases where this ratio is higher than 30%, are given in the fifth and seventh columns and are 3.8% and 1.6%, respectively. We expect that as the number of CCBM on the board of a company increases, the decisions of that board will become more distinct from those of a board consisting only of locals, and CCBM>0.30 variable can be used to validate/invalidate this intuition.

These results suggest that firms with foreign board members tend to maintain significantly more leverage than those that have no CCBM. Furthermore, the magnitude of the coefficients (3% vs. 6.6%) indicates that as the number of CCBM on the board increases, borrowing becomes even more aggressive.

On the other hand, the coefficients obtained for the other explanatory variables are consistent with the existing literature, in terms of the direction of the relationship they indicate. Specifically, firms with more fixed assets - i.e., assets that can be pledged as collateral - tend to borrow more, while firms with higher levels of EBIT tend to be less reliant on external resources. Additionally, as firm size and profitability increase, the level of leverage also tends to increase. In some of the years, firms reported negative net income (see Table 3 for details), which can result in negative values for cash flow and ROA variables. This can impact the interpretation of the coefficients. The estimated coefficients for ROA and cash flow are 0.632 and -0.238, respectively. They reflect the changes in the dependent variable in response to a one-unit increase/decrease in ROA and cash flow variables. A one-unit increase (decrease) in ROA is associated with an estimated increase (decrease) of 0.632 units in total liabilities, assuming other variables are held constant. Similarly, a one-unit increase (decrease) in cash flow is associated with an estimated decrease (increase) of 0.238 units in total liabilities, assuming other variables are held constant.

4.2. Robustness Check with an Alternative Measures of Dependent Variable

Robustness check with financial debt: Previous analysis reveals that firms with at least one CCBM have more leverage than their peers. We chose total long-term and short-term liabilities as the dependent variables because they are frequently used in the literature. However, it's important to note that some items included in the dependent variable, such as deferred income, state subventions, or accrued compensation, may not reflect the financial risk a company bears. These items may cloud the variables and make it difficult to isolate the influence of cross-cultural board members, particularly the effects of their perception of risk. Therefore, we specifically conduct robustness analysis using financial debt and trade debt as the dependent variables to ensure a more accurate representation of the borrowing decisions and to address potential limitations associated with the inclusion of non-financial risk-related items in the dependent variable.

Table 6. The Effect of Cross-Cultural Members on Financial Debt

	1	2	3	4	5	6	7	8
Liquidity			0.090**	(0.048)			0.088*	(0.049)
PPE			0.203***	(0.019)			0.201***	(0.019)
Cashflow			-0.584***	(0.078)			-0.576***	(0.078)
Size			0.011***	(0.002)			0.014***	(0.002)
ROA			0.269***	(0.070)			0.264***	(0.070)
CCBM	0.25***	(0.006)	0.037***	(0.009)				
CCBM > 0.30					0.45***	(0.015)	0.082***	(0.024)
Year dummy	Yes		Yes		Yes		Yes	
# obs	1.055		1.055		1.055		1.055	
# firm	158		158		158		158	
R^2	0.028		0.250		0.024		0.250	

The table presents the output for the OLS estimation specified in Equation 1. Robust standard errors are given in parentheses and ***, **, * denote significance levels of 1%, 5%, and 10%, respectively. All estimations include a constant, industry and time dummies. The dependent variable is financial debt, liquidity is cash plus cash-equivalents, PPE is net fixed assets, Cashflow is net income + depreciation, size is the natural logarithm of total assets, and ROA is operating income. All relevant variables are scaled by total assets. For a detailed description of the variables, see Table 2.

The results of the estimation are presented in Table 6. The first key variable, the CCBM dummy, exhibits statistically significant and positive coefficients of 25% and 3.7%, respectively. The second key variable, CCBM>0.30, also displays statistically significant positive coefficients of 45% and 8.2%, which is actually twice the previous one. This implies that an increase in the number of CCBMs above a certain threshold leads to a more drastic effect on borrowing decision. These coefficients provide evidence that firms with CCBM tend to prefer debt over equity, which is consistent with the earlier findings.

Robustness check with trade credit: The results obtained thus far support the hypothesis that the capital structure of firms with CCBM differs from that of firms managed solely by local managers. If this is indeed the case, we may observe similar effects of managerial influence on financial decisions related to trade payables. To conduct a robustness check, we examine the use of trade credit as an alternative financing instrument for firms with CCBM.

Trade payables refer to a financing instrument that arises when goods and services purchased by an enterprise are delivered on time, but payment is deferred until later. By converting borrowed goods and services into cash before the maturity of the debt or by using them to finance their credit sales, firms create a significant economic resource (Karakoç, 2023). In proportional terms, trade payables are defined as the second most important financial resource after financial debts, financing approximately 13% of the total assets of an average enterprise. Academic studies have generally emphasized that trade payables constitute a financial resource for the borrowing firm, particularly when there is difficulty in accessing financial loans (El Ghoul & Zheng, 2016).

Table 7. The Effect of Cross-Cultural Members on Trade Debt

	1	2	3	4	5	6	7	8
Liquidity			-0.096***	(0.030)			-0.105***	(0.030)
PPE			-0.119***	(0.019)			-0.119***	(0.019)
Cashflow			-0.146***	(0.066)			-0.144***	(0.067)
Size			-0.001	(0.002)			-0.001	(0.002)
ROA			0.063	(0.070)			0.060	(0.070)
CCBM	0.12***	(0.005)	0.018***	(0.007)				
CCBM > 0.30					0.39***	(0.013)	0.045***	(0.013)
Year dummy	Yes		Yes		Yes		Yes	
# obs	1.055		1.055		1.055		1.055	
# firm	158		158		158		158	
R^2	0.028		0.103		0.018		0.103	

The table presents the output for the OLS estimation specified in Equation 1. Robust standard errors are given in parentheses and ***, **, * denote significance levels of 1%, 5%, and 10%, respectively. All estimations include constant, industry, and time dummies. The dependent variable is trade debt, liquidity is cash plus cash-equivalents, PPE is net fixed assets, Cashflow is net income + depreciation, size is the natural logarithm of total assets, and ROA is EBIT. All relevant variables are scaled by total assets. For a detailed description of the variables, see Table 2.

For robustness check, we have undertaken an examination of firms' approach to trade credit in accordance with the procedures described in Section III. Given that detailed information on the data and methodology has already been provided earlier, it is not necessary to discuss it again at this point. The impact of culture on trade debt policies has been estimated using Equation 1, wherein the original dependent variable has been replaced with trade credit (refer to Table 2 for further details). The results of the estimation are presented in Table 6, where it can be observed that the coefficients for our key variables, CCBM, are 12% and 1.8%, and for CCBM>0.30, they are 39% and 4.5%. It is noteworthy that these coefficients are positive and statistically significant at the one percent level of significance, which implies that firms with CCBM tend to borrow more trade credit than their peers who are managed by local managers.

5. Conclusion, Discussion, Limitations, and Future Directions

The objective of this study is to examine the impact of board members' cultural backgrounds on borrowing decisions. To achieve this goal, we conducted a series of regression analyses comparing borrowing decisions between firms with and without CCBMs. We utilized two dummy variables to represent the effects of CCBM on these decisions. The first variable indicates whether a firm has at least one CCBM, while the second represents the case where at least 30% of the board members are from cross-cultural backgrounds. To enhance the robustness of our findings, we utilized alternative dependent variables, namely trade credit and total equity. The empirical analyses revealed that firms with CCBM tend to be more aggressive in borrowing. However, the underlying reasons for this behavior are not entirely clear. We attempt to shed light on this issue in the following discussion by addressing the question of why firms managed entirely by locals may borrow less than firms with CCBMs.

Hofstede's (2001) theory of cultural dimensions categorizes cultural features into four dimensions: Individualism, masculinity/femininity, uncertainty avoidance, and power distance. According to this theory, national culture refers to the collective programming of the mind that distinguishes people from each other. Cultural differences can significantly influence communication and decision-making, as individuals from individualistic cultures may prioritize their own interests and opinions, while those from collectivistic cultures may prioritize consensus and group agreement. Recent research has shed light on how national culture influences firms' capital structure choices. Aggarwal and Goodell (2014) examine the determinants of national culture on cross-country differences in firms' access to finance and argue that borrowing is related to masculinity and uncertainty aversion. El Ghoul and Zheng (2016) document similar findings, demonstrating that cultural traits influence financial decisions. Wang and Esqueda (2014) examine firms' leverage decisions in the context of national culture according to Hofstede's (2001) cultural dimensions theory. They reveal that

countries with high power distance, masculinity, uncertainty avoidance, and long-term adaptation use less debt, while centralized countries with high individualism and tolerance use more financial leverage.

Higher financial leverage can increase a firm's market value (Gill, Biger, & Mathur, 2011: 5), but it also raises the risk of bankruptcy (Kajola, 2008: 17). This effect is particularly notable for low-profit firms, as investors may see earnings as collateral (Adenugba, Ige, & Kesinro, 2016). Thus, an optimal capital structure is crucial for firms to enhance their market capitalization. The debt-to-equity ratio must be determined at an optimal level that maximizes firm value without increasing the likelihood of bankruptcy (Gill et al., 2011). When this threshold is exceeded, a negative relationship emerges between firm leverage and performance (Gleason, Mathur, & Mathur, 2000).

The natural conclusion one draws from this dicussion is that the optimal debt level that maximizes firm value depends on both the economic characteristics of firms, such as profitability, income generation potential, and asset availability as collateral and the personal characteristics of the individuals managing them. Corporate decision-makers' perceptions of risk and reward are influenced by their values, beliefs, preferences, and limitations to some extent. As a result, board members from different cultural backgrounds may have distinct risk perceptions, which may lead to different views on the optimal debt ratio for maximizing firm value. A study by Lins, Servaes, and Tufano (2010) found that firms with more diversified boards had higher debt levels than those with less diversified boards. This is because diverse boards may have a broader range of risk appetites, with some members more willing to take on debt to finance growth opportunities than others. Therefore, it is not far-fetched to argue that the optimal leverage ratio will differ among firms and the mindset of the people managing them.

Furthermore, CCBMs may also have a better understanding of global markets and different cultural norms in comparison to local board members, which can be beneficial in expanding a firm's business internationally. A study by Pless and Maak (2004) found that firms with diverse boards were more likely to engage in international business activities than those with homogeneous boards. This is because diverse boards can provide better insights into foreign markets and cultural differences, which can help firms to tailor their products and services to local needs. They may also provide a fresh perspective and new ideas to the table, which can enhance a firm's decision-making process. Studies have shown that diverse teams tend to have more innovative ideas and make better decisions than homogeneous teams (e.g., Page, 2007; Herring, 2009). This is because diverse teams bring a variety of perspectives, knowledge, and experiences that can lead to a wider range of ideas and approaches to problem-solving.

While our findings align with previous research that emphasizes the influence of personal attributes on corporate decision-making, they diverge from the arguments put forth by well-established capital structure hypotheses such as the trade-off theory (Modigliani & Miller, 1958), agency theory (Jensen & Meckling, 1976), and pecking order theory (Myers & Majluf, 1984). These theories suggest that the discretion of corporate managers and board members is constrained by a simple principle - that they must strive to maximize corporate value (Cheng, Liu, & Chien, 2010; Aggarwal & Padhan, 2017).

In contrast, our study concludes that the personal values and judgments of individuals involved in firm management are influential in decision-making. Specifically, we found that firms managed entirely by local individuals borrow less than those managed by at least one CCBM. This finding suggests that cultural differences among board members may have an impact on firm financing decisions and that personal values and judgments play a key role in these decisions

Several studies, including those conducted by Zou and Xiao (2006), Azzam et al. (2013), and Abukosim et al. (2014), have suggested that foreign ownership through foreign direct investment can improve the corporate governance structure of firms and consequently, enhance their access to bank loans and financial markets. This access may even extend to international capital markets, enabling such firms to operate at higher levels of leverage (Gurunlu & Gursoy, 2010; Rely & Arsjah, 2017). While our findings align with these studies, our conclusions and implications differ slightly. Specifically, our research shows that the presence of CCBM improves firms' access to debt, possibly due to the improved corporate governance structure of firms with CCBM.

As mentioned earlier, this study's aim was to investigate the impact of the cultural background of board members on capital structure-related decisions in Turkey. Although a large number of board members in Turkey and their presence in various firms made this study feasible, the use of a static dummy variable to reflect their impact limits the analysis to the pooled OLS method. Hence, future studies should be designed to use different methods such as fixed-effect OLS to provide a more comprehensive understanding of the influence of foreign board members on financial decisions.

Moreover, it should be noted that this study only examined borrowing decisions and excluded significant corporate decisions such as liquidity management and investment policies, e.g., research and development. Examining these policies in firms that have CCBM can help expand the existing knowledge about the effects of culture on economic decisions.

The findings of this study have important implications for firms looking to optimize their financing strategies. In particular, including CCBMs on the board can have a positive impact on a firm's ability to access and utilize debt financing. Therefore, firms seeking to improve their financial performance should consider the potential benefits of having a diverse board with members from different cultural backgrounds.

Another related issue, though outside the scope of this study, is the potential influence of foreign board members' education and work experience compared to local managers. For instance, does a manager with a marketing or finance background has a different impact than one with an engineering background? Answering these questions would provide valuable insights and a deeper understanding of the topic, and thus contribute to the existing literature.

The study's findings demonstrate that firms with CCBM exhibit a tendency to borrow more than their counterparts, which has been reported to have a positive impact on various performance metrics (Abukosim et al., 2014). In the literature, arguments have been presented suggesting that managerial discipline (Oxelheim & Randøy, 2003) and foreign board members' expertise (Mi Choi et al., 2012) have led to improved performance measures. Therefore, board diversity is likely to be perceived positively by external stakeholders, including investors, suppliers, and customers, as it reflects the company's adherence to social values and regulations (Oxelheim & Randøy, 2003).

From a corporate governance standpoint, the board's structure can serve as a signal of the existing governance mechanisms' strength and the company's quality (Beatty & Ritter, 1986). The board members and their composition have an impact on the company's reputation and influence the public's perception (Certo, 2003), which can potentially affect the firm's standing in society. Therefore, having CCBM could serve as a powerful signal to stakeholders for improved corporate governance and is likely to be interpreted as higher value creation.

Declarations and Disclosures

End Notes

1. *We would like to express our gratitude to the editor, Prof. Adem Anbar and anonymous reviewers for their valuable comments and constructive feedback on this paper. Their input has greatly improved the quality of this paper.*

2. *In accordance with this statement, we only consider board members from Europe and North America cross-cultural.*

3. *First, we identified foreign board members by name and confirmed their origin through phone calls to the respective companies. Specifically, we verified that these members were from Europe or North America.*

4. *To obtain robust results, we employed several dependent variables, including total liabilities, total short-term debt, financial debt and trade debt.*

5. *This variable has been adjusted for inflation.*

6. *For a similar treatment see Karakoç (2023).*

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Appendix

Table A1. Fisher-Type Unit Root Test Results

H_0: Series contain unit root (not stationary)		
Variables	Chi-Sq.Statistic	Prob
Debt	25.700	0.000
Trade debt	25.400	0.000
Liquidity	24.900	0.000
PPE	27.500	0.000
EBIT	24.800	0.000
Size	27.200	0.000
ROA	25.200	0.000
Trade payables	24.100	0.000
Equity	26.700	0.000

Table A2. Correlation Matrix of the Variables

	Debt	Equity	Trade Debt	Liquidity	PPE	EBIT	Size	ROA	CCBM	CCBM>0.30
Debt	1.0000									
Equity	-0.4937	1.0000								
Trade debt	-0.0807	-0.3968	1.0000							
Liquidity	0.0036	0.0813	-0.0231	1.0000						
PPE	0.3450	-0.0028	-0.1997	-0.2507	1.0000					
EBIT	-0.1607	0.3683	-0.0899	0.2788	-0.0742	1.0000				
Size	0.2051	-0.0898	-0.0362	0.3119	-0.0175	0.2400	1.0000			
ROA	-0.0167	0.1321	-0.0757	0.2289	-0.0016	0.7770	0.2825	1.0000		
CCBM	0.1080	-0.0144	0.0533	0.1299	-0.0743	0.0626	0.0961	0.0423	1.0000	
CCBM>0.30	0.1091	-0.0830	0.1047	0.1404	-0.0572	0.0184	0.1247	0.0337	0.5868	1.0000