Cultural diversity and capital structures of multinational firms

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Online Appendix

Robustness tests

OA.1 Endogeneity issues

Endogeneity is an important issue in corporate finance. One concern, for example, is that both decisions on cultural diversity and the use of leverage are made according to the same internal factors. The endogeneity issue may also arise from reverse causality, where leverage may affect cultural diversity. Roberts and Whited (2013) suggest that in capital structure studies, an important endogeneity concern is that managers may use their private information to determine leverage ratios. This information, however, may not be feasibly modeled in regressions.

OA 1.1 Propensity score matching

One approach to address the endogeneity issue, as suggested by Roberts and Whited (2013), is propensity score matching. In the context of this paper, the treatment effect can be estimated by comparing the firms with higher degrees of cultural diversity to the firms with lower degrees of cultural diversity, by matching other firm- and country-level characteristics.[1] If managerial leverage decisions are irrelevant to cultural diversity, it would be expected to see no significant difference in leverage ratios between firms with high and low cultural diversity.

Insert OA Table 1 here

OA Table 1 reports results of the treatment effects for the multinational leverage ratio. Results of the first (propensity score generation) and second (treatment effect estimation) steps are both reported. In the first step, the dependent variable is the dummy variable that equals one if the firm has a higher level of cultural diversity, and otherwise zero. The results from the first step suggest that firms with higher profitability, larger size, greater geographic distance, and expropriation risks tend to have high cultural diversity. In contrast, firms with higher levels of investment opportunities, tangibility, foreign tax rates, property rights, and political risks tend to have low cultural diversity.

The results in the second step are the key interest of the test. To ensure the unbiasedness of the results, three matching techniques are used: Nearest neighbor, stratification, and Kernel match.[2] Panel A of OA Table 1 reports results of the treatment effects for the consolidated leverage ratio. The results from all the three matching techniques show that, after matching

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[1] The sample is thus split into two subsamples — high and low cultural diversity firms. The results reported are based on the mean. While not report, the results are essentially identical when dividing the sample by the median.
[2] The nearest neighbor method matches the testing point in treatment groups with the nearest point in the control groups (Rubin, 1973). The stratification method divides the sample into blocks and then matches the testing point in treatment groups with the weighted average value in the corresponding block (Frangakis and Rubin, 2002). The Kernel method matches the testing point in treatment groups with the weighted average of all values in the control groups (Imbens, 2000).

firm-level determinants, firms with a higher degree of cultural diversity have significantly lower leverage ratios than firms with lower degrees of cultural diversity.[3] The difference is statistically significant at the 1% level throughout the three matching techniques.

Panel B of OA Table 1 carries out the tests with the same procedure as above but focuses on parent leverage ratios. The first-step results are similar to the results obtained in Panel A of OA Table 1, except that the coefficient on investment opportunities becomes negative and the sign of tangibility turns positive. In the second step, after matching firm- and country-level factors, the results of the average treatment effect for the treated are all negative and significant at the 1% level. These results suggest that firms with higher levels of cultural diversity have significantly lower leverage ratios compared to firms with lower levels of cultural diversity. These results are consistent with the main result.

OA 1.2 Exogenous shocks

A more straightforward way to address the endogeneity issue is to find an exogenous shock, which is unlikely to be controlled by the firm but can have an impact on the variables of interest. The 2007-2008 global financial crisis provides a natural experiment in this regard. During the 2007-2008 global financial crisis, firms tend to become more cautious about their financial situations and thus reduce their financial activities (Campello et al., 2010; Giannetti and Laeven, 2012; Kahle and Stulz, 2013). Meanwhile, the degree of cultural diversity is contracted as many foreign operations were closed (Kleimeier et al., 2015; Sander et al., 2016). If there is a spurious relation between cultural diversity and capital structure, then we expect that the significant coefficient on cultural diversity is eradicated after implementing the exogenous shock. For the empirical analysis, a post-crisis dummy is generated. It equals one if an observation belongs to the 2009-2013 sub-period, and otherwise zero (The U.S. Federal Reserve started Quantitative easing in late November 2008).

Insert OA Table 2 here

OA Table 2 reports the regression results. While our focus here is the interaction terms, it can be seen that the coefficients on cultural diversity are fairly consistent with the main results. The impact of the global financial crisis is also material, it is negatively related to both consolidated and parent leverage ratios and positively related to equity activities. For the interaction terms, column (1) shows that the effect of cultural diversity is positive and

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[3] The results reported here are after performing bootstrapping 20 times. Very similar results are obtained when performing bootstrapping less time or more times.

significant at the 5% level on the consolidated leverage ratios. This suggests that the global financial crisis does have an impact on the culture and leverage relation. However, the financial crisis does not eradicate the effect, the combination of the coefficient on cultural diversity (-0.056) and interaction coefficient (0.023) are still negative. This means that the effect of cultural diversity sustains during the period of the global financial crisis. Column (2) reports the effect of cultural diversity on leverage ratios of parent firms. The results show an insignificant coefficient on the interaction term, indicating that the global financial crisis has no significant influence on the relation between cultural diversity and parent leverage. Therefore, the negative relation between cultural diversity and leverage ratio exists under the shock of the 2008 global financial crisis.

The above results, nevertheless, do not mean that the global financial crisis impacts debt and equity activities in the same manner. As shown in columns (3) and (4) of OA Table 2, which examine how cultural diversity affects the choices between debt and equity using the probit model, the interaction between cultural diversity and the financial crisis for debt activities is significantly positive. However, the interaction between cultural diversity and the financial crisis for equity activities is insignificant. Closely scrutiny, we can find from columns (5) and (6) of OA Table 2 (which using quantile regressions for net debt reduction and net equity issuance, respectively) that there is a significantly positive coefficient on the interaction between cultural diversity and the financial crisis for net debt reduction and a significantly negative coefficient on the interaction between cultural diversity and the financial crisis for net equity issuance. Again, this indicates that the global financial crisis does have a material effect on the culture and capital structure relation. Specifically, those multinationals with high cultural diversity would reduce more debts and issue fewer new equities during the crisis period. However, this does not totally eradicate the effect of cultural diversity. In columns (3) and (5), the combined effect of cultural diversity remains significantly negative for debt activities and the net debt reduction. In columns (4) and (6), the combined effect of cultural diversity remains significantly positive for equity activities and the net equity reduction. Therefore, these results suggest that the effect of cultural diversity consistently holds even in the financial crisis.

Finally, we implement the exogenous shock of the global financial crisis on the subsidiary capital structure. Column (7) of OA Table 2 reports the result from the quantile regression, showing a significantly negative coefficient on the interaction between cultural distance and the financial crisis, suggesting that the global financial crisis aggravates the negative effect of cultural differences on the subsidiary leverage ratio. Overall, the findings in

column (7) suggest that the negative influence of cultural distance become more significant for the subsidiary capital structures during the period of the global financial crisis.

Taken together, these results reconfirm that the strong relation between cultural diversity and capital structures even after addressing the potential endogeneity issue. This means that the cultural effect is not driven by endogeneity and therefore provides supporting evidence that cultural diversity is a crucial factor related to low multinational leverage ratios.

OA.2 Further robustness

This section carries out robust tests using alternative cultural frameworks and single cultural dimensions for the effect of cultural diversity on debt-equity activities and decisions on debt reduction and equity issuance and the effect of cultural distance on subsidiary capital structure. The results of this section complement the main manuscript.

<div align="center">Insert OA Table 3 here</div>

OA Table 3 reports the results for debt-equity activities with alternative cultural frameworks using the probit model and logit model, respectively.

<div align="center">Insert OA Table 4 here</div>

OA Table 4 reports the results for debt-equity activities with different cultural dimensions with the probit model. logit model produces the same results.

<div align="center">Insert OA Table 5 here</div>

OA Table 5 reports the results for decisions on debt reduction and equity issuance with alternative cultural frameworks using linear and panel quantile regressions, respectively.

<div align="center">Insert OA Table 6 here</div>

OA Table 6 reports the results for decisions on debt reduction and equity issuance with different cultural dimensions using linear quantile regressions. Panel quartile regression produces the same results.

<div align="center">Insert OA Table 7 here</div>

OA Table 7 reports the results for subsidiary leverage ratios with alternative cultural frameworks and different cultural dimensions, respectively.

Taken together, these results are consistent with the results in the main manuscript.

OA Table 1
Propensity score match

This table reports the results of propensity score matches. Panel A reports results comparing consolidated leverage ratios and Panel B reports comparing parent leverage ratios. Consolidated leverage ratio is the total debt divided by the total book value of capital as reported in Datasream. Parent leverage ratio is estimated according to consolidated leverage ratio adjusted for subsidiary debts. In the first-stage, propensity score generation, the dependent variable equals one if a firm belongs to the high cultural diversity group, and otherwise zero. The second stage calculates the average treatment effect at treated (ATT) and comparing leverage ratios between high and low cultural diversity groups based on the propensity score generated in the first stage. ATT Nearest Neighbor is the average effect of the treatment on the treated based on the nearest neighbor matching. ATT the average effect of the treatment on the treated based on stratification matching. ATT Kernel Match is the average effect of the treatment on the treated by matching with kernel weighting. The results are obtained from 20 times bootstrapping. The sample is split into high and low cultural diversity by the mean. Cultural diversity is an aggregated cultural distance: Cultural diversity$_{i,t} = \left(\sum_{j=1}^{J} \text{Distance}_{US,j}\right)_{i,t}$, where Distance$_{US,j}$ is cultural distance between the U.S., the home country of the sample firms and country j, the country where firm i's subsidiary is located. Distance$_{US,j}$ is computed using a Euclidean version of the Kogut and Singh's (1988) formula based on Hofstede's six cultural dimensions. The control variables are consistent with the main manuscript and described in Appendix of the main text. Numbers in parentheses report t-statistics based on White-corrected robust standard errors clustered by firm and year. *, **, and *** stand for the 10%, 5%, and 1% significance levels, respectively.

First-stage: Propensity score generation				
	Consolidated leverage ratio		Parent leverage ratio	
	Coefficient	(z-statistic)	Coefficient	(z-statistic)
Profitability	0.003**	(2.47)	0.004***	(3.29)
Firm size	0.188***	(16.10)	0.138***	(10.94)
Investment opportunity	-0.059***	(-2.99)	-0.016	(-0.71)
Tangibility	-0.011***	(-11.95)	0.055***	(6.42)
Geographical distance	19.152***	(71.36)	14.815***	(55.95)
Foreign tax rate	-0.025***	(-5.94)	-0.017***	(-3.49)
Property rights	-1.120***	(-22.39)	-1.190***	(-19.88)
Expropriation risks	0.888***	(18.54)	0.946***	(16.47)
Political risk	-1.609***	(-9.27)	-1.833***	(-9.21)
Constant	-0.131	(-0.82)	0.393	2.21
Pseudo R^2	0.507		0.462	
N of Observations	12,216		9,303	
Second stage: Average treat effect at treated				
	Value	(t-statistic)	# treat	# control
Panel A: Consolidated leverage ratio				
ATT Nearest Neighbor	-14.072***	(-3.75)	6,648	1,178
ATT Kernel Match	-11.156***	(-4.32)	6,648	5,134
ATT Stratification	-12.303***	(-6.29)	6,648	5,134
Panel B: Parent leverage ratio				
ATT Nearest Neighbor	-13.830***	(-4.71)	6,648	931
ATT Kernel Match	-10.589***	(-4.06)	6,648	5,134
ATT Stratification	-12.432***	(-11.30)	6,648	5,134

OA Table 2
The relation between cultural diversity and leverage ratios: Sub-period analysis

This table reports the coefficient estimates of OLS regressions for two sub-period: Pre-crisis period (2004-2008) and Post-crisis period (2009-2013). Consolidated leverage ratio is the total debt divided by the total book value of capital as reported in Datasream. Parent leverage ratio is estimated according to consolidated leverage ratio adjusted for subsidiary debts. Debt activity is equal to one if the firm carries out debt activities at year t, and zero otherwise. Equity activity is equal to one if the firm carries out equity activities at year t, and zero otherwise. Net Debt reduction is the dollar amount a company received from the sale of common and/or preferred stock minus the amount of total borrowings, scaled by total capital. Net Equity issuance is funds used to reduce long term debt and short term borrowings minus funds used to decrease the outstanding shares of common and/or preferred stock, scaled by total capital. Subsidiary leverage ratio is debts divided by the total assets of the subsidiary. Cultural diversity is an aggregated cultural distance: Cultural diversity$_{i,t} = \left(\sum_{j=1}^{J} \text{Distance}_{US,j}\right)_{i,t}$, where Distance$_{US,j}$ is cultural distance between the U.S., the home country of the sample firms and country j, the country where firm i's subsidiary is located. Distance$_{US,j}$ is computed using a Euclidean version of the Kogut and Singh's (1988) formula based on Hofstede's cultural dimensions, including power distance index (PDI), uncertainty avoidance index (UAI), individualism index (IDV), masculinity index (MAS), long-term orientation (LTO), and Indulgence (IND). The control variables are consistent with the main manuscript and described in Appendix of the main text. The data cover listed U.S. multinationals over the period between 2004 and 2013. Numbers in parentheses are t-statistics based on White-corrected robust standard errors clustered by firm (subsidiary for the last column) and year. *, **, and *** stand for the 10%, 5%, and 1% significance level, respectively.

	Consolidated leverage ratio	Parent leverage ratio	Debt activity	Equity activity	Net Debt reduction	Net Equity issuance	Subsidiary leverage ratio
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cultural diversity (CDiv)	-0.056***	-0.059***	-0.009***	0.005***	-0.367***	0.364***	-0.006***
	(-3.63)	(-3.00)	(-4.73)	(4.33)	(-6.44)	(5.60)	(-5.99)
Post crisis dummy (PC)	-1.795**	-2.301*	-0.312***	0.338***	-4.925	-13.399***	0.125
	(-2.04)	(-1.93)	(-4.47)	(5.69)	(-1.47)	(-3.50)	(0.79)
CDiv*PC	0.023**	0.009	0.004***	0.000	0.150***	-0.187***	0.001
	(2.12)	(0.66)	(3.61)	(-0.10)	(3.58)	(-3.88)	(0.76)
Cultural distance (CDis)							-0.140***
							(-3.49)
CDis*PC							-0.112***
							(-2.71)
Constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted/Pseudo R^2	0.255	0.197	0.146	0.070	0.013	0.026	0.039
Observation	12,183	9,700	11,875	11,932	11,549	11,661	27,971

OA Table 3
Debt-Equity activities with different cultural frameworks

Dependent variable	Probit model			Logit model		
	Debt	Equity	Debt & Equity	Debt	Equity	Debt & Equity
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Schwartz						
Cultural diversity	-0.003**	0.003***	0.003***	-0.008***	0.004***	0.005***
	(-2.45)	(3.13)	(3.20)	(-3.08)	(2.73)	(3.07)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.151	0.080	0.151	0.153	0.080	0.153
Number of observations	10,814	10,841	10,841	10,814	10,841	10,841
Panel B: GLOBE						
Cultural diversity	-0.004**	0.004***	0.003***	-0.009***	0.006***	0.005***
	(-2.45)	(3.84)	(3.67)	(-3.23)	(3.47)	(3.47)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.151	0.080	0.151	0.153	0.081	0.153
Number of observations	10,814	10,841	10,841	10,814	10,841	10,841
Panel C: WVS_Life						
Cultural diversity	-0.140***	0.068***	0.021*	-0.300***	0.113***	0.032
	(-5.56)	(5.64)	(1.73)	(-6.76)	(5.66)	(1.64)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.153	0.081	0.149	0.155	0.082	0.152
Number of observations	10,730	10,757	10,757	10,730	10,757	10,757
Panel D: WVS_ Environ.						
Cultural diversity	-0.170***	0.084***	0.027**	-0.367***	0.139***	0.042*
	(-5.77)	(6.04)	(1.98)	(-7.00)	(6.02)	(1.85)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.153	0.081	0.149	0.155	0.082	0.152
Number of observations	10,730	10,757	10,757	10,730	10,757	10,757
Panel E: WVS_ Work						
Cultural diversity	-0.100***	0.059***	0.023**	-0.211***	0.098***	0.036**
	(-5.79)	(6.17)	(2.40)	(-6.45)	(6.14)	(2.28)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.152	0.081	0.150	0.154	0.083	0.152
Number of observations	10,730	10,757	10,757	10,730	10,757	10,757
Panel F: WVS_ Binary						
Cultural diversity	-0.170***	0.084***	0.027**	-0.367***	0.139***	0.042*
	(-5.77)	(6.04)	(1.98)	(-7.00)	(6.02)	(1.85)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.153	0.081	0.150	0.156	0.082	0.152
Number of observations	10,730	10,757	10,757	10,730	10,757	10,757

OA Table 4
Debt-Equity activities with different cultural dimensions

Regressions	Coefficients	(t-statistics)	Controls + Constant	Industry and year dummy	Pseudo R²	Observations
Panel A: Debt dummy as the dependent variables						
Hof _ PDI	-0.008*	(-1.80)	Yes	Yes	0.151	10,814
Hof _ IDV	-0.007**	(-2.20)	Yes	Yes	0.151	10,814
Hof _ MAS	-0.013***	(-2.78)	Yes	Yes	0.152	10,814
Hof _ UAI	-0.010**	(-2.25)	Yes	Yes	0.151	10,814
Hof _ LTO	-0.020***	(-4.79)	Yes	Yes	0.154	10,814
Hof _ IND	-0.019***	(-3.79)	Yes	Yes	0.153	10,814
Sch_harmony	-0.003	(-1.42)	Yes	Yes	0.151	10,814
Sch_embedded	-0.013**	(-2.55)	Yes	Yes	0.152	10,814
Sch_hierarchy	-0.016***	(-2.96)	Yes	Yes	0.152	10,814
Sch_mastery	-0.005	(-1.43)	Yes	Yes	0.151	10,814
Sch_aff_auton	-0.008	(-1.58)	Yes	Yes	0.151	10,814
Sch_intel_auton	-0.010***	(-2.81)	Yes	Yes	0.152	10,814
Sch_egalitar	-0.009**	(-2.01)	Yes	Yes	0.151	10,814
GLOBE_Assertiveness	-0.014***	(-2.91)	Yes	Yes	0.152	10,814
GLOBE_InstitutionalCollectivism	-0.002	(-0.47)	Yes	Yes	0.151	10,814
GLOBE_InGroupCollectivism	-0.022***	(-3.77)	Yes	Yes	0.153	10,814
GLOBE_FutureOrientation	-0.009	(-1.55)	Yes	Yes	0.151	10,814
GLOBE_GenderEgalitarianism	-0.019***	(-3.67)	Yes	Yes	0.152	10,814
GLOBE_HumaneOrientation	-0.007	(-1.19)	Yes	Yes	0.151	10,814
GLOBE_PerformanceOrientation	-0.028***	(-5.02)	Yes	Yes	0.154	10,814
GLOBE_PowerDistance	-0.003	(-0.67)	Yes	Yes	0.151	10,814
GLOBE_UncertaintyAvoidance	-0.002	(-0.38)	Yes	Yes	0.151	10,814
Panel B: Equity dummy as the dependent variables						
Hof_PDI	0.008***	(2.96)	Yes	Yes	0.079	10,814
Hof _ IDV	0.006***	(3.14)	Yes	Yes	0.079	10,814
Hof _ MAS	0.007**	(2.24)	Yes	Yes	0.079	10,814
Hof _ UAI	0.009***	(3.38)	Yes	Yes	0.079	10,814
Hof _ LTO	0.011***	(4.48)	Yes	Yes	0.080	10,814
Hof _ IND	0.009***	(3.20)	Yes	Yes	0.079	10,814
Sch_harmony	0.005***	(2.87)	Yes	Yes	0.079	10,814
Sch_embedded	0.011***	(3.22)	Yes	Yes	0.079	10,814
Sch_hierarchy	0.011***	(3.14)	Yes	Yes	0.079	10,814
Sch_mastery	0.007***	(2.65)	Yes	Yes	0.079	10,814
Sch_aff_auton	0.011***	(3.20)	Yes	Yes	0.079	10,814
Sch_intel_auton	0.008***	(3.05)	Yes	Yes	0.079	10,814
Sch_egalitar	0.010***	(3.32)	Yes	Yes	0.079	10,814
GLOBE_Assertiveness	0.013***	(4.00)	Yes	Yes	0.080	10,814
GLOBE_InstitutionalCollectivism	0.009***	(3.18)	Yes	Yes	0.079	10,814
GLOBE_InGroupCollectivism	0.015***	(4.21)	Yes	Yes	0.080	10,814
GLOBE_FutureOrientation	0.014***	(3.67)	Yes	Yes	0.079	10,814
GLOBE_GenderEgalitarianism	0.012***	(3.53)	Yes	Yes	0.079	10,814
GLOBE_HumaneOrientation	0.011***	(2.65)	Yes	Yes	0.079	10,814
GLOBE_PerformanceOrientation	0.016***	(4.95)	Yes	Yes	0.080	10,814
GLOBE_PowerDistance	0.010***	(3.35)	Yes	Yes	0.079	10,814
GLOBE_UncertaintyAvoidance	0.010***	(3.15)	Yes	Yes	0.079	10,814
Panel C: Both debt and equity dummy as the dependent variables						
Hof_PDI	0.009***	(3.48)	Yes	Yes	0.151	10,814
Hof _ IDV	0.006***	(3.30)	Yes	Yes	0.151	10,814
Hof _ MAS	0.005	(1.59)	Yes	Yes	0.150	10,814
Hof _ UAI	0.009***	(3.31)	Yes	Yes	0.151	10,814
Hof _ LTO	0.005**	(2.08)	Yes	Yes	0.151	10,814
Hof _ IND	0.006**	(2.23)	Yes	Yes	0.151	10,814
Sch_harmony	0.006***	(3.48)	Yes	Yes	0.151	10,814
Sch_embedded	0.009***	(2.86)	Yes	Yes	0.151	10,814
Sch_hierarchy	0.009***	(2.74)	Yes	Yes	0.151	10,814
Sch_mastery	0.008***	(3.35)	Yes	Yes	0.151	10,814
Sch_aff_auton	0.012***	(3.69)	Yes	Yes	0.151	10,814
Sch_intel_auton	0.006**	(2.29)	Yes	Yes	0.151	10,814
Sch_egalitar	0.010***	(3.40)	Yes	Yes	0.151	10,814
GLOBE_Assertiveness	0.009***	(3.25)	Yes	Yes	0.151	10,814
GLOBE_InstitutionalCollectivism	0.011***	(4.15)	Yes	Yes	0.152	10,814
GLOBE_InGroupCollectivism	0.009***	(2.67)	Yes	Yes	0.151	10,814
GLOBE_FutureOrientation	0.015***	(4.14)	Yes	Yes	0.151	10,814
GLOBE_GenderEgalitarianism	0.007**	(2.38)	Yes	Yes	0.151	10,814
GLOBE_HumaneOrientation	0.013***	(3.47)	Yes	Yes	0.151	10,814
GLOBE_PerformanceOrientation	0.006**	(2.04)	Yes	Yes	0.151	10,814
GLOBE_PowerDistance	0.013***	(4.53)	Yes	Yes	0.152	10,814
GLOBE_UncertaintyAvoidance	0.013***	(4.47)	Yes	Yes	0.152	10,814

OA Table 5
Debt-Equity decisions with different cultural frameworks

Dependent variable	Panel A: Linear Regression			Panel B: Panel Regression		
	Net debt reduction	Net equity issuance	Equity issuance vs. Debt reduction	Net debt reduction	Net equity issuance	Equity issuance vs. Debt reduction
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Schwartz						
Cultural diversity	-0.184***	0.226***	0.119**	-0.184***	0.412***	0.067***
	(-3.44)	(3.80)	(2.12)	(-18.35)	(8.58)	(5.65)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.015	0.028	0.038	0.012	0.019	0.030
Number of observations	10,639	10,681	10,763	10,639	10,681	10,763
Panel B: GLOBE						
Cultural diversity	-0.241***	0.234***	0.116**	-0.245***	0.178***	0.094***
	(-4.40)	(3.87)	(2.06)	(-40.70)	(24.72)	(13.20)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.015	0.028	0.038	0.012	0.018	0.029
Number of observations	10,639	10,681	10,763	10,639	10,681	10,763
Panel C: WVS_Life						
Cultural diversity	-4.522***	4.726***	4.206***	-4.218***	2.593***	2.839***
	(-6.36)	(5.92)	(5.73)	(-57.75)	(18.08)	(7.48)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.015	0.028	0.038	0.012	0.020	0.028
Number of observations	10,558	10,599	10,679	10,558	10,599	10,679
Panel D: WVS_ Environ.						
Cultural diversity	-5.674***	5.537***	5.120***	-3.442***	3.738***	3.511***
	(-6.96)	(5.87)	(6.07)	(-4.79)	(16.85)	(8.14)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.015	0.028	0.038	0.001	0.023	0.030
Number of observations	10,558	10,599	10,679	10,558	10,599	10,679
Panel E: WVS_ Work						
Cultural diversity	-3.879***	3.108***	3.365***	-2.742***	4.908***	2.901***
	(-6.85)	(4.80)	(5.72)	(-7.28)	(6.64)	(23.48)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.015	0.027	0.038	0.011	0.013	0.025
Number of observations	10,558	10,599	10,679	10,558	10,599	10,679
Panel F: WVS_ Binary						
Cultural diversity	-5.674***	5.537***	5.120***	-4.172***	4.390***	5.020***
	(-6.96)	-5.87	-6.07	(-5.18)	-32.69	-26.99
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Industry + year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.015	0.028	0.038	0.011	0.020	0.031
Number of observations	10,558	10,599	10,679	10,558	10,599	10,679

OA Table 6
Debt-Equity decisions with different cultural dimensions

Regressions	Coefficients	(t-statistics)	Controls + Constant	Industry and year dummy	Pseudo R²	Observations
Panel A: Debt dummy as the dependent variables						
Hof_PDI	-0.398***	(-2.65)	Yes	Yes	0.015	10,639
Hof_IDV	-0.328***	(-3.11)	Yes	Yes	0.015	10,639
Hof_MAS	-0.558***	(-3.11)	Yes	Yes	0.015	10,639
Hof_UAI	-0.612***	(-4.01)	Yes	Yes	0.015	10,639
Hof_LTO	-0.797***	(-5.58)	Yes	Yes	0.015	10,639
Hof_IND	-0.658***	(-4.03)	Yes	Yes	0.015	10,639
Sch_harmony	-0.289***	(-2.99)	Yes	Yes	0.015	10,639
Sch_embedded	-0.822***	(-4.28)	Yes	Yes	0.015	10,639
Sch_hierarchy	-0.689***	(-3.59)	Yes	Yes	0.015	10,639
Sch_mastery	-0.361**	(-2.53)	Yes	Yes	0.015	10,639
Sch_aff_auton	-0.580***	(-2.98)	Yes	Yes	0.015	10,639
Sch_intel_auton	-0.626***	(-4.18)	Yes	Yes	0.015	10,639
Sch_egalitar	-0.718***	(-4.06)	Yes	Yes	0.015	10,639
GLOBE_Assertiveness	-0.843***	(-4.74)	Yes	Yes	0.015	10,639
GLOBE_InstitutionalCollectivism	-0.372**	(-2.43)	Yes	Yes	0.015	10,639
GLOBE_InGroupCollectivism	-0.861***	(-4.08)	Yes	Yes	0.015	10,639
GLOBE_FutureOrientation	-0.679***	(-3.21)	Yes	Yes	0.015	10,639
GLOBE_GenderEgalitarianism	-0.747***	(-4.20)	Yes	Yes	0.015	10,639
GLOBE_HumaneOrientation	-0.599***	(-2.69)	Yes	Yes	0.015	10,639
GLOBE_PerformanceOrientation	-1.158***	(-6.37)	Yes	Yes	0.015	10,639
GLOBE_PowerDistance	-0.447***	(-2.69)	Yes	Yes	0.015	10,639
GLOBE_UncertaintyAvoidance	-0.453**	(-2.55)	Yes	Yes	0.015	10,639
Panel B: Equity dummy as the dependent variables						
Hof_PDI	0.334*	(1.96)	Yes	Yes	0.027	10,681
Hof_IDV	0.280**	(2.40)	Yes	Yes	0.027	10,681
Hof_MAS	0.725***	(3.54)	Yes	Yes	0.027	10,681
Hof_UAI	0.526***	(3.10)	Yes	Yes	0.027	10,681
Hof_LTO	0.875***	(5.64)	Yes	Yes	0.028	10,681
Hof_IND	0.603***	(3.36)	Yes	Yes	0.027	10,681
Sch_harmony	0.352***	(3.30)	Yes	Yes	0.027	10,681
Sch_embedded	0.903***	(4.19)	Yes	Yes	0.028	10,681
Sch_hierarchy	0.846***	(3.94)	Yes	Yes	0.028	10,681
Sch_mastery	0.565***	(3.50)	Yes	Yes	0.027	10,681
Sch_aff_auton	0.647***	(2.98)	Yes	Yes	0.027	10,681
Sch_intel_auton	0.793***	(4.81)	Yes	Yes	0.028	10,681
Sch_egalitar	0.806***	(4.04)	Yes	Yes	0.028	10,681
GLOBE_Assertiveness	0.949***	(4.88)	Yes	Yes	0.028	10,681
GLOBE_InstitutionalCollectivism	0.509***	(2.92)	Yes	Yes	0.027	10,681
GLOBE_InGroupCollectivism	1.041***	(4.55)	Yes	Yes	0.028	10,681
GLOBE_FutureOrientation	0.728***	(3.06)	Yes	Yes	0.027	10,681
GLOBE_GenderEgalitarianism	0.782***	(3.96)	Yes	Yes	0.028	10,681
GLOBE_HumaneOrientation	0.713***	(2.82)	Yes	Yes	0.027	10,681
GLOBE_PerformanceOrientation	1.124***	(5.85)	Yes	Yes	0.028	10,681
GLOBE_PowerDistance	0.454**	(2.44)	Yes	Yes	0.027	10,681
GLOBE_UncertaintyAvoidance	0.368*	(1.85)	Yes	Yes	0.027	10,681
Panel C: Both Debt and Equity dummy as the dependent variables						
Hof_PDI	-0.051	(-0.32)	Yes	Yes	0.038	10,763
Hof_IDV	0.073	(0.66)	Yes	Yes	0.038	10,763
Hof_MAS	0.363*	(1.90)	Yes	Yes	0.038	10,763
Hof_UAI	0.252	(1.55)	Yes	Yes	0.038	10,763
Hof_LTO	0.786***	(5.44)	Yes	Yes	0.038	10,763
Hof_IND	0.362**	(2.15)	Yes	Yes	0.038	10,763
Sch_harmony	0.178*	(1.73)	Yes	Yes	0.038	10,763
Sch_embedded	0.580***	(2.86)	Yes	Yes	0.038	10,763
Sch_hierarchy	0.503**	(2.56)	Yes	Yes	0.038	10,763
Sch_mastery	0.225	(1.46)	Yes	Yes	0.038	10,763
Sch_aff_auton	0.208	(1.00)	Yes	Yes	0.038	10,763
Sch_intel_auton	0.596***	(3.90)	Yes	Yes	0.038	10,763
Sch_egalitar	0.486***	(2.65)	Yes	Yes	0.038	10,763
GLOBE_Assertiveness	0.522***	(2.87)	Yes	Yes	0.038	10,763
GLOBE_InstitutionalCollectivism	0.163	(1.00)	Yes	Yes	0.038	10,763
GLOBE_InGroupCollectivism	0.651***	(3.11)	Yes	Yes	0.038	10,763
GLOBE_FutureOrientation	0.427*	(1.93)	Yes	Yes	0.038	10,763
GLOBE_GenderEgalitarianism	0.386**	(2.09)	Yes	Yes	0.038	10,763
GLOBE_HumaneOrientation	0.122	(0.52)	Yes	Yes	0.038	10,763
GLOBE_PerformanceOrientation	0.826***	(4.56)	Yes	Yes	0.038	10,763
GLOBE_PowerDistance	0.165	(0.95)	Yes	Yes	0.038	10,763
GLOBE_UncertaintyAvoidance	-0.077	(-0.42)	Yes	Yes	0.038	10,763

OA Table 7
Subsidiary capital structure with different cultural frameworks and dimensions

Regressions	Cultural distance		Cultural diversity		Controls	Constant	Industry and year dummy	Adjusted R^2	Observations
	Coefficient	(t-statistics)	Coefficient	(t-statistics)					
Hof_ PDI	-0.092	(-0.27)	-0.113***	(-7.77)	Yes	Yes	Yes	0.12	27,971
Hof _ IDV	-3.839***	(-14.52)	-0.062***	(-6.39)	Yes	Yes	Yes	0.13	27,971
Hof _ MAS	-2.522***	(-12.39)	-0.153***	(-8.54)	Yes	Yes	Yes	0.13	27,971
Hof _ UAI	-0.515*	(-1.69)	-0.138***	(-8.49)	Yes	Yes	Yes	0.12	27,971
Hof _ LTO	0.017	(0.06)	-0.192***	(-11.29)	Yes	Yes	Yes	0.12	27,971
Hof _ IND	-2.293***	(-6.30)	-0.137***	(-8.68)	Yes	Yes	Yes	0.12	27,971
Schwartz	-2.197***	(-9.35)	-0.068***	(-10.73)	Yes	Yes	Yes	0.13	27,964
Sch_harmony	-3.141***	(-10.94)	-0.122***	(-10.39)	Yes	Yes	Yes	0.13	27,964
Sch_embedded	-0.548	(-1.14)	-0.276***	(-11.36)	Yes	Yes	Yes	0.12	27,964
Sch_hierarchy	-6.175***	(-16.60)	-0.230***	(-10.26)	Yes	Yes	Yes	0.13	27,964
Sch_mastery	-1.643***	(-5.03)	-0.179***	(-10.46)	Yes	Yes	Yes	0.12	27,964
Sch_aff_auton	7.022***	(11.63)	-0.185***	(-8.69)	Yes	Yes	Yes	0.13	27,964
Sch_intel_auton	-1.099***	(-2.99)	-0.283***	(-12.78)	Yes	Yes	Yes	0.13	27,964
Sch_egalitar	-4.427***	(-9.57)	-0.252***	(-11.40)	Yes	Yes	Yes	0.13	27,964
GLOBE	-4.653***	(-14.12)	-0.048***	(-7.50)	Yes	Yes	Yes	0.13	25,050
GLOBE_Assertiveness	-0.323	(-0.73)	-0.204***	(-9.11)	Yes	Yes	Yes	0.13	25,050
GLOBE_InstitutionalCollectivism	-2.164***	(-5.79)	-0.144***	(-7.35)	Yes	Yes	Yes	0.13	25,050
GLOBE_InGroupCollectivism	-3.246***	(-7.75)	-0.276***	(-10.02)	Yes	Yes	Yes	0.13	25,050
GLOBE_FutureOrientation	-5.964***	(-14.28)	-0.184***	(-7.32)	Yes	Yes	Yes	0.13	25,050
GLOBE_GenderEgalitarianism	-0.519	(-1.03)	-0.134***	(-6.73)	Yes	Yes	Yes	0.13	25,050
GLOBE_HumaneOrientation	0.464	-1.08	-0.188***	(-7.27)	Yes	Yes	Yes	0.13	25,050
GLOBE_PerformanceOrientation	-2.942***	(-8.65)	-0.180***	(-8.18)	Yes	Yes	Yes	0.13	25,050
GLOBE_PowerDistance	-6.035***	(-17.36)	-0.120***	(-6.25)	Yes	Yes	Yes	0.13	25,050
GLOBE_UncertaintyAvoidance	-4.835***	(-9.40)	-0.138***	(-6.78)	Yes	Yes	Yes	0.13	25,050