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Quality of working environment and corporate financial distress

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Abstract:

This study examines the impacts of the quality of working environment and its components on corporate financial distress. Employing a unique dataset of firm-level data from 41 countries over the period of 2012-2018, we find that a better working environment is related to a higher level of financial soundness. Particularly, firms which have better training and career development policies are less likely to take excessive risks. Further examination suggests that the quality of working environment tends to affect corporate financial risk by influencing firms' cash holding policies.

Keywords: quality of working environment, quality of life, risk taking, financial distress

JEL: G30, G32

1. Introduction

Firms' financial soundness is a key to the health of an economy. A firm experiences financial distress when it faces liquidity problems or is unable to fulfil its debt obligations, which increases the likelihood of default. Since the negative impacts of firm failures can be transmitted to the sector or even the whole economy, a vast amount of literature has been devoted to examining the determinants of financial distress. However, most existing studies have focused only on the economic causes, e.g., the firm-level financial ratios or macroeconomic factors (Tinoco and Wilson, 2013; Amendola et al., 2015; Mselmi et al., 2017), while little is known about the non-financial factors which could affect managers' risk attitudes, and ultimately, firm risk. In this study, we aim to fill this gap in the literature by examining the link between the quality of working environment and financial soundness.

Particularly, we construct an index which covers various aspects of working environment namely economic benefits, work flexibility, and career development opportunity. Arguably, these factors can affect risk preferences, risk perceptions, and attitudes towards the work of employees generally and managers especially. This relationship can then be translated into changes in managers' decision-making, and thus, firm risk. For instance, a more flexible working arrangement can increase the employees' and managers' job satisfaction. More satisfied managers, consequently, might be more optimistic and more likely to make a risky investment (Johnson and Tversky, 1983). In contrast, a better career prospect could make the managers more cautious about investment decisions, and hence, less likely to take risks.

The study is related to two main strands of literature. The first strand examines the impacts of socio-organizational factors in a workplace on employees' risk-taking behaviour (e.g., Watson and Kumar, 1992; Storseth, 2006). The second strand focuses on the link between cash holding, leverage, and corporate financial distress (Han and Qiu, 2007; Bates et al., 2009; Duchin, 2010; McLean, 2011; Bhagat et al., 2015; Acharya et al., 2017). Our study contributes to the literature in several ways. First, we are the first to quantify the link between the quality of working environment and the corporate riskiness. Second, we provide some insights into this relationship by disentangling the quality of working environment index into employment quality, diversity, and training opportunity components; and examining their impacts on financial soundness. Third, our study sheds light on the channels through which the quality of working environment and its components can affect corporate policies and risk.

The rest of the paper is organized as follows. Section 2 is a summary of data employed in the analysis. The empirical model is presented in Section 3. In Section 4, we will discuss our findings. Finally, Section 5 concludes and provides some implications.

2. Data

The data employed in this study are extracted from various sources and cover the period of 2009-2018. We obtain the firms' financial data from Compustat Global database, which is then matched with the ASSET4 ESG data from Datastream. After matching, screening procedures are applied to obtain the final sample. First, we exclude financial and utility firms from the estimation sample. Second, only countries which have at least 10 firms and each firm has at least 3 consecutive observations are kept for analysis. Third, we drop all cases of "suspicious" observations, e.g., observations with negative assets. To alleviate the influence of extreme values, all firm-level financial variables are winsorized at the top and bottom 1% of their distributions. After cleaning, our estimation sample contains 3,827 firms located in 41 countries, which covers a wide range of countries including both developed countries and emerging market countries (Table 1).

Table 1. Number of firms by country

Country	No. of firms	Country	No. of firms
UNITED STATES	1076	RUSSIA	34
JAPAN	373	THAILAND	33
UNITED KINGDOM	288	NEW ZEALAND	31
AUSTRALIA	246	POLAND	29
CANADA	215	NETHERLANDS	29
TAIWAN	120	MEXICO	27
SOUTH AFRICA	113	DENMARK	26
HONG KONG	110	TURKEY	25
CHINA	110	PHILIPPINES	24
INDIA	88	BELGIUM	24
SOUTH KOREA	88	FINLAND	24
FRANCE	88	BERMUDA	22
GERMANY	80	CHILE	21
BRAZIL	74	IRELAND	18
SWITZERLAND	63	INDONESIA	18
SWEDEN	53	GREECE	17
MALAYSIA	48	AUSTRIA	16
SPAIN	44	NORWAY	16
ITALY	40	ISRAEL	15
SINGAPORE	39	UNITED ARAB EMIRATES	12
		QATAR	10

Notes: This table shows the number of firms by country which are included in the analysis.

The statistics on the sub-indices used to measure the working environment quality are presented in Table 2. These sub-indices include (1) Generous Fringe Benefits; (2) Management

Departures; (3) Bonus Plan for Employees/Managers; (4) Diversity Opportunity Policy/Diversity and Opportunity; (5) Diversity Opportunity Policy/Work Life Balance; (6) Diversity and Opportunity Processes/Policy Diversity and Opportunity; (7) Diversity and Opportunity Processes/Work Life Balance; (8) Flexible Working Schemes; (9) Training and Career Development Policy/Skills Training; (10) Training and Career Development Policy/Career Development; and (11) Management Training. Sub-indices (1)-(3) are indicators of employment quality, which account for financial benefits and job stability. Sub-indices (4)-(8) show statistics for diversity, work-life balance, and flexible working environment. The last three sub-indices indicate training and career development opportunities. All sub-indices take the value of 1 if these policies/measures of working environment quality are implemented and 0 otherwise. In general, we observe the improvement in these indices over time, indicating the general trend of better working environment. Nevertheless, some problems still remain. For instance, at least 90% of the firms in the sample experience the departure of an important management team member in a single year, which suggests the high turnover of the management team. Moreover, some indices have significantly lower average value than others. For example, in 2017, only about 31% of firms have policies or have implemented processes to promote diversity among employees. In contrast, 65% of firms have actively promoted work-life balance.

Table 2. Indices of employment/working environment by year

Year	Firms	Employment quality			Diversity					Training		
		SOEQ DP025	SOEQ DP036	SOEQ DP0202	SODO DP0011	SODO DP0012	SODO DP0081	SODO DP0082	SODO DP026	SOTD DP0011	SOTD DP0012	SOTD DP024
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2011	2,174	0.296	0.056	0.428	0.150	0.540	0.301	0.563	0.668	0.229	0.245	0.427
2012	2,618	0.301	0.059	0.417	0.167	0.550	0.316	0.574	0.690	0.219	0.234	0.398
2013	2,777	0.306	0.079	0.420	0.170	0.561	0.323	0.583	0.707	0.225	0.242	0.413
2014	2,912	0.310	0.074	0.422	0.176	0.572	0.279	0.593	0.705	0.229	0.251	0.417
2015	3,032	0.331	0.071	0.434	0.181	0.583	0.235	0.605	0.691	0.238	0.263	0.396
2016	3,178	0.363	0.065	0.461	0.218	0.604	0.203	0.624	0.667	0.275	0.297	0.361
2017	3,558	0.443	0.033	0.524	0.313	0.650	0.159	0.669	0.659	0.365	0.384	0.382
2018	1,779	0.998	0.099	0.998	0.997	1.000	0.103	0.999	0.649	0.997	0.997	0.428

Notes: This table shows the average value of the quality of employment/working environment indices and sub-indices by year. Columns (3)-(5) show statistics for employment quality statistics which account for financial benefits and job stability. These indices include Generous Fringe Benefits (Column 3); Management Departures (Column 4); and Bonus Plan for Employees/Managers (Column 5). Columns (6)-(10) show statistics for diversity, work-life balance, and flexible working environment. These sub-indices include Diversity Opportunity Policy/Diversity and Opportunity (Column 6); Diversity Opportunity Policy/Work Life Balance (Column 7); Diversity and Opportunity Processes/Policy Diversity and Opportunity (Column 8); Diversity and Opportunity Processes/Work Life Balance (Column 9); and Flexible Working Schemes (Column 10). Columns (11)-(13) show statistics for training and career development opportunities including Training and Career Development Policy/Skills Training (Column 11); Training and Career Development Policy/Career Development (Column 12); and Management Training (Column 13).

3. Empirical model

To examine the influence of quality of working environment on firm financial distress, we employ the following model:

$$Z - score_{i,t} = \alpha + \beta QualityIndex_{i,t-1} + Controls_{i,t-1}\gamma + u_i + \gamma_t + \varepsilon_{i,t} \quad (1)$$

where *i* indexes firm and *t* indexes year. Following the previous literature (e.g., Laeven and Levine, 2009), we use Z-score as a measure of firm risk ($Z - score = \frac{ROA + \frac{Equity}{Total\ assets}}{sd(ROA)}$). A higher *Z-score* indicates a safer firm. Our main variable of interest, *QualityIndex*, is the quality of the working environment index (*WorkingEnv*) and different components of this index including employment quality (*EmplQual*), diversity (*Diversity*), and training (*Training*). *EmplQual* is average of three sub-indices (1)-(3) specified above. Similarly, *Diversity* is the average of sub-indices (4)-(8), and *Training* is the average of sub-indices (9)-(11). *WorkingEnv* is the average of all sub-indices (1)-(11).[1]

Following the existing literature (Kini and Williams, 2012; Almamy et al., 2016; Kamiya et al., 2019), various firm-level variables are employed to control for firm-specific characteristics that can also affect firm risk. *Equity* is the ratio of shareholders' equity to total assets. To control for firm size and profitability, we use the natural log of total assets, *Ln(assets)* and return on assets *(ROA)*. A firm's growth opportunity is proxied by the sale growth (*SaleGr*), which is the first difference in the natural log of total sales. *Cashflow* is the ratio of earnings before extraordinary items and depreciation to total assets. *Tangibility* is the ratio of fixed assets to total assets. Moreover, both firm and year fixed effects are included. Model (1) is estimated using the fixed effect estimator.

To investigate the mechanisms through which the quality of working environment can affect financial distress, we replace *Z-score* in Model (1) with two indicators of firms' financing policy namely *CashHolding* and *Leverage*. *CashHolding* is the ratio of cash and cash equivalent to total assets and the higher value indicates a less risky financial decision. *Leverage* is the ratio of current debt to total assets where the higher value indicates a riskier capital

[1] We thank the anonymous referee for this suggestion. As the robustness check, we construct the quality of working environment index and its components (e.g., employment quality, diversity, and training) by employing the Principal Component Analysis method and obtain qualitatively similar results. The findings are available upon request.

structure and is positively related to firm risk. Since capital expenditure is among the important determinants of firms' capital structure (Purnanandam and Rajan, 2018), *CAPEX*, which is the ratio of capital expenditure to total assets, is added in this analysis.

4. Results

4.1. The quality of working environment, risk taking, and financial distress

Column 1 of Table 3 shows the results for the link between *QualityIndex* and *Z-score* when no control variables are added. We find that the better quality of working environment is positively related to the lower level of risk. Further, this relationship is driven by the positive effect of training and career development opportunities on financial soundness. However, once control variables are added progressively (Columns 2-6), the effect of the overall quality of working environment disappears. In contrast, the effect of training and career development opportunities is still statistically significant, although with the smaller magnitude (0.4 in Column 6 versus 0.8 in Column 1). Nevertheless, the impact is still economically sizeable. Given the unconditional average of Z-score of 29.2, introducing career development/management training for employees can help increase Z-score by at least 1.4%.

These findings shed some lights into the link between the quality of working environment and firm risk. Specifically, individuals equipped with better skills and management training might better understand the risks associated with risk-taking behaviour, which in turn prevents them from excessive risk taking. Further, individuals might have a higher perceived career prospect, if they work in a firm with a policy that supports employees' career development policy. Consequently, this can improve individuals' work satisfaction, and boost their productivity while reducing risk-taking incentives (Ben-Nasr and Ghouma, 2018).

The results for other variables are generally in line with our expectations. For instance, more profitable and smaller firms face fewer risks. Similarly, firms with better growth prospects and have more equity are less prone to financial distress.

Table 3. Effects on Z-score

	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A. WorkingEnv					
QualityIndex	0.7025*	0.6680	0.3852	0.3914	0.3960	0.3950
	(0.4179)	(0.4141)	(0.4102)	(0.4101)	(0.3593)	(0.3591)
ROA		11.1588***	10.1233***	9.6532***	2.9531***	2.9516***
		(0.4648)	(0.4769)	(0.5256)	(0.5442)	(0.5450)
Ln(assets)			-1.5144***	-1.5551***	-0.7126***	-0.7152***
			(0.1701)	(0.1759)	(0.1432)	(0.1457)
SaleGr				0.4727**	0.9629***	0.9610***
				(0.1918)	(0.1778)	(0.1793)
Equity					21.4055***	21.4016***
					(0.6042)	(0.6051)
Tangibility						-0.0247
						(0.2128)
Observations	22,035	22,035	22,035	22,035	22,035	22,035
	Panel B. EmplQual					
QualityIndex	-0.1386	-0.0769	-0.0462	-0.0377	-0.0361	-0.0362
	(0.2770)	(0.2749)	(0.2741)	(0.2739)	(0.2494)	(0.2494)
ROA		11.1626***	10.1218***	9.6538***	2.9538***	2.9518***
		(0.4650)	(0.4770)	(0.5258)	(0.5445)	(0.5453)
Ln(assets)			-1.5197***	-1.5604***	-0.7180***	-0.7214***
			(0.1701)	(0.1759)	(0.1431)	(0.1457)
SaleGr				0.4709**	0.9611***	0.9586***
				(0.1918)	(0.1778)	(0.1794)
Equity					21.4054***	21.4002***
					(0.6041)	(0.6049)
Tangibility						-0.0329
						(0.2129)
Observations	22,035	22,035	22,035	22,035	22,035	22,035
	Panel C. Diversity					
QualityIndex	0.1487	0.1279	-0.0609	-0.0573	0.0619	0.0611
	(0.3038)	(0.3009)	(0.2971)	(0.2972)	(0.2614)	(0.2614)
ROA		11.1639***	10.1234***	9.6549***	2.9542***	2.9523***
		(0.4650)	(0.4769)	(0.5258)	(0.5445)	(0.5453)
Ln(assets)			-1.5210***	-1.5616***	-0.7169***	-0.7202***
			(0.1699)	(0.1758)	(0.1430)	(0.1456)
SaleGr				0.4711**	0.9618***	0.9594***
				(0.1918)	(0.1778)	(0.1794)
Equity					21.4063***	21.4013***
					(0.6045)	(0.6054)
Tangibility						-0.0314
						(0.2128)
Observations	22,035	22,035	22,035	22,035	22,035	22,035
	Panel D. Training					
QualityIndex	0.7844***	0.7232***	0.5656**	0.5634**	0.4365**	0.4361**
	(0.2412)	(0.2388)	(0.2382)	(0.2382)	(0.2108)	(0.2108)
ROA		11.1254***	10.0994***	9.6331***	2.9417***	2.9406***
		(0.4644)	(0.4766)	(0.5254)	(0.5438)	(0.5446)
Ln(assets)			-1.5085***	-1.5490***	-0.7096***	-0.7116***
			(0.1704)	(0.1762)	(0.1434)	(0.1460)
SaleGr				0.4689**	0.9593***	0.9579***
				(0.1919)	(0.1778)	(0.1794)
Equity					21.3934***	21.3905***

					(0.6042)	(0.6050)
Tangibility						-0.0186
						(0.2126)
Observations	22,028	22,028	22,028	22,028	22,028	22,028

Notes: This table presents estimation results for the impact of the quality of working environment on *Z-score*. Panels A-D present results with *WorkingEnv*, *EmplQual*, *Diversity*, and *Training*, respectively. Column 1 shows results when no control variables are included while Columns 2-6 show results when control variables are included progressively. *Equity* is the ratio of shareholders' equity to total assets. *ROA* is return on assets. *Ln(assets)* is the natural log of total assets. *SaleGr* is sale growth. *Tangibility* is the ratio of fixed assets to total assets. In all estimations, a constant term as well as firm and year fixed effects are included but not reported. Robust standard errors are reported in parentheses. ***, **, and * indicate significance level at 1%, 5%, and 10%, respectively.

Next, we take a step further to examine the mechanisms through which the working environment quality affects financial distress. The results of this investigation are reported in Table 4. We find that the better quality of working environment is positively associated with the level of cash held by the firms while unrelated to leverage. In other words, firms with a higher quality of working environment tend to adopt safer financing options: holding more cash as a precaution against future fluctuations in cash flows. Further, firms with better training and career development policies and with more diversified employees are more likely to hold cash. This finding is consistent with the growing literature examining the benefits of (board) diversity to firm performance and risk (e.g., Bernile et al., 2018). In comparison, the magnitude of the effect of diversity is comparable to that of the effect of training policy. It should be also noted that the results hold even after controlling for firm-specific characteristics.

Overall, our examination reveals that the quality of working environment can affect firms' financial soundness through their financing choices. That is, firms with a better working environment are more likely to opt for the safer financing choices (holding cash). While the employment quality does not affect financing choices, the opposite is observed for diversity and training policies. However, only the impact of training policies on cash holding is translated into the quality of working environment– corporate financial distress relationship.

Table 4. Effects on capital structure

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	WorkingEnv		EmplQual		Diversity		Training	
	Panel A. Cash holding							
QualityIndex	0.0194***	0.0174***	0.0010	0.0018	0.0119***	0.0107**	0.0097***	0.0080**
	(0.0058)	(0.0058)	(0.0037)	(0.0037)	(0.0042)	(0.0042)	(0.0032)	(0.0032)
ROA		0.0772***		0.0772***		0.0771***		0.0770***
		(0.0165)		(0.0165)		(0.0165)		(0.0165)
Ln(assets)		-0.0127***		-0.0130***		-0.0127***		-0.0127***
		(0.0034)		(0.0034)		(0.0034)		(0.0034)
SaleGr		0.0016		0.0015		0.0016		0.0015
		(0.0037)		(0.0037)		(0.0037)		(0.0037)
Equity		0.0110		0.0109		0.0111		0.0108
		(0.0083)		(0.0083)		(0.0083)		(0.0083)
Tangibility		-0.0116**		-0.0120**		-0.0117**		-0.0117**
		(0.0049)		(0.0049)		(0.0049)		(0.0049)
CAPEX		-0.1468***		-0.1461***		-0.1468***		-0.1462***
		(0.0224)		(0.0224)		(0.0224)		(0.0224)
Observations	21,952	21,826	21,952	21,826	21,952	21,826	21,945	21,819
	Panel B. Leverage							
QualityIndex	0.0019	0.0030	0.0020	0.0013	0.0021	0.0025	-0.0012	0.0001
	(0.0038)	(0.0038)	(0.0024)	(0.0024)	(0.0028)	(0.0028)	(0.0022)	(0.0022)
ROA		-0.0222***		-0.0222***		-0.0222***		-0.0222***
		(0.0080)		(0.0080)		(0.0080)		(0.0080)
Ln(assets)		0.0031**		0.0030**		0.0031**		0.0030**
		(0.0014)		(0.0013)		(0.0014)		(0.0014)
SaleGr		-0.0040*		-0.0040*		-0.0040*		-0.0040*
		(0.0021)		(0.0021)		(0.0021)		(0.0021)
Equity		-0.0598***		-0.0598***		-0.0598***		-0.0598***
		(0.0053)		(0.0053)		(0.0053)		(0.0053)
Tangibility		0.0016		0.0016		0.0016		0.0016
		(0.0037)		(0.0037)		(0.0037)		(0.0037)
CAPEX		0.0273*		0.0274*		0.0272*		0.0275*
		(0.0158)		(0.0158)		(0.0158)		(0.0158)

Observations	22,189	22,063	22,189	22,063	22,189	22,063	22,182	22,056

Notes: This table presents estimation results for the impact of the quality of working environment on cash holding (Panel A) and leverage (Panel B). Columns 1, 3, 5, and 7 show results with *WorkingEnv*, *EmplQual*, *Diversity*, and *Training* when no control variables are included, respectively. Columns 2, 4, 6, and 8 show results with *WorkingEnv*, *EmplQual*, *Diversity*, and *Training* when all control variables are included, respectively. *Equity* is the ratio of shareholders' equity to total assets. *ROA* is return on assets. *Ln(assets)* is the natural log of total assets. *SaleGr* is sale growth. *Tangibility* is the ratio of fixed assets to total assets. *CAPEX* is the ratio of capital expenditure to total assets. In all estimations, a constant as well as firm and year fixed effects are included but not reported. Robust standard errors are reported in parentheses. ***, **, and * indicate significance level at 1%, 5%, and 10%, respectively.

4.2. Endogenous relationship between quality of working environment and risk

In this section, we will discuss the endogeneity concerns and our approaches to address such concerns. First, the quality of working environment variable might be correlated with other time-varying characteristics that have not been controlled for (i.e., omitted variable bias). Second, one could argue that firms might over-state when reporting various quality of working environment indicators, leading to the measurement error. Third, the relationship between the working environment quality and financial risk could be endogenous, that is, the latter could affect the former. While there are various ways to address each of these concerns separately, we employ the instrument variables estimation to address the potential endogeneity regardless of the sources (Wooldridge, 2002).[2]

Inspired by the recent study by Chen et al. (2020), we use the quality of life in the city where a firm is located and the country's governance quality indicators as the instruments. The quality of life index is constructed from seven components: purchasing power, property purchase affordability, living costs, safety, quality of health care services, traffic commute time index, and pollution index. The data covering the 2012-2018 period are collected from Numbeo.com, which is one of the biggest user-contributed websites collecting opinions on different aspects of life through online-based services. Moreover, to account for the impact of quality of governance at the country level on firms' working environment quality, we employ the indicator of the Rule of Law from the World Bank's database. The Rule of Law (*Rule*) indicates the "perceptions of the extent to which agents have confidence in and abide by the rules of society". In a country with a higher rule of law index, firms are more likely to provide better working environment to the employees.

After matching all datasets, we get a sample of 1,282 firms located in 75 cities in 27 countries, which is used to re-estimate Model (1). The estimation results using the two stage least square (2SLS) estimator with standard errors clustered by city are presented in Table 5.[3] In general, these results are in line with our baseline findings: the quality of working environment is

[2] For example, the omitted variable bias could be addressed by adding more control variables into the estimation. We had performed this analysis by adding more variables that had been used in the literature and obtained consistent findings (Appendix Table 1).

[3] The results are similar if we use the Generalized Method of Moments (GMM) estimator (Appendix Table 2).

positively related with financial soundness, which is driven by the negative effect of training and career development opportunities on risk.

Table 5. Instrumental variables estimation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	WorkingEnv		EmplQual		Diversity		Training	
QualityIndex	4.2225	4.9759**	3.6026	5.4065**	4.6143	4.6088	3.0963	4.1288**
	(2.7659)	(2.2342)	(2.8743)	(2.2970)	(4.8801)	(3.6751)	(2.2408)	(1.7588)
ROA		2.6894*		2.9988*		2.5264*		2.6317*
		(1.5359)		(1.6018)		(1.5001)		(1.5608)
Ln(assets)		-0.6895*		-1.0373**		-0.4649		-0.6954**
		(0.3741)		(0.4168)		(0.3637)		(0.3137)
SaleGr		-0.1339		-0.1478		-0.0464		-0.1519
		(0.3667)		(0.3995)		(0.3992)		(0.3590)
Equity		15.6167***		15.1230***		15.9738***		15.5342***
		(2.5339)		(2.6358)		(2.3913)		(2.5284)
Tangibility		0.4031		0.1204		0.6921		0.3058
		(0.5888)		(0.6484)		(0.5953)		(0.5279)
Observations	5,411	5,411	5,411	5,411	5,411	5,411	5,411	5,411
Hansen p-value	0.966	0.966	0.864	0.600	0.777	0.423	0.963	0.675

Notes: This table presents estimation results for the impact of the quality of working environment on *Z-score* using 2SLS estimator. The instruments include the quality of life in the city where a firm is located and the country's governance quality indicators. Columns 1, 3, 5, and 7 show results with *WorkingEnv*, *EmplQual*, *Diversity*, and *Training* when no control variables are included, respectively. Columns 2, 4, 6, and 8 show results with *WorkingEnv*, *EmplQual*, *Diversity*, and *Training* when all control variables are included, respectively. *Equity* is the ratio of shareholders' equity to total assets. *ROA* is return on assets. *Ln(assets)* is the natural loga of total assets. *Leverage* is the ratio of short-term debt to total assets. *SaleGr* is sale growth. *Tangibility* is the ratio of fixed assets to total assets. In all estimations, firm fixed effect is included but not reported. Standard errors clustered by city are reported in parentheses. ***, **, and * indicate significance level at 1%, 5%, and 10%, respectively.

5. Conclusion

Previous studies have shown that corporate risk taking could be influenced by the institutional and cultural characteristics of the country and by the manager's personal characteristics. Contributing to the existing literature, this study emphasizes the important role of overall satisfaction with working environment in determining employees' risk-taking behaviour and consequently corporate risk taking.

Combining data on firms' financial performance with that of working environment/employment quality and welfare, we compare the differences in corporate risk taking across firms within a country and across countries. After controlling for various firm characteristics, a significant link between the quality of working environment and corporate financial distress is observed. This link occurs mainly through the impact of the working environment quality on financing choices. More specifically, a firm with a higher quality of working environment tends to adopt a safer financing option, i.e., holding more cash. The examination of three components of the working environment quality namely diversity, training and career development policies, and employment quality suggests that the training/career development policies are most important.

Several insights can be drawn from these results. First, the quality of working conditions can affect individuals' risk-taking behaviour, and hence, firm risk. Second, the improvement in the working environment, e.g., promoting diversity, better skills training, or supporting career development is beneficial to employees' work well-being, which can be translated into higher productivity, hence, better firm performance and lower risk.

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Appendix

Appendix Table 1. Additional control variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	WorkingEnv		EmplQual		Diversity		Training	
QualityIndex	0.3889	0.4276	-0.0418	-0.0334	0.0583	0.0859	0.4355**	0.4462**
	(0.3590)	(0.3612)	(0.2496)	(0.2500)	(0.2612)	(0.2628)	(0.2108)	(0.2118)
ROA	3.0111***	3.4791***	3.0116***	3.4787***	3.0122***	3.4790***	3.0002***	3.4694***
	(0.5448)	(0.5716)	(0.5451)	(0.5721)	(0.5452)	(0.5721)	(0.5444)	(0.5713)
Ln(assets)	-0.7186***	-0.7203***	-0.7247***	-0.7270***	-0.7236***	-0.7252***	-0.7149***	-0.7170***
	(0.1459)	(0.1462)	(0.1458)	(0.1461)	(0.1458)	(0.1461)	(0.1461)	(0.1464)
SaleGr	0.9622***	1.0197***	0.9598***	1.0167***	0.9606***	1.0177***	0.9591***	1.0166***
	(0.1794)	(0.1830)	(0.1794)	(0.1831)	(0.1795)	(0.1831)	(0.1795)	(0.1831)
Equity	21.5277***	21.5600***	21.5274***	21.5597***	21.5281***	21.5609***	21.5169***	21.5486***
	(0.6189)	(0.6259)	(0.6187)	(0.6258)	(0.6192)	(0.6263)	(0.6189)	(0.6260)
Tangibility	-0.0258	-0.0464	-0.0340	-0.0554	-0.0325	-0.0533	-0.0197	-0.0405
	(0.2126)	(0.2142)	(0.2127)	(0.2143)	(0.2127)	(0.2142)	(0.2125)	(0.2141)
Leverage	1.1579	1.0985	1.1683	1.1099	1.1653	1.1065	1.1613	1.1021
	(0.8166)	(0.8167)	(0.8170)	(0.8171)	(0.8165)	(0.8166)	(0.8165)	(0.8166)
CAPEX		-5.6662***		-5.6444***		-5.6520***		-5.6589***
		(1.1157)		(1.1136)		(1.1146)		(1.1143)
Observations	22,035	21,913	22,035	21,913	22,035	21,913	22,028	21,906

Notes: This table presents estimation results for the impact of the quality of working environment on *Z-score* when additional control variables are included. Columns 1-2 present results with *WorkingEnv*. Columns 3-4 present results with *EmplQual*. Columns 5-6 present results with *Diversity*. Columns 7-8 present results with *Training*. Column 1 shows results when no control variables are included while Columns 2-6 show results when control variables are included progressively. *Equity* is the ratio of shareholders' equity to total assets. *ROA* is return on assets. *Ln(assets)* is the natural log of total assets. *SaleGr* is sale growth. *Tangibility* is the ratio of fixed assets to total assets. *Leverage* is the ratio of current debt to total assets. *CAPEX* is the ratio of capital expenditure to total assets. In all estimations, a constant term as well as firm and year fixed effects are included but not reported. Robust standard errors are reported in parentheses. ***, **, and * indicate significance level at 1%, 5%, and 10%, respectively.

Appendix Table 2. GMM estimation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	WorkingEnv		EmplQual		Diversity		Training	
QualityIndex	4.2137	5.3313**	3.8334	5.4442**	5.5542	6.6845**	3.1344	3.9514**
	(2.7587)	(2.1474)	(2.5286)	(2.2959)	(3.5726)	(2.5852)	(2.0694)	(1.7062)
ROA		2.1806*		2.5841*		1.8219		2.2544*
		(1.2568)		(1.3896)		(1.2102)		(1.2698)
Ln(assets)		-0.8349***		-1.1409***		-0.6710**		-0.7704***
		(0.2763)		(0.3662)		(0.2550)		(0.2567)
SaleGr		-0.1712		-0.1705		-0.2138		-0.1365
		(0.3609)		(0.3971)		(0.3391)		(0.3571)
Equity		14.8464***		14.4296***		15.0176***		15.0014***
		(2.1529)		(2.2745)		(2.0665)		(2.1795)
Tangibility		0.2331		0.0034		0.4142		0.2283
		(0.5095)		(0.6081)		(0.4818)		(0.4939)
Observations	5,411	5,411	5,411	5,411	5,411	5,411	5,411	5,411
Hansen p-value	0.966	0.966	0.864	0.600	0.777	0.423	0.963	0.675

Notes: This table presents estimation results for the impact of the quality of working environment on *Z-score* using GMM estimator. The instruments include the quality of life in the city where a firm is located and the country's governance quality indicators. Columns 1, 3, 5, and 7 show results with *WorkingEnv*, *EmplQual*, *Diversity*, and *Training* when no control variables are included, respectively. Columns 2, 4, 6, and 8 show results with *WorkingEnv*, *EmplQual*, *Diversity*, and *Training* when all control variables are included, respectively. *Equity* is the ratio of shareholders' equity to total assets. *ROA* is return on assets. *Ln(assets)* is the natural loga of total assets. *Leverage* is the ratio of short-term debt to total assets. *SaleGr* is sale growth. *Tangibility* is the ratio of fixed assets to total assets. In all estimations, firm fixed effect is included but not reported. Standard errors clustered by city are reported in parentheses. ***, **, and * indicate significance level at 1%, 5%, and 10%, respectively.