

Employee treatment, financial leverage, and bankruptcy risk: Evidence from high contact services

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ABSTRACT

Using employee online reviews as a proxy of employee treatment and well-being for tourism and hospitality firms, we extrapolate the association of employee satisfaction with financial leverage and bankruptcy risk. Consistent with theoretical expectations and empirical evidence, we find that firms ranked high on employee treatment have lower levels of market and book leverage. This relationship is also pronounced for bankruptcy risk where firms with higher employee satisfaction enjoy higher creditworthiness. The results are robust controlling for well-known effects, alternative specifications, and endogeneity concerns.

1. Introduction

The effect of corporate social responsibility (CSR) on firms' behaviours and performance has received particular attention among scholars and practitioners alike. CSR has long been recognized as a source of competitive advantage for organizations (Porter and Kramer, 2006). Recent literature redirects the focus from studying the effect of CSR activities on firm performance (Inoue and Lee, 2011; Lee et al., 2013) to other critical corporate financial indicators. It has been shown that CSR interlinks with important financial decisions and outcomes, such as cash holdings (Cheung, 2016), cost of capital (El Ghoul et al., 2011), cost of debt (Gong et al., 2020), and firm debt maturity (Benlemlih, 2017), among others.

Firms' policies that have a direct effect on employee well-being are an integral part of firms' CSR (e.g., Waddock and Graves, 1997). Employee-related issues may also attract significant public attention (Capelle-Blancard and Petit, 2017). Human capital is recognized as a critical organizational asset that enhances firm value through quality improvement and innovation (Zingales, 2000). Good employee practices can also lead to employee loyalty and increase in the reputation capital (e.g., Brammer and Pavelin, 2006). Companies that perform poorly in employee practices may experience not only direct costs, such as costs from strikes, high turnover ratios, reduced productivity, but also other societal and litigation risks, such as reputation costs, customer boycotts, and loss of consumers and suppliers in the long-run (see discussion in Ben-Nasr and Ghouma, 2018; and references therein). Thus, firms have

an incentive to invest in employees as such investments offer positive present values.

While the relationship between employee satisfaction and firm profitability is well established (e.g., Chi and Gursoy, 2009; Symitsi et al., 2018) only a limited number of studies explore the relationship of employee treatment under the lens of firms' core financing decisions. Theory suggests that a firm's capital structure is directly related to how it treats its stakeholders (Maksimovic and Titman, 1991; Myers, 1977). The present study adds to this research domain by using employee online reviews from Glassdoor for tourism and hospitality companies offering empirical evidence that a firm's ability to treat employees well is a determinant of its financial leverage and creditworthiness. Our analysis is based on a dataset of 51,365 employee reviews for 118 public firms. We perform several analyses to examine the relationships into consideration. First, we explore the association of employee satisfaction with both market and book leverage. We are doing so by controlling for well-known effects including tangibility, profitability, and firm size, among others, as well as time, industry or fixed effects. Second, we consider several model specifications testing also for reverse causality and endogeneity concerns. Third, we shed further light on the suggested relationship considering disaggregated measures of employee satisfaction in specific job aspects including career opportunities, compensation and benefits, senior leadership, work/life balance and culture and values. Fourth, we gauge differential effects on the specific industries under investigation. Finally, we assess the relationship of employee satisfaction with bankruptcy risk, using corporate credit ratings. Our

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results document a strong relationship with firms that score higher in employee ratings having lower financial leverage and enjoying higher credit ratings.

The study contributes to the literature in several ways. We extend previous limited research that explores the relationship between employee treatment and capital structure (Bae et al., 2011; Verwijmeren and Derwall, 2010; Xu et al., 2020). We add to this literature contextually as our focus is solely on high contact services. The empirical studies of Verwijmeren and Derwall (2010) and Bae et al. (2011) offer some first empirical evidence that a firm's ability to treat employees well is a determinant of its financial leverage. Our research design allows us to differentiate from those studies in two core aspects. First, the focus is on the high contact services, specifically in tourism and hospitality, and not on the overall market. It seems rational to assume that in those services, given the significance of employees' performance, there should be a stronger relationship between employee treatment and capital structure choices. However, Titman and Wessels (1988) argue that the pressures to conform capital structure, considering stakeholders bankruptcy risk, exists only in cases of unique or specialized products where it is difficult for firms to replace employees or for customers to replace firms due to the substantial cost. In their study, one proxy of firm uniqueness is the quit ratio of the industry as they expect that firms in industries with a high quit ratio are relatively less unique. The tourism and hospitality sector consistently reports the highest quit ratio among all sectors (Stamolampros et al., 2019a), so based on that perhaps the examined relationship is weak or non-existent in that case. However, the high associated cost with employee turnover and the pressures imposed due to industry skills shortage, at the same time, can be a strong reason for firms to want to create more attractive conditions to retain their employees and build a good employer reputation. Having that in mind, it is meaningful to explore the relationship between employee treatment and financing decision in the context of high contact services in tourism and hospitality.

Another core difference with the other studies is related to the measurement of employee treatment, yielding a methodological contribution. Bae et al. (2011) and Verwijmeren and Derwall (2010) use KLD to measure the CSR performance of firms with respect to their employee treatment. There are concerns that KLD entail several limitations, such as limited construct validity and small sample bias due to the inclusion of only the companies that are part of the S&P 500 and the Russell 3000 Indices (Inoue and Lee, 2011). In a more recent study, Dremptic et al. (2019) discuss the effect of firm size on ESG scores raising questions about the existence of size bias which could distort the entailed information about the sustainability of corporations. That provides an argument for the need to re-evaluate existing relationships with new sources of data. Similarly, best employer awards data used in Xu et al. (2020) carry a self-selection bias coming from voluntary participation which means that only those firms who perform well have an incentive to participate in the survey (Symitsi et al., 2018). A second limitation of employer awards data is that its focus is unidimensional as it is constrained only to a limited number of companies with the top performance. To address these limitations, we measure employee treatment with employee online reviews from Glassdoor. This source of information receives increasing academic attention (Green et al., 2019; Symitsi and Stamolampros, 2021) as it offers advantages in terms of the volume of firms that participate as well as the explicitly expressed opinion of the employees about their employer.

We add to the tourism and hospitality literature that focuses on corporate social responsibility given that employee treatment is part of such policies. However, we do not examine this through the lens of corporate performance (Inoue and Lee, 2011; Theodoulidis et al., 2017), but through the lens of core financing decisions which have not received attention to the extant literature in the tourism and hospitality research field. We contribute to the strand of the literature that studies key determinants of capital structure decisions in tourism and hospitality (e.g., Li and Singal, 2019; Park and Jang, 2013) by analyzing the role of

employee treatment in leverage decisions and bankruptcy risk. Finally, we contribute to the stream of studies that explore user-generated content from different perspectives, such as factors that affect customer satisfaction, the existence of biases or its effect on firm performance (Filieri and McLeay, 2014; Korfiatis et al., 2019; Phillips et al., 2017; Stamolampros et al., 2019b). More specifically, we expand the nascent stream of studies that focuses on employee online reviews (Fang et al., 2021; Green et al., 2019). Currently, the literature takes advantage of this novel source of information as a tool to explore determinants of employee satisfaction and its relationship with firm profitability. Our perspective is to study the link of employee treatment with financial leverage and bankruptcy risk.

The structure of this paper is organized as follows: Section 2 highlights the related literature and develops the research hypotheses. In Section 3, we describe the data used in the empirical study. Section 4 presents the empirical findings of the analysis. The study concludes in Section 5 discussing the limitations and implications.

2. Literature review

2.1. Employee treatment: a core CSR dimension in tourism and hospitality

Firms in the tourism and hospitality industry seem to agree on the importance of CSR activities mainly as a tool to enhance their reputation (Sheldon and Park, 2011). Since 2007 an exponential growth in the number of studies revolving around this topic is observed (Font and Lynes, 2018). In their systematic literature review, Farrington et al. (2017) report that dominant topics in the area include the impact of CSR activities on industry and firm competitive performance, and the factors determining the successful implementation of CSR practices. For example, the study of Inoue and Lee (2011) examines five dimensions of CSR activities and reports differential financial effects for each dimension among different time horizons and industries. Goncalves et al. (2016) consider environmental strategies as a core part of CSR activity examining the effect of two green strategies on financial performance. The authors report that "proactive" strategies are more highly correlated with firm performance than "concerned citizen strategies". Theodoulidis et al. (2017) gauge the existence of direct and indirect effects of CSR on corporate performance through firm strategy. Lee et al. (2013) distinguish between operation (OR) related activities (those with direct implications on core business, such as employee treatment and product quality) and non-operation (Non-OR) related CSR activities (such as those related to environmental issues) for airlines. Their findings suggest that the former CSR activities have a positive effect on firm performance. It should be highlighted that no consensus exists about the directionality of this relationship as studies deliver inconclusive results with either positive, negative or even the absence of substantial effects of CSR on corporate performance (Kang et al., 2010; Kim and Kim, 2014; Lee and Park, 2009).

Employee treatment is a major part of Corporate Social Responsibility policies which have received extensive attention in tourism and travel literature. A plethora of empirical studies substantiates a positive relationship between employee treatment and corporate performance (Chi and Gursoy, 2009; Symitsi et al., 2021a). In services with high employee-customer interaction (high-contact services), the effect is more pronounced (Stamolampros et al., 2019a). There exists a direct link among employee satisfaction, productivity, customer loyalty and profitability as described by the service-profit chain model (Heskett et al., 1994). Simply put, more satisfied employees are more productive, deliver higher quality service to customers which in turn enhances customer loyalty, and results in increased profitability. Firm value can also increase due to reduced risks and costs that may arise from negative or poor employee practices which may lead to litigation costs, strike costs and disruption of operations, negative media attention, and customer and supplier loss (Ben-Nasr and Ghouma, 2018; Mishra and Modi, 2013).

One commonality of the existing CSR-related studies in the area is that their focus is mainly on firm profitability or its precedents, such as customer satisfaction or loyalty. Tourism and hospitality literature completely neglects the effect of CSR activities on other corporate performance aspects, which as aforementioned, have received attention in other fields of research. The only notable exception is the study of [Park et al. \(2017\)](#) which examines the moderating role of geographical diversification in the relationship between CSR and systemic risk in restaurants. As the authors highlight in that study, to fully understand the financial implications of CSR activities, it is important to extend the understanding of the relationship between CSR and corporate financial performance from accounting performance measures to measures of business risks ([Park et al., 2017](#)).

2.2. Employees as key stakeholders and capital structure choices

In their seminal paper, [Modigliani and Miller \(1958\)](#) propose that in a perfect frictionless market the capital structure of a firm should not have any effect on its value. However, as stated in [Myers \(2001\)](#) in the real world indeed matters due to differences in taxes, information and agency costs. Financial literature entertains the idea of discovering the frictions that are important in capital structure decisions with an emerging consensus on the importance of corporate taxes and bankruptcy costs ([Berk et al., 2010](#)).

[Titman \(1984\)](#) pioneers the discussion of the relevance of non-financial stakeholders to capital structure decisions. Customers, suppliers, and employees among other groups of stakeholders bear severe liquidation costs. Firms to compensate these agents for their additional costs and convince them to transact with them bear this cost ex-ante. This cost could have the form of lower product prices or higher salaries. [Maksimovic and Titman \(1991\)](#) model extends the work of [Titman \(1984\)](#) and shows that firm stakeholders, such as suppliers, customers and employees, may be reluctant to do business with a firm that has higher financial constraints and bankruptcy risk as it is more likely not to honour its implicit contracts. [Berk et al. \(2010\)](#) discuss that employees are the only group of stakeholders that face a significant bankruptcy cost among stakeholders. Therefore, firms that want to maintain a good reputation among employees should limit the use of financial leverage. This theoretical channel supports a negative link between employee satisfaction and firm leverage.

Along the same lines, the resource-based view ([Barney, 1991](#)) is a second theoretical channel implying a negative association between firm-specific investments in human capital practices with the financial leverage of firms. The explanation is that such investments, though may offer unique resources, capabilities, and reputation, they have high liquidation costs due to their limited capacity to offer collaterals against bankruptcy. Therefore, companies which want to maintain their firm-specific investments to these unique resources will resort to alternative financing sources than debt financing ([Vicente-Lorente, 2001](#); [Williamson, 1988](#)). [Long and Malitz \(1985\)](#) shows investments in intangible assets, such as investments in employee treatment, because are more difficult to be monitored, are less financed by debt compared to investments in tangibles.

A limited stream of studies tries to shed light on the association of different categories of firms' stakeholders and corporate structure decisions. This is done mainly under the prism of the buyer-supplier relationship where the firms under scrutiny could take both roles. [Titman and Wessels \(1988\)](#) report that firms with unique products and, as such, with higher liquidation risk for customers (because it will be difficult and costly to replace them) have lower levels of leverage. [Banerjee et al. \(2008\)](#) consider this topic from a different perspective, that of the supplier who invests in asset-specificity to serve its big customers. In that case, customer liquidation is of particular concern for the supplier as customers' financial distress will propagate distress to its suppliers ([Lian, 2017](#)).

Nevertheless, only a handful of studies have attempted to explore the

effect of another key stakeholder, the employees. The studies of [Bae et al. \(2011\)](#) and [Verwijmeren and Derwall \(2010\)](#) using employee-relevant dimensions from the KLD database report that firms that score higher in these dimensions have lower debt ratios. Similar conclusions are inferred from the recent study of [Xu et al. \(2020\)](#), who based on a sample of "China's 100 Best Employers Award" winners, report a negative relationship of job satisfaction with firm leverage. Aligned with the two theoretical streams and the empirical evidence, we test the following hypothesis:

H1. : Firms with better employee treatment have lower leverage.

2.3. Employee treatment and firm creditworthiness

Creditworthiness assesses the likelihood of a company to repay its debt. A good credit rating means that a company is more likely to repay a loan, and therefore, it has a smaller probability of bankruptcy. Credit rating institutions' criteria (e.g., S&P) are heavily dependent on mathematical models using financial information disclosed by companies, such as the funding sources, the profitability, the quality of assets.¹ Though, other factors also have been found to matter, including CSR activities (e.g., [Dallas, 2004](#)).

There are several theoretical arguments which are aligned with this point of view and delineate a positive association between investments in employee practices and credit ratings. Investing in intangibles and internal resources, such as reputation and good relationships with various stakeholders might result in competitive resources, value creation and long-term sustainability ([Attig et al., 2013](#)). For example, investing in good employee practices might translate in lower costs for attracting and retaining workforce (e.g., [Stellner et al., 2015](#); [Turban and Greening, 1997](#)), among other benefits. Moreover, using internal funds to strategically support CSR practices could signal more efficient use of resources. Last but not least, looking after relationships with stakeholders through CSR activities, in line with stakeholder theory, is a process that does not only reduce potential costs and create valuable intangible assets, but it is interpreted as a source of diminishing risk. These arguments suggest that investments in employees will be appreciated among credit rating analysts.

The empirical findings are in line with the theoretical grounding finding a positive effect of CSR investments on credit ratings (e.g., [Attig et al., 2013](#); [Jiraporn et al., 2014](#)). [Stellner et al. \(2015\)](#) document a weak positive relationship in an international study, though, this relationship is stronger in countries that score high in environmental, social and governance (ESG) responsibility. [Attig et al. \(2013\)](#) find that better performance in dimensions of corporate responsibility that are most closely related to key company stakeholders (e.g., employee relations, product issues, community and diversity issues) yield a positive effect on credit ratings. Likewise, [Oikonomou et al. \(2014\)](#) focus on those CSR dimensions that connect to primary key stakeholders, i.e., community issues, employee relations, product safety and quality, diversity, and environmental issues. In particular, they decompose these measures to strengths and concerns revealing that there are differential effects on credit risk across different CSR factors. Employee dissatisfaction and controversies have been found to have detrimental effects resulting in smaller firm credit ratings.

A small number of studies offer further evidence on employee practices and their association with credit risk. [Bauer et al. \(2009\)](#) using a measure of employee relations quality find higher credit ratings, lower cost of debt, and lower firm idiosyncratic risk. In another study, [Chen et al. \(2011\)](#) show that firms in unionized industries are less likely to invest in risky projects resulting in reduced risk perception for the company from debtholders, investors and credit analysts. [Verwijmeren](#)

¹ See https://www.spglobal.com/ratings/_division-assets/pdfs/guide_to_credit_rating_essentials_digital.pdf

and Derwall (2010) report reduced probability of default for companies with better practices for employees. We hypothesize, thus, the following:

H2. : Firms with better employee treatment have higher credit ratings.

3. Data

For our empirical analysis, we obtain data from two main sources. As a proxy of employee treatment, we use a direct measure of employee satisfaction by obtaining online reviews from Glassdoor.² Glassdoor is the most popular web platform where current and former employees provide their evaluation about their employers. The platform allows employees to provide an overall rating that describes their opinion about their employers, as well as ratings in specific aspects, such as career opportunities, compensations and benefits, senior leadership, work/life balance, culture and values, CEO approval, and business outlook of the company. This source of information has recently gained attention to management, finance and tourism-related research (Green et al., 2019; Symitsi et al., 2021b). Financial data is retrieved from Compustat.

The focus of our study is on high contact services and specifically companies in the tourism and hospitality industry. To identify those companies, we follow a two-step process. First, as in Fang et al. (2021) we identify all the companies in Compustat that belong in the 4-digit sic codes 7011, 4512, 5812, 7990 for Hotels and Motels, Air Transportation, Eating Places, and Reservation Services, respectively. Then, we hand match those companies with companies on Glassdoor using the stock ticker and the company name, as identifiers. From a total of 267 companies in Compustat, we identify 155 of these companies in Glassdoor and the sample period spans from 2008 to 2018.

Our main dependent variable is the firm financial leverage. Following the literature (Verwijmeren and Derwall, 2010; Bae et al., 2011), we estimate both market financial leverage (MarketLeverage) and book financial leverage (BookLeverage). With high leverage being linked with a higher probability of default, we test whether the employee well-being effects manifest in bankruptcy risk. To this end, we measure the bankruptcy risk with the credit ratings (LtCreditRating). The main independent variable in our study is the overall employee satisfaction, computed as the average annual overall employee rating (Emp_OverallRating). Separately, we calculate the average employee rating in five disaggregated job aspects, i.e., Career Opportunities (Emp_CareerOpp), Compensation and Benefits (Emp_CompBenefits), Work/life Balance (Emp_WorkLife), Senior Leadership (Emp_SeniorLeadership) and Cultural Values³ (Emp_CultureValues).⁴

In our empirical analysis, we control for several variables that are used in the relevant literature (e.g., Frank and Goyal, 2009; Rajan and Zingales, 1995). Specifically, we control for firm size (logAssets), tangibility (Tangibility), profitability (Profitability), market to book ratio (MB), earnings volatility (EarningsVol), depreciation (Depreciation), financial slack (FinancialSlack), asset growth (AssetGrowth), research and development expenses (RDExpenses) and selling, general and administrative expenses (SGAExpenses). We also use the industry median leverage as a proxy of the target leverage (Ind. Med. ML/ Ind.

Table 1
Descriptive Statistics.

| | Obs | Mean | SD | Q25 | Q50 | Q75 |
|---------------------------------------|-----|-------|-------|--------|-------|-------|
| <i>Panel A: Dependent Variables</i> | | | | | | |
| MarketLeverage | 659 | 0.325 | 0.250 | 0.130 | 0.274 | 0.483 |
| BookLeverage | 659 | 0.425 | 0.465 | 0.191 | 0.339 | 0.531 |
| <i>Panel B: Independent Variables</i> | | | | | | |
| Emp_OverallRating | 659 | 3.399 | 0.709 | 3.000 | 3.429 | 3.875 |
| Emp_CareerOpp | 654 | 3.205 | 0.675 | 2.921 | 3.215 | 3.593 |
| Emp_CompBenefits | 655 | 3.106 | 0.705 | 2.686 | 3.071 | 3.562 |
| Emp_SeniorLeadership | 655 | 3.081 | 0.770 | 2.724 | 3.020 | 3.506 |
| Emp_WorkLife | 655 | 3.270 | 0.677 | 2.986 | 3.325 | 3.667 |
| Emp_CultureValues | 463 | 3.503 | 0.700 | 3.057 | 3.571 | 4.000 |
| <i>Panel C: Control Variables</i> | | | | | | |
| logAssets | 659 | 2.928 | 1.795 | 1.606 | 2.749 | 4.311 |
| Profitability | 659 | 0.153 | 0.104 | 0.087 | 0.131 | 0.197 |
| Tangibility | 659 | 0.545 | 0.215 | 0.432 | 0.581 | 0.705 |
| MB | 659 | 1.800 | 1.849 | 0.847 | 1.225 | 2.135 |
| Depreciation | 659 | 0.057 | 0.030 | 0.037 | 0.051 | 0.070 |
| EarningsVol | 659 | 0.035 | 0.025 | 0.019 | 0.029 | 0.046 |
| AssetGrowth | 659 | 0.066 | 0.269 | -0.034 | 0.029 | 0.102 |
| FinancialSlack | 659 | 0.106 | 0.088 | 0.041 | 0.080 | 0.157 |
| RDExpenses | 659 | 0.000 | 0.002 | 0.000 | 0.000 | 0.000 |
| SGAExpenses | 659 | 0.134 | 0.087 | 0.079 | 0.111 | 0.156 |

Med. BL). All but the employee well-being variables are winsorized at 1% and 99% level (Verwijmeren and Derwall, 2010; Bae et al., 2011). Table A1 in the Online Appendix contains a full description of the variables used in the empirical analysis.

Our final sample consists of 118 companies (51,365 reviews) with complete data across the financial leverage, the control and overall employee satisfaction (Emp_OverallRating) variables. Table 1 displays the descriptive statistics of the variables used in this study (for a description of the distribution of the sample across years and industries in firm-year observations see Table A2 on the Online Appendix).

4. Empirical results

4.1. Employee satisfaction and financial leverage

We start the analysis by employing a simple univariate analysis splitting our sample in the upper and lower half of the companies in terms of the average employee overall rating (above or equal vs below the median employee overall rating). In so doing, we test whether the firm characteristics differ significantly across firms that score high and low in employee well-being.

The results are presented in Table 2. There are 392 observations where companies score above the median employee overall rating (column 2) and 386 observations at the other end (column 3). The last two columns present the p-values of a parametric t-test and a non-parametric Wilcoxon t-test that evaluate for the difference in firm characteristics in statistical terms. There exists initial support of our suggested relationships with the evidence revealing that firms that score high in employee welfare have less exposure to debt with the most notable findings being for market leverage. Firms that score higher in employee satisfaction (over the median) have lower market and book leverage. Importantly, as seen in Table 2 we do not find that companies across the two groups differ statistically in terms of other firm characteristics that would justify the reported differences in leverage.

We, then, perform a multivariate regression analysis which allows us to test the hypothesized relationship between employee welfare and financial leverage after controlling simultaneously for other known effects. The dependent variables are the firms' market and book leverage ratios. To test the relationship between firm leverage and employee treatment, we run a series of models that, as in the seminal study of Frank and Goyal (2009), have the following form:

$$Leverage_{jt} = \alpha + \beta Emp_OverallRating_{jt-1} + \gamma' x_{jt-1} + \varepsilon_{jt} \quad (1)$$

² We would like to thank Glassdoor for providing the data for our research.

³ All but the Cultural Value disaggregated job aspects have been present from 2008 to 2018. The Cultural Value dimension was added in 2012, therefore, yielding a smaller number of observations (see also Table 1). The rest of the job aspects might be slightly different as during the first years a 90% of the respondents in Glassdoor provided ratings for these subcategories (see also, Green et al., 2018).

⁴ We aggregate the ratings using average values per company per year following the literature (e.g., Huang et al., 2015). We also check whether our results change if we use median ratings per company per year. The findings remain similar.

Table 2
Univariate analysis.

| | Emp_OverallRating (≥Median) (N = 332) | Emp_OverallRating (<Median) (N = 327) | ttest Pval | Wilcoxon Pval |
|----------------|---|---|---------------|------------------|
| MarketLeverage | 0.299 | 0.351 | 0.007 | 0.013 |
| BookLeverage | 0.405 | 0.435 | 0.375 | 0.005 |
| logAssets | 3.022 | 2.833 | 0.176 | 0.115 |
| Profitability | 0.152 | 0.154 | 0.834 | 0.699 |
| Tangibility | 0.557 | 0.533 | 0.144 | 0.074 |
| MB | 1.822 | 1.703 | 0.338 | 0.596 |
| Depreciation | 0.057 | 0.057 | 0.850 | 0.726 |
| EarningsVol | 0.035 | 0.035 | 0.751 | 0.851 |
| AssetGrowth | 0.061 | 0.056 | 0.735 | 0.404 |
| FinancialSlack | 0.104 | 0.108 | 0.543 | 0.714 |
| RDExpenses | 0.000 | 0.000 | 0.563 | 0.254 |
| SGAExpenses | 0.136 | 0.129 | 0.279 | 0.654 |

where j and t correspond to firm and year, respectively. The vector x_{jt-1} contains other firm-specific characteristics and effects (industry, firm, year) used in the relevant literature (Frank and Goyal, 2009; Rajan and Zingales, 1995). We employ five different models. The simplest model is a pooled ordinary least squares (OLS) regression for the effect of employee well-being on corporate leverage controlling for year and industry effects (Models 1 and 6). We then test an OLS model that controls for both firm-specific characteristics and industry and time fixed effects (Models 2 and 7). In regression 3, we run a dynamic OLS model that controls in addition to firm-specific characteristics and industry and time fixed effects for lagged dependent variable (Models 3 and 8). We run a fixed effects (FE) model which allows for heterogeneity across firms controlling of year fixed effects (Models 4 and 9) and for lagged dependent variable (Models 5 and 10).

Table 3 reports the findings of these models for market and book leverage ratios. We document a negative and statistically significant effect of employee welfare on market leverage ratio with coefficients (t-statistics) ranging from -6.90 (-4.08) percent to -1.06 (-1.66) percent for the strictest model. An extra point on the employee overall rating scale will lead to a lower debt ratio by 5.89% for Model 2, ceteris paribus, with the coefficient being significant at 1% level. The results are in line for book leverage in all but Model 9.

We perform a series of robustness checks to validate the results of our analysis. First, we impose a filter to the number of reviews (≥ 5 per year) that need a company to be included in the sample. In that way similar to previous research we want to average out idiosyncratic views (Green et al., 2019). Moreover, we construct market and book leverage measures considering only the long-term debt as in Bae et al. (2011). In both specifications our untabulated results indicate that the negative association between employee satisfaction and financial leverage in tourism and hospitality companies is robust.

4.2. Endogeneity of employee satisfaction

In this section, we consider endogeneity potentially induced by omitted variables, or reverse causality. In the former case of omitted variables that determine both the firm's leverage and the implementation of employee policies (and consequently, employee satisfaction), employee satisfaction will be endogenous. In the latter case of reverse causality, it could be that employees are less satisfied in companies with high leverage due to restrictions imposed by high levels of debt to implement employee-friendly practices. If that is the case, then the reverse association should be found, with leverage predicting Employee Satisfaction.

A reverse relationship would be supported by the underinvestment theory of Myers (1977) which predicts that corporate debt will force companies to reject good investment opportunities. As discussed in Barnea and Rubin (2010) debt will act as a preventive mechanism for managers to invest in CSR activities to increase their reputation as a

result of the monitoring role of creditors. These arguments presume that the capital structure will determine and more specifically discourage or prohibit investments in intangibles including human capital investments.

To control for such endogeneity concerns, we employ three methods. First, we perform 2SLS IV regression analyses, where in the first stage we use three instrumental variables to predict the employee satisfaction following the literature (Bae et al., 2011; Huang et al., 2015). More specifically, the instrumental variables used are the lagged value of pension and retirement expenses per employee (firm level), the logarithm of industry wage per year (industry level), and the industry average employee satisfaction score (industry level). Then, we use the predicted Emp_OverallRating in the second stage. Table 4 in Models 1–6⁵ reports the findings of the 2SLS-IV regression analyses for the second stage and includes the coefficients along with t-statistics for the instrumental variables for the first stage. The coefficients of the predicted Emp_OverallRating are negative and strongly significant in all cases. We also report the statistics and denote the level of significance or p-values for standard tests of relevance and validity of the instrumental variables used. The Kleibergen and Paap (2006) LM statistic along with p-values denoted in asterisks indicate that the instruments are sufficiently correlated with the endogenous variable (under-identification). The Anderson-Rubin F-statistic shows that the endogenous variables are jointly significant. The overidentification test fails to reject the null hypothesis that our instrumental variables are valid (Hansen J p-values).

Second, we employ the dynamic panel generalized method of moments (GMM) using lagged leverage as in Wintoki et al. (2012) and Huang et al. (2015). This is well-established practice in the literature to control for endogeneity concerns using lagged variables for the endogenous variables. Time and industry effects are used as exogenous variables. The AR(2) test of no second-order serial correlation is not rejected at 5% and the Hansen J test is not rejected at 5% indicating that the lagged instruments are valid for both market and book leverage. The coefficients for the Emp_OverallRating are negative and significant at 5%.

Third, we directly investigate the reverse relationship, i.e., whether financial leverage predicts the Emp_OverallRating. Overall, our findings indicate that market or book leverage are not statistically significant. These findings are in line with prior empirical results in closely related studies (e.g., Bae et al., 2011; Verwijmeren and Derwall, 2010). Taken altogether, the findings of this analysis are in line with the theoretical predictions of the stakeholder theory and the resource-based view.

⁵ We employ various combinations of the instrumental variables given that the lag pension per employee expenses has missing values compared to our dataset. In order to demonstrate the results for the 659 observations we do the same analysis using the logIndustryWage and Industry Emp_OverallRating.

Table 3
Regression analysis.

| | MarketLeverage | | | | | BookLeverage | | | | |
|-------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|------------------------|-----------------------|-----------------------|
| | OLS | OLS | DOLS | FE | FE | OLS | OLS | DOLS | FE | FE |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Emp_OverallRating | -0.0690 * ** (-4.08) | -0.0589 * ** (-4.15) | -0.0179 * ** (-3.07) | -0.0148 * (-1.81) | -0.0106 * (-1.66) | -0.0485 * * (-2.12) | -0.0599 * ** (-3.32) | -0.0130 * * (-2.13) | -0.0133 (-1.40) | -0.0124 * (-1.79) |
| logAssets | | -0.0041 (-0.38) | -0.0030 (-1.14) | 0.0352 (0.84) | -0.0016 (-0.06) | | -0.0128 (-0.61) | 0.0015 (0.54) | -0.0737 (-1.03) | -0.0389 (-1.29) |
| Profitability | | -0.2930 (-0.95) | -0.1523 (-1.59) | -0.7731 * ** (-2.98) | -0.3144 (-1.49) | | 1.7787 * * (2.07) | 0.0478 (0.64) | 0.0546 (0.14) | 0.0096 (-0.04) |
| Tangibility | | -0.0585 (-0.77) | -0.0051 (-0.22) | -0.1527 (-1.11) | -0.0972 (-0.92) | | -0.1226 (-0.94) | -0.0246 (-0.95) | 0.0111 (0.07) | 0.0200 * (-1.98) |
| MB | | -0.0080 (-0.60) | 0.0068 (1.24) | 0.0026 (0.18) | 0.0141 * * (1.99) | | 0.0850 * ** (-2.75) | 0.0117 * (1.91) | 0.0409 (1.59) | 1.2690 * (1.86) |
| Depreciation | | -0.1646 (-0.20) | 0.5029 * (1.76) | 1.6107 (1.44) | 1.6273 * * (2.57) | | -3.1226 * (-1.87) | 0.6226 * * (2.16) | -0.8377 (-0.39) | 0.9678 * * (2.12) |
| EarningsVol | | 0.3141 (0.46) | -0.1599 (-0.66) | 0.1013 (0.12) | -0.3024 (-0.63) | | 3.1544 * ** (2.68) | 0.0303 (0.13) | 2.5963 (1.61) | 0.6501 (0.97) |
| AssetGrowth | | -0.0444 (-0.86) | 0.0154 (0.71) | -0.0130 (-0.28) | 0.0128 (0.42) | | -0.2006 * * (-2.29) | -0.0091 (-0.55) | -0.0462 (-0.67) | -0.0023 (-0.09) |
| FinancialSlack | | -0.7309 * ** (-4.18) | -0.1015 * (-1.88) | -0.4429 * ** (-3.15) | -0.2390 * * (-2.14) | | -0.8353 * * (-2.48) | -0.0456 (-0.60) | -0.0461 (-0.18) | 0.0490 (0.24) |
| RDExpenses | | -0.9544 (-0.04) | 1.3169 (0.22) | -31.8245 * (-1.79) | -9.4409 (-0.91) | | 3.9702 (0.07) | 26.8033 (1.64) | -30.8237 (-0.92) | -0.3260 (-0.01) |
| SGAExpenses | | 0.5926 * ** (4.00) | 0.0510 (0.83) | 0.0242 (0.12) | -0.069 (-0.59) | | 0.8730 * ** (3.84) | 0.0819 * (1.85) | 0.2369 (0.98) | -0.0232 (-0.13) |
| Ind. Med. ML | | 0.1677 (0.84) | -0.1686 * ** (-2.84) | 0.3780 * * (2.40) | -0.0255 (-0.28) | | | | | |
| MarketLeverage _{t-1} | | | 0.8817 * ** (44.40) | | 0.6077 * ** (12.79) | | | | | |
| Ind. Med. BL | | | | | | | 1.1115 * ** (2.95) | 0.0254 (0.25) | 0.7810 * ** (3.47) | 0.1715 (1.22) |
| BookLeverage _{t-1} | | | | | | | | 0.9536 * ** (55.2) | | 0.6832 * ** (6.46) |
| Constant | 0.5627 * ** (9.61) | 0.5816 * ** (5.31) | 0.1551 * ** (3.81) | 0.2997 (1.64) | 0.2005 (1.57) | 0.6102 * ** (7.00) | -0.00055 (-0.03) | 0.0172 (0.37) | 0.2336 (0.99) | 0.0833 (0.61) |
| Year Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | No | No | Yes | Yes | Yes | No | No |
| Fixed Effects | No | No | No | Yes | Yes | No | No | No | Yes | Yes |
| Obs. | 659 | 659 | 659 | 659 | 659 | 659 | 659 | 659 | 659 | 659 |
| Adj. R-sq | 0.259 | 0.393 | 0.840 | 0.291 | 0.492 | 0.033 | 0.469 | 0.936 | 0.300 | 0.601 |

Notes: This Table presents t statistics in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$.

4.3. Disaggregated measures of employee satisfaction and their effect on leverage

As a next step, we extend the main analysis by focusing on disaggregated measures of employee well-being. In this analysis, we test whether the employee treatment effects are driven by a particular job aspect.⁶ Results are reported in Table 5 using the most typical and exhaustive model from our previous analysis (Model 2). All job aspects display a statistically strong and negative relationship with leverage. Therefore, we cannot claim that a particular dimension is irrelevant to that relationship. This is somehow expected given that most of the dimensions are highly correlated as it is common for companies that care for employee treatment to score high in all dimensions. However, we should highlight that there is variation in the average effects and in both measures of leverage the strongest effects appear to be in the compensation and benefit, work/life balance and cultural values.

⁶ The availability of ratings on various job satisfaction aspects may differ than the overall rating in that it was not necessary initially for reviewers to provide ratings for these dimensions in order to submit a review, or some features (e.g., the culture and values) were added later. This results to a slightly smaller number of observations for some dimensions.

5. Employee well-being effects and financial leverage across tourism and hospitality industries

We examine in this section the employee well-being effects on market and book leverage across the tourism and hospitality industries. In line with Maksimovic and Titman (1991) model, the more important employee retention is for firms, the more likely is those firms to emphasize on their reputation as companies that treat well their employees. Thus, the more important is for companies to maintain expertise and talent in the company the more pronounced the effect of employee well-being is expected on financial leverage.

To estimate individual characteristics across the industries we employ a multi-level mixed-effects regression model that allows different error terms between industries based on the SIC code. In particular, the model employed for this analysis is a random slope and intercept model for the effect of employee treatment on financial leverage.

Allowing for various hierarchies based on the SIC code, the coefficients (t-statistics) of *Emp_OverallRating* are strong and negative with - 0.0606 (-2.38) and - 0.0630 (-2.67) for market leverage and book leverage, respectively. In both cases of market and book leverage, we identify a significant variance component on employee treatment suggesting that there is variation across the tested industries. In Fig. 1, we estimate how the coefficients range for the industries. Air Transport produces among the strongest effects of employee treatment on financial leverage and Tourism Services among the least significant.

Table 4
Endogeneity.

| | IV - 2SLS | | | | | | Dynamic panel GMM | | FE | |
|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | MarketLeverage | | | BookLeverage | | | MarketLeverage | BookLeverage | Emp_OverallRating | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Predicted Emp_OverallRating | -0.3988 * ** (-5.75) | -0.4017 * ** (-5.10) | -0.2887 * (-1.88) | -0.4914 * ** (-5.35) | -0.4322 * ** (-4.63) | -0.7999 * ** (-2.04) | | | | |
| Emp_OverallRating | | | | | | | -0.0151 * ** (-2.29) | -0.0141 * ** (-2.12) | | |
| MarketLeverage | | | | | | | 0.8637 * ** (12.21) | | -0.2548 (-0.98) | |
| BookLeverage | | | | | | | | 0.9549 * ** (20.78) | | -0.0133 (-0.10) |
| logAssets | 0.0388 * ** (3.17) | 0.0217 * (1.81) | 0.0223 * (1.88) | 0.0320 * ** (2.04) | 0.0263 * (1.68) | 0.0330 (1.25) | -0.0023 (-0.24) | -0.0030 (-0.52) | 0.0980 (0.80) | 0.0856 (0.69) |
| Profitability | -0.0512 (-0.25) | -0.2083 (-0.92) | -0.2066 (-1.13) | 1.9584 * ** (3.69) | 1.9465 * ** (3.67) | 1.7548 * ** (3.01) | -0.1810 (-0.91) | -0.0378 (-0.30) | 0.2778 (0.42) | 0.4872 (0.76) |
| Tangibility | 0.2073 * ** (2.72) | 0.1020 (1.33) | 0.1077 (1.44) | 0.1314 (1.35) | 0.0873 (0.90) | 0.1596 (0.92) | -0.0572 (-0.63) | -0.0037 (-0.05) | 0.2623 (0.71) | 0.2873 (0.81) |
| MB | -0.0102 (-0.86) | 0.0032 (0.23) | -0.0114 (-1.03) | 0.0971 * ** (2.91) | 0.0957 * ** (2.78) | 0.1059 * ** (2.80) | 0.0060 (0.78) | 0.0121 (1.16) | -0.0411 * ** (-2.09) | -0.0351 * (-1.67) |
| Depreciation | -0.1822 (-0.25) | 0.3048 (0.40) | -0.0180 (-0.03) | -2.6876 * ** (-2.52) | -2.8401 * ** (-2.59) | -1.7417 (-1.18) | 0.6919 (1.02) | 0.6251 (1.00) | -5.6355 * ** (-2.14) | -5.6664 * ** (-2.15) |
| EarningsVol | 0.7671 (1.19) | 0.1342 (0.19) | 0.6721 (1.27) | 3.1059 * ** (3.06) | 2.9381 * ** (2.89) | 2.7916 * ** (2.11) | 0.1306 (0.27) | 0.3308 (0.52) | -0.6374 (-0.37) | -0.7492 (-0.41) |
| AssetGrowth | -0.0402 (-0.56) | -0.0572 (-0.82) | -0.0336 (-0.62) | -0.2052 * ** (-2.10) | -0.2187 * ** (-2.43) | -0.1984 (-1.60) | 0.0260 (0.68) | -0.0029 (-0.13) | -0.4383 * ** (-2.55) | -0.4304 * ** (-2.49) |
| FinancialSlack | -0.6476 * ** (-3.60) | -0.6896 * ** (-3.79) | -0.6066 * ** (-4.12) | -0.7330 * ** (-2.89) | -0.7167 * ** (-2.85) | -0.6192 * (-1.78) | -0.1456 (-0.98) | -0.0319 (-0.24) | 0.2722 (0.44) | 0.3445 (0.56) |
| RDExpenses | -6.3246 (-0.17) | 2.1674 (0.06) | -1.7940 (-0.06) | 12.0494 (0.19) | 7.6386 (0.13) | 14.7020 (0.17) | 8.4912 (0.39) | 28.5397 (1.08) | -166.0503 (-1.33) | -157.0865 (-1.25) |
| SGAExpenses | 0.9018 * ** (5.58) | 0.7649 * ** (5.09) | 0.7300 * ** (5.20) | 1.0859 * ** (4.93) | 1.0829 * ** (5.46) | 1.0189 * ** (3.03) | 0.0141 (0.06) | -0.0330 (-0.18) | 1.4690 * ** (2.70) | 1.4408 * ** (2.64) |
| Ind. Med. ML | 0.6409 * ** (4.45) | -0.0460 (-0.17) | 0.6831 * ** (6.17) | | | | | | | |
| Ind. Med. BL | | | | 1.3271 * ** (4.18) | 1.1074 * (1.83) | 1.5942 * ** (3.17) | | | | |
| Ind. Emp_OverallRating | | | | | | | | | -0.0993 (-0.35) | -0.0459 (-0.17) |
| Constant | 1.0972 * ** (5.35) | 1.7527 * ** (4.79) | 0.8545 * ** (2.01) | 0.9659 * ** (3.61) | 0.9257 * ** (2.31) | 1.7790 * (1.77) | 0.2171 * ** (2.56) | 0.1423 * ** (2.05) | 3.2357 * ** (3.13) | 2.9378 * ** (2.97) |
| <i>Instrumental Variable (First Stage)</i> | | | | | | | | | | |
| lag Pension per Worker | 0.0500 * ** (4.74) | 0.0513 * ** (5.02) | | 0.0522 * ** (4.89) | 0.0526 * ** (5.44) | | | | | |
| Industry Emp_OverallRating | 0.5976 * ** (2.37) | | 0.4605 * ** (2.11) | 0.4560 * (1.94) | | 0.4552 * ** (2.06) | | | | |
| logIndustryWage | -0.5099 * ** (-2.59) | | | -0.3912 * ** (-2.54) | | | | | | |
| Controls in First Stage | Yes | Yes | Yes | Yes | Yes | Yes | - | - | - | - |
| Year Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | No | Yes | No | No | Yes | No | Yes | Yes | No | No |
| Fixed Effects | No | No | No | No | No | No | No | No | Yes | Yes |
| Obs. | 586 | 586 | 659 | 586 | 586 | 659 | 659 | 659 | 659 | 659 |
| Kleibergen-Paap rk LM | 29.641 * ** | 19.682 * ** | 4.615 * * | 32.469 * ** | 22.097 * ** | 4.431 * * | - | - | - | - |
| Anderson-Rubin F | 21.158 * ** | 51.052 * ** | 5.615 * * | 20.846 * ** | 46.632 * ** | 22.166 * ** | - | - | - | - |
| AR(1) pvalue | - | - | - | - | - | - | 0.0000 | 0.0330 | - | - |
| AR(2) pvalue | - | - | - | - | - | - | 0.0053 | 0.6800 | - | - |
| Hansen J-statistic pvalue | 0.4549 | - | - | 0.2530 | - | - | 1.0000 | 1.0000 | - | - |
| Diff in Hansen pvalue | - | - | - | - | - | - | 0.8300 | 0.9610 | - | - |

Notes: This Table presents t statistics in parentheses. * p < 0.10 ** p < 0.05 *** p < 0.01.

Table5
Disaggregated analysis.

| | MarketLeverage | | | | | BookLeverage | | | | |
|----------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Emp_CareerOpp | -0.0308 * | | | | | -0.0367 * | | | | |
| | (-1.75) | | | | | (-1.69) | | | | |
| Emp_CompBenefits | | -0.0523 * ** | | | | | -0.0685 * ** | | | |
| | | (-3.05) | | | | | (-2.71) | | | |
| Emp_SeniorLeadership | | | -0.0352 * ** | | | | | -0.0324 * | | |
| | | | (-2.66) | | | | | (-1.94) | | |
| Emp_WorkLife | | | | -0.0541 * ** | | | | | -0.0705 * ** | |
| | | | | (-3.43) | | | | | (-3.56) | |
| Emp_CultureValues | | | | | -0.0679 * ** | | | | | -0.0864 * ** |
| | | | | | (-4.02) | | | | | (-3.26) |
| logAssets | -0.0068 | -0.0022 | -0.0068 | -0.0053 | 0.0033 | -0.0162 | -0.0084 | -0.0156 | -0.0127 | 0.0045 |
| | (-0.62) | (-0.21) | (-0.62) | (-0.48) | (0.30) | (-0.77) | (-0.43) | (-0.73) | (-0.60) | (0.23) |
| Profitability | -0.2714 | -0.2776 | -0.2680 | -0.2659 | -0.3393 | 1.8071 * * | 1.7993 * * | 1.8004 * * | 1.8097 * * | 1.0071 * |
| | (-0.87) | (-0.89) | (-0.85) | (-0.86) | (-1.22) | (2.11) | (2.10) | (2.11) | (2.11) | (1.98) |
| Tangibility | -0.0671 | -0.0626 | -0.0714 | -0.0798 | -0.0547 | -0.1240 | -0.1218 | -0.1372 | -0.1454 | -0.0051 |
| | (-0.85) | (-0.82) | (-0.91) | (-1.07) | (-0.66) | (-0.94) | (-0.94) | (-1.04) | (-1.14) | (-0.04) |
| MB | -0.0110 | -0.0121 | -0.0110 | -0.0105 | -0.0123 | 0.0807 * * | 0.0803 * ** | 0.0822 * ** | 0.0827 * ** | 0.1318 * * |
| | (-0.80) | (-0.89) | (-0.80) | (-0.76) | (-0.59) | (2.62) | (2.64) | (2.67) | (2.70) | (2.50) |
| Depreciation | -0.2940 | -0.2168 | -0.2330 | -0.0515 | 1.0217 | -3.3679 * ** | -3.1517 * | -3.1993 * | -2.9360 * | -1.7762 |
| | (-0.34) | (-0.25) | (-0.27) | (-0.06) | (1.17) | (-2.01) | (-1.91) | (-1.90) | (-1.78) | (-1.12) |
| EarningsVol | 0.3510 | 0.3055 | 0.3042 | 0.2180 | 0.4446 | 3.4161 * ** | 3.1839 * ** | 3.1656 * ** | 3.0611 * ** | 2.8571 * ** |
| | (0.50) | (0.45) | (0.45) | (0.33) | (0.60) | (2.87) | (2.69) | (2.70) | (2.64) | (2.68) |
| AssetGrowth | -0.0470 | -0.0514 | -0.0503 | -0.0505 | -0.0309 | -0.2068 * * | -0.2090 * * | -0.2080 * * | -0.2079 * * | -0.1150 |
| | (-0.89) | (-0.97) | (-0.95) | (-0.97) | (-0.52) | (-2.35) | (-2.36) | (-2.34) | (-2.37) | (-1.43) |
| FinancialSlack | -0.7159 * ** | -0.7030 * ** | -0.7182 * ** | -0.7247 * ** | -0.6298 * ** | -0.8195 * * | -0.7979 * * | -0.8176 * * | -0.8250 * * | -0.8219 * * |
| | (-3.97) | (-3.92) | (-4.03) | (-4.22) | (-3.48) | (-2.38) | (-2.31) | (-2.38) | (-2.44) | (-2.47) |
| RDExpenses | -3.1769 | 5.3596 | -4.1016 | 0.1270 | 4.9438 | 16.9429 | 11.7490 | 0.5546 | 5.2637 | 53.9320 |
| | (-0.12) | (0.23) | (-0.17) | (0.01) | (0.16) | (0.32) | (0.22) | (0.01) | (0.10) | (0.86) |
| SGAExpenses | 0.6064 * ** | 0.6039 * ** | 0.6097 * ** | 0.6293 * ** | 0.4768 * ** | 0.9013 * ** | 0.8802 * ** | 0.8866 * ** | 0.9127 * ** | 0.8100 * ** |
| | (3.84) | (3.98) | (4.04) | (4.29) | (2.83) | (3.80) | (3.92) | (3.84) | (4.00) | (2.92) |
| Ind. Med. ML | 0.2029 | 0.1526 | 0.1955 | 0.1916 | -0.1287 | | | | | |
| | (0.98) | (0.74) | (0.95) | (0.94) | (-0.61) | | | | | |
| Ind. Med. BL | | | | | | 1.0971 * ** | 1.0371 * ** | 1.0856 * ** | 1.1137 * ** | 0.9934 * ** |
| | | | | | | (2.90) | (2.76) | (2.90) | (3.04) | (2.77) |
| Constant | 0.4876 * ** | 0.5495 * ** | 0.5000 * ** | 0.5590 * ** | 0.6123 * ** | -0.0721 | 0.0181 | -0.0806 | 0.0201 | -0.0144 |
| | (4.12) | (4.70) | (4.75) | (5.19) | (4.59) | (-0.42) | (0.11) | (-0.49) | (0.13) | (-0.08) |
| Year Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 654 | 655 | 655 | 655 | 463 | 654 | 655 | 655 | 655 | 463 |
| Adj. R-sq | 0.380 | 0.395 | 0.387 | 0.397 | 0.346 | 0.468 | 0.474 | 0.467 | 0.475 | 0.535 |

Notes: This Table presents t statistics in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$.

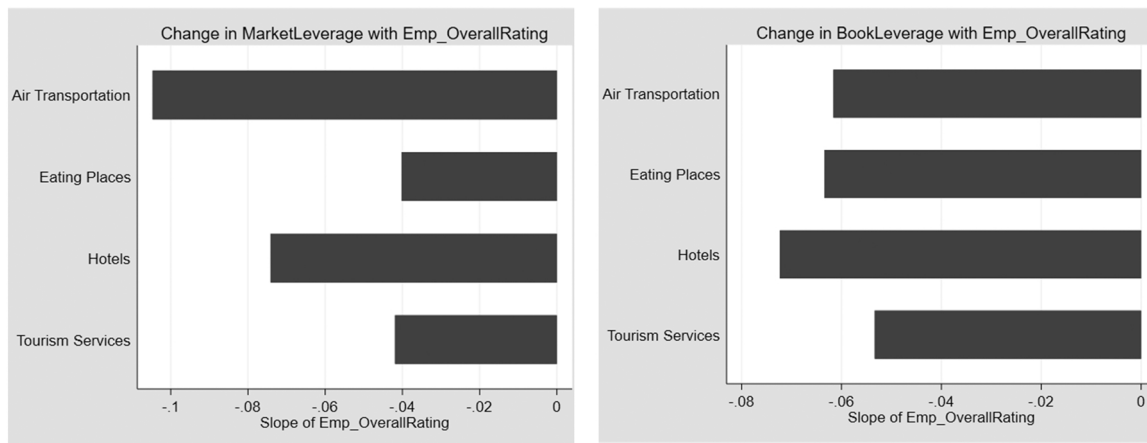


Fig. 1. Industry coefficients.

5.1. Employee well-being effects and bankruptcy risk across tourism and hospitality industries

Firms with high credit ratings are more likely to fulfil their outstanding debt and, therefore, less likely to declare bankruptcy. Thomas Cook's piling of debt for several years along with failure to alter the business model may have been of the most important reasons that led to an inability to meet the financial obligations with credit rating companies' downgrade of Thomas Cook's long-term issuer default rating being forerunner of the upcoming bankruptcy.⁷

While lower debt levels for firms with high employee welfare could decrease the probability of default (higher credit ratings), we test for a positive association between employee well-being and credit ratings after controlling for leverage and other factors that determine a firm's creditworthiness. Under this hypothesis, could employees' treatment predict a company's creditworthiness and its probability to satisfy debt commitments? To this end, we focus this analysis on the S&P credit ratings taken from Compustat. As is typical in the literature (Ashbaugh-Skaife et al., 2006; Verwijmeren and Derwall, 2010), we reclassify the credit ratings on a 7-point scale with 7 representing the highest credit rating (lower probability of default) and 1 the lowest (highest probability of default). Table A1 in the Online Appendix shows the credit rating classification.

Panel A in Table 6 performs a univariate analysis. There is a total of 305 firm-year observations due to several companies with unreported credit ratings. The univariate analysis (both parametric and non-parametric) exhibits that companies with above the median employee overall rating significantly achieve on average higher credit ratings compared with below the median employee overall rating companies.

Panel B in Table 4 performs ordered logistic multivariate regression models with robust standard errors clustered at firm level (t statistics are displayed in parentheses) and controlling for several firm variables and industry and year effects. The *Emp_OverallRating* (Model 1) and various job aspects at a disaggregated level (Models 2–6) are the variables of interest. There is a positive and significant association between employee overall rating and one year ahead credit ratings which suggests that firms that achieve better employee well-being have reduced probability of bankruptcy. Importantly, the disaggregate analysis reveals that this effect is mainly driven by companies that achieve better work/life balance conditions and have strong senior leadership. Looking at the control variables, we find that as expected larger and more profitable companies have higher creditworthiness, while more levered companies and companies with higher selling, general and

administrative expenses predict lower credit ratings.

6. Discussion and conclusions

The current study examines the relationship between employee treatment, financing decisions and bankruptcy risk. Specifically, we explore the effect of employee treatment on financial leverage and credit ratings. We do that using employee online reviews as a proxy of employee treatment and well-being. To the best of our knowledge, this is the first study that examines this relationship in the context of high contact services.

Our study has theoretical and practical implications. First, we expand the tourism and hospitality literature that focuses on corporate social responsibility given that employee treatment is part of such policies. Unlike prior studies that focus mainly on the effects on corporate performance (Inoue and Lee, 2011; Theodoulidis et al., 2017), we investigate whether employee treatment impacts financing decisions which have not received attention to the extant literature in the field. Our results provide evidence which support the interlink between employee treatment and capital structure choices in line with the stakeholder theory and the resource-based view.

Our empirical analysis adds to the literature that studies key determinants of capital structure decisions in tourism and hospitality by analyzing the role of employee treatment in leverage decisions and bankruptcy risk (Karadeniz et al., 2009; Li and Singal, 2019; Pacheco and Tavares, 2017; Park and Jang, 2013). Specifically, we unveil that firms that score higher in the overall satisfaction of employees, and its disaggregated measures, maintain lower levels of financial leverage. This is a departure from the arguments of Titman and Wessels (1988) who predict that such relationship stands only in cases of unique or specialized products as we show that the effect is significant even in industries with high quit ratio which are considered less unique. Our hierarchical analysis finds a varying effect across the tourism and hospitality industries, though, this remains significant and negative. Notwithstanding, we highlight that airlines, which is the most specialized industry in our analysis, appear to have the strongest effect. We also show that companies which invest in employee practices have on average significant effects that expand through determining the firm's creditworthiness and how this is perceived among credit rating analysts. Overall, the findings of this analysis support that firms with increased employee satisfaction enjoy better credit ratings.

Overall, our empirical study corroborates the idea that there are additional benefits from investing in employee well-being in excess of increasing employee productivity and the subsequent customer satisfaction and firm profitability (Chi and Gursoy, 2009; Symitsi et al., 2018). This could be explained by the fact that firms that engage in CSR activities reduce the hazard coming from possible shocks that may harm

⁷ <https://www.fitchratings.com/research/corporate-finance/fitch-downgrades-thomas-cook-to-c-05-09-2019>

Table 6

Credit ratings and employee-well-being in tourism and hospitality industries.

| LtCreditRating | | | | | | |
|--------------------------------------|-----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Panel A: Univariate Analysis | | | | | | |
| Emp_OverallRating Q> 50 (N = 147) | Emp_OverallRating Q< 50 (N = 158) | | | Ttest pval | Wilcoxon pval | |
| 3.114 | 2.876 | | | 0.021 | 0.013 | |
| Panel B: Ordered Logistic Regression | | | | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Emp_OverallRating | 0.4931 * (1.78) | | | | | |
| Emp_CareerOpp | | 0.2686 (0.96) | | | | |
| Emp_CompBenefits | | | 0.4558 (1.19) | | | |
| Emp_SeniorLeadership | | | | 0.4321 * * (2.29) | | |
| Emp_WorkLife | | | | | 0.6816 * ** (2.70) | |
| Emp_CultureValues | | | | | | 0.6040 (1.52) |
| BookLeverage | -6.2407 * ** (−4.81) | -6.3240 * ** (−4.84) | -6.0923 * ** (−4.74) | -6.0495 * ** (−4.76) | -6.1362 * ** (−4.69) | -6.2207 * ** (−3.19) |
| logAssets | 0.8605 * ** (3.00) | 0.8483 * ** (2.92) | 0.8221 * ** (2.76) | 0.8666 * ** (3.10) | 0.9031 * ** (3.05) | 0.9489 * ** (2.93) |
| Profitability | 21.1583 * ** (4.22) | 21.0016 * ** (4.34) | 21.4048 * ** (4.16) | 20.9747 * ** (4.39) | 20.6401 * ** (4.24) | 13.3145 (1.61) |
| Tangibility | 1.6737 (1.11) | 1.8868 (1.26) | 1.8620 (1.24) | 1.8520 (1.23) | 1.8591 (1.22) | 0.5557 (0.27) |
| MB | 0.2746 (0.71) | 0.3308 (0.85) | 0.2683 (0.69) | 0.3356 (0.85) | 0.3130 (0.81) | 0.7631 (1.15) |
| Depreciation | -12.0162 (−0.54) | -13.3835 (−0.59) | -14.5720 (−0.63) | -13.9556 (−0.65) | -13.0963 (−0.62) | 3.7094 (0.12) |
| EarningsVol | -16.4075 (−0.79) | -17.7459 (−0.82) | -18.6608 (−0.87) | -17.2688 (−0.83) | -13.2110 (−0.63) | -22.0879 (−0.88) |
| AssetGrowth | -0.0581 (−0.07) | -0.2122 (−0.26) | -0.2214 (−0.27) | -0.1161 (−0.14) | -0.2768 (−0.33) | 0.7663 (0.68) |
| FinancialSlack | 4.5291 (1.14) | 4.2413 (1.09) | 4.4948 (1.14) | 4.4377 (1.13) | 4.9866 (1.24) | 4.7381 (0.95) |
| RDExpenses | -3.4868 (−0.95) | -3.0356 (−0.84) | -3.8151 (−1.12) | -3.0856 (−0.82) | -3.7479 (−0.96) | -3.8339 (−0.75) |
| SGAExpenses | -5.3805 * (−1.85) | -5.1476 * (−1.71) | -5.5697 * (−1.83) | -5.1881 * (−1.73) | -5.8005 * * (−2.09) | -9.3618 * (−1.80) |
| Year Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 272 | 270 | 270 | 270 | 270 | 162 |
| Pseudo R-squared | 0.3316 | 0.3259 | 0.3281 | 0.3306 | 0.3352 | 0.3172 |

Notes: This Table presents t statistics in parentheses. * p < 0.10 ** p < 0.05 *** p < 0.01.

their cash flows (Sharfman and Fernando, 2008) and this risk reduction is rewarded from the market. This is also in line with the argumentation of Chemmanur et al. (2020) who in a recent study report that external financing may be affected by information, such as employee ratings, if equity investors have access to this.

Several managerial implications arise, along with the theoretical implications discussed above. Managerial implications could be on the direction of implementing appropriate employee policies that will increase employee well-being, but also on initiatives that will increase the public image of a firm as a good employer. Under the first perspective the findings of the study suggest that managers have an extra incentive of creating an employee-friendly environment. Under the second perspective, employee-friendly policies can act as a signal of a firm's creditworthiness and this will affect rating agencies' credit ratings (Attig et al., 2013). To achieve these, in a similar manner to business practices which allow companies to monitor, respond and react on customers' e-WOM about their product or service experiences, firms can also monitor and incorporate the information from employee user-generated platforms. This approach will complement traditional internal HR mechanisms, such as surveys or other tools used to get feedback from employees and review the existing employee practices, with up-to-date information arriving from employee platforms. Using alternative

channels to mine their employees' feedback could eliminate phenomena such as employees' reluctance to express their opinions through official internal mechanisms (Milliken et al., 2003). In addition to that, firms could also respond to such comments, either they are negative or positive. Previous literature involving online generated content shows that the provision of a response or action from the company to a negative comment enhances trust and positive evaluations towards the company (Sparks et al., 2016). Such practice is also expected to enhance the profile of the company as an employer who listen to their employees. Within an appropriate organizational context and with the appropriate mechanism in place for HR analytics, "online voices" can lead to strategic advantage (Miles and Mangold, 2014). However, as discussed in Belizón and Kieran (2021), the successful and impactful adoption of HR analytics requires the pre-existence of HR Analytics legitimacy as a critical strategic contribution.

Our study is not free of limitations. The employee treatment proxy based on online employee reviews comes with several advantages and disadvantages. On the one hand, it offers advantages in terms of the volume of firms that participate as well as the explicitly expressed opinion of the employees about their employer. On the other hand, it may be prone to biases that govern online reviews (Li and Hitt, 2008; Stamolampros et al., 2020). However, the Glassdoor platform is based

on a *quid pro quo* model where users should contribute their review to access some information. This model has been shown to reduce the polarization effect of online reviews leading to a more balanced representation (Marinescu et al., 2018). In addition, the recent academic research of Landers et al. (2019) report that Glassdoor online employee data has high correlation with survey data offering some first evidence of its construct validity. A possible avenue for future studies is to extend the findings of the current study by focusing on the interlink of employee treatment in high contact services to other core financial decisions that have been studied in another context of CSR, such as earnings management, dividend policy, cash holdings, cost of capital (El Ghoul et al., 2011), cost of debt, and firm debt maturity (Benlemlih, 2017; Cheung, 2016; Chih et al., 2008; Gong et al., 2020).

Data availability

The data that has been used is confidential.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.ijhm.2022.103268.

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