Does it Pay to Treat Employees Well? International Evidence on the Value of an Employee-Friendly Culture[1]

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Abstract

We examine the valuation impact of an employee-friendly corporate culture that provides better benefits, training, safety, and equal opportunities for advancement. Using a sample of 3,457 firms from 43 countries for the period 2003 to 2014, we show that firms with a more employee-friendly culture have a higher valuation (Tobin's q) and perform better (ROE and ROA). We find evidence that better employee treatment fosters technical efficiency, suggesting that this is a viable channel through which an employee-friendly culture affects firm value. The impact of an employee-friendly culture is larger for firms in countries with high labor market flexibility and for firms with better governance and those that are more geographically dispersed and are more diversified. Our results help to explain why firms are behaving efficiently in offering generous employee perks and benefits.

Key Words: Culture, Corporate Finance, Behavioral Finance, Governance, Valuation, International, Theory of the Firm

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1. Introduction

"Train people well enough so they can leave, treat them well enough so they don't want to."
Sir Richard Branson

The above quote by Virgin Atlantic's founder signals what could be the start of a global shift in the way firms view and treat employees raising important questions about efficiency for financial economists to consider. While firms in the tech sector (e.g. Google, Yahoo, Netflix) are well-known for offering employees perks that include free meals, generous paid leave packages and in-building fitness amenities, in addition to paying competitive wages, such perks have not been as prevalent in other industries. Yet, the media, government agencies, and corporations are beginning to pay close attention to the treatment of employees. For instance, San Francisco recently became the first city in the United States to pass a law guaranteeing fully-paid parental leave, while Virgin Group, made headlines recently with its generous paternity leave policy in which new dads get up to 12 months paid leave.[5]

As more companies introduce policies aimed at providing their employees with better benefits and treatment, a question arises as to whether such actions are efficient or value-enhancing for shareholders. Yet, aside from studies that explore the impact of compensation on firm performance (e.g. Mas, 2006; Propper and Van Reenen, 2010; Ouimet and Simintzi, 2015; Pagano and Volpin, 2005), relatively little is known about the impact of employee-friendly policies on firm value. Given the prominence of firms taking steps to improve employee treatment, it is important to understand the valuation impacts of these actions, and to reconcile this observable

[5] Tuttle, Brad, "Virgin's New Paternity Leave Policy Puts Google and Facebook to Shame." *Money* 10 June 2015.

market behavior with the existing literature around the theory of the firm (e.g. Jensen and Meckling, 1976).

In this paper we aim to fill this gap in the literature by exploring the valuation consequences of adopting more employee-friendly policies. Our work adds to the theory of the firm helping to address issues seemingly at odds with traditional economic theory such as promotion-based pay systems, downward nominal wage rigidity, and the reluctance of employers to fire or penalize employees (see e.g. Baker, Jensen, and Murphy, 1988). Creating an employee-friendly environment may lead to increased employee satisfaction, but it is unclear whether this will translate into better performance and higher firm value. On the one hand, the reciprocity view argues that when firms treat employees well (e.g. by paying generous wages), the workers reciprocate by exerting high effort, which leads to improved performance and valuation (see e.g. Akerlof, 1982).[6] In addition to wages, there is evidence that nonmonetary gifts may be helpful in motivating employees (Kube, Maréchal, and Puppe, 2012)).[7] If workers reciprocate being treated well by exerting high effort, investing in employee-friendly policies may be value-enhancing and efficient for the firm.

While employee-friendliness may lead to improvements in productivity and firm performance, there are plausible value-destroying consequences associated with better employee treatment. As Pagano and Volpin (2005) argue managers may have an incentive to offer generous

[6] Consistent with the reciprocity view, several studies document a link between above-market compensation and worker productivity, which leads to improved performance (e.g. Cappelli and Chauvin, 1991; Holzer, Katz, and Krueger, 1991; Mas, 2006; Propper and Van Reenen, 2010; Ouimet and Simintzi, 2015).

[7] Kube et al. (2012) conduct a field experiment and find evidence that nonmonetary gifts have a more significant impact on worker productivity than monetary gifts. A limitation of their field study is that it examines a one-shot relationship; as such, its findings may not translate to employment, which is characterized by long-term relationships. For example, if employees become accustomed to the perks (gifts) offered by firms, the impact on productivity may be mitigated (Gneezy and List, 2006).

wages (i.e. treat employees well) without monitoring workers closely in an attempt to avert hostile takeovers, or to quiet potential whistleblowers; Cronqvist et al. (2009) find evidence that entrenched managers pay their workers more to enjoy private benefits (e.g. lower effort wage bargaining). In addition, Landier et al. (2009) argue that social factors associated with the proximity between employees and managers (e.g. reluctance to "fire neighbor employees") may lead to a misalignment of managerial and shareholder incentives. Consistent with the latter view, Landier et al. (2009) find that geographic dispersion is inversely related to employee treatment;[8] they document that divisions that are closer to headquarters are less likely to experience layoffs, and that such layoffs are less sensitive to divisional performance, which suggests that better employee treatment may be value-destroying in certain cases. Thus, there remains an empirical question as to whether investing in an employee-friendly culture that captures both monetary and nonmonetary aspects is beneficial.

Many studies of culture rely on surveys (directly or indirectly) to make assessments on dimensions of corporate culture. A common way to assess a firm's culture as it pertains to employee treatment and satisfaction is to rely on the firm's inclusion in the list of "Best Companies to Work for" (see e.g. Edmans et al. (2015); Guiso, Sapienza, and Zingales (2013); Edmans (2011)). In this study, we focus on one particular aspect of corporate culture–employee-friendliness. To capture the extent of a firm's employee-friendly culture, we use firm-level indicators of social performance from ASSET4 ESG database. Our measure of employee-friendliness parallels the employee treatment measure used in several US studies (Bae, Kang, and

[8] Cronqvist et al. (2009) also document that entrenched managers pay more to employees who are geographically closer to the headquarters and closer in terms of the corporate hierarchy.

Wang, 2011; Landier, Nair, and Wulf, 2009).[9] The indicators we use measure employment quality, health and safety, diversity, training and development, and human rights. We construct our measure of employee-friendly culture combining several attributes that are associated with firms that adopt policies that create an employee-friendly environment. In this sense, we extract our measures of corporate culture from observed behavior, as opposed to relying strictly on survey data. While imperfect, we believe this approach allows us to better answer questions related to our main hypothesis: is there value to creating an employee-friendly environment? In addition, our approach allows us to examine important questions, such as which components of an employee-friendly culture are more valuable.

Overall, we find that firms that invest more in their employees have higher valuations and perform better. This result holds even after controlling for a battery of other relevant variables from past literature, as well as industry, firm- and country-level factors. Our results provide additional support to the "reciprocity view" of Akerlof (1982) and suggest that when firms treat employees well, workers reciprocate by exerting more effort, which yields better performance and higher firm value. Specifically, we find that firms with a more employee-friendly culture have higher value (Tobin's q). We further document that the impact of an employee-friendly environment on firm value is stronger for firms with better governance, firms that are more geographically dispersed, and firms with more diversified products. The latter results suggest that treating employees well adds value for firms with fewer frictions (e.g. proximity of employees and managers) that may result in employee treatment (e.g. firing and hiring decisions) being less

[9] These papers use data from KLD Socrates database that provides scores for social performance based on strengths and weaknesses in particular categories including: union relations; cash profit sharing; employee involvement; retirement benefits, and family benefits.

sensitive to performance because of a misalignment of managerial and shareholder incentives.[10] Finally, we observe that firm profitability (return on equity, ROE and return on assets, ROA) is greater in firms with more employee-friendly measures. Further, we document that employee-friendly measures are more beneficial to firms in countries with greater labor flexibility, which suggests that employee treatment may be a way for firms to retain and attract productive employees in competitive labor markets.

In addition to exploring the impact of employee-friendliness on firm value, we examine the channels through which an employee-friendly culture may impact firm value. We find that employee-friendliness is associated with improved technical efficiency (higher sales-to-assets and lower cost of goods sold-to-employees) and innovation (measured by the number of patents). The latter results add support to the findings in Chen et al. (2016) and Mao and Weathers (2015) who document a positive impact of employee treatment on innovation for a sample of US firms.

Our findings related to improved firm performance (valuation) may not necessarily establish causality. It could be argued that better-performing firms are able to invest more in their employees, in turn becoming more employee-friendly. Thus, reverse causality is a concern. In addition, there could be unobservable characteristics that we could not adequately control for that may explain differences in valuation between firms with high and low levels of employee-friendliness. While there is no perfect solution to address such endogeneity concerns we perform several tests that attempt to mitigate concerns over reserve causality and omitted variables, in addition to employing a range of control variables and fixed effects in all regressions. First, we

[10] As Landier et al. (2009) point out, firms that are less geographically disperse treat employees better (experience fewer layoffs), in part due to social factors (e.g. manager's reluctance to fire a neighbor). Such problems should be less severe for more geographically dispersed firms.

examine the causal effect between changes in Tobin's q and changes in employee friendly culture. The results show that while there is a causal effect of changes on employee-friendliness on Tobin's q, past changes in Tobin's q have no significant impact on employee-friendliness. Second, we implement a Two-Stage Least Squares (2SLS) procedure using lagged values of the gender wage gap in a country and the industry-level wages as instruments. Third, to better control for plausible unobservable heterogeneity between firms with high and low levels of employee-friendliness, we perform a matched-sample analysis in which we match firms with high (top tercile in the country) levels of industry-adjusted employee-friendliness with similar firms with low values employee-friendliness using propensity score matching that controls for various characteristics that may affect the level of employee-friendliness in a firm. In all of ours tests, we continue to find that employee-friendliness is associated with higher valuation, which provide further support to our main findings.

We further examine which components of employee-friendliness are more beneficial. Our results show that higher levels of employment quality, training and development, diversity, and human rights have a positive impact on firm value. Importantly, employment quality is not the sole driver of our results. Thus, compensation as well as the inclusion in the Best Companies to Work for list, which are components of employee quality (EQ), are not the main drivers of our observed results. This suggests that our results complement those in studies that find a link between compensation and employee satisfaction on abnormal stock return performance (e.g. Edmans et al., 2015).

We contribute to several strands of the literature. Because employees are vital assets to organizations (Zingales, 2000), a vast literature explores how firms motivate their employees to exert high effort (Kube et al. 2012; MacLeod, 2007; Akerlof, 1982). Paying high wages has been shown to be an effective way to motivate workers. Several studies document a positive link between above-market compensation and worker productivity, which leads to improved performance (e.g. Cappelli and Chauvin, 1991; Holzer, Katz, and Krueger, 1991; Mas, 2006; Propper and Van Reenen, 2010; Ouimet and Simintzi, 2015; Pagano and Volpin, 2005). Our paper contributes to this literature by providing evidence of how investing in employee-friendly policies enhance firm performance and add value. By doing so, we complement the findings in earlier studies by exploring how additional nonmonetary components of employee-treatment impact performance.

Next, our study contributes to the literature on the impact of culture on firm performance (Guiso et al., 2013; Edmans, 2011; Edmans, et al., 2015) by exploring how one aspect of culture−employee-friendliness− affects firm performance. Our measure of culture attempts to capture firms' investment in the well-being of their employees, thus avoiding, to the extent possible, reliance on firms' claims about their treatment of employees, which should have little effect on firm performance (see e.g. Guiso et al., 2013). Our findings add further support to theories that emphasize the importance of employees as key assets in organizations (see e.g. Rajan and Zingales, 1998; Berk, Stanton, and Zechner, 2010; Carlin, and Gervais, 2009).

We also contribute to the literature that examines how employee-treatment affects firm's capital structure (Bae, Kang, and Wang, (2011)) and corporate innovation (Chang, Fu, Low, and Zhang, (2015); Chen et al. (2016); Mao and Weathers, (2015)), and to studies that analyze the impact of employee stock ownership programs (Kim and Ouimet, (2014)). Bae et al. (2011) document that firms that treat their employees better tend to have lower debt ratios. We expand on their study by exploring how an employee-friendly culture affects firm value and performance in an international setting. Chang et al. (2015) document how the use of non-executive stock options has a positive effect on innovation, while Kim and Ouimet (2014) document that small employee-stock ownership plans (ESOPs) yield benefits to firms by increasing productivity especially in cases where ownership is concentrated among fewer employees. More recently, Chen et al. (2016) and Mao and Weathers (2015) find evidence of a positive impact of employee-friendliness on innovation for a sample of US firms. Our study expands on these studies by examining a broader measure of employee-treatment and its impact on firm value and performance and by exploring additional channels (e.g. technical efficiency) through which such treatment affects performance.

Finally, this paper contributes to the literature by examining the valuation consequences of an employee-friendly culture.[11] Edmans (2011) and Edmans, Li, and Zhang (2015) explore the relation between employee satisfaction and abnormal stock returns for a sample of US and international firms, respectively. We expand on those studies by exploring a related, but different question from the one posed by Edmans et al. (2015). We examine whether investing in firms' employees is beneficial or not. Our measure of an employee-friendly culture captures firms' investment in compensation, training, health and safety, diversity, and human rights and assesses the extent to which firms provide equal treatment and opportunities for advancement. As such, our measure captures both monetary "costly" components (e.g. total annual training costs), as well as less costly nonmonetary components (e.g. providing flexible working hours). In addition, we expand on prior studies by exploring which components of employee-friendly policies are value-enhancing.

The paper proceeds as follows. In Section 2 we discuss the data and the methodology used in our study. In section 3 we present our main results on the relation between employee-

[11] As Karolyi (2015) argues, the finance literature has not yet adequately explored the importance of culture. Yet, he demonstrates that cultural influences have an important impact on investment decisions in financial arenas.

friendliness and firm value and performance. In section 4 we discuss some robustness tests, and we conclude in section 5.

2. Data and Methodology

2.1. Measure of Employee-Friendly Culture

We measure a firm's "employee-friendly" culture by focusing on how a firm treats its current employees. To do so, we rely on questions and attributes of social performance using data from ASSET4's ESG database. Specifically, we focus on the following five categories: 1) *Employment quality* − measures a company's management commitment and effectiveness towards providing high-quality employment benefits and job conditions; 2) *Health and safety* − measures a company's management commitment and effectiveness towards providing a healthy and safe workplace; 3) *Training and Development* − measures a company's management commitment and effectiveness towards providing training and development (education) for its workforce; 4) *Diversity* − measures a company's management commitment and effectiveness towards maintaining diversity and equal opportunities in its workforce, and 5) *Human Rights* − measures a company's management commitment and effectiveness towards respecting the fundamental human rights conventions.

While ASSET4's ESG provides its own aggregate scores for each of these categories, we construct our own firm-level employee-friendly index (*EF-Index*) using various attributes. While our choice of variables is admittedly arbitrary, this approach allows us to more closely examine important questions such as what factors are important determinants of an employee-friendly culture and its associated effects on firm value and performance. In addition, by constructing our own firm-level measures of employee-friendliness we can apply a consistent standard to all firms in our sample. Our index construction parallels the construction of the firm-level governance index by Aggarwal et al. (2009). To alleviate concerns about the validity of our measure, we also use an alternate index that is based on the scores in each of the above five categories provided by the ESG database. Specifically, our alternate index, *Culture-PCA*, is the first principal component of the scores on the five categories.[12]

From the questions and attributes provided by the ESG database for each of the five categories of social performance, we choose those that relate to how a firm treats its employees. Several of the questions in the ESG database relate to claims made by the companies about certain issues. We specifically choose questions and attributes that can be verified, thus avoiding, to the extent possible, reliance on firms' claims about their treatment of employees, which should have little effect on firm performance (see e.g. Guiso et al., 2013).

We have a total of 32 employee-treatment attributes covering the five categories: *Employment quality* (seven attributes); *Diversity* (eight attributes); *Training and development* (six attributes); *Health and safety* (five attributes), and *Human rights* (six attributes). For each of the 32 attributes, our index takes the value of one if the company meets the criteria, and zero otherwise. In the case in which the attribute is a number (e.g. percentage of women managers), the index takes the value of one if the value is above (or below) the industry median and zero otherwise. We create an index for each of the five categories, expressed as a percentage, with a maximum value of 100% if a firm meets all the available criteria in each category. Similarly, we compute an aggregate index of employee-friendliness, *EF-Index*, with a maximum value of 100% if a firm

[12] ESG assigns scores (0-100) to each component of the five components of the social score: Employment quality; Diversity; Training and Development; Health and Safety, and Human Rights. These are based on multiple factors (questions) within each category. Higher values are associated with better employee treatment.

meets all 32 attributes. For firms that have missing attributes, we compute each index based on the percentage of all nonmissing attributes that a firm satisfies. Appendix B shows the attributes used to create the index for each category as well as the percentage of firms in our sample that satisfy each attribute. The indices are computed annually for each firm.

In terms of *Employment Quality*, from Appendix B we observe that very few firms in our sample experience strikes that lead to lost working days and only 7.6% of our firms have been included in the "Best Companies to Work For" lists. The latter suggests that our sample has a broader coverage of firms than those in prior studies of employee satisfaction (Edmans, 2011; Edmans et al., 2015). More importantly, our index of employee-friendliness is a broader measure than the one typically used in prior studies, as it covers additional areas that go beyond the inclusion in the "Best Companies to Work For" lists, which is only a subcomponent of one of our index categories. Assessing the *Diversity* component, about 50% of our firms have a diversity policy, while the proportion of women managers is higher than the industry median for about 45% of the firms in our sample. For *Training and Development*, we observe that about half of the companies in our sample have policies that support skills training of their employees, while only 7% of the companies provide training to its suppliers. In terms of *Health and Safety* about half (47%) of companies establish targets or objectives on employee health & safety. Finally, looking at the *Human Rights* component, we observe that only a fourth of our firms have a general policy regarding human rights, and only 11% monitor human rights in its suppliers. The proportion of firms meeting the *Human Rights* criteria is the lowest among all five categories.

2.2. Sample Description and Descriptive Statistics

Our initial sample consists of all firms covered by ASSET4 ESG database from 2002 through 2014 with available data on the five key performance indicators of social performance. The database covers a subset of firms from Thompson Financial's DataStream and WorldScope. The ASSET4 universe comprises over 5,000 firms from major indices including MSCI Emerging Markets, MSCI World, CAC40, DAX, FTSE250, S&P 500, NASDAQ 100, STOXX 600, ASX 300, SMI, and Bovespa. The database coverage varies by country, with coverage of developed markets starting in 2002, while some emerging markets begin coverage in 2007 or beyond. Our initial sample consists of 5,006 firms from 67 countries. We exclude firms with missing values for total assets, as well as those with negative sales or negative book value of equity. We proceed with our screening by excluding firms from regulated industries (financials – SIC codes between 6000 and 6999 and utilities – firms with SIC codes between 4900 and 4949) and those with missing values on our control variables. Finally, we exclude countries with fewer than three years of available data and those with fewer than three firms.[13] To mitigate the influence of outliers we winsorize all variables at the top and bottom 1% of the distribution. While ASSET4 coverage starts in 2002, our sample period starts in 2003 because we use lagged measures of our employee-friendliness variable in our analyses. Our final sample consists of 3,457 firms from 43 countries totaling 21,215 firm-year observations.

Table I shows a description of our sample. Our sample is geographically diverse. Firms from the US (844), Japan (352), Australia (310), and the United Kingdom (298) comprise about half of our sample (52.2%). While the United States makes up a large portion of our sample as

[13] The following countries were dropped from our sample because of data availability: Cayman Islands, Cyprus, Czech Republic, Gibraltar, Hungary, Iceland, Isle of Man, Jordan, Kazakhstan, Kuwait, Macau, Morocco, Nigeria, Oman, Panama, Papua New Guinea, Peru, Puerto Rico, Qatar, Saudi Arabia, Sri Lanka, Ukraine, United Arab Emirates, and Zimbabwe. Firms from these countries (74) represent about 2.1% of our final sample.

would be expected given the size and development of its capital markets, our sample population is an international one. International firms make up more than 75% of the total sample, and roughly 60% of our firms are outside of the US, Canada, and the UK. While our sample is relatively small, it is comprised of large firms, covering about 87% of the total market capitalization of all firms (excluding financials and utilities) covered by WorldScope as of 2014.

[Insert Table I Here]

In addition to the firm-level data, we collect country-level data from various sources. We obtain data on financial development and economic growth from the World Bank Development Indicators. We obtain data on proxies for labor market mobility from the Fraser Institute and from the Heritage Foundation and the Wall Street Journal. Specifically, we use two proxies for labor market mobility: 1) *Labor regulation*− a component of the Economic Freedom of the World Index from the Fraser Institute, and 2) *Labor freedom*– a component of the Index of Economic Freedom from the Heritage Foundation and the Wall Street Journal. Finally, we collect data on country-level culture from Hofstede (1980): *Power distance*, *Individualism*, *Uncertainty avoidance*, and *Masculinity*, to assess how country-level culture interacts with employee-friendly culture to affect firm performance. All variables are defined in Appendix A.

Table II shows descriptive statistics of our main firm- and country-level variables. Firms in our sample are large, with average (median) total assets of $4.7 billion ($4.5 billion). The average (median) Tobin's *q* is 1.80 (1.44). The average (median) of our main index of employee-friendliness, *EF Index, is* 38.6 (36.8) with a standard deviation of 21.2. This suggests that the average firm in our sample has adopted about 38% of the 32 attributes of employee-friendliness.

[Insert Table II here]

Table III shows the pairwise correlation coefficients between all our variables of interest. Notably, the results show a strong correlation between our measure of employee-friendliness and many of the other variables. While there is a negative correlation between *EF Index* and Tobin's *q*, *EF index* is positively correlated with various measures of firm performance (*ROA*, *ROE*) and firm-level governance (*Governance score*). The *EF index* also displays a positive correlation with firm size, age, percentage of foreign sales, and the cross-listing indicator, and a negative correlation with cash holdings, the percentage of closely-held shares, and the level of capital expenditures to assets. This suggests that employee-friendliness is correlated with important firm characteristics that drive financial performance and implies that we should control for these factors when examining its impact at the firm-level to avoid potential omitted variables biases. Many of the other variables also display unsurprising correlations, but none of these correlations is high enough to suggest a multicollinearity issue.

[Insert Table III Here]

3. Results

3.1. Employee-Friendly Culture and Firm Value

We first examine whether having an employee-friendly culture is associated with an increase in firm value, per our main hypothesis. The primary regression specification is a standard OLS regression using Tobin's *q* (market value of assets-to-book value of assets) as our main proxy for firm value. Our regressions include several firm-level, country-level, and industry-level control variables used in prior research to explain Tobin's *q* (Aggarwal et al. 2009; Gompers et al. 2010; Doidge et al., 2004). Specifically, we include the following firm-level control variables: (1) *Size*, measured as the log of book value of assets; (2) *Age*, the log of firm age; (3) *Leverage*, debt divided by total assets; (4) *Cash*, cash divided by total assets; (5) *PPE*, property, plant, and equipment divided by sales; (6) *Foreign sales*, the two-year average foreign sales divided by sales; (7) *R&D*, the two-year average research and development expenses divided by sales; (8) *Capex*, capital expenditures divided by total assets; (9) *Closely-held*, the percentage of a firm's shares that are closely held, and (10) *ADR*, a variable indicating firms cross-listed on U.S. stock exchanges. To control for patterns over time by country and industry, we include country-year and industry-year fixed effects in our baseline regressions. In specifications in which we exclude country-year fixed effects, we include the log of annual GDP per capita (*Log GDP per capita*) and the growth rate of real GDP (*GDP Growth*) to control for financial development and growth. All the control variables are lagged one year. Our regression model to test the effect of an employee-friendly culture on firm value is the following:

$$q_{it} = \alpha + \beta_1 EF_{i,t-1} + \sum \beta_m Controls_{i,t-1} + \mu_{ct} + \delta_{jt} + \varepsilon_{it}\ , \qquad (1)$$

EF refers to our proxies for employee-friendliness, *EF index* or *Culture-PCA*; *Controls* refers to the firm-level control variables, and μ_{ct} and δ_{jt} refer to country-year and industry-year fixed effects, respectively. Per our main hypothesis, our variable of interest is the coefficient on β_1 and we expect this to be positive and significant if an employee-friendly culture is associated with positive valuation consequences. Consistent with our main hypothesis, the results in Panel A of Table IV show evidence of a positive and significant coefficient on β_1, suggesting that firms that adopt more employee-friendly policies have higher Tobin's *q*. The results are both statistically and economically significant. Using the coefficient in Model (2), a one-standard-deviation increase in *EF Index* (21.2 – from Table II) is associated with a 5.9 percent increase in Tobin's *q*.[14]

[14] The coefficient on *EF index* in Model (2) of Panel A of Table IV is 0.0050. Thus, a one-standard-deviation increase in *EF index* (21.17) is associated with a 0.106 (21.17 x 0.0050) increase in Tobin's *q*, which represents a 5.9% increase (0.106/1.80).

[Insert Table IV here]

We examine the robustness of our results by estimating various specifications of Equation 1 in Panel A of Table IV. In Model (1) we control for country, industry, and year fixed effects and include *Log GDP per capita* and *GDP growth* to control for financial development and growth. In Model (2) we include country-year and industry-year fixed effects to control for plausible patterns in employee-friendly culture over time by country and industry. In Model (3) we show results including firm and year fixed effects to better control for time invariant firm-specific characteristics. The magnitude of the coefficient on *EF-index* is much smaller when using firm fixed effects. This is consistent with the idea that culture is stable over time (Lazear, 1995; Kreps, 1990) and suggests that the variation in Tobin's *q* is driven mostly by cross-sectional variation in *EF index*. In Model (4) we use our alternate measure of employee-friendly culture, *Culture-PCA*, derived from the component scores given by ASSET4 ESG. The results using the alternate measure of employee-friendliness are similar in statistical significance, but slightly larger in economic magnitude compared to our main measure, *EF index*. From Model (4) in Panel A of Table IV, a one-standard-deviation increase in *Culture-PCA* (1.73) is associated with a 6.6 percent increase in Tobin's *q*.[15]

In Panel B of Table 4, we examine the impact of the individual components of the *EF index*, based on: 1) *Employment quality (EQ)*; 2) *Health and safety (HS)*; 3) *Training and development (TD)*; 4) *Diversity (DO),* and 5) *Human rights (HR)*. The results in Panel B show that except for the *HS index*, all other components of the *EF index* have a positive and significant

[15] The coefficient on *Culture-PCA* in Model (4) of Table IV is 0.0691. Thus, a one-standard-deviation increase in *Culture-PCA* (1.73) is associated with a 0.119 (1.73 x 0.0691) increase in Tobin's *q*, which represents a 6.6% increase (0.119/1.80).

impact on Tobin's *q*. In terms of economic magnitude, the *HR index* and the *TD index* have the largest impact. A one-standard-deviation increase in *Human rights* (36.76) is associated with a 5.5% increase in Tobin's q, while a one-standard deviation increase in *Training and development* (28.2) is associated with a 4.4% increase in Tobin's *q*.[16] These results suggest that our findings are not just a result of firms paying higher wages, nor are they driven by firms that make the list of the Best Companies to Work for. Note that salaries and the inclusion on the Best Companies to Work for list are subcomponents of *Employment Quality*. While *Employment Quality* does have a positive impact on firm value, other indices have a more significant impact on Tobin's *q*.[17] Although not reported to conserve space, in our internet appendix we run regressions including all five index components in the same regression; only the coefficients on *Training and development and Human Rights* remain positive and statistically significant in these regressions; the coefficient on *Health and Safety* switches sign and becomes negative and significant.[18]

The results in Panels A and B of Table IV are in line with our main hypothesis and suggest than an employee-friendly culture is associated with higher firm value. Thus, these preliminary results suggest that there is value in investing in an employee-friendly culture.

3.2. Endogeneity in Employee-Friendly Culture and Firm Value

[16] Based on the coefficient on HR index (0.0027) in Model (5) of Panel B of Table IV, a one-standard deviation increase in HR index (36.76) is associated with a 0.099 increase in Tobin's q, which represents a 5.5% increase (0.099/1.8). Similarly, based on the coefficient on TD index (0.0028) in Model (3) of Panel B, a one-standard deviation increase in TD index (28.2) is associated with a 0.079 increase in Tobin's q, which represents a 4.4% increase (0.079/1.8).

[17] Based on the coefficient on EQ index (0.0041) in Model (1) of Panel B, a one-standard deviation increase in *EQ index* (14.36) is associated with a 0.059 increase in Tobin's q, which represents a 3.3% increase (0.059/1.8).

[18] The high correlation between these variables likely explains the switch in sign of the coefficient on *Health and Safety* when we include all variables in the same regression. For example, the correlation between the *Human Rights* and *Training and Development* is 0.57.

Our results thus far suggest that an employee-friendly culture is associated with higher Tobin's q, which adds support to our main hypothesis. These results may not necessarily establish causality, however. One potential concern deals with reverse causality; firms with higher value (or better prior performance) may be able to spend more on their employees to create a more employee-friendly working environment. In addition, there could be endogeneity bias caused by omitted variables. If an omitted variable impacts both firm value and a firm's ability to invest in employee-friendly policies, our employee-friendly culture would not be exogenous to firm value, and the coefficients from OLS regressions would be biased and inconsistent. While there is no perfect solution to addressing endogeneity, we perform the following tests to alleviate these concerns.

3.2.1. Change Regressions

As a first test to address endogeneity concerns, we first examine the causal effect between changes in Tobin's q and changes in employee friendly culture. To do so, we run OLS regressions using changes in Tobin's q (*EF index*) between t and $t\text{-}1$ as the dependent variable and use lagged changes in *EF index* (Tobin's q) as the key independent variables, along with all controls (measured as differences between t and $t\text{-}1$). The results are shown in Panel A of Table V. In Models (1) and (2) we use ΔTobin's $q_{\mathrm{t,\,t\text{-}1}}$ as the dependent variable, while Models (3) and (4) use ΔEF Index$_{t,t\text{-}1}$. The results in Models (1) and (2) show that past changes in *EF index* are associated with future changes in Tobin's q. The p-value of the Wald tests reject the null that lagged values of $\Delta EF\ Index_t$ are jointly equal to zero.[19] This suggests that lagged changes in *EF index* have a causal effect on Tobin's q. In contrast, in Models (3) and (4), we observe that lagged changes in

[19] In Models (1) and (2) of Panel A of Table V, the p-values of the Wald test are 0.030 and 0.044, respectively.

Tobin's q have no significant impact on the *EF index*. The Wald tests fail to reject the null that lagged values of ΔTobin's q are jointly equal to zero. Overall, the results show that while there is a causal effect of changes on employee-friendliness on Tobin's q, past changes in Tobin's q have no significant impact on employee-friendliness.

3.2.2. Two-stage Least Squares Estimation

As an alternate way to address endogeneity concerns, we employ a two-stage least squares (2SLS) procedure using instrumental variables for our measure of employee-friendly culture. We use two instruments: 1) *Wage gap*− the difference between median wages of men and women relative to the median wages of men in the country, and 2) *Industry wage*− the total salaries and wages divided by the total number of employees across firms in the same industry.[20] We obtain *Wage gap* from the Organization for Economic Cooperation and Development (OECD) Statistics and complement it with data from the International Labor Organization 's ILOSTAT database. Valid instruments must satisfy two conditions: 1) the relevancy condition− the instrument and the endogenous variable must be correlated after controlling for all other exogenous variables, and 2) the exclusion restriction− the instrument should not be correlated with the error term from the second-stage regression. While no instrument is perfect, our instruments seem to satisfy both conditions of validity (we discuss the tests of validity below). The gender wage gap in a country may reflect cultural norms in the country with respect to diversity and equality. While these norms could influence a firm's employee-friendly policies (e.g. with relation to the diversity component of the *EF index*), the wage gap in a country is unlikely to directly impact firm performance.[21] As

[20] The wages and salaries figures were obtained from Compustat Global. We construct the industry-level wages (Fama-French 30 industries) following Bae et al. (2011).

[21] In untabulated results, we examine whether more developed countries tend to have lower wage gaps; if so, firms in countries with lower wage gaps (and likely more employee-friendly policies) could have higher valuation, but not because of the employee-friendly policies, but because of economic development in those countries. Exploring the

argued by Bae et al. (2011), higher industry-level wages may reflect employee productivity in the industry. If firms' treatment of employees reflects their productivity, firms in higher wage industries may have more employee-friendly policies. While firm performance may affect the wages paid to its employees, it is unlikely that its performance would affect industry-level wages; thus, industry-level wages seems to meet the exclusion restriction, as well.

Panel B of Table V shows results from the instrumental variable (2SLS) regressions. Model (1) shows results from the first-stage OLS regressions using the *EF index* as the dependent variable; we use the predicted values from the first-stage in the second-stage regressions (Model (2)). Because our instruments vary by country-year (*Wage gap*) and by industry-year (*Industry wage*), we do not use country-year and industry-year fixed effects in the first-stage regressions. Instead, we use region-year and industry fixed effects.[22] Our instruments exhibit significant explanatory power for firm-level employee-friendly culture. The coefficient on *Wage gap* is negative and significant, while *Industry wage* is positive and highly statistically significant. The 1st stage *F*-statistic (*p*-value of 0.039) rejects the null hypothesis that the instruments are jointly zero. In addition, the Hansen's *J*-statistic overidentification test (χ^2) fails to reject the null hypothesis that the instruments are valid.[23] In Model (2) we report results from the second-stage regressions and confirm our prior findings.[24] An employee-friendly culture continues to have a positive impact on firm value, even after correcting for endogeneity using the instrumental variable

data, we do not find evidence of this. Countries such as the United States and the United Kingdom tend to have above-median wag gaps, while Scandinavian countries (such as Norway) tend to have the lowest wage gaps. Thus, there is no clear pattern to the wage-gap-economic development relation.

[22] We group countries into regions using the World Bank regions.

[23] The *p*-value from Hansen's *J*-test statistic is 0.166.

[24] As a further test, available in our internet appendix, we include *Industry wage* as an additional instrument and obtain similar results. We measure *Industry wage* annually as the median wage across all firms in the same country and industry (defined using the Fama-French 17 industry classification). Following Bae et al. (2011), wage is calculated as the log of total salaries and related expenses scaled by the number of employees.

approach. In Models (3)-(6) we show first- and second-stage results using each instrument separately. Each instrument continues to have a significantly impact on *EF index*. In addition, the *EF index* continues to have a positive impact on firm value and have a similar economic magnitude after instrumenting it with each of these variables.

3.2.3. Matching approach

While our results thus far suggest that employee-friendliness leads to improved valuation, a lingering concern is that unobserved heterogeneous characteristics between firms with high and low values of the *EF index* may be driving our results. To address this concern, we present results for a matched sample of firms with similar characteristics. We first rank firms by country-year based on their industry-adjusted *EF index*. Firms in the top tercile of the distribution in their country are classified as *High EF index*. Next, we match each *High EF index* firm with a similar firm with a low *EF index* score using propensity score matching (PSM) technique. To obtain the propensity scores, we first run the following probit regressions:

$$High\ EF\ index_{it} = \alpha + \sum \beta_m Controls_{i,t-1} + \mu_c + \delta_j + \lambda_t\ \varepsilon_{it} \qquad (2)$$

High EF index is an indicator variable for firms with an industry-adjusted *EF index* in the top tercile in its country and zero otherwise. *Controls* refers to the standard set of controls used in our regressions, and μ_c, δ_j, and λ_t are country, industry, and year fixed effects. Results from these regressions are shown in Appendix C. Using the propensity scores, we match each treatment (*High EF index*) firms with a control firm using the nearest neighborhood method (we employ a 1:1 and a 1:4 matching) with replacement. The results from the probit regressions suggest that several firm characteristics are associated with *EF index*. In particular, size, age, capital expenditures, and ADR are associated with a higher probability of having a high *EF index*, while higher values of leverage, PPE-to-sales, and closely held shares lower the probability of being a *High EF index* firm.

To assess the quality of our matching approach, we run several tests. First, we rerun the above probit (Equation 2) using the matched sample. Model (2) of Appendix C shows these results. The results show that none of independent variables are statistically significant. In addition, the Pseudo R^2 drops from 0.19 in Model (1) to 0.01 in the post-match sample (Model 2). To more directly assess the quality of our matching, in Panel B of Appendix C we compare the values of control variables between our treatment firma and the control firms pre- and post-match. Following Imbens and Wooldridge (2009) and Focke, Maug, and Niessen-Ruenzi (2016), we compare firms based on normalized differences, as follows:

$$\Delta x = \frac{\bar{x}_H - \bar{x}_c}{\sqrt{{s_H}^2 + {s_c}^2}}$$

where $\bar{x}_H$ ($\bar{x}_c$) is the sample mean of the covariates for *High EF index* (control) firms, and ${s_H}^2$ (${s_c}^2$) is the estimate of the variance. As Imbens and Wooldridge (2009) argue, using normalized differences addresses problems associated with *t*-statistics when there are large differences in the means of two distributions. The results for the full sample in Panel B of Appendix C show that *High EF index* firms tend to be larger, have a larger proportion of foreign sales, and are more likely to be cross-listed. After matching, while some differences remain statistically significant, the magnitude of the differences is small. For the matched sample, the normalized differences (Δx) are all within the recommended 0.25 threshold (Imbens and Wooldridge (2009)). Overall, our tests suggest that the propensity score matching procedure yields a comparable set of treatment and control firms.

In Panel C of Table V we show results from the estimation of Equation (1) for the matched sample of firms. In Model (1) we show results from the 1:1 nearest neighbor matching, while Model (2) show results using a 1:4 nearest neighbor matching. The results continue to show that firms with more employee-friendly policies have higher value. In terms of economic significance, from Model (1) we observe that *High EF index* firms have Tobin's q that are 7.3% higher than their matches.[25]

[Insert Table V Here]

3.2.4. The Impact of Governance

The impact of an employee-friendly culture on firm value may be driven by firm-level governance. Firms with better governance may tend to treat employees better. Since it has been shown that firms with better governance are valued higher (see e.g. Aggarwal et al. (2009)), our earlier results may be driven by governance characteristics. To examine whether governance is the driver of our results, we run Equation 1 using interactions between our *EF index* and proxies for governance. Specifically, we use three proxies for firm-level governance: 1) Governance score – the pillar score on the governance component (0-100) given by ASSET 4 ESG database; 2) Board independence – the percentage of independent directors, and 3) GOV index – the governance index from Aggarwal et al. (2009).[26] Using these measures, we create indicator variables of good governance. For the two governance indices, we create indicator variables of good governance (*High governance*) that equal one if the firm's governance index is above the median value in its

[25] For this sample, the average Tobin's q is 1.68. From the coefficient in Model (1) of Panel C of Table V (0.123), *High EF* firms have Tobin's q that are 7.3% higher than their matches (0.123/1.68).
[26] GOV index (Aggarwal et al. (2009), based on 44 governance attributes, is only available for 25 countries in our sample.

country and zero otherwise. We also create an indicator variable, *Board independence* that is equal to one if the board is comprised by a majority of independent directors and zero otherwise.

We present these results in Panel A of Table VI. The results show that the impact on an employee-friendly culture on firm value is larger for firms with better governance, firms with poor governance still benefit from treating employees well. From Model (1) of Panel A of Table VI, a one-standard deviation increase in *EF index* is associated with a 4.7% increase in Tobin's q for firms with poor governance. In contrast, a one-standard-deviation increase in *EF index* is associated with a 7.9% increase in Tobin's q.[27]

Overall, the results suggest that the value of an employee-friendly culture is larger for firms with better governance, but governance is not the sole driver of our results.

3.2.5. Geographic and Product Diversity

We now turn to examine whether the impact of an employee-friendly culture on firm value differs based on firms' geographic or product diversity. Landier et al. (2009) document that employee treatment is inversely related to geographic distance. Their findings suggest that social factors (e.g. reluctance to fire their neighbors) related to the proximity between employees and managers may lead to a misalignment of managerial and shareholder incentives. Such agency problems should be less severe for firms that are geographically disperse. For such firms, employee treatment is more likely driven by value-maximizing incentives (e.g. motivating employees; retaining productive workers). We posit that the impact of an employee-friendly culture should be stronger in more geographically dispersed firms. To test this hypothesis, we run

[27] Based on the coefficient on *EF index* (0.004) in Model (1) of Panel A, a one-standard deviation increase in *EF index* (21.17) is associated with a 0.085 increase in Tobin's q, which represents a 4.7% increase (0.085/1.8) for firms with poor governance. For *High governance* firms, the impact is larger ([0.004+0.0027] *21.17)/1.8, or 7.9%.

Equation (1) regressions using interactions with proxies for geographical diversification. We use two proxies of diversification: 1) *High geographical diversification* is an indicator variable that is equal to one if the firm's Herfindahl index (HI_{geog}) based on geographic segment sales is in the bottom 25% of the distribution in its country and zero otherwise; 2) *Geographical dispersion* is an indicator variable that is equal to one if the firm operates in more than two geographic segments and zero otherwise. Results are shown in Panel B of Table VI. Consistent with our hypothesis, we document that more geographically dispersed firms benefit more from an employee-friendly culture. The impact is economically significant. From Model (1) in Panel B of Table VI, a one-standard-deviation increase in *EF index* is associated with a 4.6% increase in Tobin's *q* for less geographically dispersed firms; for geographically dispersed firms, the impact is much larger (8.1% increase in Tobin's q).[28] Results are of similar magnitude when we use the alternate index of geographic dispersion.

In terms of product diversity, firms that are more diversified in terms of the products offered tend to be more complex. Managers may find it harder to monitor employees in such firms. Better employee-treatment may serve as an alternate way to motivate employees that are harder to monitor; thus the impact of a more employee-friendly culture may be more pronounced for more diversified firms. On the other hand, employees who are not monitored closely by managers but are treated better may take advantage of this treatment without becoming more productive. Better employee-treatment in the latter case may be value-destroying. We test this hypothesis using two proxies for product diversity: 1) *High product diversification* is an indicator variable that is equal

[28] Based on the coefficient on EF index (0.004) in Model (1) of Panel B, a one-standard deviation increase in *EF index* (20.9 for this subsample) is associated with a 0.084 increase in Tobin's q, which represents a 4.6% increase (0.084/1.81) for firms that are not geographically dispersed. For firms with high geographical dispersion, the impact is larger ([0.004+0.003] *20.9)/1.81, or 8.1%.

to one if the firm's Herfindahl index (HI_{prod}) based on product segment (2-digit SIC code) sales is in the bottom 25% of the distribution in its country and zero otherwise; 2) *Product diversification* is an indicator variable that is equal to one if the firm operates in more than two product segments (2-digit SIC code) and zero otherwise. The results show in Panel B of Table VI reveal that the impact of an employee-treatment is stronger for firms that are more diversified. These results are consistent with the view that employee treatment may be a way to motivate employees when the costs of monitoring may be high.

3.3. The Impact of Labor Market Flexibility and Country Culture

3.3.1. Labor Market Mobility

The impact of an employee-friendly culture on firm value may differ across countries. Edmans et al. (2015) conclude that employee satisfaction is associated with higher abnormal returns in countries with greater labor mobility. We investigate whether firms in countries with greater labor mobility will adopt more employee-friendly policies as a result of competition in the labor force. If so, these firms are more likely to benefit by providing workers with a more employee-friendly environment and should be more valuable where labor mobility is higher. We test this hypothesis using two proxies for labor market mobility: 1) *Labor regulation* and 2) *Labor freedom*. *Labor regulation*− a component of the Economic Freedom of the World Index from the Fraser Institute− is an index that measures the extent to which a country allows market forces to determine wages and establish the conditions of hiring and firing workers. Using these measures, we create indicator variables of *High Labor regulation* and *High Labor freedom* that equal one for countries with above-median values of the indices and zero otherwise.

To test our hypothesis, we run regressions using interactions between our *EF index* variable and our measures of labor market mobility; we report results in Panel A of Table VII. The results are economically significant. Taking the coefficients in Model (1), a one-standard-deviation increase in *EF index* is associated with a 4.6% increase in Tobin's q in countries with below median *Labor regulation*. The impact is *stronger* in countries with high labor market mobility; a one-standard-deviation increase in *EF index* is associated with an 8.0% increase in Tobin's q in *High Labor regulation* countries.[29] We obtain similar results using our alternate measure of labor market mobility, *High Labor freedom*, in Models (2). Overall, the results in Table VII suggest that the impact of an employee-friendly environment on firm value is larger when labor mobility is greater. Importantly, in contrast with the results in Edmans et al. (2015), we find evidence that an employee-friendly culture improves firm value even in countries with low labor market mobility.[30]

[Insert Table VII]

3.3.2. Country-Level Culture

In addition to labor mobility, the impact of an employee-friendly culture on firm value may differ across countries based on their culture. Certain cultures may value the adequate treatment of employees more than others, and we posit that firms that invest more in their employees may observe larger rewards in such countries. To test this hypothesis, we use well-established measures of a country's culture from Hofstede (1980): *Power distance*, *Individualism*, *Uncertainty avoidance*, and *Masculinity;* these measures have been widely used in the literature (see e.g. Karolyi, 2015). *Power distance* measures the degree to which the less powerful members of a society accept and expect that power is distributed unequally. People in societies exhibiting a large

[29] The EF index-*PCA* (20.9) is associated with a 0.083 increase in Tobin's q, which represents a 4.6% increase relative to its mean (0.083/1.83). For *High Labor regulation* countries, a one-standard-deviation increase in *EF index* is associated with an 8.0% increase in Tobin's q ([0.004+0.003] x 20.9]/1.83).

[30] The coefficient on *EF index* is positive and statistically significant in Models (1) and (2) of Panel A of Table VII, suggesting that employee-friendly culture adds value in countries with low labor flexibility. The inclusion of additional countries relative to the sample in Edmans et al. (2015) may help explain why we find a positive impact on firm value in countries with low labor mobility.

degree of power distance accept a hierarchical order in which everybody has a place and which needs no further justification. We thus posit that treating employees well may be valued less, or yield fewer benefits in countries with high power distance. *Individualism* captures the extent to which people's self-image is defined in terms of "I" or "we." Firms may need to work harder to retain productive workers in more individualistic societies; we thus posit that treating employees well may be more productive in countries with higher levels of individualism. *Uncertainty avoidance* measures "the degree to which members of a society feel uncomfortable with uncertainty and ambiguity". We posit that employee-friendliness should be valued more in cultures that tolerate more uncertainty. In such cultures, firms may find it more difficult to retain productive employees unless they treat them well (i.e. employees are more likely to take the risk to seek other employment opportunities). Finally, *Masculinity* measures a society's preference for achievement, assertiveness and material rewards for success. Treating employees well may be more valuable in high masculinity societies in which there is a preference for rewards for success.

To examine these hypotheses, we create indicator variables for each culture measure that equals one for countries with above median values of each measure and zero otherwise. We then run Equation 1 regressions including interactions between *EF index* and the four indicator variables.

Results from these regressions are shown in Panel B of Table VII. We do not report coefficients on country- and firm-level controls to conserve space. The results show that the impact of an employee-friendly culture on firm value is stronger in countries with low *Power distance,* high *Individualism*, and low *Uncertainty avoidance*, consistent with our hypotheses. We do not find any significant difference between countries with high and low *Masculinity*. The magnitude of the results is economically large. As an example, taking the coefficients in Model

(1) of Panel B of Table VII, a one-standard-deviation increase in *EF index* is associated with a 6.9% increase in Tobin's *q* in low *Power distance* countries, but only a 2.3% increase in Tobin's *q* in high *Power distance* countries.[31] The results for countries with high *Individualism* and low *Uncertainty avoidance* are of similar magnitude and suggest that the impact is stronger in more individualistic countries and in countries where risk is more tolerated. Overall, the results in this section suggest that treating employees well is valued more in certain cultures; specifically, employee-friendly cultures are valued higher in countries with low *Power distance,* high *Individualism*, and low *Uncertainty avoidance*.

3.4. Employee-Friendly Culture and Productivity

The reciprocity view argues that better employee-treatment should encourage workers to be more productive, which may help explain the observed improvements in firm value and performance. If this mechanism is at work, we should observe that more employee-friendly firms have more productive workers. Firms with more driven employees should be able to maximize their earnings potential and improve technical efficiency by making better products, delivering better services, and potentially lowering costs. To explore this hypothesis, we use two measures of technical efficiency from previous literature (see e.g. Loderer, Stulz, and Waelchli, 2014): 1) *Sales-to-assets* and 2) *COGS-to-employees (log)*−cost of goods sold per employee. Per our hypothesis, we should observe that a more employee-friendly culture (higher value of *EF index)* is associated with higher asset turnover (higher *Sales-to-assets*) and lower costs (lower *COGS-to-employees*). We report results from these regressions in Table VIII. In all of the regressions we

[31] From Model (1) of Panel B of Table VII, a one-standard deviation increase in *EF index* (20.9) is associated with a 0.25 (20.9 x 0.0.006) increase in Tobin's *q* in low power distance countries, a 6.9% increase relative to its mean (1.80). In high *Power distance* countries, a one-standard deviation increase in *EF index* is associated with a 0.042 (20.9 x [0.0006+-0.0004]) increase in Tobin's *q*, which represents a 2.3% increase.

control for various factors that have been shown to affect technical efficiency, including: firm age, size, capital expenditures, leverage, R&D expenses-to-sales, market-to-book ratio, volatility, and *ROA*.

[INSERT TABLE VII]

The results in Models (1) and (2) of Table VIII show that an employee-friendly culture is associated with improved technical efficiency. Taking the coefficients in Model (1), a one-standard-deviation increase in *EF index* is associated with a 10.4 (20.9 x 0.499) increase in *Sales-to-assets*, which represents an 11.3% increase relative to its mean (92.1). The reduction in costs (Model (2)) is of similar magnitude.

In Model (3), we report results using a proxy for innovation, the number of patents. Unfortunately, data availability for patents is limited to a small subsample of firms (1,540 firm-year observations). Using these data, we follow Chang et al. (2015) and run regressions using Patents (log (1 + # of patents)) as the dependent variable. Consistent with the existing evidence on the impact of employee treatment on innovation (e.g. Chen et al. (2016)), results in Model (3) of Table VIII show that employee treatment is associated with a larger number of patents. Overall, the results in this section are consistent with our hypothesis that a more employee-friendly culture encourages employees to work harder (and be more innovative) and this increased effort appears to improve efficiency, and ultimately firm value.

[INSERT TABLE VIII]

3.5. Employee-Friendly Culture and Firm Performance

We next examine whether an employee-friendly culture is associated with improved firm performance. Specifically, we explore whether a more employee-friendly culture is associated with higher profitability. In an employee-friendly environment, employees may be more motivated to work harder, which could translate into higher profitability. To examine this, we run regressions similar to Equation 1 using two proxies for profitability: 1) return on assets (*ROA)* - net income divided by lagged assets, and 2) return on equity (*ROE)* - net income divided by lagged book value of equity.

The results from regressions of firm profitability on culture are shown in Panel B of Table VIII. In line with our hypothesis, the results in Panel B of Table VIII show a positive and significant coefficient on *EF index.* Firms with a more employee-friendly culture tend to have higher *ROA* and *ROE*. The results are economically significant. As an example, the coefficient on *EF index* in Model (1) indicates that a one-standard-deviation increase in *EF index* is associated with an 8.0% increase in *ROA*.[32] The results are similar when we use *ROE* as our measure of profitability. In Models (2) and (4) we show results from 2SLS regressions in which we instrument *EF index* with our two instruments identified earlier, 1) *Wage gap*, and 2) *Industry wage* Our results are similar using this approach.

4. Additional Robustness Tests

In Table IX we present our main valuation regression results from Table IV, Panel A using alternative specifications. Specifically, in Model (1) we report result from regressions in which we exclude US firms from the sample as they account for roughly 24% of the sample. The results here are very similar in significance and magnitude as those in Table IV, Panel A. To examine whether our results are driven by firms that are included in the list of "Best Companies to Work for" (BC firms), in Model (2) we run regressions excluding BC firms. The results continue to hold when excluding BC firms. As an additional robustness test we calculate value using market-to-book

[32] The coefficient on *EF index* in Model (1) of Panel B of Table VIII is 0.0025. Thus, a one-standard deviation increase in *EF index* (20.9) is associated with a 0.523 increase in *ROA*. From Table II, the average *ROA* is 6.52%. Thus, the 0.523 increase corresponds to an (0.523/6.52) 8.0% increase.

value of equity instead of Tobin's q. Again in Model (3) we find similar results to those reported earlier. Finally, to examine whether our results are affected by the changing composition of our sample of firms, since ASSET 4 ESG database's coverage improves throughout our sample period, in Model (4) of Table IX we show results in which we restrict the sample to firms with available data for the full sample period.[33] The results using this subsample of firms corroborate our main findings.

[Insert Table IX Here]

5. Conclusion

Anecdotal observation suggests that many firms are starting to offer more perks to employees in an attempt to create a more employee-friendly culture. We examine the economic rationale behind this behavior and explore whether investing in employee-friendly policies is value-enhancing. Overall, we show that firms that invest more in their employees (for example by providing more benefits and training and equal opportunities for advancement) are valued higher and perform better. Specifically, we find that firms with a more employee-friendly culture have higher value (Tobin's q) and profitability (*ROE* and *ROA*).

We further document that the impact of an employee-friendly environment on firm value is stronger for firms with better governance and those that are more geographically dispersed and diversified. Consistent with past research (Edmans et al. 2015), we document that the impact of culture on firm value is maximized in countries with significant labor mobility, although we also find a positive (albeit smaller) impact in countries with low labor mobility. In addition, we explore the impact of country-level culture on firm value and show that the impact of employee-friendly

[33] This also avoids any survivorship bias that may exist in our earlier regression results.

policies on firm value is more pronounced in countries with lower power distance, high individualism, and low uncertainty avoidance.

We further find that the improvement in firm value and profitability appears to stem from improved firm-level technical efficiency (i.e. higher sales-to-assets; lower costs), and find some evidence that employee-friendliness promotes innovation. Our results suggest that a more employee-friendly culture adds value via enhanced employee motivation that encourages employees to become more efficient.

Overall, these findings suggest that firms are acting rationally on behalf of shareholders in offering employees perks and benefits that are consistent with an employee-friendly culture. Shareholders see benefits both in cash flows and in the valuation placed on their investment. The optimal level of employee benefits remains an open question, but firm-friendliness towards employees need not be detrimental to shareholders.

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Table I: Sample Distribution across Countries

The table reports the number of firms, total number of observations, and the first year of available data for firms in the country. Our sample includes all firms covered by ASSET4 ESG database. We exclude financial firms and utilities (SIC codes between 6000 and 6999 and between 4900 and 4949) and firms with missing data on total assets, as well as those with negative sales or negative book value of equity. We require countries to have three years of data on at least three firms. Our sample consists of 3,457 firms (21,215 firm-year observations) from 43 countries from 2003 through 2014.

Country	First Year	# of firms	# of Observations
AUSTRALIA	2003	310	1,325
AUSTRIA	2003	13	104
BELGIUM	2003	18	141
BERMUDA	2005	10	49
BRAZIL	2008	59	206
CANADA	2003	240	1,239
CHILE	2009	12	61
CHINA	2005	119	481
COLOMBIA	2011	5	16
DENMARK	2003	21	174
EGYPT	2012	8	20
FINLAND	2003	25	224
FRANCE	2003	82	695
GERMANY	2003	76	488
GREECE	2003	15	79
HONG KONG	2003	86	512
INDIA	2008	64	262
INDONESIA	2009	25	81
IRELAND	2003	28	212
ISRAEL	2010	11	39
ITALY	2003	27	219
JAPAN	2003	352	2,816
KOREA (SOUTH)	2005	86	355
LUXEMBOURG	2005	9	55
MALAYSIA	2009	34	112
MEXICO	2009	27	64
NETHERLANDS	2003	41	238
NEW ZEALAND	2005	11	67
NORWAY	2003	17	149
PHILIPPINES	2011	9	24
POLAND	2010	12	41
PORTUGAL	2003	8	69
RUSSIAN	2008	28	137
SINGAPORE	2005	40	274
SOUTH AFRICA	2009	96	264
SPAIN	2003	30	232
SWEDEN	2003	42	356
SWITZERLAND	2003	64	489
TAIWAN	2009	118	474
THAILAND	2009	20	73
TURKEY	2009	17	67
UNITED	2003	298	2,117
UNITED STATES	2003	844	6,115
TOTAL		3,457	21,215

Table II: Descriptive Statistics

The table shows descriptive statistics for our main variables. Our sample consists of 3,457 firms (21,215 firm-year observations) from 44 countries from 2003 through 2014. Financial and stock market data are obtained from Thomson's WorldScope and DataStream. Data on culture variables is obtained from ASSET4 ESG database. Variable definitions are found in Appendix A.

Descriptive Statistics						
	N	Mean	25th. pctl.	Median	75t pctl.	Std. dev.
Firm-level variables:						
EF Index	21,215	38.59	21.05	36.84	55.56	21.17
Culture -PCA	21,215	0.12	-1.35	0.12	1.61	1.73
Employment quality (%)	21,215	33.47	25.00	25.00	42.86	14.36
Human rights (%)	21,215	32.02	0.00	16.67	66.67	36.76
Training and development (%)	21,215	40.47	25.00	50.00	50.00	28.20
Diversity (%)	21,215	49.22	33.33	50.00	66.67	30.02
Health and safety (%)	21,215	45.28	0.00	50.00	75.00	36.95
Tobin's q	21,215	1.80	1.10	1.44	2.07	1.12
ROA	21,098	6.52	3.02	6.17	10.16	8.20
ROE	21,040	13.58	5.47	12.63	21.16	22.86
Log assets ($)	21,215	22.27	21.38	22.22	23.17	1.38
Log Age	21,215	3.03	2.48	2.94	3.56	0.87
Leverage	21,215	23.09	10.56	22.28	33.38	15.98
Cash-to-assets	21,215	8.05	1.64	5.21	11.36	8.90
PP&E-to-sales	21,215	113.11	28.94	57.34	122.10	169.53
Foreign sales-to-sales	21,215	37.29	1.44	33.70	64.05	32.58
RD-to-sales	21,215	2.49	0.00	0.04	2.40	5.27
Capex-to-assets	21,215	5.78	2.19	4.16	7.35	5.47
Closely-Held %	21,215	25.64	3.47	19.55	42.81	23.49
ADR	21,215	0.19	0.00	0.00	0.00	0.40
Governance score	21215	52.23	21.53	59.98	79.37	30.51
Country-level variables:						
Log GDP per capita	21,215	10.50	10.49	10.70	10.82	0.65
GDP growth	21,215	1.91	1.12	2.19	2.88	2.69

Table III: Correlations

The table shows correlation among variables used in our analysis. * indicates that the correlation is significant at least at the 10% level. See Appendix A for variable definitions.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
(1)	1																						
(2)	0.83*	1																					
(3)	0.46*	0.38*	1																				
(4)	0.85*	0.72*	0.28*	1																			
(5)	0.78*	0.72*	0.32*	0.57*	1																		
(6)	0.66*	0.50*	0.17*	0.38*	0.40*	1																	
(7)	0.71*	0.55*	0.20*	0.46*	0.48*	0.50*	1																
(8)	-0.06*	-0.04*	0.03*	-0.04*	-0.06*	-0.02*	-0.12*	1															
(9)	0.01*	0.06*	0.05*	0.02*	0.04*	-0.03*	-0.05*	0.51*	1														
(10)	0.04*	0.09*	0.05*	0.05*	0.05*	0.00	-0.02*	0.39*	0.82*	1													
(11)	0.37*	0.45*	0.11*	0.38*	0.33*	0.19*	0.20*	-0.29*	-0.07*	-0.01*	1												
(12)	0.17*	0.18*	0.04*	0.15*	0.11*	0.17*	0.12*	-0.01*	0.04*	0.05*	0.16*	1											
(13)	0.03*	0.05*	-0.02*	0.03*	0.03*	0.03*	0.05*	-0.23*	-0.13*	0.01	0.26*	-0.01	1										
(14)	-0.07*	-0.10*	0.00	-0.05*	-0.05*	-0.08*	-0.07*	0.21*	0.07*	0.03*	-0.20*	-0.10*	-0.28*	1									
(15)	-0.07*	-0.10*	-0.03*	-0.10*	-0.10*	-0.01*	0.03*	-0.12*	-0.23*	-0.20*	-0.07*	-0.09*	0.10*	-0.10*	1								
(16)	0.28*	0.27*	0.10*	0.30*	0.21*	0.12*	0.17*	0.02*	0.02*	0.00	0.10*	0.05*	-0.05*	0.11*	-0.10*	1							
(17)	0.01	0.03*	0.01*	0.01	-0.02*	0.09*	-0.03*	0.22*	-0.04*	-0.07*	-0.05*	0.02*	-0.20*	0.24*	-0.09*	0.20*	1						
(18)	-0.02*	-0.04*	-0.01*	-0.04*	-0.03*	-0.01	0.06*	0.02*	-0.01	-0.03*	-0.09*	-0.10*	0.04*	-0.09*	0.41*	-0.05*	-0.16*	1					
(19)	-0.12*	-0.09*	-0.01*	-0.08*	-0.02*	-0.23*	-0.12*	-0.01	0.02*	-0.01*	-0.04*	-0.25*	0.02*	0.03*	0.04*	-0.08*	-0.13*	0.07*	1				
(20)	0.20*	0.27*	0.07*	0.22*	0.20*	0.04*	0.10*	-0.07*	-0.01	0.00	0.25*	0.06*	0.05*	-0.01	0.02*	0.19*	0.01	0.02*	0.09*	1			
(21)	0.33*	0.30*	0.13*	0.22*	0.21*	0.40*	0.27*	0.08*	0.05*	0.07*	0.08*	0.29*	0.01	-0.14*	0.01	0.14*	0.07*	0.02*	-0.45*	-0.04*	1		
(22)	0.02*	0.00	0.01*	-0.04*	-0.10*	0.21*	0.02*	-0.04*	-0.09*	-0.05*	-0.05*	0.13*	-0.03*	0.01*	0.03*	0.14*	0.13*	-0.06*	-0.39*	-0.10*	0.32*	1	
(23)	-0.14*	-0.10*	-0.05*	-0.09*	-0.08*	-0.17*	-0.13*	0.12*	0.13*	0.10*	-0.04*	-0.05*	-0.02*	0.03*	0.04*	-0.06*	-0.04*	0.02*	0.15*	0.00	-0.06*	-0.35*	1

(1)	EF Index	(7)	Health and safety (%)	(13)	Leverage	(19)	Closely-Held %
(2)	Culture -PCA	(8)	Tobin's q	(14)	Cash-to-assets	(20)	ADR
(3)	Employment quality (%)	(9)	ROA	(15)	PP&E-to-sales	(21)	Governance score
(4)	Human rights (%)	(10)	ROE	(16)	Foreign sales-to-sales	(22)	Log GDP per capita
(5)	Training and development (%)	(11)	Log (assets -$000)	(17)	RD-to-sales	(23)	GDP growth
(6)	Diversity (%)	(12)	Log Age	(18)	Capex-to-assets		

Table IV: The Relationship between Employee-Friendly Firm Culture and Firm Value

Panel A presents regression results of the impact of an employee-friendly culture on *Tobin's q*. The *EF index* is an index ranging from 0-100 based on the proportion of 32 attributes of employee-friendliness adopted by a firm. The 32 attributes cover the following areas from the social score components from ASSET 4 ESG database: 1) employee quality; 2) health and safety; 3) training and development; 4) diversity, and 5) human rights. Panel B reports results using the scores on the individual components of the *EF index*: 1) Employment quality (*EQ index*); 2) Diversity (*DO index*); 3) Training and development (*TD index*); Health and safety (*HS index*), and Human rights (*HR index*). The control variables (not shown in Panel B to conserve space) include: 1) *Size*; 2) *Age*; 3) *Leverage*; 4) *Cash*; 5) *PPE*; 6) *Foreign sales*; 7) *R&D*; 8) *Capex*; 9) *Closely-held*; 10) *ADR*; 11) Log *GDP per capita*, and 12) *GDP growth*. In specifications with country-year fixed effects, the country-level variables are subsumed by the country-year fixed effects. *t*-statistics, in parentheses, are based on standard errors clustered at the country level. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 two-tailed levels, respectively. See Appendix A for variable definitions.

Panel A – Impact of employee-friendliness on firm value				
	Dependent variable: Tobin's q			
	(1)	(2)	(3)	(4)
EF Index t-1	0.0048***	0.0050***	0.0013**	
	(4.61)	(4.98)	(2.10)	
Culture-PCA t-1				0.0691***
				(4.29)
Size t-1	-0.2261***	-0.2375***	-0.4984***	-0.2485***
	(-15.25)	(-15.35)	(-10.15)	(-13.86)
Log Age	-0.0139	-0.0173	-0.1761**	-0.0202
	(-1.02)	(-1.17)	(-2.31)	(-1.35)
Leverage t-1	-0.0080***	-0.0076***	-0.0057***	-0.0075***
	(-3.28)	(-3.38)	(-5.60)	(-3.38)
Cash t-1	0.0161***	0.0159***	0.0067***	0.0160***
	(5.92)	(6.08)	(5.60)	(6.20)
PPE-to-Sales t-1	-0.0005***	-0.0004**	-0.0000	-0.0004**
	(-2.88)	(-2.45)	(-0.09)	(-2.38)
Foreign sales-to-sales	0.0004	0.0006	-0.0016***	0.0006
	(0.79)	(1.11)	(-2.80)	(1.23)
RD-to-sales	0.0236***	0.0229***	-0.0078*	0.0224***
	(5.82)	(7.53)	(-1.73)	(7.18)
Capex-to-assets t-1	0.0169***	0.0184***	-0.0009	0.0180***
	(3.74)	(4.63)	(-0.37)	(4.61)
Closely-held %	0.0022**	0.0022*	0.0004	0.0022**
	(2.10)	(1.94)	(0.52)	(2.04)
ADR	0.0688	0.0893*		0.0844*
	(1.61)	(1.92)		(1.83)
Log GDP per Capita	-0.7375***		-0.0792	
	(-3.71)		(-0.42)	
GDP Growth	0.0278**		0.0160*	
	(2.45)		(1.77)	
Country fixed effects	Yes	No	No	No
Industry fixed effects	Yes	No	No	No
Firm fixed effects	No	No	Yes	No
Year fixed effects	Yes	Yes	Yes	Yes
Country-year fixed	No	Yes	No	Yes
Industry-year fixed	No	Yes	No	Yes
Observations	21,215	21,215	21,215	21,215
R-squared	0.323	0.347	0.810	0.349
Adjusted R^2	0.320	0.328	0.773	0.330
# countries	43	43	43	43

Table IV. Continued.

Panel B – Components of *EF index*					
	Dependent variable: Tobin's *q*				
	(1)	(2)	(3)	(4)	(5)
Employment quality t-1	0.0041*				
	(2.00)				
Diversity t-1		0.0012**			
		(2.38)			
Training and development t-1			0.0028***		
			(5.19)		
Health and safety t-1				0.0001	
				(0.47)	
Human rights t-1					0.0027***
					(5.38)
Controls	Yes	Yes	Yes	Yes	Yes
Country-year fixed effects	Yes	Yes	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	21,215	21,215	21,215	21,215	21,215
R-squared	0.365	0.363	0.366	0.363	0.366
Adjusted R^2	0.342	0.341	0.343	0.340	0.344
# countries	43	43	43	43	43

Table V. Additional Tests of the Employee-friendliness-firm value relationship

The table shows various results from OLS and 2SLS regressions of Tobin's q. The *EF index* is an index ranging from 0-100 based on the proportion of 32 attributes of employee-friendliness adopted by a firm. The 32 attributes cover the following areas from the social score components from ASSET 4 ESG database: 1) employee quality; 2) health and safety; 3) training and development; 4) diversity, and 5) human rights. Panel A shows results from regressions of changes in Tobin's *q* (*EF index*) on lagged changes in *EF index* (Tobin's *q*) and all control variables (measured as changes from *t-1* to *t*) included in Panel A. In Panel B, we report results from 2SLS regressions in which we instrument *EF index* with two variables: 1) *Wage gap* - the difference between median wages of men and women relative to the median wages of men.in the country, and 2) *Industry wage* – the total salaries and wages divided by the total number of employees across firms in the same industry. In Panel C we report results for a matched sample of firms. We use propensity scores from a Probit regression using an indicator variable *High EF index* that is equal to one if the industry-adjusted *EF index* is in the top tercile in the country and zero otherwise. We match each treatment (*High EF index)* firm with a control firm using the nearest neighbor matching technique (1:1 and 1:4) with replacement. Panel E we examine the relative performance following the financial crisis for firms with *High* (top third) and *Low* (bottom third) culture values as of the end of 2006. *Post* is an indicator variable that equals one for years after 2008 and zero otherwise. The control variables (not shown in Panels B through E to conserve space) include: 1) *Size*; 2) *Age*; 3) *Leverage*; 4) *Cash*; 5) *PPE*; 6) *Foreign sales*; 7) *R&D*; 8) *Capex*; 9) *Closely-held*; 10) *ADR*; 11) Log of GDP per capita, and 12) *GDP growth*. In specifications with country-year fixed effects, the country-level variables are subsumed by the country-year fixed effects. *t*-statistics, in parentheses, are based on standard errors clustered at the country level. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 two-tailed levels, respectively. See Appendix A for variable definitions.

Panel A – Causal Effect of Employee-Friendliness on Firm Value

Dependent variable:	ΔTobin's $q_{t,-1,t}$		ΔEF index $_{t,-1,t}$	
	(1)	(2)	(3)	(4)
Δ EF Index *t,t-1*	0.0010*	0.0007		
	(1.71)	(1.22)		
Δ EF Index *t-1,t-2*	0.0011*	0.0009		
	(1.78)	(1.38)		
Δ EF Index *t-2,t-3*		0.0007*		
		(1.71)		
Δ Tobin's q *t, t-1*			0.1468	0.1168
			(1.46)	(1.12)
Δ Tobin's q *t-1,t-2*			0.0109	0.1455
			(0.15)	(1.31)
Δ Tobin's q *t-2,t-3*				-0.0403
				(-0.64)
Country-year fixed effects	Yes	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Observations	17,758	14,543	17,758	14,543
R-squared	0.223	0.244	0.136	0.156
Adjusted R^2	0.200	0.219	0.110	0.128
# countries	43	43	43	43
Wald test - lagged *EF index* (Tobin's *q*) are jointly equal to zero (*p*-value)	0.030	0.044	0.252	0.203

Table V. Continued.

Panel B – 2SLS Regressions						
	1st stage	2nd stage	1st stage	2nd stage	1st stage	2nd stage
Dependent variable:	EF Index t-1	Tobin's q	EF Index t-1	Tobin's q	EF Index t-1	Tobin's q
	(1)	(2)	(3)	(4)	(5)	(6)
EF Index		0.047**		0.052**		0.021**
		(2.43)		(2.33)		(2.34)
Wage gap	-0.321*		-0.296**			
	(-2.03)		(-2.08)			
Industry wage	0.275**				0.238*	
	(2.10)				(1.72)	
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Country-year fixed effects	No	Yes	No	Yes	Yes	Yes
Industry-year fixed effects	No	Yes	Yes	Yes	No	Yes
Industry fixed effects	Yes	No	No	No	Yes	No
Region-year fixed effects	Yes	No	Yes	No	No	No
Observations	17,136	17,136	17,136	17,136	21,215	21,215
R-squared	0.486	0.311	0.485	0.311	0.507	0.344
Adjusted R^2	0.483	0.302	0.478	0.302	0.497	0.325
# countries	27	27	27	27	43	43
1st stage F-statistic (*p*-value)		0.039		0.047		0.092
Hansen *J*-statistic		1.914		0.000		0.000
χ^2 *p*-value		0.166				

Panel C- Matched sample regressions		
Nearest neighbor:	1: 1	1:4
	(1)	(2)
High EF Index	0.123***	0.125***
	(3.88)	(5.13)
Controls	Yes	Yes
Country-year fixed effects	Yes	Yes
Industry-year fixed effects	Yes	Yes
Observations	14,878	37,195
R-squared	0.399	0.361
Adjusted R^2	0.368	0.351
# countries	43	43

Table VI: Impact of Governance and Geographic and Product Diversification

Table shows results from OLS regressions of Tobin's *q*. The *EF index* is an index ranging from 0-100 based on the proportion of 32 attributes of employee-friendliness adopted by a firm. The 32 attributes cover the following areas from the social score components from ASSET 4 ESG database: 1) employee quality; 2) health and safety; 3) training and development; 4) diversity, and 5) human rights. In Panel A, we measure firm-level governance using three proxies: 1) High governance score – an indicator variable that is equal to one if the firm's governance score (from ASSET 4 ESG database) is above the median in its country and zero otherwise; 2) Board independence – an indicator variable that is equal to one if a firm's board of directors is comprised of a majority of independent directors and zero otherwise; 3) High GOV index- an indicator variable that is equal to one if the governance index from Aggarwal et al. (2009) is above the country median and zero otherwise. In Panel B we show results based on proxies for geographic and product diversification. We use two proxies of diversification: High geographical (product) diversification is an indicator variable that is equal to one if the firm's Herfindahl index based on geographic (product) segment sales is in the bottom 25% of the distribution in its country and zero otherwise. Geographical (product) diversification is an indicator variable that is equal to one if the firm operates in more than two geographic (product – 2-digit SIC code) segments and zero otherwise. The control variables (not shown to conserve space) include: 1) Size; 2) Age; 3) Leverage; 4) Cash; 5) PPE; 6) Foreign sales; 7) R&D; 8) Capex; 9) Closely-held; 10) ADR; 11) the log of GDP per capita; 12) GDP growth; 13) country-level governance index from Kauffman et al. (2009), and 14) Industry q. t-statistics, in parentheses, are based on standard errors clustered at the country level. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 two-tailed levels, respectively. See Appendix A for variable definitions.

Panel A – The Impact of Governance			
Dependent variable:	Tobin's q		
	(1)	(2)	(3)
EF Index t-1	0.0040***	0.0033**	0.0072***
	(3.31)	(2.43)	(3.01)
EF index x High governance score	0.0027**		
	(2.39)		
High governance score	-0.1279**		
	(-2.25)		
EF index x Board independence		0.0023*	
		(1.95)	
Board independence		-0.1542**	
		(-2.59)	
EF index x High GOV index			0.0035***
			(3.02)
High GOV index			-0.1525***
			(-3.67)
Observations	21,215	16,073	5,575
R-squared	0.364	0.355	0.404
Adjusted R^2	0.341	0.324	0.370
# countries	43	43	25

Table VI. Continued

Panel B – Geographic and Product Diversification				
Dependent variable:	Tobin's *q*			
	(1)	(2)	(3)	(4)
EF Index x High geographical diversification	0.003**			
	(2.58)			
High geographical diversification	-0.115**			
	(-2.37)			
EF Index x Geographical diversification		0.004**		
		(2.02)		
Geographical diversification		-0.058		
		(-0.58)		
EF Index x High product diversification			0.002*	
			(1.90)	
High product diversification			-0.094	
			(-1.52)	
EF Index x Product diversification				0.002*
				(1.72)
Product diversification				-0.068
				(-1.21)
EF Index t-1	0.004***	0.001	0.004***	0.004***
	(3.93)	(0.61)	(4.77)	(4.71)
Observations	19,897	19,897	20,644	20,644
R-squared	0.368	0.368	0.371	0.371
Adjusted R^2	0.344	0.344	0.348	0.348
# countries	43	43	43	43

Table VII: Impact of Labor Market Flexibility and Country Culture

Table shows results from OLS regressions of Tobin's *q*. The *EF index* is an index ranging from 0-100 based on the proportion of 32 attributes of employee-friendliness adopted by a firm. The 32 attributes cover the following areas from the social score components from ASSET 4 ESG database: 1) employee quality; 2) health and safety; 3) training and development; 4) diversity, and 5) human rights. In Panel A, we measure a country's labor market flexibility using two proxies: 1) *Labor regulation*: The labor regulation component from the Economic Freedom of the World Index from the Fraser Institute, and 2) *Labor Freedom*- Index of Labor Freedom from the Heritage Foundation and Wall Street Journal. We use the cross-country median to group countries into high/low labor market flexibility. In Panel B, we use four measures of culture from Hofstede (1890): 1) *Power distance,* 2) *Individualism,* 3) *Uncertainty avoidance and* 4) *Masculinity*. Using these measures, we construct indicators based on the cross-country median. The control variables (not shown to conserve space) include: 1) *Size*; 2) *Age*; 3) *Leverage*; 4) *Cash*; 5) *PPE*; 6) *Foreign sales*; 7) *R&D*; 8) *Capex*; 9) *Closely-held*; 10) *ADR*; 11) the *log of GDP per capita*; 12) *GDP growth*; 13) country-level governance index from Kauffman et al. (2009), and 14) *Industry q*. *t*-statistics, in parentheses, are based on standard errors clustered at the country level. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 two-tailed levels, respectively. See Appendix A for variable definitions.

Panel A- Labor Market Flexibility

Dependent variable:	Tobin's *q*	
	(1)	(2)
EF index x *High Labor regulation*	0.003*	
	(1.85)	
EF index x *High Labor Freedom*		0.003**
		(2.41)
EF index t-1	0.004**	0.003***
	(2.46)	(2.88)
Controls	Yes	Yes
Country-year fixed effects	Yes	Yes
Industry-year fixed effects		
Observations	21,166	19,892
R-squared	0.347	0.360
Adjusted R^2	0.329	0.340
# of countries	42	42

Panel B – Country Culture

Dependent variable:	Tobin's *q*			
	(1)	(2)	(3)	(4)
EF index x *High Power distance*	-0.004***			
	(-3.10)			
EF index x *High individualism*		0.003***		
		(2.85)		
EF index x *High uncertainty avoidance*			-0.005***	
			(-3.66)	
EF index x *High masculinity*				-0.000
				(-0.25)
EF index	0.0947***	0.0614***	0.1005***	0.0767***
	(6.75)	(4.66)	(11.61)	(3.93)
Controls	Yes	Yes	Yes	Yes
Country-year fixed effects	Yes	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes	Yes
Observations	20,882	20,882	20,882	20,882
R-squared	0.368	0.368	0.368	0.367
Adjusted R^2	0.346	0.345	0.346	0.345
# of countries	40	40	40	40

Table VIII - Employee-Friendliness, Technical Efficiency, Innovation, and Performance

Table shows results from OLS regressions of the impact of an employee-friendly culture on firm technical efficiency and performance. In Panel A we show results using two measures of technical efficiency: 1) Sales-to-assets and 2) COGS-to-employees- cost of goods sold per employee. In Model (3) of Panel A we show results using the number of patents (log) as a proxy for innovation. Control variables, measured as of the prior year-end include: 1) *Size*; 2) *Age*; 3) *Leverage*; 4) *Capex*; 5) *R&D*; 6) *Market-to-book*; 7) *Volatility* – the standard deviation of weekly stock returns, and 8) *ROA* – net income-to-assets. In Panel B, we show results using two measures of profitability- 1) *ROA* – net income scaled by assets as of prior year-end, and 2) *ROE*- net income scaled by equity as of prior year-end. *EF index* is an index ranging from 0-100 based on the proportion of 32 attributes of employee-friendliness adopted by a firm that cover the following five areas: 1) employee quality; 2) health and safety; 3) training and development; 4) diversity, and 5) human rights. In Models (2) and (4) of Panel B we report we report results from 2SLS regressions in which we instrument *EF index* with two instruments: 1) *Wage gap* - the difference between median wages of men and women relative to the median wages of men.in the country, and 2) *Industry wage* – the total salaries and wages divided by the total number of employees across firms in the same industry. Control variables in Panel include: 1) Size; 2) Age; 3) Leverage; 4) Cash; 5) PPE; 6) Foreign sales; 7) R&D; 8) Capex; 9) Closely-held, and 10) ADR. Country-year and industry-year fixed effects are included in all regressions. *t*-statistics, in parentheses, are based on standard errors clustered at the country level. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 two-tailed levels, respectively. See Appendix A for variable definitions.

Panel A - Firm Culture, Technical Efficiency and Innovation			
Dependent variable:	Sales-to-assets	COGS-to-employees (log)	Ln (patents)
	(1)	(2)	(3)
EF Index t-1	0.499***	-0.002*	0.008***
	(9.55)	(-1.70)	(3.43)
Size	-7.584***	0.151***	0.327***
	(-6.99)	(6.33)	(5.66)
Log Age	0.765	-0.065***	0.053
	(0.65)	(-2.78)	(1.02)
Capex t-1	-0.968***	-0.017***	0.021
	(-4.60)	(-4.29)	(1.60)
RD-to-sales	-2.865***	-0.040***	0.031**
	(-14.68)	(-8.49)	(2.06)
Leverage t-1	-0.618***	-0.001	-0.006*
	(-4.41)	(-1.07)	(-1.89)
Market-to-book	0.114*	0.000	0.005
	(1.90)	(1.02)	(0.45)
Volatility t-1	-5.692	0.243***	0.324
	(-1.28)	(4.04)	(0.50)
ROA t-1	0.191***	-0.003	0.002
	(2.83)	(-1.61)	(0.91)
Country-year fixed effects	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes
Observations	20,224	18,221	1,540
R-squared	0.302	0.869	0.494
Adjusted R^2	0.283	0.865	0.351
# countries	43	43	31

Table VIII. Continued.

Panel B - Impact of culture on financial performance				
Estimation Method:	*OLS*	*2SLS*	*OLS*	*2SLS*
Dependent variable:	ROA	ROA	ROE	ROE
	(1)	(2)	(4)	(5)
EF Index t-1	0.025**		0.092***	
	(2.65)		(2.74)	
EF Index (IV)		0.330**		0.611*
		(2.18)		(1.94)
Size t-1	-0.441***	-2.354**	-1.030**	-4.231**
	(-2.77)	(-2.69)	(-2.70)	(-2.44)
Age (log)	0.275**	-0.213	0.620***	0.101
	(2.41)	(-0.79)	(2.97)	(0.17)
Leverage t-1	-0.053***	-0.024*	0.035	0.092**
	(-6.00)	(-1.84)	(0.98)	(2.57)
Cash t-1	0.058***	0.067***	0.152***	0.199***
	(4.40)	(7.67)	(4.79)	(6.62)
PPE-to-Sales t-1	-0.012***	-0.009***	-0.025***	-0.022***
	(-5.82)	(-7.87)	(-10.23)	(-6.45)
Foreign sales-to-sales	0.002	-0.013	-0.014	-0.038
	(0.25)	(-1.19)	(-0.89)	(-1.38)
RD-to-sales	-0.202***	-0.183***	-0.546***	-0.594***
	(-5.99)	(-5.62)	(-7.26)	(-6.77)
Capex-to-assets t-1	0.155***	0.117***	0.237***	0.146**
	(6.12)	(3.93)	(4.36)	(2.22)
Closely-held	0.004	0.007	-0.015	-0.019
	(0.38)	(0.67)	(-0.54)	(-0.58)
ADR t,t-1	0.016	-0.864	-0.047	-1.133
	(0.04)	(-1.49)	(-0.04)	(-0.69)
Country-year fixed effects	Yes	Yes	Yes	Ye
Industry-year fixed effects	Yes	Yes	Yes	Yes
Observations	21,098	17,057	21,040	17,004
R-squared	0.182	0.190	0.162	0.140
Adjusted R^2	0.159	0.180	0.139	0.128
# countries	43	27	43	27
1st stage *F*-statistic		3.540		3.355
1st stage *F*-statistic *p*-value		0.044		0.051
Hansen *J*-statistic		2.365		1.944
χ^2 *p*-value		0.124		0.163

Table IX: Robustness Tests

Table shows results from OLS regressions. The dependent variable is Tobin's *q,* unless otherwise indicated. *EF* index is an index ranging from 0-100 based on the proportion of 32 attributes of employee-friendliness adopted by a firm that cover the following five areas: 1) employee quality; 2) health and safety; 3) training and development; 4) diversity, and 5) human rights. In Model (1) we show results for regressions excluding firms in the US. In Model (2) we run regressions excluding firm in the list of Best Companies to Work for (BC firms). In Model (3) we use an alternate measure of firm value, market-to-book value of equity. In Model (4) we restrict the sample to firms with available data for the entire sample period. The control variables (not shown to conserve space) include: 1) *Size*; 2) *Age*; 3) *Leverage*; 4) *Cash*; 5) *PPE;* 6) *Foreign sales*; 7) *R&D*; 8) *Capex*; 9) *Closely-held*, and 10) *ADR*. *t*-statistics, in parentheses, are based on standard errors clustered at the country level. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 two-tailed levels, respectively. See Appendix A for variable definitions.

	Robustness tests			
	No US	Excluding BC firms	Market-to-book	Firms with available data for all years
	(1)	(2)	(3)	(4)
EF index	0.004***	0.004***	0.016***	0.009***
	(3.75)	(4.70)	(4.53)	(6.62)
Controls	Yes	Yes	Yes	Yes
Country-year fixed effects	Yes	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes	Yes
Observations	15,100	18,495	21,215	3,444
R-squared	0.347	0.337	0.226	0.498
Adjusted R^2	0.322	0.316	0.204	0.403

Appendix A- Variable Definitions

EF Index	An index ranging from 0-100 based on the proportion of 32 attributes of employee-friendliness adopted by a firm. The 32 attributes cover the following areas from the social score components from ASSET 4 ESG database: 1) employee quality; 2) health and safety; 3) training and development; 4) diversity, and 5) human rights.
Culture-PCA	The first principal component of the percentage score given by ASSET4 database on five areas: 1) employee quality; 2) health and safety; 3) training and development; 4) diversity, and 5) human rights. Each component receives a percentage score by ASSET 4 based on several factors.
Tobin's q	Total assets less book value of equity plus market value of equity divided by book value of total assets.
ROA	Net income divided by lagged book value of assets.
ROE	Net income divided by lagged book value of equity.
Sales-to-assets	Sales divided by book value of assets as of the beginning of the year.
COGS-to-employees	Cost of goods sold divided by the total number of employees.
R&D	The two-year average research and development (R&D) expenses divided by sales
Capex	Capital expenses scaled by the lagged book value of assets.
Size	Log of total assets (US$ 000).
Age	Log of firm age. Firm age is the number of years since the firm was incorporated. When the date of incorporation is unavailable, firm age is calculated as the number of years since the firm first appeared on the DataStream and WorldScope databases.
Leverage	Total debt divided by book value of assets.
Cash	Cash divided by total assets.
PPE	Property, plant, and equipment, scaled by sales.
Foreign sales	Two-year average of the ratio of foreign sales to sales.
Closely-held	Percentage of closely held shares.
ADR	Indicator that equals one if the firm is cross-listed on a U.S. stock exchange and zero otherwise.
Log GDP per capita	Annual log of real gross domestic product per capita (constant U.S. dollars).
GDP Growth	Annual growth in real gross domestic product (GDP).
Wage gap	Gender wage gap, defined as the difference between median wages of men and women relative to the median wages of men. Source: OECD Statistics and International Labor Organization 's ILOSTAT database.

Appendix A. Continued.

Industry wage	Industry-level wage rate measured as the total salaries & wages divided by total number of employees across firms in the same industry (Fama French 30 classification), following Bae et al. (2011). We use the natural log of industry wage in our analysis.
Labor Regulation	The labor regulation component from the Economic Freedom of the World Index form the Fraser Institute. The labor-market component is designed to measure the extent to which restraints upon economic freedom are present. In order to earn high marks in the component rating regulation of the labor market, a country must allow market forces to determine wages and establish the conditions of hiring and firing, and refrain from the use of conscription. Higher values indicate more flexible labor markets.
Labor Freedom	A component of the Index of Economic Freedom from the Heritage Foundation and Wall Street Journal. It measures various aspects of the legal and regulatory framework of a country's labor market, including regulations concerning minimum wages, laws inhibiting layoffs, severance requirements, and measurable regulatory restraints on hiring and hours worked. Higher values indicate more economic freedom. http://www.heritage.org/index/labor-freedom.
Power Distance	Measures the degree to which the less powerful members of a society accept and expect that power is distributed unequally. People in societies exhibiting a large degree of power distance accept a hierarchical order in which everybody has a place and which needs no further justification. Source: Hofstede (1980).
Individualism	Individualism captures the extent to which people's self-image is defined in terms of "I" or "we." Source: Hofstede (1980).
Uncertainty avoidance	Uncertainty avoidance measures "the degree to which members of a society feel uncomfortable with uncertainty and ambiguity." Source: Hofstede (1980).
Masculinity	Masculinity measures a society's preference for achievement, assertiveness and material rewards for success. Source: Hofstede (1980).
High Governance score	Indicator variable that is equal to one if the firm's governance score (score on the governance pillar from ASSET 4 ESG database) is above the median in its country, and zero otherwise.
High GOV index	Indicator variable that is equal to one if the firm's governance index from Aggarwal et al. (2009) is above the median in its country, and zero otherwise.
Board independence	An indicator variable that is equal to one if the firm's board of directors is comprised of a majority of independent directors. Data obtained from ASSET 4 ESG database.

Appendix A. Continued

High geographical diversification	Indicator variable that is equal to one if the Herfindahl index based on geographic segment sales (HI_{geog}) is in the bottom 25th percentile in the country and zero otherwise. $$HI_{geog} = \sum \left[\frac{sales_g}{Total\ sales}\right]^2$$ Where $sales_g$ are the total sales in geographic segment g.
Geographical diversification	Indicator variable that is equal to one if the firm operates in more than two geographical segments and zero otherwise.
High product diversification	Indicator variable that is equal to one if the Herfindahl index based on product segment sales (HI_{prod}) is in the bottom 25th percentile in the country and zero otherwise. Product segments are based on 2-digit SIC codes. $$HI_{prod} = \sum \left[\frac{sales_j}{Total\ sales}\right]^2$$ Where $sales_j$ are the total sales in product segment j.
Product diversification	Indicator variable that is equal to one if the firm operates in more than two product segments (2-digit SIC codes) and zero otherwise.

Appendix B. Employee-Friendly (EF) Index Components

The 32 attributes correspond to five categories of social performance: *Employment quality*; *Diversity*; *Training and development*; *Health and safety*, and *Human rights*. The attributes are based on a subset of questions used by ASSET ESG to rate each of these components. A firm is assigned a value of one for positive responses, or if its value is above (below) the industry median. We create an index for each of the five categories with a maximum value of 100% based on the fraction of all nonmissing attributes that a firm satisfies. An aggregate index is computed in a similar fashion (as the proportion of all nonmissing attributes that a firm satisfies). We report the percentage of firms that meet each of the attributes. To do so, we first compute the percentage of firms that meet each attribute each year and report the time-series average.

		% meeting
	EMPLOYMENT QUALITY:	
1	Company monitors or measures its performance on employment quality	8.21%
2	Percentage of employee turnover below industry median.	41.35%
3	Strikes that led to lost working days below industry median.	97.21%
4	Average salaries and benefits above industry median.	48.54%
5	Company won an award or any prize related to general employment quality or "Best Company	10.78%
6	CEO salary-to-average wage below industry median.	47.83%
7	Number of lay-offs divided by the total number of employees below industry median.	0.08%
	DIVERSITY:	
8	Company has a diversity and equal opportunity policy	73.59%
9	Company has a work-life balance policy.	30.17%
10	Company has the appropriate communication tools (whistle blower, ombudsman, suggestion	38.68%
11	Company sets targets or objectives to be achieved on diversity and equal opportunity.	25.79%
12	Company sets targets or objectives to be achieved on employees' work-life balance.	13.89%
13	Percentage of women employees above industry median.	46.03%
14	Percentage of women managers above industry median.	44.05%
15	Percentage of elderly employees above industry median.	31.75%
	TRAINING AND DEVELOPMENT:	
16	Company has a policy to support the skills training of its employees.	61.63%
17	Company has a policy to support the career development of its employees.	57.02%
18	Company monitors its own training and development programs.	14.06%
19	Average hours of training per year per employee above industry median.	41.86%
20	Company provides training in environmental, social or governance factors to its suppliers.	7.80%
21	Training costs per employee above industry median.	41.14%
	HEALTH AND SAFETY:	
22	Company has an employee health & safety team.	33.19%
23	Company has the appropriate internal communication tools (whistle blower, ombudsman,	41.21%
24	Company sets targets or objectives to be achieved on employee health & safety.	55.42%
25	Total number of injuries and fatalities per one million hours worked is below industry median.	43.71%
26	Number of injuries and fatalities reported by employees and contractors while working for the	42.48%
	HUMAN RIGHTS:	
27	Company has a policy to ensure the freedom of association of its employees.	22.11%
28	Company has a policy to avoid child labor.	30.92%
29	Company has a policy to avoid forced labor.	28.43%
30	Company has a human rights policy that is applied to its supply chain.	26.28%
31	Company has a general, all-purpose policy regarding human rights.	33.13%
32	Company monitors human rights in its or its suppliers' facilities.	11.87%

Appendix C
Procedure to develop propensity-score-matched (PSM) firms

The propensity-score-matching approach involves pairing treatment and control firms (Dehejia and Wahba 2002). We rank firms as *High* (*Low*) employee-friendly *culture* based on the value of the *EF index*. We create an indicator variable *High EF index* that is equal to ono for firms with an industry-adjusted *EF index* that is in the top third of the distribution in their country and zero otherwise. We first estimate a probit regression to model the probability of being a *High EF index* firm. Next, we estimate the propensity score for each firm using the predicted probabilities from the probit model. We then match each *High culture* (treatment) firm to a control firm in its country using the nearest neighbor matching technique (with replacement). Panel A reports the estimation results of the probit model. In Model (1) we show results from the probit model used to generate the propensity scores. In Model (2), we run the probit model using only the matched sample to determine whether there are significant differences between matched and control firms. Panel B shows descriptive statistics of the firm-level variables for our group of *High EF index* firms and the control firms. We report the mean values for each matching characteristic pre- and post-match, along with the normalized difference (Δ X) to evaluate the quality of the matching, following Imbens and Wooldridge (2009). *Z*-statistics, in parentheses, are based on standard errors clustered at the country level. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 two-tailed levels, respectively. See Appendix A for variable definitions.

Panel A – Probit Regressions		
Dependent variable:	High EF index	
	Pre-match	Post-match
	(1)	(2)
Size t-1	0.171***	-0.003
	(11.60)	(-0.21)
Age (log)	0.028**	0.006
	(2.21)	(0.30)
Leverage t-1	-0.002***	0.000
	(-5.52)	(0.48)
Cash t-1	0.001	-0.000
	(0.80)	(-0.10)
PPE-to-Sales t-1	-0.000**	0.000
	(-2.47)	(0.12)
Foreign sales-to-sales	0.001***	0.000
	(2.69)	(0.38)
RD-to-sales	0.001	0.001
	(0.38)	(0.55)
Capex-to-assets t-1	0.003**	0.001
	(2.12)	(0.44)
Closely-held (%)	-0.001***	-0.000
	(-3.48)	(-0.86)
ADR	0.102***	0.001
	(4.38)	(0.03)
Log GDP per Capita	0.060	0.136
	(0.51)	(0.66)
GDP Growth	0.003	-0.003
	(1.17)	(-0.69)
Governance score		
Industry fixed effects	Yes	Yes
Country fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Observations	21,215	14,878
Pseudo R^2	0.188	0.013
# countries	43	43

Appendix C. Continued.

Panel B – Descriptive Statistics of Treatment (*High EF index*) and Control Firms

	Full sample			Matched sample		
	High EF index	Control	ΔX	*High EF index*	Control	ΔX
Size	22.93	21.91	0.55	22.93	22.47	0.25
Log Age	3.14	2.86	0.22	3.19	3.06	0.10
Leverage	23.44	22.90	0.02	23.44	23.23	0.01
Cash-to-assets	7.50	8.34	-0.07	7.50	7.93	-0.04
PP&E-to-sales	102.47	118.86	-0.07	102.47	104.31	-0.01
Foreign sales-to-sales	43.82	32.24	0.26	44.73	38.81	0.13
RD-to-sales	2.63	2.37	0.04	2.67	2.42	0.04
Capex-to-assets	5.70	5.83	-0.02	5.70	5.56	0.02
Closely-Held %	22.91	26.74	-0.11	22.21	24.91	-0.08
ADR	0.29	0.14	0.28	0.30	0.21	0.14