

Did best employee rating companies outperform their peers during the pandemic?

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Abstract

This dissertation builds on Edmans (2011) and Boustanifar and Kang (2021) to examine whether companies included in the “100 Best Companies to Work For in America” outperformed their peers during the COVID-19 pandemic. Using an extended sample from 2017 to 2023, an equally-weighted and value-weighted long-only portfolio are constructed based on employee satisfaction as a proxy for corporate culture. During the pandemic, the value-weighted portfolio earns significant abnormal returns, with monthly alphas up to 1.7%, robust across the Carhart four-factor and Fama-French five-factor models. A difference-in-differences approach confirms that these firms significantly outperformed their peers from March 2020 to January 2023. These results are robust to multiple benchmarks and controls, suggesting that employee satisfaction enhances corporate resilience and shareholder value during systemic crises. Therefore, human capital quality emerges as a financially material intangible for investors and firms alike.

Keywords: employee satisfaction, corporate culture, COVID-19 pandemic, socially responsible investing, firm resilience.

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Resumo

Esta dissertação baseia-se em Edmans (2011) e Boustanifar e Kang (2021) para examinar se as empresas incluídas na lista das “100 Melhores Empresas para Trabalhar na América” superaram seus pares durante a pandemia da COVID-19. Utilizando uma amostra estendida de 2017 a 2023, são construídos portfólios long-only ponderados igualmente e por valor, com base na satisfação dos funcionários como um proxy para a cultura corporativa. Durante a pandemia, o portfólio ponderado por valor obteve retornos anormais significativos, com alfas mensais de até 1,7%, robustos em relação aos modelos de quatro fatores de Carhart e cinco fatores de Fama-French. Uma abordagem de diferenças-em-diferenças confirma que essas empresas superaram significativamente seus pares de março de 2020 a janeiro de 2023. Esses resultados são robustos a múltiplos benchmarks e controles, sugerindo que a satisfação dos funcionários fortalece a resiliência corporativa e o valor para os acionistas durante crises sistêmicas. Portanto, a qualidade do capital humano surge como um intangível financeiramente relevante para investidores e empresas.

Palavras-chave: satisfação dos funcionários, cultura corporativa, pandemia de COVID-19, investimento socialmente responsável, resiliência empresarial.

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1. Introduction

The COVID-19 pandemic undoubtedly marked the most significant disruption to economic activity in modern history, severely challenging firms both operationally and in terms of employee morale. The crisis limited companies' ability to retain talent at a time of deep uncertainty. In such an unprecedented context, the challenges posed by a highly volatile financial market and an unstable labor market brought renewed attention to the importance of corporate culture and employee satisfaction in sustaining business performance. This study aims to examine whether publicly traded companies included in the "100 Best Companies to Work For in America" were able to outperform their peers during the pandemic. Specifically, it investigates the relationship between employee satisfaction and stock performance before and during the crisis, contributing to the broader discussion on Socially Responsible Investing (SRI) and the role of intangible assets, particularly human capital, in driving firm resilience and long-term value in times of systemic stress.

This unprecedented crisis introduced a multidimensional shock that tested the adaptive capacity of organizations globally. Unlike previous crises such as the 2008 financial meltdown, primarily rooted in financial mismanagement, COVID-19 simultaneously disrupted supply chains, reduced consumer demand, and radically altered working conditions. In this environment, firms with strong internal cultures and a demonstrated commitment to employee welfare appeared better positioned to absorb external shocks, reflecting a broader shift in how intangible assets are evaluated by investors and stakeholders. These dynamics have accelerated the integration of Environmental, Social, and Governance (ESG) criteria into both corporate strategy and financial analysis.

The debate surrounding the impact of SRI on stock performance remains both open and highly contested. Within this broader discourse, academic interest has increasingly focused on one of the most critical aspects of the Social pillar in the 21st century: can an investment strategy based on employee satisfaction generate abnormal returns for shareholders? One of the earliest pieces of empirical evidence supporting the outperformance of an SRI-based strategy can be attributed to Edmans (2011), who argued that the market struggled to incorporate intangible assets, such as employee satisfaction, into stock prices, despite human capital being one of the foundational elements of modern corporate finance as described by Zingales (2000). Edmans' study demonstrates that a value-weighted portfolio composed of publicly traded companies included in

the "Top 100 Best Companies to Work for in America", initially published in a book by Levering, Moskowitz, and Katz in 1984 and later updated annually by Fortune magazine since 1998, generated significant and positive abnormal returns between 1984 and 2009. Despite McLean and Pontiff (2016) highlighted that market anomalies tend to lose robustness once they are identified, as investors learn about mispricing from academic publications, Boustanifar and Kang (2021), by replicating Edmans' study on a more extended reference sample, found that this anomaly remains persistent and even intensifies during periods of crisis. Moreover, Boustanifar and Kang extend the literature by focusing on risk-adjusted returns and by introducing new controls for firm characteristics and macroeconomic conditions, further validating the robustness of the observed outperformance. Their findings strengthen the importance of corporate culture and Corporate Social Responsibility (CSR) during economic downturns, when employee retention becomes crucial, as also shown by Li et al. (2021). Particularly, they showed that firms with a strong corporate culture, despite the significant negative effect of COVID-19 on their operations, outperformed their peers without a strong culture.

The study by Li et al. (2021) marked a significant step in the literature regarding the role of corporate culture during times of crisis. Nevertheless, their work exhibits several methodological and empirical gaps that the present study aims to address. More specifically, their approach relies on textual analysis of earnings call transcripts, measuring firm exposure and response to the pandemic exclusively through topic modeling techniques applied to COVID-19-related paragraphs over a brief period between January and April 2020. Although innovative, this method does not explicitly integrate employee satisfaction as a dimension of corporate culture and provides only a limited analysis of the relationship between employee satisfaction and financial performance across the entire pandemic period.

The literature on the profitability of SRI strategies has never been unanimous, both before and after Edmans' (2011) seminal work. Earlier studies, such as those by Hamilton et al. (1993) and Statman (2000), as well as more recent contributions from Hornuf and Yuksen (2024), find that SRI strategies fail to outperform more conventional investment approaches. Furthermore, Geczy et al. (2005) and Luo and Balvers (2017) argue that the constraints imposed by SRI can lead to substantial costs and lower returns compared to traditional investments, thereby reflecting the intricate nature of CSR. These arguments are grounded in the belief that excluding certain sectors or firms for ethical reasons can limit diversification and reduce portfolio efficiency. Conversely,

Lins et al. (2017) reinforce the argument for the importance of corporate culture by demonstrating that investments in companies with a strong commitment to CSR generate positive abnormal returns, particularly during periods of economic distress. These diverging findings reflect the broader tension between normative and performance-based motivations within the SRI framework.

Given this context, the COVID-19 pandemic presents a compelling setting for further investigation. The pandemic-induced economic crisis, which severely impacted the global economy for over two years, coincided with a profound labor market shock in the United States known as the "Great Resignation" of 2021. This phenomenon saw an unprecedented surge in employee turnover rates, with the resignation rate surpassing 3% in September 2021¹, an all-time high compared to the pre-pandemic average of less than 2.4% per month across the workforce². This structural shift has also raised questions regarding the sustainability of traditional human resources practices and the need for companies to offer more flexible, employee-centered policies. As outlined by Tessema (2022), the costs associated with employee separation, replacement, and training impose significant financial burdens on firms, ultimately undermining profitability. In this scenario, employee satisfaction emerges as a critical factor in safeguarding corporate performance. Bocean et al. (2023) demonstrate that work-life balance fosters employee satisfaction, which, in turn, leads to greater motivation, enhanced performance, and reduced employee turnover. Further supporting the link between employee satisfaction and corporate performance, Li et al. (2022) show that a long portfolio composed of stocks from firms with the highest turnover rates yields a negative alpha. These findings suggest that firms prioritizing employee well-being may achieve superior financial outcomes, particularly during periods of economic turbulence.

This study contributes to the existing SRI literature by extending the analysis of the "Top 100 Best Companies to Work for in America" portfolio returns during the COVID-19 pandemic. Building upon the frameworks of Edmans (2011) and Boustanifar and Kang (2021), this study uses employee satisfaction, measured through Fortune magazine's survey data, as a direct and validated proxy for the quality of corporate culture. It also extends the observation period from 2017 to 2023, adopting a more longitudinal perspective that captures medium-term effects. Unlike the study by

¹ U.S. Bureau of Labor Statistics (2021). Job Openings in January 2021 Little Different from One Year Earlier. U.S. Bureau of Labor Statistics.

² Economic Policy Institute (2021). Economic Indicators: The Job Openings and Labor Turnover Survey (JOLTS). Economic Policy Institute.

Li et al. (2021), which focuses exclusively on the early stages of the COVID-19 crisis, this analysis considers the whole pandemic period and evaluates the impact of employee satisfaction using two established multifactor models (4-Carhart and 5-Fama-French), alongside causal inference techniques such as difference-in-differences. This framework entails a more accurate assessment of the relationship between corporate culture and financial performance, while identifying the channels through which employee satisfaction increases resilience and firm value in times of severe crisis. By doing so, it aims to provide further insights into the role of employee satisfaction and CSR in shaping corporate financial performance in times of crisis and also offers practical implications for institutional investors, asset managers, and corporate decision-makers, stressing out the potential financial materiality of intangibles in portfolio construction and strategic planning.

2. Data

To analyze the crucial aspect of employee satisfaction, the main data source is the “Top 100 Best Companies to Work for in America” list. The first version of this ranking originated from a book published by Levering, Moskowitz, and Katz in October 1984, and was later updated in February 1993 by Levering and Moskowitz. Since 1998, the list has been published yearly every January by *Fortune* magazine.

The ranking exclusively considers U.S. based companies with more than 1,000 employees, excluding government agencies. It is based on anonymous surveys conducted among employees, making it a highly reliable tool to capture internal sentiment. Respondents are asked to evaluate leadership behavior, the degree of respect they experience within their workplace, and whether they feel fairly compensated in terms of pay, profits, promotions, recognition, favoritism, and access to growth opportunities. Beyond material and managerial factors, the survey delves deeper into the company culture and emotional connection employees have with their work. Participants share whether they feel proud of their work, their teams, and the company as a whole. They are also asked if they believe their work has a purpose and whether they feel they are making a meaningful contribution. In addition to the employee survey, each organization must respond to six essay questions. These responses offer valuable insights into how and why the company fosters an inclusive and positive environment for all employees. The final ranking is compiled by Great Place to Work using a proprietary methodology known as the Trust Index™. This framework

evaluates companies across four key dimensions: credibility (how well leadership communicates with employees), respect (benefits and opportunities provided), fairness (equality in compensation and inclusiveness), and pride/camaraderie (team spirit, philanthropic efforts, and shared celebrations). In 2024, Great Place to Work surveyed companies employing over 8.2 million people across the United States and collected more than 1.3 million individual survey responses³, making it one of the most comprehensive snapshots of employee sentiment available today.

2.1. Portfolio Construction

Of the 100 companies featured on the list, only a subset will be included in the portfolio, as not all of them are publicly traded or have available stock return data in the CRSP (Center for Research in Security Prices) database. As shown in Table 1, less than half of the companies on the list are publicly listed, with an average of 41 companies per year. The list also experiences an average annual turnover rate of around 20%. A particularly noteworthy observation concerns the impact of the COVID-19 pandemic. Many companies faced unprecedented challenges during this period and were unable to maintain the same standards in workplace quality. As a result, 2021 saw the highest turnover in list composition in recent years. Interestingly, this significant shift did not occur in 2020 itself, due to the fact that the list is compiled in mid-January, prior to the pandemic's full-scale disruption in the United States.

Table 1. Number of Securities in the Portfolio

The table below reports the number of securities included in the portfolio each year, which are the companies included in the list that have at least one month of return data available on CRSP, as well as the number of firms entering and exiting the portfolio each year between 2017 and 2022.

Year of list	Best Companies	Added	(%)	Dropped	(%)
2017	40	6	0.15	2	0.05
2018	45	7	0.16	2	0.04
2019	43	7	0.16	9	0.21
2020	40	3	0.08	6	0.15
2021	39	17	0.44	18	0.46
2022	37	8	0.22	10	0.27
Average	41	8	0.20	8	0.20

³ For updated methodology see: <https://fortune.com/franchise-list-page/best-companies-2024-methodology/>

The portfolio construction follows the methodology of Edmans (2011), incorporating both equally-weighted and value-weighted returns. This dual approach is used because Fama and French (2008) show that certain market anomalies are not robust when using value-weighted returns alone. Specifically, the portfolio is formed on 1st March 2017, and rebalanced annually in February based on the companies entering or exiting the list published each January.

This setup allows the analysis to test two main hypotheses: first, that employee satisfaction contributes to long-term firm value, and second, that markets do not fully and immediately incorporate this information into stock prices. The analysis uses monthly stock returns, starting in March 2017 and ending in January 2023, covering a total of 71 months. This time frame provides a sufficiently long window to assess both the short- and long-term performance of firms recognized for high employee satisfaction, and to evaluate the persistence of any abnormal returns following their inclusion in the ranking.

2.2. Summary Statistics

Table 2 presents the summary statistics of the publicly listed “Top 100 Best Companies to Work For in America” during the two fiscal years 2020–2021, a period marked by significant changes in the list’s composition. In terms of market capitalization, the distribution in 2020 was notably more right-skewed, suggesting that smaller companies may have struggled to maintain pre-pandemic employee satisfaction standards. At the same time, it is interesting to observe that the percentage of intangible assets as a share of total assets rose on average. Unfortunately, data on employee turnover at firm-level remain limited. Most companies do not disclose turnover figures, ESG providers do not possess reliable and up-to-date data, and fewer than half of the Best Companies publish such information. Nevertheless, among the companies that do provide this data, the average turnover level is incredibly reassuring, compared to an average turnover in the US during the 2020-21 period of around 57.3%⁴.

The most common industries as shown in Figure 1 in descending order, are Business Services, Meals, Banking, Retail, and Pharmaceutical Products. These are human capital-intensive because their success largely depends on the skills, knowledge, and engagement of their employees. Business Services rely on specialized expertise, Pharmaceuticals on advanced R&D talent, and

⁴ Source: <https://www.glassdoor.com/blog/turnover-retention-rates/>

Banks on financial professionals despite increasing automation. Meals (hospitality) and Retail depend heavily on frontline staff for service quality and customer experience. In all cases, human capital plays a central role in driving innovation, efficiency, and overall firm performance.

Table 2. Summary Statistics

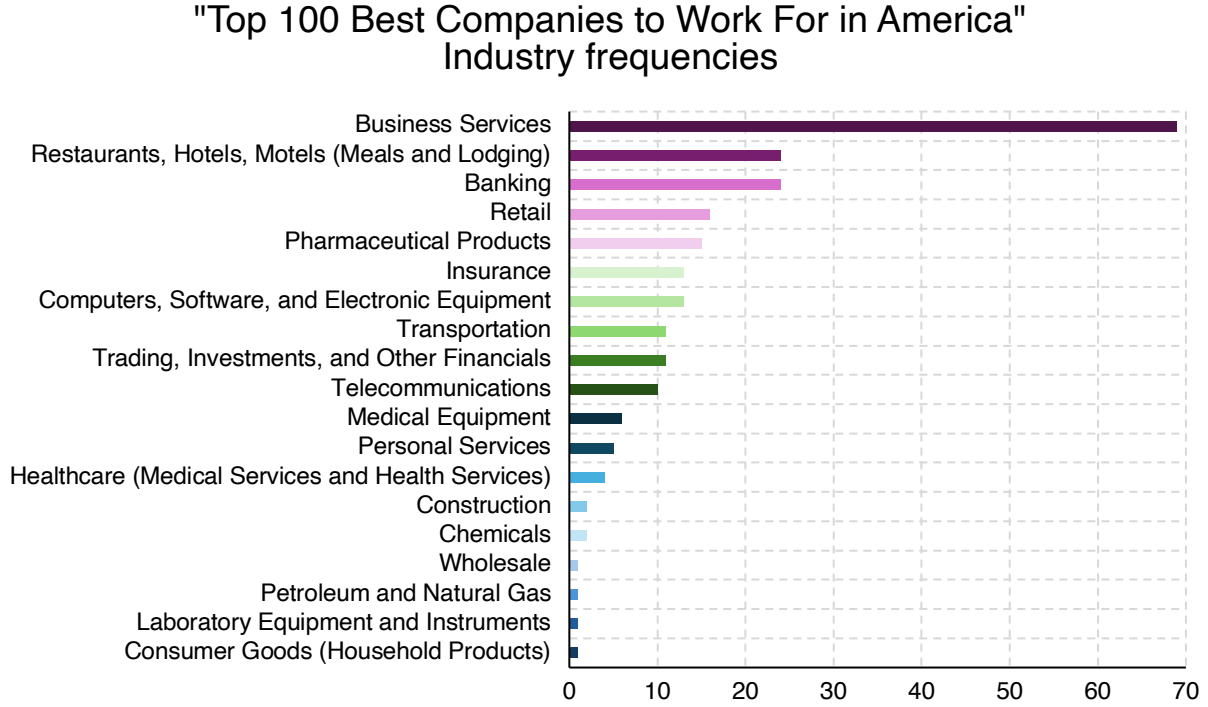
The following table presents the summary statistics for the fiscal years 2020–2021 of the publicly listed companies featured in Fortune’s annual “Top 100 Best Companies to Work For in America.” The data for the first two variables come from the CRSP database, while the remaining data are sourced from Compustat and Refinitiv Datastream.

	# obs	Mean	Std. Dev.	Median	Min	Max
2020 List						
Market Cap (\$ bn)	40	134.07	73.18	19.66	0.78	333.93
Price (\$)	40	55.77	130.94	90.35	8.59	632.07
Price/Book	40	13.61	24.76	5.18	-23.41	100.59
Dividend Yield (%)	40	1.25	2.18	0.46	0.00	12.49
Gross Profit/Total Assets (%)	40	25.37	22.10	22.90	-5.75	77.03
Capex/Sales (%)	40	4.14	3.88	3.12	0.00	16.13
Intangible Assets/Total Assets (%)	40	22.29	22.18	16.13	0.00	77.04
Employee Turnover (%)	12	10.73	6.37	7.72	3.80	23.00
2021 List						
Market Cap (\$ bn)	39	188.91	115.75	47.09	1.86	816.90
Price (\$)	39	95.61	159.72	132.95	27.36	800.10
Price/Book	39	12.99	24.60	6.19	-53.03	91.99
Dividend Yield (%)	39	1.17	1.62	0.37	0.00	6.23
Gross Profit/Total Assets (%)	39	29.59	19.99	28.64	3.37	93.09
Capex/Sales (%)	39	3.02	3.05	2.19	0.00	15.38
Intangible Assets/Total Assets (%)	39	30.57	24.74	26.48	0.00	73.93
Employee Turnover (%)	18	15.08	7.88	12.25	3.80	35.00

This context reinforces the idea that employee satisfaction, as captured by the Best Companies list, is not only a reliable proxy for internal workplace quality, but also a reflection of firms' ability to nurture and leverage their most valuable intangible asset: human capital. Unlike traditional measures of intangibles such as R&D or advertising, which are often industry-specific and harder to connect directly to employee well-being, the Best Companies list offers a cross-sectoral lens to evaluate how firms manage, motivate, and retain talent. This is particularly relevant given the industry composition of the sample. The most represented sectors are all heavily dependent on the capabilities, judgment, and engagement of their workforce.

Figure 1. Frequencies of “Top 100 Best Companies to Work For in America”, by Industry

This graph displays the number of “Top 100 Best Companies to Work For in America” across the entire sample from 2017-2022 categorized by industry according to the 49 Fama-French classification.



In such environments, human capital is a key source of competitive advantage, driving innovation, operational excellence, and customer satisfaction. By focusing on companies recognized for outstanding workplace culture, the analysis captures a dimension of firm performance that is deeply rooted in employee experience and potentially underappreciated by traditional financial metrics or market participants.

2.3. Prediction of the inclusion in the list

To test whether the basic firm characteristics are predictive of inclusion in the “Top 100 Best Companies to Work For in America” list, a simple logistic regression was implemented as specified below:

$$P(\text{Best Company} = 1) = \Lambda(\beta_0 + \beta_1 \text{Price/Book} + \beta_2 \text{DividendYield} + \beta_3 \text{GrossProfit/TotalAssets} + \beta_4 \text{Capex/Sales} + \beta_5 \text{IntangibleAssets/TotalAssets} + \beta_6 \text{LogEmployees} + \beta_7 \text{R\&DExpenses}) \quad (1)$$

The dependent variable is a dummy that takes the value 1 when the firm appears in the list in the corresponding fiscal year and 0 otherwise, whereas the explanatory variables are the basic firm characteristics analyzed earlier, except for R&D Expenses and logEmployees employee turnover which substituted Employee Turnover. The limited disclosure of this metric distorted the regression, making its exclusion from the dataset necessary.

Table 3. Top 100 Best Companies prediction based on firm characteristics

The table below presents the results of the logistic regression on standard firm characteristics using the full Compustat database. The dependent variable is a dummy that takes value 1 if the firm is included in the “Top 100 Best Companies to Work For in America” list. Column (1) displays the odds ratios, with constant being omitted from display, while Column (2) the marginal effects on the dependent variable. Robust standard errors are in parentheses, with significance levels denoted as: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Best Company	(1) Odds Ratio	(2) dy/dx
PriceBook	0.9999 (0.0000)	0.0000 (0.0000)
DividendYield	0.1211 (0.4021)	-0.0032 (0.0051)
GrossProfitTotalAssets	1.2918*** (0.1050)	0.0004* (0.0003)
CapexSales	0.1343*** (0.0972)	-0.0030*** (0.0007)
IntangibleAssetsTotalAssets	6.5683*** (2.065)	0.0029* (0.0017)
LogEmployees	1.0014*** (0.0005)	0.0000 (0.0000)
R&D Expenses	1.0000*** (0.0000)	0.0000 (0.0000)
Observations	37,549	
Pseudo R2	5%	

Table 3 reports the odds ratios and marginal effects of the logistic regression. The firm characteristic that emerges as the strongest positive predictor is the ratio of intangibles to total assets. As expected, firms rich in intangible assets (those with a higher stock of human capital) display a remarkably higher likelihood of being included in the list. At the same time, the odds of appearing in the list decrease as the Capex/Sales ratio increases, indicating that more capital-intensive companies tend to be less employee centric. Great operating efficiency raises the odds of inclusion, but the impact remains relatively small, as indicated by the Gross Profit/Total Assets marginal effect. By contrast, a high dividend yield exerts a negative effect on the probability of inclusion, but the results are non-significant. Lastly, a higher P/B ratio, Log_Employees or R&D

Expenses don't have any effect on the probability of inclusion in the list, as indicated by the odds ratio close to one and the null marginal effects.

3. *Empirical Methodology*

3.1. *Factor Models*

In order to conduct a more accurate, rigorous, and comprehensive evaluation of the performance of the portfolio composed of the “Top 100 Best Companies to Work For in America,” two widely established and methodologically sound asset pricing models from contemporary financial literature were employed: the Carhart four-factor model and the Fama-French five-factor model. Both frameworks are particularly effective for decomposing portfolio excess returns into systematic components associated with well-documented risk factors, thereby facilitating the identification of true alpha, that is, risk-adjusted abnormal returns unexplained by market-wide movements or common firm characteristics.

The Carhart model builds upon the original Fama-French three-factor framework by incorporating an additional momentum factor, which accounts for the empirical observation that stocks with strong past performance tend to continue outperforming in the short term. Conversely, the Fama-French five-factor model extends the original by introducing two further factors: profitability and investment, thus capturing dimensions of firm performance and corporate strategy that are not reflected in size or value metrics. The combined use of these two models offers a more granular and multidimensional understanding of the drivers behind portfolio returns, while also enabling robustness checks through model comparison.

$$R_{it} = \alpha + \beta_{MKT}MKT_t + \beta_{HML}HML_t + \beta_{SMB}SMB_t + \beta_{MOM}MOM_t + \varepsilon_{i,t} \quad (2)$$

$$R_{it} = \alpha + \beta_{MKT}MKT_t + \beta_{HML}HML_t + \beta_{SMB}SMB_t + \beta_{RMW}RMW_t + \beta_{CMA}CMA_t + \varepsilon_{i,t} \quad (3)$$

In both (2) and (3), R_{it} denotes the monthly excess return of the portfolio over a chosen benchmark. The intercept term α represents the portfolio's abnormal return, net of systematic risk exposures. The variables MKT_t , HML_t , SMB_t , MOM_t , RMW_t , CMA_t are respectively the return on the market, value, size, momentum, profitability and investment factors from the Kenneth French database. The residuals $\varepsilon_{i,t}$ were estimated using heteroskedasticity and autocorrelation-consistent (HAC) standard errors as proposed by Newey and West (1987) with 4 lags, as the

methodology adopted in Edmans (2011). Robustness in the presence of serial correlation and conditional heteroskedasticity was checked varying the number of lags by ± 1 around the baseline, and the results remained qualitatively unchanged.

3.2. Benchmark Construction

To construct the benchmark for excess return computation, three distinct references were adopted: i) the U.S. risk-free rate, obtained from Kenneth French Data Library, providing a baseline representing the minimum required return on a riskless asset; ii) an industry-adjusted portfolio, based on the Fama-French 49-industry classification, where the sectoral composition of the “Top 100 Best Companies” was replicated using industry-specific weights to create an appropriately matched benchmark; iii) a characteristics-based peers portfolio, composed of firms exhibiting similar observable characteristics, selected based on prior academic frameworks for constructing control groups in performance analysis.

More in detail, for the industry-adjusted portfolio, the first step was to compute the relative industry frequencies within the Best Companies from 2017 to 2022. The frequencies obtained were then used as weights for the benchmark, with industry return data obtained from Kenneth French’s website. For the peer portfolio, instead, the selection process began with the identification of three key financial ratios, based on the ones that resulted to be more predictive of the inclusion in the list from the logistic regression in section 2, to assess the comparable firms: 1) the Capex/Sales ratio, to provide insights into the capital-intensity of the firm; 2) the Gross Profit/Total Assets, to measure a firm’s efficiency in utilizing assets to generate gross profits; 3) the Intangible Assets/Total Assets, because the “Top 100 Best Companies” reportedly have a higher-than-average relative presence of intangibles. To ensure comparability, the mean and standard deviation of these ratios were computed for the Top 100 Best Companies, applying a winsorization at the 5th and 95th percentiles to mitigate the influence of outliers. Then, the monthly Z-scores for each publicly listed U.S. firm were computed for all of the three selected financial ratios. Firms with joint Z-scores between -0.5 and 0.5 were included into the peer portfolio to ensure its representativeness. Monthly return data for the peers were obtained from CRSP, as were the returns for the Top 100 Best Companies.

Upon calculating monthly returns and the associated excess returns relative to each benchmark, the persistence and magnitude of the alpha, previously documented by Edmans (2011) and

Boustanifar & Kang (2021), were empirically tested across two distinct timeframes: a pre-pandemic period (March 2017 – February 2020) and a pandemic period (March 2020 – January 2023). This temporal division was chosen to assess whether the portfolio’s outperformance was more pronounced during periods of heightened uncertainty and market stress, conditions under which firm-level intangibles such as corporate culture and employee satisfaction are hypothesized to have a greater impact on firm value.

3.3. Differences-in-Differences analysis

To further validate the findings and assess the differential effect of the COVID-19 shock on the performance of the "Best Companies" while controlling for a wider set of lagged firm-specific characteristics and lagged idiosyncratic volatility, a difference-in-differences (DiD) regression framework was implemented. The specification is as follows:

$$R_{i,t} = \alpha + \lambda_i + \lambda_t + \beta_1(BestCompany \times COVID19)_{i,t} + \delta X_{i,t-1} + \varepsilon_{it} \quad (4)$$

Here, *BestCompany* is a dummy variable which takes value equal to 1 if the firm is a firm listed among the “Top 100 Best Companies to Work For in America”, and *COVID19* is a dummy variable which takes value equal to 1 for returns recorded after February 2020. As a result, the interaction term *BestCompany* $\times$ *COVID19* captures the differential impact of the pandemic period on the target firms relative to their peers. The vector $X_{i,t}$ includes the following set of control variables⁵ for firm characteristics: i) *logSize*, computed as the natural log of the company’s market capitalization, in order to capture size-related effects among the different companies considered and to control for potential differences in financial and managerial resources; ii) *Dividend Payout Ratio*, which represents the shareholder remuneration policy and reflects strategic differences among investors decisions based on their investment time horizons and preferences; iii) *ROE*, computed as the ratio of the Net Income to Total Shareholders Equity, to account for both operational and financial consistency of the firms; iv) *Gross Profit/Total Assets*, used as a proxy for efficiency in generating income from operating activities; v) *Price/Book*, namely the ratio between market price and book value per share, to capture investors’ long-term expectations

⁵ The $X_{i,t}$ controls are taken from Li, Kai, Xing Liu, Feng Mai, and Tengfei Zhang. 2021. “The Role of Corporate Culture in Bad Times: Evidence from the COVID-19 Pandemic.” *Journal of Financial and Quantitative Analysis* 56(7): 2545–83.

during the pandemic; vi) Idiosyncratic Volatility, obtained from the residuals of the CAPM on monthly returns, to further capture the risk premium required by investors. λ_i and λ_t correspond to firm and monthly fixed effects, respectively, and are included to control for unobservable time-invariant firm heterogeneity and common time shocks.

This dual econometric strategy, combining multi-factor performance attribution with temporal causal inference techniques, aims to provide a robust understanding of the relationship between workplace quality, as reflected in employee satisfaction, and the generation of superior risk-adjusted returns, particularly during periods of systemic stress.

4. Results

Table 4 presents the alpha coefficients obtained by applying the previously described factor models, the Carhart four-factor model and the Fama-French five-factor model, to two distinct periods: pre-COVID-19 and during COVID-19. The analysis examines both equally weighted and value-weighted portfolios of companies featured in the "100 Best Companies to Work For in America".

Starting with Panel A, which are the pre-pandemic period (March 2017 – February 2020) for the equally weighted portfolio, slightly positive alpha values are observed for excess returns calculated relative to the risk-free rate and the industry-matched portfolio for both factor models. However, excess returns computed against the characteristics-based benchmark show negative alpha values. This discrepancy may indicate that the companies considered "best places to work" underperformed relative to firms with similar financial and operational characteristics. This finding aligns with previous literature (Hornuf & Yuksen, 2023; Luo & Balvers, 2017) which suggests that strict adherence to socially responsible investing criteria might limit diversification and consequently lower portfolio efficiency, particularly in stable market periods.

Moving to Panel B, which considers the same pre-pandemic period but evaluates the value-weighted portfolio, alpha values are consistently positive, ranging between 46 and 76 basis points across all benchmarks, influenced by the returns of large-cap firms. Despite these positive alphas, the results lack statistical significance, except for the excess value-weighted returns calculated using the risk-free rate with the Fama-French 5-factor model. This exception might be attributed to the portfolio's exposure to profitability and investment factors uniquely captured by the Fama-French 5-factor model. This result suggests that the superior financial performance captured by

this model's additional factors might have influenced investors' perception of firm value, especially in firms where employee satisfaction potentially enhances productivity and profitability.

Table 4. Risk adjusted returns

Monthly regressions of excess returns on a portfolio of the “100 Best Companies to Work For in America” on the four Carhart factors (MKT, HML, SMB and MOM) and the five Fama-French factors (MKT, HML, SMB, RMW, CMA), for ease of comparison factor loadings have been collapsed. The dependent variable is the portfolio return less either the US risk-free rate, the industry-matched portfolio return, or the characteristics-matched (peers) portfolio return. Panel A contains pre-Covid19 equally weighted returns, Panel B contains pre-Covid19 value-weighted returns, Panel C contains Covid19 equally weighted returns and Panel D contains Covid19 value weighted returns. The alpha is the excess risk-adjusted return. The sample period is March 2017–February 2020 for Panel A-B, and March 2020–January 2023 for Panel C-D. Standard errors are in parenthesis with significance level specified as: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

	Carhart 4-Factor Model			Fama-French 5-Factor Model		
	Risk-Free	Industry	Characteristics	Risk-Free	Industry	Characteristics
<i>Panel A: Pre-Covid19 Period, Equally Weighted</i>						
α	0.0024	0.0004	-0.0017	0.0036	0.0018	-0.0006
	(0.0047)	(0.0051)	(0.0032)	(0.0041)	(0.0048)	(0.0045)
<i>Panel B: Pre-Covid19 Period, Value Weighted</i>						
α	0.0066	0.0046	0.0046	0.0076*	0.0059	0.0056
	(0.0044)	(0.0051)	(0.0041)	(0.0040)	(0.0050)	(0.0051)
# Firms	54	54	54	54	54	54
# Months	36	36	36	36	36	36
<i>Panel C: Covid19 Period, Equally Weighted</i>						
α	0.0122**	0.0136**	0.0134*	0.0119	0.0128	0.0132
	(0.0052)	(0.0055)	(0.0079)	(0.0082)	(0.0087)	(0.0101)
<i>Panel D: Covid19 Period, Value Weighted</i>						
α	0.0156***	0.0170***	0.0168**	0.0156**	0.0165**	0.0169*
	(0.0039)	(0.0042)	(0.0063)	(0.0066)	(0.0070)	(0.0087)
# Firms	56	56	56	56	56	56
# Months	35	35	35	35	35	35

The most intriguing insights emerge from Panels C and D, corresponding to the COVID-19 pandemic period (March 2020 – January 2023). Panel C illustrates that the equally weighted portfolio achieved substantial alpha exceeding one percentage point across all benchmarks during the pandemic. However, statistical significance was only evident for returns calculated with the

Carhart 4-factor model. A possible explanation for this could lie in the momentum factor unique to the Carhart model, suggesting that during crises, market participants disproportionately rewarded companies exhibiting recent robust performance and employee-focused strategies. Nevertheless, the lack of universal statistical significance across all models implies limited robustness, overshadowing Boustanifar & Kang's (2021) argument regarding the persistence of such anomalies in equally weighted portfolios during turbulent times.

Panel D presents the most compelling findings, demonstrating that the value-weighted portfolio achieved statistically significant alphas consistently exceeding 1.56 percentage points across all benchmarks and model specifications during the pandemic. This robust outcome strongly reinforces Edmans' (2011) original conclusions regarding the financial benefits of investing in employee satisfaction, particularly for value-weighted portfolios. The significant outperformance during the COVID-19 crisis likely stems from enhanced corporate resilience driven by employee satisfaction and internal corporate culture. Firms with stronger human capital management may have experienced lower turnover, higher productivity, and better adaptability to remote work conditions, aligning with arguments proposed by Lins et al. (2017) and Li et al. (2022). These firms likely maintained operational stability and investor confidence during an economically disruptive period marked by labor market turmoil, as highlighted by the "Great Resignation." Consequently, investors might have recognized these firms as less risky, rewarding them with higher valuations, reflected in significant alpha returns.

However, it is important to note that the pandemic time horizon may represent a limitation of the study. As Edmans (2011) states, the relationship between employee satisfaction and financial performance also emerges over the medium/long-term, so a horizon of at least three years-ahead. This timeframe allows investors to gradually incorporate the value of intangible assets, like human capital and employee satisfaction, into financial evaluations. Therefore, although the results are satisfactory with a value-weighted portfolio after the pandemic, focusing exclusively on the three years of the pandemic could be potentially underestimating the true impact of employee satisfaction and corporate culture.

As the factor models show, while the alpha values during the pre-pandemic period indicate moderate and mostly insignificant outperformance, the COVID-19 period provides robust evidence that companies prioritizing employee welfare substantially outperformed their peers, particularly evident in value-weighted portfolios. The results of the difference-in-differences

(DiD) regression on monthly stock returns for the “Top 100 Best Companies to Work For in America” during the COVID-19 pandemic are reported in Table 5, to test directly the statistical difference between the alphas. Integrating this analysis alongside the factor models is essential to assess whether these firms experienced a systematic and statistically significant outperformance relative to their peers throughout the unprecedented economic disruption caused by the pandemic. The DiD approach offers a more robust causal interpretation by comparing the evolution of returns before and after the onset of COVID-19 across treated (Top 100) and untreated (control) firms.

Table 5. Differences-in-Differences Regression for Monthly Returns

The table below reports the results of differences-in-differences estimation for the monthly price range observed during the Covid-19 Pandemic. BestCompany equals one for the companies included in the selected list of top performers, and zero otherwise. COVID19 equals one for the period from February 28, 2020, to January 31, 2023, and zero before this timeframe. Firm and month fixed effects are included in every specification to account for unobserved heterogeneity. The numbers in parentheses represent the robust standard errors, which are clustered at the firm level to account for potential intra-firm correlation. Significance levels are denoted as follows: ***p < .01; **p < .05; *p < .1.

Dependent Variable	(1) Returns	(2) Returns	(3) Returns	(4) Returns	(5) Returns	(6) Returns	(7) Returns
BestCompany*COVID19	0.0199*** (0.0073)	0.0173** (0.0082)	0.0173** (0.0082)	0.0185** (0.0084)	0.0186** (0.0084)	0.0175** (0.0082)	0.0180** (0.0082)
logSize		0.0448*** (0.0035)	0.0448*** (0.0035)	0.0475*** (0.0036)	0.0474*** (0.0037)	0.0439*** (0.0039)	0.0483*** (0.0043)
DividendPayoutRatio			0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001* (0.0000)
ReturnOnEquity				-0.0165*** (0.0057)	-0.0166*** (0.0059)	-0.0150*** (0.0053)	-0.0147*** (0.0053)
GrossProfit/TotalAssets					0.0096 (0.0215)	0.0037 (0.0203)	0.0136 (0.0214)
Price/Book						0.0011*** (0.0003)	0.0012*** (0.0003)
Idiosyncratic Volatility							0.6960*** (0.2270)
Constant	0.0121*** (0.0005)	-0.355*** (0.0289)	-0.355*** (0.0290)	-0.377*** (0.0295)	-0.378*** (0.0288)	-0.354*** (0.0299)	-0.413*** (0.0351)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N° of Firms-Months	17,395	17,385	17,385	17,385	17,385	17,385	17,385
R-squared	0.208	0.222	0.222	0.223	0.223	0.225	0.227
N° of Firms	339	339	339	339	339	339	339

In each specification of the regression shown in Table 5, firm and month fixed effects are included to account for time-invariant firm characteristics and common time shocks, respectively. Moreover, each model incorporates one or more additional control variables to further isolate the

effect of interest. The key explanatory variable is the interaction term $\text{BestCompany} \times \text{COVID19}$, which captures the differential effect of the pandemic period on firms featured in the “Top 100 Best Companies” list. As evidenced across all model specifications, the coefficient for this interaction term is both positive and statistically significant at the 5% level or better. Its magnitude ranges from 0.0173 to 0.0199, indicating that, on average, firms recognized for their superior workplace culture achieved monthly returns between 1.73 and 1.99 percentage point higher than comparable firms not included in the list, and this is not attributable to the correlation with observable characteristics like studied by Brennan, Chordia, and Subrahmanyam (1998).⁶

Figure 2. Pseudo-Event Study on Average Monthly Returns

This graph compares the point estimates and the 95% confidence interval of the average monthly returns for each year between 2017 and 2022 for the “Top 100 Best companies to Work For in America” and their characteristics-based Peers considering t-2 as the baseline in a pseudo-event study.

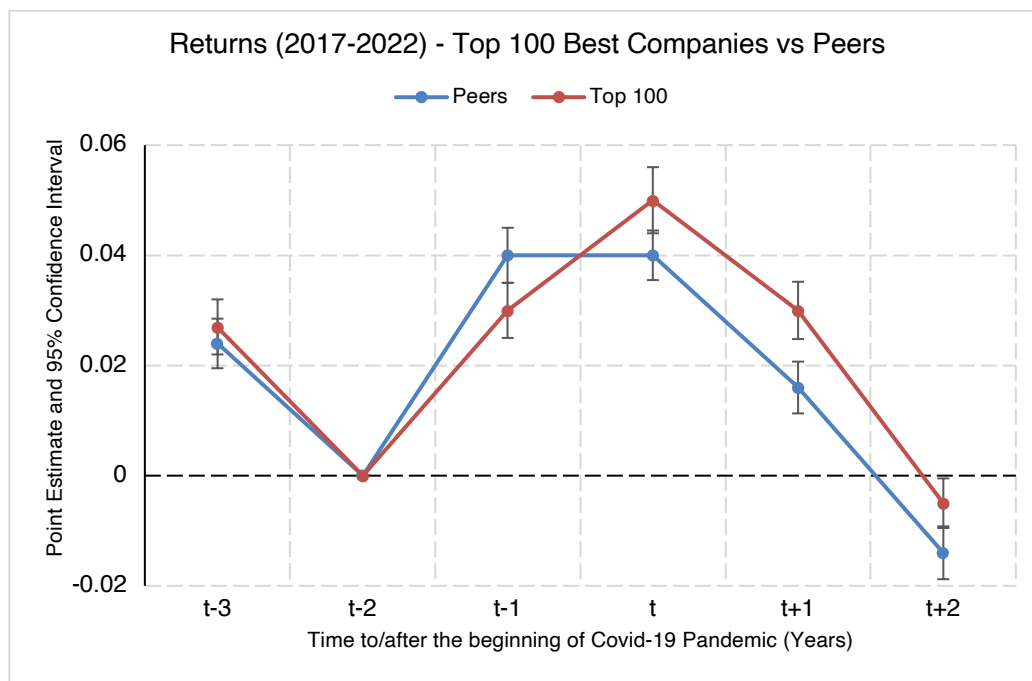


Figure 2 presents the results of a pseudo-event study, comparing the average monthly returns, year by year from 2017 (t-3) to 2022 (t+2) of the “Top 100 Best Companies to Work For in America” against those of a peer group. Here, t denotes the year the COVID-19 pandemic began. Specifically, the chart shows the point estimates of returns, adjusted for potential multicollinearity

⁶ When using the Fama-MacBeth regression to assess the impact of being included in the list on stock returns, Edmans (2011) found a slight reduction in the effect, by 4 basis points relative to peers, compared to factor models.

among year dummies, along with 95% confidence intervals. For a better visualization of the differences in returns, the baseline is represented by t-2.

From the graph, it is evident that prior to the onset of the pandemic, both the Top 100 companies and their peers exhibited relatively similar performance, particularly in t-3. A negative discrepancy is observed in t-1, where the Top 100 firms underperformed their peers. Starting from the year of the pandemic (t), the returns of the “Top 100 Best Companies” significantly outpaced those of their peers, with the divergence peaking in 2020, as reflected in the non-overlapping confidence intervals. A preliminary interpretation suggests that investors may have acknowledged the resilience of firms known for high employee satisfaction, indicating how the market valuation of such firms remained robust despite the economic disruption caused by the COVID19 pandemic, likely due to their strong organizational culture. In t+2, the start of a convergence in returns is observed, reflecting a normalization of the crisis effect, consistent with findings in Boustanifar & Kang (2021).

The economic and statistical significance of these findings can be attributed to several key factors. First, during periods of extreme uncertainty, such as a global health and economic crisis, both institutional and retail investors are likely to favor ESG stocks, those associated with strong internal governance, resilient corporate culture, and sustainable employee engagement practices. Firms listed among the “Top 100 Best Companies” are perceived to embody these characteristics, thus becoming particularly attractive in the eyes of investors seeking stability and long-term value in turbulent markets. Second, companies with high levels of employee satisfaction are more likely to exhibit operational resilience, stronger morale, and lower turnover during crises, which can translate into more stable earnings and better financial performance. As such, employee satisfaction may act as a risk-mitigating asset, reducing exposure to internal disruptions and boosting a firm’s ability to adapt to rapidly changing conditions. From an investment perspective, this makes such firms particularly appealing during market downturns, where resilience and adaptability become highly valued traits.

5. Heterogeneity Analysis

To strengthen the value and robustness of the main analysis, this section explores in greater depth the mechanisms behind the outperformance of the “Top 100 Best Companies to Work For in America” during the COVID-19 pandemic. Although the primary analysis focuses on the

relationship between stock returns and employee satisfaction, further investigation through additional model specifications and complementary metrics is required to enhance the credibility of the findings. These supplementary analyses aim to provide a more comprehensive view of the connection between workplace quality and financial performance, particularly in times of elevated uncertainty.

5.1. Profitability Analysis

The primary goal of this analysis is to investigate whether the positive effect of employee satisfaction on returns is attributable to a specific firm characteristic, which in this case is the firm's profitability. To address this question, the following analysis employs a triple-differences (DDD) model, extending the previous specifications by incorporating a new dummy variable along with the relevant interaction terms. Specifically, *HighProfit* is set to 1 if a company's Gross Profit/Total Assets lies at or above the median of the sample distribution, and 0 if it falls below that threshold. Formally, the regression can be expressed as:

$$R_{i,t} = \alpha + \lambda_i + \lambda_t + \beta_1 HighProfit_i + \beta_2 (BestCompany \times COVID19)_{i,t} + \beta_3 (BestCompany \times HighProfit)_i + \beta_4 (COVID19 \times HighProfit)_{i,t} + \beta_5 (BestCompany \times COVID19 \times HighProfit)_{i,t} + \delta X_{i,t-1} + \varepsilon_{it} \quad (6)$$

where $R_{i,t}$ still represents the monthly stock returns, λ_i and λ_t are firm and time fixed effects respectively, and $X_{i,t-1}$ is the same vector of lagged control variables included in (5) to mitigate omitted-variable bias.

From an initial inspection of the regression results, as shown in Table 6, the *HighProfit* dummy coefficient is positive but it's not statistically significant. In other words, there is no statistical evidence that a strong profitability ratio implies a systematic risk premium over the sample period. However, firms with a high operating margin similar to the Best Companies that weren't included in the list experienced a setback during the COVID19 pandemic period, as evidenced by the negative coefficient associated with the $COVID19 \times HighProfit$ interaction term. This indicates that a higher profitability ratio wasn't sufficient to face the pressures and vulnerabilities in the COVID-19 market environment.

Table 6. Triple Differences Profitability Analysis

The table below reports the results of a triple differences estimation for the monthly price range during the Covid-19 Pandemic. HighProfit is a dummy variable equal to one if the firm is above the median for GrossProfit/TotalAssets, zero otherwise. BestCompany equals one for the companies included in the list, and zero otherwise. COVID19 equals one from February 28, 2020, to January 31, 2023, and zero before this period. Firm and month fixed effects are included in every specification. The numbers in parentheses are the standard errors which are robust and clustered by firm. Significance levels are denoted as follows: ***p < .01; **p < .05; *p < .1.

Dependent Variable	(1) Returns	(2) Returns	(3) Returns	(4) Returns	(5) Returns	(6) Returns
HighProfit	0.0037 (0.0036)	0.0056 (0.0044)	0.0056 (0.0044)	0.0068 (0.0045)	0.0060 (0.0044)	0.0070 (0.0045)
BestCompany*COVID19	0.0103** (0.0049)	0.0111** (0.0056)	0.0112* (0.0060)	0.0116* (0.0062)	0.0081* (0.0045)	0.0085* (0.0046)
BestCompany*HighProfit	-0.0249* (0.0149)	-0.0134 (0.0185)	-0.0132 (0.0185)	-0.0130 (0.0187)	-0.0158 (0.0175)	-0.0161 (0.0172)
COVID19*HighProfit	-0.0007 (0.0040)	-0.0159*** (0.0046)	-0.0158*** (0.0046)	-0.0157*** (0.0047)	-0.0162*** (0.0046)	-0.0163*** (0.0047)
BestCompany *COVID19* HighProfit	0.0232** (0.0108)	0.0158** (0.0073)	0.0157** (0.0073)	0.0173** (0.0081)	0.0221** (0.0102)	0.0237** (0.0118)
logSize		0.0481*** (0.0038)	0.0482*** (0.0038)	0.0508*** (0.0039)	0.0467*** (0.0041)	0.0500*** (0.0044)
DividendPayoutRatio			0.0001*** (0.0000)	0.0001*** (0.0000)	0.0001*** (0.0000)	0.0001*** (0.0000)
ReturnonEquity				-0.0161*** (0.0056)	-0.0146*** (0.0052)	-0.0145*** (0.0049)
PriceBook					0.0012*** (0.0004)	0.0012*** (0.0004)
Idiosyncratic Volatility						0.6247*** (0.2114)
Constant	0.0118*** (0.0021)	-0.3840*** (0.0306)	-0.3840*** (0.0307)	-0.4060*** (0.0316)	-0.3780*** (0.0328)	-0.4220*** (0.0370)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N° of Firms-Months	17,395	17,395	17,395	17,395	17,395	17,395
R-squared	0.207	0.222	0.222	0.223	0.225	0.226
N° of Firms	339	339	339	339	339	339

Consistently with the earlier findings, the coefficient for *BestCompany* $\times$ *COVID19* remains positive and significant in all specifications, implying that firms recognized as a “Best Company to Work For” still enjoyed a stock performance premium during the pandemic. When diving deeper into the triple-differences component, the coefficient on *BestCompany* $\times$ *COVID19* $\times$ *HighProfit* appears positive and highly significant at approximately 0.0221 once controlling for all other variables in the vector $X_{i,t}$. Hence, it can be concluded that the “Top 100 Best Companies”

with higher profitability ratio achieved higher returns during the COVID-19 period relative to lower profitable “Top 100 Best Companies”.

From a broader perspective, this heterogeneity analysis indicates that the value of employee-centric corporate culture becomes more visible under stress when it is backed by solid profitability that give management the financial flexibility to protect jobs, maintain the morale and pivot quickly. High profitability alone did not shield firms from COVID-19 headwinds and workplace quality alone was not enough to offset weak fundamentals, it was the combination of the two that produced the strongest resilience and returns. This nuanced results evidence that, across the Fortune list, both profitable and less-profitable “Best Companies” benefit from their culture, but firms with greater capability of generating profit from their assets are better positioned to make the most of human capital when a systemic shock happens.

5.2. Productivity Analysis

Similarly to the previous specification, the goal of this analysis is to explore more deeply the relationship between stock returns and employee satisfaction, specifically, whether the positive effect is driven by the productivity of the "Top 100 Best Companies to Work For in America." To investigate this, the following analysis employs the same triple-differences (DDD) model as before, replacing the HighProfit dummy with a new variable, HighProd. The latter equals 1 if productivity, measured as Sales per Employee, is greater than or equal to the median of the sample distribution, and 0 otherwise. As before, the regression can be expressed as follows:

$$R_{i,t} = \alpha + \lambda_i + \lambda_t + \beta_1 HighProd_i + \beta_2 (BestCompany \times COVID19)_{i,t} + \beta_3 (BestCompany \times HighProd)_i + \beta_4 (COVID19 \times HighProd)_{i,t} + \beta_5 (BestCompany \times COVID19 \times HighProd)_{i,t} + \delta X_{i,t-1} + \varepsilon_{it} \quad (6)$$

where $R_{i,t}$ still represents the monthly stock returns, λ_i and λ_t are firm and time fixed effects respectively, and $X_{i,t-1}$ is the same vector of lagged control variables included in (5) to mitigate omitted-variable bias.

First off, as shown in Table 7, the coefficient on the *HighProd* dummy is positive across all specifications but remains statistically insignificant, meaning that, on average, a higher productivity level (measured as Sales per Employee) does not imply the existence of a systematic

return premium over the sample period by itself. Firms with high productivity that were not included in the “Best Companies” list did not display a distinctive advantage during the Covid-19 crisis, as indicated by the insignificant $COVID19 \times HighProd$ interaction term. This reinforces the idea that greater productivity alone was not sufficient to offset the external shocks and operational uncertainty brought about by the pandemic.

Table 7. Triple Differences Productivity Analysis

The table below reports the results of a triple differences estimation for the monthly price range during the Covid-19 Pandemic. HighProd is a dummy variable equal to one if the firm is above the median for Sales per Employee, zero otherwise. BestCompany equals one for the companies included in the list, and zero otherwise. COVID19 equals one from February 28, 2020, to January 31, 2023, and zero before this period. Firm and month fixed effects are included in every specification. The numbers in parentheses are the standard errors which are robust and clustered by firm. Significance levels are denoted as follows: ***p < .01; **p < .05; *p < .1.

Dependent Variable	(1) Returns	(2) Returns	(3) Returns	(4) Returns	(5) Returns	(6) Returns
HighProd	0.0052 (0.0047)	0.0048 (0.0051)	0.0049 (0.0051)	0.0051 (0.0053)	0.0050 (0.0054)	0.0047 (0.0056)
BestCompany*COVID19	0.0110** (0.0054)	0.0102* (0.0075)	0.0101* (0.0075)	0.0114* (0.0076)	0.0112* (0.0074)	0.0120* (0.0072)
BestCompany*HighProd	0.0063 (0.0102)	0.0054 (0.0125)	0.0053 (0.0124)	0.0060 (0.0128)	0.0056 (0.0126)	0.0055 (0.0123)
COVID19*HighProd	0.0032 (0.0039)	0.0024 (0.0043)	0.0028 (0.0044)	0.0031 (0.0045)	0.0026 (0.0046)	0.0029 (0.0047)
BestCompany *COVID19* HighProd	0.0190** (0.0091)	0.0201** (0.0098)	0.0194** (0.0096)	0.0190** (0.0099)	0.0183** (0.0097)	0.0189** (0.0095)
logSize		0.0487*** (0.0036)	0.0487*** (0.0036)	0.0497*** (0.0037)	0.0475*** (0.0039)	0.0510*** (0.0044)
DividendPayoutRatio			0.0001** (0.0000)	0.0001** (0.0000)	0.0001** (0.0000)	0.0001* (0.0000)
ReturnonEquity				-0.0168*** (0.0061)	-0.0153*** (0.0057)	-0.0150*** (0.0054)
PriceBook					0.0012*** (0.0004)	0.0012*** (0.0004)
Idiosyncratic Volatility						0.7060*** (0.2270)
Constant	0.0075*** (0.0021)	-0.3900*** (0.0293)	-0.3910*** (0.0294)	-0.4150*** (0.0303)	-0.3870*** (0.0317)	-0.4310*** (0.0369)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N° of Firms-Months	17,395	17,395	17,395	17,395	17,395	17,395
R-squared	0.212	0.229	0.229	0.230	0.232	0.235
N° of Firms	339	339	339	339	339	339

In line with earlier findings, the coefficient on the $BestCompany \times COVID19$ interaction still is consistently positive and statistically significant across all specifications, reaffirming that

companies recognized as a “Best Company to Work For” enjoyed superior stock market performance during the pandemic period. More interestingly, the triple interaction term $BestCompany \times COVID19 \times HighProd$ is positive and significant in each specification, with values ranging from 0.0183 to 0.0201. This suggests that among the firms included in the “Top 100 Best Companies,” those with higher productivity levels achieved stronger excess returns during the COVID-19 period than their lower-productivity counterparts.

The results emerging from this second heterogeneity analysis indicate that the benefits of a strong employee-centric corporate culture become stronger when paired with operational efficiency. High productivity allowed the “Top 100 Best Companies” to adapt more quickly, preserve margins, and implement effective work-from-home strategies without sacrificing output. At the same time, their internal culture helped maintain morale, engagement and resilience. In contrast, productivity without a strong culture was not sufficient to generate a consistent outperformance. Similarly, culture without underlying efficiency may not have been enough to fully capitalize on organizational strengths in times of crisis. Ultimately, it was the synergy between employee satisfaction and productive efficiency that drove the most robust stock performance. This interpretation supports the view that even within the Fortune list, culture matters across the board, and it is especially significant when backed by strong fundamentals.

6. *Conclusions and Limitations*

This study was conducted with the aim of assessing whether publicly traded companies featured in Fortune’s annual “Top 100 Best Companies to Work For in America” list, recognized for superior employee satisfaction compared to their peers, were capable of outperforming these peers, particularly during a challenging crisis such as the COVID-19 pandemic. Utilizing rigorous empirical methods, including the Carhart four-factor and Fama-French five-factor models combined with a difference-in-differences (DiD) analysis on stock returns, the study demonstrates and supports the positive impact of high employee satisfaction on firm performance during periods of systemic market and economic stress.

These findings reveal a nuanced but significant relationship between employee satisfaction and financial resilience. Prior to the pandemic, evidence regarding abnormal returns for the “Top 100 Best Companies to Work For in America” was relatively limited and mostly statistically insignificant, suggesting that in stable market conditions, the advantages associated with high

employee satisfaction and consequently greater human capital might be partially overshadowed or already priced into the market. However, the scenario shifted dramatically during the COVID-19 pandemic. In this period, both equally-weighted and value-weighted portfolios of the listed "Top 100 Best Companies" demonstrated significantly positive and notable outperformance compared to the benchmarks considered, especially in the case of the value-weighted portfolio, consistent with the original findings by Edmans (2011). Moreover, these results align with Boustanifar & Kang (2021), who demonstrated that the relationship strengthens during crises, implying that human capital and employee satisfaction substantially contribute to shareholder value creation in times of adversity.

The use of an econometric technique like the difference-in-differences (DiD) methodology further strengthens the outcomes from factor models, providing a causal interpretation regarding the significance of workplace quality, evidenced by consistently higher returns obtained during the pandemic. Specifically, the coefficient associated with the interaction term between inclusion in the "Top 100 Best Companies to Work For in America" and the pandemic period was statistically significant and positive, indicating that market participants viewed these companies as better positioned to withstand an unprecedented crisis. This effect can likely be attributed to increased investor focus on ESG factors and corporate social responsibility, alongside recognition of intangible assets like human capital in investment strategies.

Through supplementary analyses, the relationship between employee satisfaction and financial performance was explored in greater depth. The first important insight derived from the heterogeneity analysis conducted on high-profitability and low-profitability "Top 100 Best Companies" is the significant differences between the two groups during the pandemic. While the potential benefit of greater employee satisfaction is universal, particularly during crises, a higher profitability allows the company to adopt employee-centric policies that further raise morale and productivity, thereby setting in motion a virtuous cycle. Supporting the previously stated evidence, the findings remain consistent when distinguishing firms by productivity instead of profitability. The advantage of a strong corporate culture remains indisputable, motivated and satisfied employees can navigate adversity effectively, potentially adopting diverse strategies. Investing in human capital and promoting a healthy corporate culture benefits enterprises, making a significant difference, especially in challenging times.

From an investor's perspective, these findings hold substantial importance, particularly for those committed to Socially Responsible Investing (SRI). During crisis periods, allocating resources to assets linked with higher employee satisfaction can provide substantial advantages, provided investors are prepared to accept increased volatility. A strategy emphasizing investment in firms prioritizing robust human capital management emerges as successful under such conditions. For corporate decision-makers, as suggested by this study, it becomes crucial to support and reinforce employee welfare initiatives, not merely for ethical or reputational reasons as commonly perceived, but primarily to enhance shareholder value creation. Consequently, firms stand to benefit significantly from revisiting and intensifying their commitment to employee-focused policies that promote improved work-life balance, fairer and more competitive compensation, inclusivity, and transparent leadership as positive performance levers during major systemic shocks. Lastly, policymakers and regulators can leverage these insights to incentivize and promote employee-centric policies, thus encouraging investment in human capital as a differentiating factor for corporate performance. By integrating ESG strategies into the company's value chain, sustainable economic development can be fostered.

Despite the robustness of the findings, this study is subject to several limitations. The analysis' exclusive focus on U.S. publicly traded firms included in the "100 Best Companies to Work For in America," may limit the generalization of the results to other countries or private firms. While the study uses employee satisfaction as a proxy for corporate culture, it does not capture more qualitative aspects of internal organizational dynamics, and the reliance on historical return data and survey-based rankings introduces potential survivorship and reporting biases. Lastly, the pandemic period, though its unique and informative nature, may not fully capture the long-term dynamics of the relationship between employee satisfaction and financial performance besides of crisis contexts.

Limitations acknowledged, the COVID-19 pandemic undoubtedly represented a stress test for global market players and corporate strategies, clearly highlighting employee satisfaction as an intangible asset capable of significantly enhancing performance during crises. This research not only confirms the proposition that investing in human capital creates value but also enriches the debate regarding the economic tangibility of corporate social responsibility practices, illustrating how ethical management and economic resilience increasingly go hand in hand in today's business landscape.

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