

Employee satisfaction and corporate performance in the UK

Efthymia Symitsi, Panagiotis Stamolampros, George Daskalakis*, Nikolaos Korfiatis

Version: 28 February 2018

Abstract

We use online reviews from Glassdoor to study the effect of employee satisfaction on corporate performance in the UK. Our results indicate that employee satisfaction positively impacts firm profitability, but this is not fully recognised by equity investors.

JEL classification: G01; G03; M05

Keywords: Employee satisfaction; Human capital; Intangibles; Online reviews

* Corresponding author. Address: Norwich Business School (NBS), University of East Anglia (UEA), Norwich NR4 7TJ, UK; Tel.: +44 (0)1603 592309; E-mail address: g.daskalakis@uea.ac.uk. We would like to thank Glassdoor, Inc. for providing us with the employee reviews dataset. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

1. Introduction

An increasing number of scholars argue that the classical view of the firm needs to give its place to a human-centred one due to the changing nature of modern western economies. As eloquently put by Zingales (2000) almost two decades ago: *'Employees are not merely automata in charge of operating valuable assets but valuable assets themselves, operating with commodity-like physical assets (p.1641).'* Relevant empirical research seems to support this view. For example, Filbeck and Preece (2003) examined the shareholder value effects of a firm's inclusion in the *'100 Best Places to Work for in America'* list compiled annually by the Great Place to Work Institute® and published in *Fortune* magazine. Their event study revealed a significant positive market reaction on the day of the announcement, leading the authors to conclude that *'[...] the marketplace believes that satisfied employees may lead to satisfied shareholders (p.791).'* Edmans (2011) assessed the performance of a stock portfolio for firms included in the same list and found significant positive abnormal returns (portfolio alpha) over a twenty-five-year period. Based on this finding, he argued that employee satisfaction positively impacts firm value, however, that this is not fully reflected in stock prices. Symitsi et al. (2018) also performed a portfolio analysis but used online reviews from the jobs and recruiting site Glassdoor to decide which US stocks to include in the portfolio. They too found a positive and significant portfolio alpha. Through a regression analysis, they further reported a significant positive association between average employee satisfaction rating and firm performance in terms of profitability (ROA) and value (Tobin's Q).

The consistency of the results presented in the aforementioned studies, especially when considering the variety of methodologies and measures of employee satisfaction used, leave little doubt on the importance of employee satisfaction for US firms and their shareholders. A natural question arising, however, is whether this conclusion can be generalised to other countries. On the one hand, there is no fundamental reason the positive relationship between employee satisfaction and corporate performance to be limited only to US firms. In fact, the theoretical arguments put forward by the proponents of the human-centred view of the firm apply to any knowledge- and service-based economy. On the other

hand, however, the marginal returns from investments in employee satisfaction are likely to depend on local labour market conditions and the labour law in place (Edmans et al., 2018). Motivated by these considerations, we revisit here the link between employee satisfaction and corporate performance, focusing our analysis on UK public and private firms over the period spanning 2014 to 2017. For measuring employee satisfaction, we use a novel dataset of employee reviews posted on Glassdoor.

Our analysis allows us to contribute to the literature on employee satisfaction, human capital and intangibles in three main directions. First, we find that UK firms rated highly by their current employees in terms of satisfaction achieve superior profitability (ROA) compared to those rated poorly. This finding, which is robust to controlling for firm characteristics, industry and time fixed-effects, suggests that the human-centred view of the firm is the appropriate one not only in the US, but also in the UK. Second, the significant positive relationship between employee satisfaction rating and profitability indicates that similarly to the case of US firms, online employee reviews can be used to forecast the financial results of UK firms. This highlights the value-relevance of online employee reviews for UK investors and supports the view that non-financial indicators are of key importance for security valuation as they address the inability of standard accounting measures to capture investments in intangibles (e.g., Amir and Lev, 1996). Third, we find that an equally-weighted (value-weighted) stock portfolio that includes the best UK public firms in our sample in terms of average employee satisfaction rating earned on average a monthly four-factor alpha of approximately 1.27% (0.92%) over the four-year period under scrutiny. Abnormal returns of comparable magnitude are also obtained when we assess portfolio performance with other popular asset pricing models. This finding, which is consistent with the portfolio analysis results for US stocks presented in Edmans (2011) and Symitsi et al. (2018), corroborates the link between employee satisfaction and corporate performance in the UK and also suggests that intangibles are not fully priced in the UK market. Moreover, since the online employee reviews we use are publicly and freely available, the latter seems to be not due to lack of

information, but because not all equity investors recognize the value that employee satisfaction brings to a firm.

To the best of our knowledge, Edmans et al. (2018) is the only study that also examines the link between employee satisfaction and corporate performance for UK firms. We differentiate from these authors in two key respects. First, we measure employee satisfaction on the basis of online employee reviews instead of the 'Best Places to Work' list. This allows us to address concerns of potential self-selection bias in the findings that may arise due to the manner in which that list is compiled (Symitsi et al., 2018). Second, further than performing a portfolio analysis, we also examine the effect of employee satisfaction on firm performance in a regression framework and include in our firm sample not only public but private firms too.

Finally, it is interesting to point out that the period we consider in our analysis is characterised by turmoil in the UK labour market and increased uncertainty for UK firms due to the Brexit referendum and its outcome. Our findings suggest that in such periods employee satisfaction can be a source of significant competitive advantage for firms.

2. Empirical analysis

2.1. Data

We obtain all available employee reviews for UK firms over the period 2014-2017 from Glassdoor. Our focus is on the overall satisfaction rating reported on a 5-point Likert scale by current employees, that is, those who at the time of posting their review were employed in the firm. This is to ensure that our results are not skewed by disgruntled former employees. To further enhance the robustness of our findings, we disregard firms with less than 100 reviews during the four-year period under examination. The final sample includes 35,231 reviews for 164 firms (55 public with primary listing in the UK, 42 public but not listed in the UK and 67 private). Annual financial data for the regression analysis are collected for all firms from Bureau van Dijk's FAME. Daily stock price and market index (FTSE 100) data for the portfolio analysis are gathered from Thomson Reuters Datastream.

2.2. Employee satisfaction and firm profitability

We examine the relationship between employee satisfaction and corporate performance using the following baseline model (Model 1):

$$ROA_{it} = \alpha + \beta Employee\ rating_{it-1} + \gamma' x_{it-1} + \varepsilon_{it} \quad (1)$$

where indices i and t correspond to firm and year, respectively. $Employee\ rating_{it-1}$ is the annual employee satisfaction rating computed by averaging all available ratings for each firm in each year. The vector x_{it-1} contains firm-specific characteristics, while, ε_{it} are robust standard errors clustered at firm level. We also control for time fixed-effects (Model 2), time and industry fixed-effects (Model 3), industry/time fixed-effects and lagged ROA (Model 4). The estimation results, presented in Table 1, indicate a statistically significant positive relationship between employee satisfaction rating and firm profitability for all models considered.

Table 1. Regression analysis results

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Employee rating	1.794***	1.852***	1.715**	1.053*
Leverage	-8.104***	-8.132***	-7.457***	-2.068
log(Total assets)	-1.783***	-1.795***	-1.704***	-0.728*
Sales growth	-0.000***	-0.001***	-0.000***	-0.000*
Capital intensity	-1.282**	-1.273**	-1.161**	-0.386
Capital expenditure ratio	-2.584	-2.465	-1.250	0.791
R&D intensity	3.008	2.713	2.638	-0.410
R&D expenditure dummy	0.322	0.295	0.493	0.253
log(Employees)	-1.193**	-1.179**	-1.468***	-1.249***
log(Firm age)	-0.817	-0.800	-0.908	-0.662
Public (UK listed) dummy	4.775***	4.793***	5.522***	2.750**
Public (non-UK listed) dummy	1.269	1.227	1.851	0.931
ROA _{t-1}				0.481***
Constant	43.838***	44.024***	46.163***	24.755***
Industry fixed-effects	No	No	Yes	Yes
Time fixed-effects	No	Yes	Yes	Yes
Adjusted R ²	0.183	0.179	0.189	0.407

Note: *, **, *** denote statistical significance at the 10%, 5% and 1% level, respectively.

2.3. Employee satisfaction and portfolio performance

We complement the regression analysis by assessing the performance of stock portfolios for firms with high levels of employee satisfaction. This allows us to examine jointly

the effect of employee satisfaction on corporate performance and whether this intangible is fully priced in the market (Edmans, 2011). Specifically, we construct an equally-weighted and a value-weighted portfolio by including the stocks of the top 25% of the public firms (with primary listing in the UK) in our sample in terms of the monthly employee satisfaction rating, that is, the average of all available reviews for a firm in each month. We use monthly rebalancing of the portfolios and account for risk by assessing portfolio performance on the basis of the following popular asset pricing models:

Capital Asset Pricing Model (CAPM)

$$R_{it} = \alpha + \beta_{MKT} \cdot MKT_t + \varepsilon_{it} \quad (2)$$

Fama-French's three-factor model (FF3)

$$R_{it} = \alpha + \beta_{MKT} \cdot MKT_t + \beta_{HML} \cdot HML_t + \beta_{SMB} \cdot SMB_t + \varepsilon_{it} \quad (3)$$

Carhart's four-factor model (C4)

$$R_{it} = \alpha + \beta_{MKT} \cdot MKT_t + \beta_{HML} \cdot HML_t + \beta_{SMB} \cdot SMB_t + \beta_{MOM} \cdot MOM_t + \varepsilon_{it} \quad (4)$$

Fama-French's five-factor model (FF5)

$$R_{it} = \alpha + \beta_{MKT} \cdot MKT_t + \beta_{HML} \cdot HML_t + \beta_{SMB} \cdot SMB_t + \beta_{RMW} \cdot RMW_t + \beta_{CMA} \cdot CMA_t + \varepsilon_{it} \quad (5)$$

where R_{it} is the monthly return on portfolio i in excess of the risk-free rate, obtained from Ibbotson Associates. The intercept α captures the abnormal risk-adjusted return, MKT_t are the excess market returns while, HML_t , SMB_t , MOM_t , RMW_t and CMA_t are the value, size, momentum, profitability and investment pattern European factors taken from Ken French's website. ε_{it} is the error term, assumed to be heteroskedastic and serially correlated. The portfolio analysis results are presented in Table 2. These indicate statistically and

economically significant abnormal returns in the case of an equally-weighted (value-weighted) portfolio when using the CAPM, C4 and FF5 (FF3 and C4) to account for risk.

Table 2. Portfolio analysis results

	<i>Equally-weighted portfolio</i>				<i>Value-weighted portfolio</i>			
	<i>CAPM</i>	<i>FF3</i>	<i>C4</i>	<i>FF5</i>	<i>CAPM</i>	<i>FF3</i>	<i>C4</i>	<i>FF5</i>
<i>a</i>	0.993***	0.619	1.265**	1.100*	0.251	0.809*	0.916**	0.194
β_{MKT}	0.423**	0.570**	0.392**	0.406*	1.203***	0.965***	0.936***	0.998***
β_{HML}		-0.152	-0.739***	0.491		-0.001	-0.099	0.725*
β_{SMB}		0.536	0.480	-0.116		-0.911***	-0.920***	-0.455
β_{MOM}			-0.917***				-0.152	
β_{RMW}				0.149				1.329***
β_{CMA}				-1.628***				0.485
\bar{R}	1.17%				0.71%			
σ	3.40%				4.20%			

Note: *, **, *** denote statistical significance at the 10%, 5% and 1% level, respectively.

3. Conclusion

We examine the relationship between employee satisfaction and corporate performance in the UK. Our results support the human-centred view of the firm as we find a significant positive relationship between employee satisfaction and firm profitability. The value of this intangible is not fully recognized by equity investors however, as investing in firms with high levels of employee satisfaction results in significant abnormal returns.

References

- Amir, E., Lev, B., 1996. Value–relevance of nonfinancial information: The wireless communications industry. *Journal of Accounting and Economics* 22, 3-30.
- Edmans, A., 2011. Does the stock market fully value intangibles? Employee satisfaction and equity prices. *Journal of Financial Economics* 101, 621-640.
- Edmans, A., Li, L., Zhang, C., 2018. Employee satisfaction, labour market flexibility and stock returns around the world. European Corporate Governance Institute (ECGI), Finance Working Paper No. 433/2014.
- Filbeck, G., Preece, D., 2003. Fortune’s best 100 companies to work for in America: Do they work for shareholders? *Journal of Business, Finance and Accounting* 30, 771-797.

Symitsi, E., Stamolampros, P., Daskalakis, G., 2018. Employees' online reviews and equity prices. *Economics Letters* 162, 53-55.

Zingales, L., 2000. In search of new foundations. *Journal of Finance* 55, 1623-1653.