

# Employee Turnover and Company Value. Were European Companies Equally Affected by the COVID-19 Pandemic?

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## Article abstract

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We analyzed the association between employee turnover and company value by using a quantile regression model to determine this association at each point of the conditional distribution of company value. All of our financial and non-financial data for the 2019-2020 period were extracted from the Bloomberg database.

We found a negative association between employee turnover and company value before and during the pandemic. The additional costs of employee turnover may have therefore reduced stock market values. The negative association weakened considerably during the pandemic for those companies that had the lowest company value, possibly because of the government support and guarantees they received during the lockdowns. Our sectoral analysis showed a stronger effect on traditional industries with intensive human interactions than on modern industries with predominantly virtual interactions. Estimation results from more profitable companies showed a positive association before the pandemic, perhaps because they had an 'optimal' level of employee turnover that maximized their productivity and performance and, thus, their stock market value. This association completely reversed during the pandemic, perhaps because their higher profitability was not sufficient to dampen the negative effect of the increase in employee turnover. For the most profitable and socially responsible companies, the same association was much stronger both before and during the pandemic. For almost all of the companies, the estimated coefficients of employee turnover were positive before the pandemic but became negative for those companies that had the lowest stock market values during the pandemic.

This study enriches the existing literature by being the first one to show how employee turnover affected the company value of European listed firms before and during the pandemic. It also provides new evidence that this association varied with the level of sectoral sensitivity to the pandemic and was much stronger for the most profitable and socially responsible companies.

# Employee Turnover and Company Value. Were European Companies Equally Affected by the COVID-19 Pandemic?

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## Summary

In this study, we sought to identify how employee turnover affected company value in a sample of 254 European listed companies before and during the COVID-19 pandemic. We specifically tested the hypothesis that the most profitable and socially responsible companies withstood the pandemic better. We then complemented our analysis by identifying potential sectoral differences.

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**Keywords:** company value; employee turnover; company profitability; social responsibility; COVID-19 pandemic; quantile regression

## Résumé

Dans cette étude, nous avons cherché à identifier comment la rotation des employés affectait la valeur de l'entreprise à l'aide d'un échantillon de 254 sociétés européennes cotées en bourse avant et pendant la pandémie de COVID-19. Nous avons spécifiquement testé l'hypothèse selon laquelle les entreprises les plus rentables et les plus socialement responsables ont mieux résisté à la pandémie. Nous avons ensuite complété notre analyse en identifiant d'éventuelles différences sectorielles.

Nous avons analysé l'association entre la rotation des employés et la valeur de l'entreprise en utilisant un modèle de régression par quantile. Toutes nos données financières et non financières pour la période 2019-2020 ont été extraites de la base de données Bloomberg.

Nous avons constaté une association négative entre la rotation du personnel et la valeur de l'entreprise avant et pendant la pandémie. Les coûts supplémentaires liés à la rotation du personnel peuvent donc avoir réduit les valeurs boursières. L'association négative s'est considérablement affaiblie pendant la pandémie pour les entreprises dont la valeur était la plus faible, peut-être en raison du soutien et des garanties dont elles ont bénéficié de la part des pouvoirs publics pendant les fermetures d'entreprises. Notre analyse sectorielle a montré un effet plus important sur les industries avec des interactions humaines intensives que sur les industries avec des interactions principalement virtuelles. Les résultats des estimations des entreprises les plus rentables ont montré une association positive avant la pandémie, peut-être parce qu'elles avaient un niveau « optimal » de rotation du personnel qui maximisait leur productivité et leur performance et, par conséquent, leur valeur boursière. Cette association s'est complètement inversée pendant la pandémie, peut-être parce que leur rentabilité supérieure n'a pas suffi à atténuer l'effet négatif de l'augmentation de la rotation du personnel. Pour les entreprises les plus rentables et socialement responsables, la même association était beaucoup plus forte avant et pendant la pandémie. Pour la quasi-totalité des entreprises, les coefficients estimés de rotation du personnel étaient positifs avant la pandémie, mais sont devenus négatifs pour les entreprises dont la valeur boursière était la plus faible pendant la pandémie.

Cette étude enrichit la littérature existante en étant la première à montrer comment la rotation des employés a affecté la valeur des entreprises européennes cotées en bourse avant et pendant la pandémie. Elle apporte également de nouvelles preuves que cette association varie en fonction du niveau de sensibilité sectorielle à la pandémie et qu'elle est beaucoup plus forte pour les entreprises les plus rentables et les plus socialement responsables.

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# 1. Introduction

Starting in early 2020, the COVID-19 pandemic caused economic and financial lockdowns all over the world, thus confronting employees and organizations with enormous challenges (Bose et al., 2022). Many companies were forced to adapt their working arrangements, and employees frequently had to work from home. The social distancing imposed by several countries seriously affected employee satisfaction (Shan and Tang, 2022), although satisfaction increased for those employees who had previously worked in hostile environments. The impact was negative on those employees with high pre-COVID-19 satisfaction, since, in general, well-being at work strongly depends on face-to-face social connections.

It is well known that, "...job satisfaction is beneficial for firm value" (Edmans, 2012, p.1). The importance of this factor was driven home to investors by the abrupt challenge of adapting to the working conditions caused by the pandemic (Shan and Tang, 2022). During the pandemic, studies were published on the superior financial performance of socially responsible companies (Qiu et al., 2021). They found that corporate social responsibility (CSR) policies increase job satisfaction and produce an "insurance-like effect on a firm's stock and bond prices when it encounters a negative event or crisis, suggesting it also helps protect investors' interests" (Fox et al., 2020, p. 2217). Khanchel et al. (2023) showed that the value of French companies was less impacted during the pandemic among those with a serious commitment to CSR.

Job dissatisfaction is notably expressed by a high turnover rate (Edmans, 2012). Employee turnover is thus one of the key ways in which job satisfaction affects the value of a company (Mitchell et al., 2001). According to Posthuma et al. (2021), company value may be substantially reduced by the costs of high employee turnover (e.g., loss of productivity, organizational changes, training costs, etc.). The pandemic thus provides an opportunity to understand how employee turnover affects company value.

Some studies over the two last years have shown how the COVID-19 pandemic affected the association between employee behaviours/perceptions and company financial performance. For example, Becker et al. (2022) found that higher employee satisfaction during the pandemic was associated with above-average equity returns, unlike the situation before. Nonetheless, to the best of our knowledge, no one has investigated the direct effect of employee turnover on company value before and during the pandemic.

Our study fills that gap in the literature in five ways. First, we show a direct association between employee turnover and company value one year before the pandemic and through to its peak. Second, we develop a concise interpretive framework to help explain the theory behind this association. Third, we analyze this association at all points of the conditional distribution of company value by means of a quantile regression model that differentiates the correlation at each level of Tobin's Q ratio. Fourth, we analyze this association by level of sectoral sensitivity. This analysis is justified because the pandemic had a stronger impact on European companies in traditional industries with intensive human interactions than on those in modern industries with predominantly virtual interactions. The latter actually benefitted from the pandemic. Fifth, we analyze both profitability and social performance for their effect on this association, an analysis never done before.

The remainder of the paper is structured as follows. Section 2 briefly presents the related theoretical framework and provides the main hypotheses. Section 3 describes the data and the methodology. Section 4 presents the most relevant results. Section 5 is a discussion and conclusion.

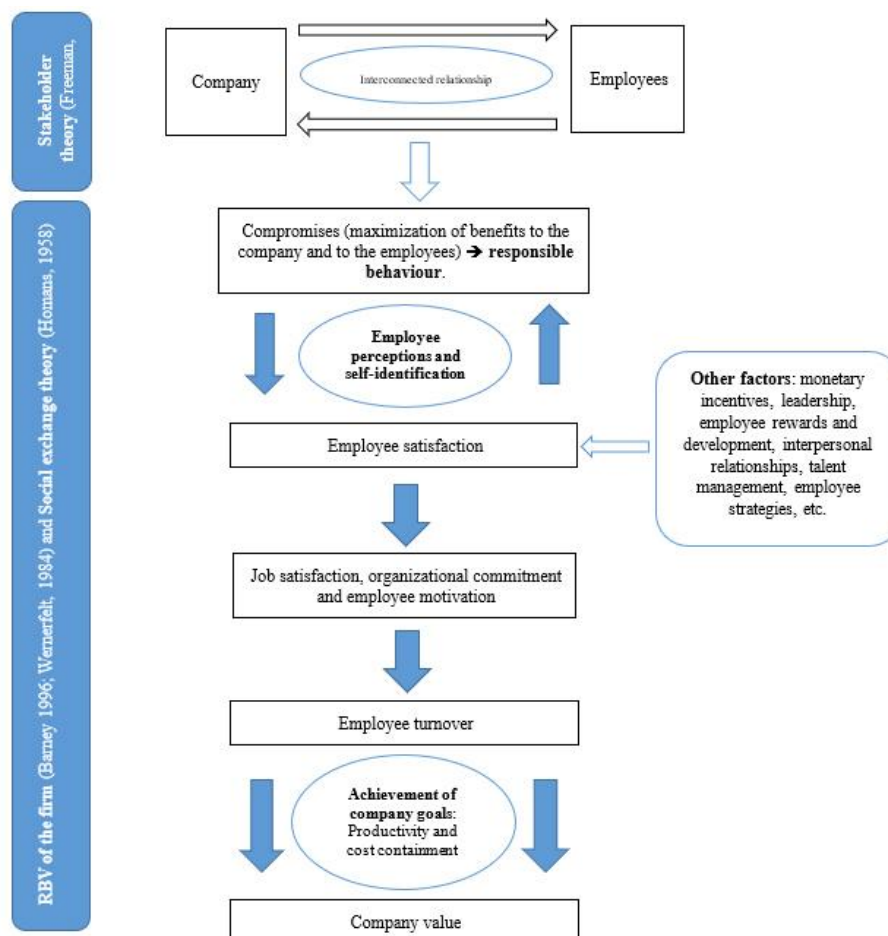
## 2. Theoretical Framework and Hypotheses

### 2.1 Employee Turnover and Company Value

To understand the theory behind the problem under study, to facilitate discussion of the results and to identify the contributions of this study, we developed a concise interpretive framework (Figure 1). This diagram shows how the interconnected relationship between a company and its employees could affect its stock market value. This relationship involves certain compromises, such as a commitment to CSR, which may enhance general employee satisfaction, which in turn would make employees more satisfied with their job in particular, and thus more committed and motivated to achieve the company's goals and increase its value. However, this relationship depends on how the employees perceive their employer's efforts and their capacity to identify with the employer (Hudson et al., 2017; Becker et al., 2022). To identify this direct association, we rely on a combination of three theories: stakeholder theory (Freeman, 1984); social exchange theory (Homans, 1958); and resource-based view (RBV) of the company (Barney, 1996; Wernerfelt, 1984).

Figure 1

#### Effect of Employee Turnover on Company Value



First, the relationship between employee turnover and company value originates in stakeholder theory, a view of capitalism that focuses on the interconnected relationships between an organization and its stakeholders (Freeman, 1984). Stakeholders are thus viewed as groups or individuals who influence and can be influenced by company decisions. Stakeholders are classified according to their degree of impact on company decisions and performance, with employees being part of the primary stakeholder group (Vracheva & Mason, 2015). Sometimes, a company's value is reduced by decisions that benefit stakeholder interests, since such decisions may incur additional costs (Allen et al., 2010). As such, the company has to make compromises to maintain or create relationships of trust with its stakeholders (Barrane et al., 2021).

Recent studies have used RBV (Barney, 1996; Wernerfelt, 1984) as the main theory to explain the relationship between stakeholder performance/behaviour and company value (Vracheva & Mason, 2015). According to this theory, stakeholder management is about capabilities that increase company value. Hence, a company can sometimes develop a competitive advantage by consolidating resources that are both valuable and hard for competitors to poach (Hart, 1995; Judge and Douglas, 1998).

In the same vein, a growing number of researchers have shown that employee well-being is a major intangible asset for companies (Shan and Tang, 2022). These researchers conclude that CSR practices not only improve the work environment but also increase job satisfaction and reduce the employee turnover rate (Edmans, 2012; Hudson et al., 2017; Afshari et al., 2022). In particular, they highlight the positive role of humanistic practices to "...promote and nurture job satisfaction, organizational commitment, and meaningful life of the workers as well as the continued existence of the organization" (Asis-Castro and Edralin, 2018, p. 130). This finding has also been confirmed by several studies in strategic HRM, and by studies in applied psychology (Garima et al., 2021), according to which the 'return on investment' on human capital can take different forms, such as a low employee turnover rate (Allen et al., 2003) and/or improvement in employee behaviours, attitudes and performance (Black and Lynch, 1996). It is worth noting that workplace CSR practices are not the only determinant of employee satisfaction, which depends on numerous other factors, such as leadership, employee rewards and development, interpersonal relationships, talent management, and others. According to Haffer (2013), the most significant factors are the level of trust, the immediate managers and the degree of internal communication. The same author also feels that employee satisfaction is determined by organizational development and success, as measured by industry-relevant metrics.

This logical schema has long been discussed in the literature on social exchange theory, beginning with Homans (1958). Briefly put, people enter into relationships with others to maximize their rewards across a range of domains. This schema "highlights the importance of understanding employees' motivation and its relation to the achievement of organizational goals" (Newman et al., 2012, p. 58).

As a result, company managers are paying attention to issues of social responsibility and are making increased efforts to strike a balance between their interests and those of their stakeholders (Garsaa and Paulet, 2022). A company's social performance has become a means to retain high-performing workers and attract new talents (Farooq et al., 2014). Consequently, companies try to demonstrate responsible behaviour in order to enhance their image and reputation toward their stakeholders (Lee et al., 2013), and especially toward their employees (Prahalad and Hamel, 1990).

Newman et al. (2012) distinguish between two kinds of perceived support and their effects on employee turnover intentions: 'perceived organizational support' (POS) and 'perceived supervisor support' (PSS). POS is the employees' perception of the extent to which the employer cares about their welfare and values their participation and effort. According to the authors, POS is positively associated with employee emotional attachment to and identification with the organization, which in turn is negatively associated with turnover intention. PSS is based on the same concept but

assesses the willingness of supervisors, rather than the organization, to reward employee efforts. The authors found a direct relationship between PSS and turnover intentions, as well as a mediated relationship through POS. Consequently, the effect of CSR practices on employee satisfaction, and thus on employee turnover, depends on employee perception (Figure 1).

In a certain sense, employers expect reciprocity when they meet the expectations of their employees and hope that more satisfied workers will be more productive and engaged (List and Momeni, 2021). In the same vein, low employee turnover and high company value are essentially due to high employee satisfaction, which implies high job satisfaction (Hulin, 1986; Mobley, 1977; Singh and Loncar, 2010), strong organizational commitment (Mathieu et al., 2016) and strong employee motivation (Ramlall et al., 2004).

Further, “the stock market value takes into account all the channels through which job satisfaction affects firm value, weighting them according to their relative importance, and also considers costs” (Edmans, 2012, p. 4). As such, employee turnover is considered to be financially costly for companies (Tracey and Hinkin, 2008; Posthuma et al., 2021), which must make compromises to retain their most critical employees (Mikalachki, 1975; Chanana, 2021). This cost generally includes recruitment and selection, employee induction, training and paperwork and so on (Balsam et al., 2007). “It is the avoidance of such costs via low turnover that generates company value” (Beattie and Smith, 2010, p. 272-273).

The above leads us to our first hypothesis:

***Hypothesis 1.*** *Employee turnover is associated with company value.*

## **2.2 Employee Turnover and Company Value during the COVID-19 Pandemic**

The pandemic disrupted financial and economic activities all over the world. It posed a big, sudden challenge to working conditions and work organization, thus making investors more aware of employee satisfaction than they might be in normal times (Shan and Tang, 2022).

Concurrently, to limit economic recession during the lockdowns, companies in most countries were asked to continue paying their employees in return for government support and guarantees. To avoid bankruptcy, some had to reduce wages and benefits and request additional efforts from their workers. Employee-company relationships thus became crucial to business stability and survival (Shan and Tang, 2022).

As suggested by Figure 1, the pandemic may have affected the association between employee turnover and company value in three main ways. First, since monetary incentive is a key determinant of employee satisfaction (Khan et al., 2020), a reduction in salary and financial benefits could reduce job satisfaction, organizational commitment and employee motivation. This reduction may have then kept the company from achieving its goals, and thus reduced its stock market value. Second, workers suffered many psychological problems, a reduced sense of well-being and lower motivation and engagement due to lack of organizational preparedness, technological limitations, managerial reluctance and the potential drawbacks of social isolation during lockdowns (Mahomed et al., 2023). Finally, the pandemic reduced the turnover intention of employees by worsening the external economic and employment environment and by consequently frustrating their intentions to leave (Deng et al., 2022). In this case, there are four possible scenarios. First, the employees have to remain in the company and are uncommitted and unmotivated until they can leave, all of which negatively affect company goals and value. This scenario could explain the famous Big Quit that occurred in early 2021 all over the world, especially in the U.S. Second, the employees resign, and the company has to replace them in a complicated context, a costly process that negatively affects their stock market value. Third, despite hard working conditions, loyal employees choose to remain with the company and support it



during the pandemic, since they identify with their organization. During the pandemic, this behaviour helped some companies survive and increase their value and efficiency. Fourth, workers leave the company, thus bringing down its costs and increasing its value. Each scenario is helped or hindered by the economic situation of the company's sector, with different sectors experiencing different impacts during the lockdowns (Canton et al., 2021).

The above leads us to our second hypothesis:

**Hypothesis 2.** *The pandemic affected the pre-existing association between employee turnover and company value.*

## 3. Data and Methodology

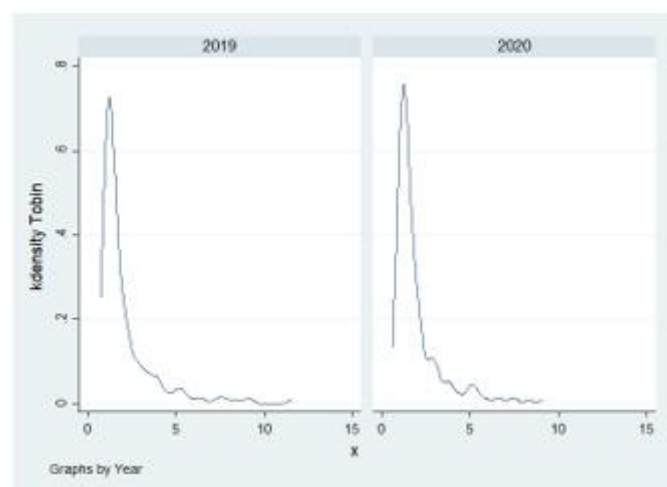
### 3.1 Sample Description

We tested our two hypotheses by means of a panel of 254 multinational companies listed in the European capital market and operating in different economic sectors during the 2019-2020 period. All of the financial and non-financial data were extracted from the Bloomberg database. Detailed definitions of all the variables are reported in the Appendix (Table 5). From a database of over 800 companies, we removed those with missing data during the selected period. This initial dataset had a wide variety of companies from different sectors, while being essentially headquartered in Europe.

In corporate finance literature, a company's value is measured by its stock market value, which is approximated by its Tobin's Q ratio (e.g., Fatemi et al., 2018). According to Vracheva and Mason (2015), Tobin's Q ratio is one of "...the most refined proxies for firm value" (p. 121).

Figure 2

#### Density Estimation of Tobin's Q Ratio



Note: The kdensity command of STATA 14 produces kernel density estimates and plots the result for  $n = 254$  observations each year.



Figure 2 represents the kernel density estimation of Tobin's Q ratio (*Tobin*) in 2019 and 2020. The distribution of company values slightly narrowed between 2019 and 2020, thus acquiring a smaller standard deviation (Table 5). This decrease in heterogeneity is visible on the right side of the distribution, i.e., the decrease in the value of the 75th and 90th percentiles, as well as in the heavy tails and the atypical distribution of Tobin's Q ratio. Although most companies in our sample had a Tobin's Q ratio of around 1.4, a minority had a very high value of up to 11.602 in 2019 and 9.148 in 2020, which leads us to conclude that the pandemic essentially affected companies with the highest stock market value. Remember, a Tobin's Q ratio greater than one indicates that a company is earning well and has good returns. Investors can average this indicator to identify those companies that offer capital investment opportunities (Blose and Shieh, 1997).

### 3.2 Model Specification and Econometric Strategy

In line with the empirical literature on company value, we selected four independent variables to explain the variability in the Tobin's Q ratio (*Tobin*) of the companies in our sample: employee turnover, which is our variable of interest; company size; company profitability; and leverage ratio. This selection of variables is limited because missing data seriously reduced the number of observations. Before we settled on the current model, we introduced other variables that had to be discarded, since they failed to increase either the model's degrees of freedom or its explanatory power.

Employee turnover (*Turnover*) is the number of employees who left the company in the previous year, as a percentage of the average total number of employees. According to the Bloomberg database, a high turnover may indicate dissatisfaction by employees with their jobs or their pay or unsafe or unsanitary working conditions.

Company size (*Size*) is the logarithm of the number of employees. Because the largest companies have greater financial resources, experience and reputation, they are commonly assumed to have a higher value (D'Amato and Falivena, 2020).

Company profitability (*ROA*) is the return on assets ratio. Several empirical studies have concluded that ROA is positively associated with company value (Iswajuni et al., 2018).

Leverage ratio (*Leverage*) is the debt to equity ratio, which is considered to be positively associated with company value (Cheng and Tzeng, 2011).

Hence, our empirical specification may be presented as follows:

$$Tobin_i = \beta_0 + \beta_1 Turnover_i + \beta_2 Size_i + \beta_3 ROA_i + \beta_4 Leverage_i + \beta_5 Sector_i + \beta_6 Country_i + \epsilon_i$$

Where  $i$  is the company and the idiosyncratic error term.

Descriptive statistics for the selected variables are reported in the Appendix (Table 5). To take into account the specific characteristics of each sector (*Sector<sub>i</sub>*) and country (*Country<sub>i</sub>*) of each company, dummy variables have been respectively included in our empirical specification.

Since the distribution of our dependent variable has extreme values that may bias our estimations, standard regression estimators like Ordinary Least Squares (OLS) are not recommended. Hence, we used the quantile regression (QR) technique, developed by Koenker and Bassett (1978), which estimates the correlation at all points of the conditional distribution of Tobin's Q ratio and has the advantage of being robust to extreme values.

Finally, to identify the potential effect of the pandemic on the association between employee turnover and company value, we estimated separately for 2019 and 2020. The estimation results are reported and discussed in the following section.

## 4. Main Findings

### 4.1 Association between Employee Turnover and Company Value: Was It Altered by the COVID-19 Pandemic?

Estimation results before 2019 and during the pandemic in 2020 are reported in Table 1. For any of the years under study, employee turnover seems to be negatively associated with company value at the 10th percentile of the conditional distribution of Tobin's Q ratio. Employee turnover may thus be costly only for companies that already suffer from low stock market value, i.e., those that are not yet mature enough in managing their costs to be able to increase their productivity and maintain or increase their market value.

The estimated coefficient of employee turnover was lower in 2020 than in 2019, an indication that the pandemic flattened the effect of employee turnover on company value, mainly because government support and guarantees helped companies hold on to their employees and dampen the effect of the pandemic on their stock market value, and perhaps because of a simultaneous decrease in the overall stock market value and in employee turnover due to the deterioration of the external economic and employment environment. The second explanation is supported by the positive sign of the estimated ROA coefficients throughout the conditional distribution of company values in 2020.

As expected, company size was positively associated with company value, but only at the 25th percentile of the conditional distribution. At the 10th and 25th percentiles in 2020, the coefficients became negative; therefore, company value fell to a greater degree for large companies with low Tobin's Q ratios than for their smaller counterparts. This may be because the larger companies, given their size and probably lower efficiency, were less able to cope with their lack of organizational preparedness for the pandemic.

We conducted in-depth analysis to check the robustness of the results, as described in the next three sections.

Table 1

#### Whole Sample in 2019 and 2020

VARIABLES	2019						2020					
	OLS	QR					OLS	QR				
		P 10	P 25	P 50	P 75	P 90		P 10	P 25	P 50	P 75	P 90
Turnover	-1.024 (1.050)	-0.794** (0.344)	-0.355 (0.489)	-0.382 (0.720)	-0.413 (1.387)	-2.403 (1.971)	-0.563 (0.955)	-0.304** (0.127)	-0.636 (0.545)	0.178 (0.620)	0.429 (1.185)	0.0608 (1.101)
Size	-0.0421 (0.0846)	0.0306 (0.0229)	0.0626* (0.0326)	-0.0167 (0.0480)	-0.0524 (0.0925)	-0.0475 (0.131)	-0.119* (0.0624)	-0.0667*** (0.00896)	-0.0704* (0.0384)	-0.0668 (0.0436)	-0.0852 (0.0834)	-0.0611 (0.0775)
ROA	15.00*** (2.320)	7.498*** (0.478)	10.49*** (0.680)	10.29*** (1.002)	11.27*** (1.930)	15.61*** (2.742)	11.05*** (1.458)	7.182*** (0.159)	7.242*** (0.679)	6.944*** (0.773)	8.422*** (1.478)	9.383*** (1.373)
Leverage	0.000527 (0.000911)	0.000187 (0.000348)	-0.000251 (0.000494)	0.000119 (0.000728)	0.000330 (0.00140)	-0.00125 (0.00199)	0.000204 (0.000447)	0.000826*** (9.00e-05)	0.000815** (0.000385)	2.99e-05 (0.000438)	0.000144 (0.000838)	-0.000280 (0.000778)
Constant	1.553 (1.573)	0.270 (0.400)	-0.157 (0.569)	0.319 (0.838)	0.432 (1.615)	0.965 (2.294)	5.262*** (0.842)	1.845*** (0.157)	1.985*** (0.671)	2.130*** (0.764)	2.264 (1.460)	2.563* (1.537)
R <sup>2</sup>	0.685						0.685					
Pseudo R <sup>2</sup>	-	0.3661	0.3848	0.4498	0.5565	0.6627	-	0.4035	0.3847	0.4482	0.5673	0.6982

Notes: Standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . P 10, P 25, P 50, P 75 and P 90 are percentiles. OLS estimations are reported to show their inefficacy compared to QR estimations. All of the specifications include industry and country dummies.  $N=254$ .

## 4.2 Did All of the Sectors Cope Equally Well with the Pandemic?

According to the European Commission (Canton et al., 2021), the pandemic had a significant impact on several sectors, in line with the degree of physical contact with end customers and/or between workers (Smit et al., 2023). The most affected sectors were services with intensive personal contact, such as retail, hospitality, transport, arts and entertainment and some other services. During the second quarter of 2020, these sectors had 25% less economic activity than they did before the pandemic. In industry and construction, which involve less physical contact, the decline was 17% and 13% respectively. At the height of the first wave, the decline was only 5% in services with highly skilled workers and a high potential for remote work, such as IT (Information Technology), finance and real estate.

To include this sectoral effect when analyzing the association between employee turnover and company value, we estimated the level of sectoral sensitivity during the pandemic. Taking into account the limited size of our dataset, we grouped the sectors into three levels of sensitivity: (1) 'non-sensitive sectors,' i.e., companies in IT (J<sup>1</sup>), finance and insurance (K) and real estate (L); (2) 'medium-sensitive sectors,' i.e., companies in industry (B, C, D and E) and construction (F) and; (3) 'sensitive sectors,' i.e., entities in trade and tourism (G, H and I) and arts, entertainment and other services (R-U). The estimation results (Table 2<sup>2</sup>) confirm the observed sectoral differences. As with the whole sample, the coefficients of employee turnover were significant only for low-value companies.

In non-sensitive sectors, employee turnover was not associated with company value either before or during the pandemic. This lack of association had several possible causes. First, these sectors were generally better prepared for the pandemic because their interactions were already predominantly virtual. In IT, for example, and unlike other sectors, the employment level and value added remained almost unchanged during the outbreak (Canton et al., 2021). Second, the lockdowns led in almost all sectors to the development of teleworking and the implementation of new IT tools, which in turn forced IT companies to retain important workers and sometimes recruit new ones. Third, the real estate sector benefitted from the pandemic, specifically from a desire by many people to move to larger spaces. Fourth, the financial sector had gone through a decrease in stock market value, which created expectations of a future upswing and thus encouraged some investors to invest.

In medium-sensitive sectors, employee turnover did not affect company value before the pandemic, as most of these sectors required soft skills that companies could easily find during that period. Turnover was less costly because individuals were generally assumed to be interchangeable (Lepak et al., 2003). During the pandemic, a negative association developed between employee turnover and company value. Despite various forms of government support, these companies were less able to cope. The value added to their products and services fell more quickly than the size of their workforce (Canton et al., 2021), thus causing a decline in productivity and a reduction in company value (Riahi-Belkaoui, 1999).

Finally, employee turnover negatively impacted the value of companies in sensitive sectors during the pandemic, perhaps also because of falling productivity (Canton et al., 2021). Since the same coefficient was positive before the pandemic, these companies may have been operating previously at their optimal level of employee turnover, which translated into a high level of productivity and company value (Beattie and Smith, 2010).

Table 2

**Non-Sensitive, Medium-Sensitive and Sensitive Sectors in 2019 and 2020**

VARIABLES	Non-sensitive sectors											
	2019						2020					
	OLS	QR					OLS	QR				
		P 10	P 25	P 50	P 75	P 90		P 10	P 25	P 50	P 75	P 90
	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin
Turnover	-1.014 (1.088)	-0.160 (0.258)	0.0719 (0.455)	0.0572 (0.938)	-0.656 (1.783)	-1.605 (1.784)	0.296 (1.245)	0.246 (0.260)	-0.127 (0.318)	0.0782 (0.596)	0.618 (1.826)	2.338 (3.192)
R <sup>2</sup>	0.607	-	-	-	-	-	0.476	-	-	-	-	-
Pseudo R <sup>2</sup>	-	0.1726	0.0992	0.1971	0.4248	0.6532	-	0.2715	0.1701	0.1862	0.3345	0.4668
	Medium-sensitive sectors											
	2019						2020					
	OLS	QR					OLS	QR				
		P 10	P 25	P 50	P 75	P 90		P 10	P 25	P 50	P 75	P 90
	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin
Turnover	-2.142 (1.613)	-1.397 (0.858)	-0.494 (1.042)	-0.856 (1.215)	-1.323 (2.846)	-1.586 (3.381)	-0.648 (1.012)	-1.149** (0.529)	0.0854 (0.670)	0.0821 (0.921)	0.0892 (2.114)	-0.946 (2.725)
R <sup>2</sup>	0.603	-	-	-	-	-	0.646	-	-	-	-	-
Pseudo R <sup>2</sup>	-	0.1870	0.2380	0.3454	0.4713	0.5769	-	0.2384	0.2743	0.3615	0.4675	0.5773
	Sensitive sectors											
	2019						2020					
	OLS	QR					OLS	QR				
		P 10	P 25	P 50	P 75	P 90		P 10	P 25	P 50	P 75	P 90
	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin	Tobin
Turnover	-0.163 (0.340)	0.133*** (0)	0.179 (0.171)	-0.112 (0.441)	-0.241 (0.293)	-0.241 (0)	0.378 (1.186)	-0.0932*** (0)	-0.114 (0.243)	0.309 (0.716)	-0.338 (0.586)	-0.338 (0)
R <sup>2</sup>	0.890	-	-	-	-	-	0.720	-	-	-	-	-
Pseudo R <sup>2</sup>	-	0.6374	0.6158	0.6574	0.7838	0.8720	-	0.5375	0.4341	0.4443	0.6469	0.8179

Notes: See previous table. Non-sensitive sectors are sections J, K and L of the NACE,  $N=113$ . Medium-sensitive sectors are sections B, C, D, E and F of the NACE,  $N=172$ . Sensitive sectors are sections G, H, I, R and U of the NACE,  $N=33$ . All of the specifications include country dummies.

### 4.3 Did the Most Profitable Companies Do Well during the Pandemic?

It is commonly assumed that the most profitable companies coped more successfully with the global economic and financial shock due to the pandemic, thanks mainly to their comfortable financial situation (Shan and Tang, 2022). Hence, to check the robustness of our previous results, we estimated the same empirical specification for the most profitable companies in our sample, i.e., those companies whose mean ROA during 2019-2020 exceeded the median ROA of our sample (Table 3).

Before the pandemic, employee turnover positively impacted company value among the most profitable companies from the lowest to the highest values of Tobin's Q ratio. During the pandemic, the impact was negative.

This reversal has two possible explanations. First, the most profitable companies had reached an optimal level of employee turnover and a correspondingly high Tobin's Q ratio before the pandemic (Harris et al., 2006). According to Beattie and Smith (2010), "it appears that an optimal level of turnover exists, which balances reappointment costs and the benefits of fresh insight" (p. 273). Second, profitability is more important to companies in markets where competition is based on price rather than quality. Such markets do not prioritize employee satisfaction, since workers have low skills and are viewed as interchangeable (Lepak et al., 2003). Hence, some companies are tempted to cut costs to increase profitability at the expense of employee satisfaction (Yee et al., 2010); they thus view employee well-being as being costlier than employee turnover. In this case, higher employee turnover may positively affect company value through cost reduction, which is also a leading company goal.

In neither case, however, could these companies replace their critical workers in a complicated economic context, especially when they had chosen to cut costs at the expense of employee satisfaction (hard working conditions, pressure, etc.) in order to keep profitability high. In fact, their estimated ROA coefficients remained positive and fell only slightly during the pandemic, being far higher than for the whole sample. These companies thus increased their market value essentially through their high profitability.

Table 3

### Most Profitable Companies in 2019 and 2020

VARIABLES	2019						2020					
	OLS	QR					OLS	QR				
		P 10	P 25	P 50	P 75	P 90		P 10	P 25	P 50	P 75	P 90
		Tobin	Tobin	Tobin	Tobin	Tobin		Tobin	Tobin	Tobin	Tobin	Tobin
Mean of ROA > Median value												
Turnover	-2.004 (3.384)	1.116*** (0.0969)	-0.930 (1.449)	0.730 (2.926)	4.022 (2.959)	3.852*** (0.353)	-2.696 (2.838)	-1.813*** (0.000138)	-1.901* (0.965)	-1.127 (2.232)	-2.181 (2.424)	-0.627* (0.328)
Size	-0.0936 (0.167)	-0.244*** (0.00596)	-0.0950 (0.0891)	-0.129 (0.180)	-0.118 (0.181)	-0.0303 (0.0217)	-0.187 (0.154)	-0.0827*** (8.53e-06)	-0.131** (0.0597)	-0.0765 (0.138)	-0.321** (0.150)	-0.216*** (0.0203)
ROA	19.93*** (3.946)	17.52*** (0.105)	16.82*** (1.576)	16.40*** (3.181)	16.72*** (3.196)	18.72*** (0.384)	15.95*** (3.112)	15.69*** (0.000149)	15.88*** (1.044)	15.48*** (2.415)	17.58*** (2.622)	15.56*** (0.354)
Leverage	0.00142 (0.00292)	0.000658*** (0.000101)	-0.000902 (0.00151)	0.000493 (0.00306)	-0.00217 (0.00307)	-0.00270*** (0.000369)	0.000326 (0.000875)	0.00128*** (6.52e-08)	0.00126*** (0.000456)	0.000323 (0.00105)	-0.00139 (0.00114)	-0.00126*** (0.000155)
Constant	0.0641 (1.755)	4.891*** (0.0761)	5.158*** (1.139)	5.085** (2.299)	5.491** (2.309)	5.267*** (0.278)	4.652*** (1.147)	-0.389*** (0.000110)	-0.103 (0.772)	-0.542 (1.785)	1.972 (1.938)	1.594*** (0.262)
R <sup>2</sup>	0.774						0.769					
Pseudo R <sup>2</sup>		0.5711	0.5523	0.5983	0.6812	0.8005		0.6160	0.5753	0.5922	0.6858	0.7938

Notes: see previous tables. N=127.

## 4.4 Did the Most Profitable and Socially Responsible Companies Do Well during the Pandemic?

If a company had good relations with its employees, did it receive more support from them to maintain operations during the pandemic? Conversely, if a company had poor relations with its employees, did it have more trouble motivating them to work from home? The literature stresses the importance of the social behaviour of companies and how it has affected their performance and survival during recent crises all over the world. For example, CSR improves relationships of trust with stakeholders during times of high uncertainty, thus increasing the company's value on the stock market (Rjiba et al., 2020). CSR companies outperform non-CSR ones on the market after natural disasters in the United States (Malik et al., 2023). The same conclusion has been reached in the specific case of the COVID-19 pandemic. In countries where the pandemic was more devastating, there was less impact on those companies that scored high on sustainability performance (Bose et al., 2022). CSR engagement improved the stock returns of hospitality companies during the pandemic (Qiu et al., 2021). If a company had higher employee satisfaction, its stock market performance withstood the pandemic better (Shan and Tang, 2022). In the disaster literature, Kuipers et al. (2022) provide an interesting review of the impacts of the COVID-19 pandemic (e.g., Dynes and Quarantelli, 1993).

We thus compared two groups of companies: those whose mean ROA during 2019-2020 exceeded the median of our sample, and those whose Robecosam social dimension rank<sup>3</sup> and Bloomberg social disclosure score<sup>4</sup> exceeded 50. The two social scores came from the Bloomberg dataset and define social performance as the company's achievements in social reporting, corporate citizenship, human capital development, talent attraction and human rights, as well as cross-industry themes such as stakeholder engagement and occupational health and safety.

The results (Table 4) confirm the positive effect of CSR on the employee turnover/company value relationship. Before the pandemic, employee turnover coefficients were positive for almost all the companies, and their values two to three times higher for the most profitable ones (Table 3). CSR engagement seems to have enabled the most profitable companies to reach their optimal rate of employee turnover faster and better, thus increasing their profitability and their market value (Beattie and Smith, 2010). Therefore, responsible behaviour interacted with a comfortable financial situation to increase the stock market value.

However, for those companies with low stock market value, neither responsible behaviour nor high profitability seems to have been sufficient to counter the negative effects of employee turnover during the pandemic. This is apparently because the critical economic context during the pandemic made it harder for them to cope with the additional costs of employee turnover. Unlike the case with the most profitable companies, employee turnover had no effect on the value of companies with a high stock market value. Hence, a high stock market value is an additional asset during a crisis.

Table 4

#### Most Profitable and Socially Responsible Companies in 2019 and 2020

VARIABLES	2019						2020					
	OLS	QR					OLS	QR				
	Tobin	P 10	P 25	P 50	P 75	P 90	Tobin	P 10	P 25	P 50	P 75	P 90
Mean of ROA, CSR and disclosure social scores> Median value												
Turnover	-3.771 (10.15)	5.530*** (0)	5.530*** (0.813)	3.076 (4.256)	7.430** (2.479)	7.430*** (0)	-1.376 (5.934)	-4.854*** (0)	-4.854*** (0.722)	-3.771 (2.174)	0.215 (1.252)	0.850 (0)
Size	0.509 (0.478)	0.702*** (0)	0.702*** (0.0418)	0.756*** (0.219)	0.826*** (0.128)	0.826*** (0)	0.0390 (0.221)	0.117*** (0)	0.117*** (0.0337)	-0.0480 (0.101)	0.147** (0.0584)	0.120 (0)
ROA	27.34*** (7.267)	27.95*** (0)	27.95*** (0.655)	27.03*** (3.429)	27.52*** (1.997)	27.52*** (0)	18.37*** (3.299)	15.40*** (0)	15.40*** (0.561)	18.96*** (1.690)	19.02*** (0.974)	19.30 (0)
Leverage	0.00280 (0.00761)	0.000862*** (0)	0.000862 (0.000633)	0.00247 (0.00331)	-0.00594* (0.00193)	-0.00594*** (0)	0.00189 (0.00362)	0.00286*** (0)	0.00286*** (0.000509)	0.00572*** (0.00153)	0.000176 (0.000883)	-0.00241 (0)
Constant	-3.135 (4.118)	-5.302*** (0)	-5.302*** (0.718)	-5.430 (3.760)	-5.804** (2.190)	-5.804*** (0)	5.668** (1.901)	6.784*** (0)	6.784*** (0.547)	6.904*** (1.648)	6.080*** (0.950)	6.768 (0)
R <sup>2</sup>	0.945	-	-	-	-	-	0.976	-	-	-	-	-
Pseudo R <sup>2</sup>	-	0.8501	0.8406	0.8379	0.8915	0.9333	-	0.8948	0.8937	0.8937	0.9248	0.9455

Notes: see previous tables. N= 48.

## 5. Discussion and Conclusion

We used a panel of 254 European listed companies from the 2019-2020 period to identify how employee turnover affected company value before and during the peak of the pandemic. This relationship was analyzed at each point of the conditional distribution of Tobin's Q ratio by means of a quantile regression model. On the assumption that the most profitable and socially responsible companies coped more successfully with the pandemic, we checked the robustness of our results by performing the same analysis for those companies. In addition, as sectors were affected differently, we estimated the sensitivity of each sector to the pandemic.

The results provide at least five new findings on the employee turnover/company value association.

First, employee turnover was negatively associated with company value only for those companies with the lowest Tobin's Q ratio value. This finding suggests that employee turnover may hurt firm productivity and performance, thus reducing the corporate stock market value of these companies. Since Tobin's Q ratio is around 1 at the 10th percentile of the distribution, an increase in the cost of



employee turnover seems to hurt those companies whose cost of investment is almost equal to anticipated profitability. For those companies with higher future profitability, the impact of this cost increase seems to be insignificant. Hence, a company can better deal with such costs to the extent that its stock market value is higher.

Second, employee turnover became considerably less associated with company value during the pandemic. This weaker association may be attributed to the government and social support and guarantees that companies benefited from during the pandemic, and which lessened the effect of the increase in employee turnover costs.

Third, the pandemic did not affect all of the sectors in the same way. It had a stronger impact on companies in traditional industries with intensive human interactions, while tending to benefit companies in modern industries with predominantly virtual interactions.

Fourth, for the most profitable companies, employee turnover was positively associated with company value before the pandemic. At that time, there seems to have been an 'optimal' employee turnover that enhanced productivity and, thus, financial performance. This association was completely reversed during the pandemic. Although these companies had superior performance, they could no longer manage the additional cost of staff turnover.

Finally, social performance accentuated the effect of employee turnover on company value before and during the pandemic. Before the pandemic, almost all of the most profitable companies could easily reach their optimal level of employee turnover, and a correspondingly high stock market value. During the pandemic, neither socially responsible behaviour nor high profitability seemed to be sufficient to counter the negative effect of employee turnover on those companies with low stock market value. However, employee turnover had no effect on those companies with high stock market value, an indication that an important element of company value is employee satisfaction that may be due to working for a socially responsible company. If a company has a strong, trusting relationship with its workers, it seems to do better than others during uncertain periods, like the pandemic.

This study contributes to the existing literature in different ways. First, it contributes to the stakeholder theory literature by showing that the interconnected relationship between a company and its stakeholders could be impacted by an exogenous event, such as the last pandemic, and that this effect may be limited by socially responsible corporate behaviour. Second, it enriches the literature on RBV by showing that CSR performance may be viewed as a valuable capability that impacts employee turnover negatively and company value positively. Finally, it enriches the social exchange theory literature by showing that, even when people enter into relationships with others in order to maximize their benefits, some of them may minimize their benefits to help others during stressful periods, like the pandemic. However, this willingness to help others will depend on the quality of the employment relationship before the shock.

To the best of our knowledge, there has been no other comparative study of the relationship between employee turnover and company value before and during the pandemic. In addition, this relationship has never been studied by looking at the stock market value of companies, the sensitivity of each economic sector to the pandemic and the CSR performance of companies.

The relationship between employee turnover and company value has numerous managerial implications for a company's overall business strategy (Edmans, 2012). As underlined by Shan and Tang (2022), "COVID-19 provides a rare opportunity to examine the value of employee satisfaction and generate implications on corporate employment policies" (p. 2). First, a company should pay more attention to its employees' needs and demands, especially during trouble-free times. If it does not, any unresolved organizational and managerial conflicts may prove disastrous during a crisis, as employees will not support their company in that context. Second, while profitability is



important for investors and many financial stakeholders, it is not the only key to corporate success. In fact, the pandemic has clearly shown the importance of a company's ethical behaviour in determining its value. Lastly, government guarantees can help a company and save it from bankruptcy; however, they cannot save it from a decrease in stock market value due to an increase in employee dissatisfaction.

These managerial implications may justify at least two types of policy measures. First, employee turnover could be limited by both engaging in and publicizing CSR practices, thus reassuring workers and building a much more stable and serious relationship of trust with them. Disclosure of social information will improve how workers perceive a company's social performance only to the extent that this information is understandable within a standardized framework (Garsaa and Paulet, 2022). Hence, companies would benefit from standardization of social information reporting and the creation of a common reporting system. Second, companies should educate their employees about CSR, particularly through mandatory training and awareness campaigns.

On a final note, this study has four limitations. First, we did not distinguish between voluntary and involuntary turnover, which could better explain the relationship between employee dissatisfaction and employee turnover and, thus, its association with the company's value. Second, our analysis was limited to 2020 and thus does not provide a complete analysis of the post-pandemic trend, since it does not include the post-2021 economic recovery. Third, we conducted a cross-sectional analysis only by year and considered only the most important determinants of company value. Future research could update the database to increase the number of independent variables and improve the explanatory power of the model. Finally, we could not directly measure employee satisfaction with the available data.

## Notes

[1] These letters correspond to the section codes of the European sector classification (NACE).

[2] Detailed results are available upon request.

[3] The RobecoSAM social dimension rank is based on the responses for the RobecoSAM Corporate Sustainability Assessment and ranges from 1 to 100.

[4] This score ranges from 1 for companies that disclose a minimum amount of social issue data to 100 for those that disclose all of the data points collected by Bloomberg.

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**Table 5** Variable Definitions and Descriptive Statistics in 2019 and 2020

Name	Definition	2019				2020			
		Mean	SD	Min	Max	Mean	SD	Min	Max
Dependent variable									
Tobin	Tobin's Q = (market capitalization + liabilities + preferred equity + minority interests) / (total assets)	2.068	1.586	0.731	11.602	1.936	1.361	0.611	9.148
Independent variables									
Variable of interest									
Turnover	Number of employees who left the company, as a percentage of the average of the total number of employees.	0.142	0.101	0.002	0.978	0.136	0.101	0.005	0.885
Control variables									
Size	Logarithm of the number of employees	9.279	1.323	5.241	12.622	9.283	1.327	5.286	12.631
ROA	Operating return on assets = (Operating income/Total assets)	0.077	0.064	-0.096	0.418	0.053	0.076	-0.225	0.373
Leverage	Leverage = Total Debts / Equity	93.887	86.741	0.000	750.340	117.306	132.347	0.422	1362.806

Note: N=254 observations.