



Research on the Impact of Online Public Opinion on Corporate ESG Evaluation—A Case Study of Meituan

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Abstract. ESG (Environmental, Social, and Governance) has become an essential pathway for firms to address multidimensional risks and achieve sustainable, high-quality growth. Using the 2020 “rider rights dispute” involving Meituan - a typical social responsibility incident in the platform economy - as a focal event, this study applies the event study method with an event window of [-3, +5] trading days to examine how online public opinion influences corporate ESG evaluation, incorporating measurements of cumulative abnormal returns (CAR) and t-statistical tests to validate market response robustness. The findings indicate that intense online public opinion, amplified by social media dissemination, can trigger significant negative market reactions, thereby pressuring firms to undertake substantive governance and responsibility reforms to restore and enhance their ESG profile. Overall, the evidence confirms that online public opinion exerts a direct and measurable influence on corporate ESG evaluation, particularly through the social (S) dimension centered on employee rights protection, offering targeted implications for labor-intensive platform enterprises in ESG management.

Keywords: ESG, online public opinion, event study method, stakeholder theory

1 Introduction

In recent years, enhancing ESG governance has shifted from an optional practice to a strategic necessity for enterprises seeking long-term sustainable development [1]. This transformation is closely aligned with China’s national policy agenda. The 14th Five-Year Plan and the Outline of Long-Range Objectives Through the Year 2035 emphasize “promoting green development and fostering harmonious coexistence between humans and nature,” which is highly consistent with the core ESG.

Traditional ESG ratings mainly depend on corporate self-disclosure. Existing studies have extensively explored the relationship between ESG performance and financial outcomes [2][3]. However, with the rapid expansion of digital media, online public opinion has become a powerful external monitoring force [4]. Social media platforms and news reporting together form a real-time supervision mechanism that can rapidly amplify ESG-related concerns. In this context, an important question arises: Does

online public opinion affect the ESG evaluation of listed firms, and if so, through what channels?

To address this question, this study adopts the event study method, selecting Meituan (03690.HK) as the case firm. The research focuses on the online public opinion surge triggered by the 2020 controversy concerning the rights and working conditions of Meituan's delivery riders. The incident exposed structural risks in the firm's social responsibility practices and generated widespread public debate and media attention. This makes it a suitable case for examining how online public opinion shapes corporate ESG evaluation.

2 Data and Methodology

The study uses daily closing prices of the Hang Seng Index, daily closing prices of Meituan (sourced from the Wind database and the Hong Kong Stock Exchange), and MSCI ESG rating reports. The event study method is employed to assess market reactions to the public opinion shock and to infer its implications for Meituan's ESG evaluation. Particular attention is given to the social (S) risks revealed by online public opinion and their role in subsequent ESG rating adjustments.

3 Results and Analysis

3.1 Company Overview

Meituan is a leading Chinese online life-services platform. Founded in 2010 by Wang Xing, it was listed on the Hong Kong Stock Exchange in 2018 and is headquartered in Beijing. With the mission "to help people eat better and live better," Meituan operates major platforms including Meituan, Dianping, and Meituan Delivery. Its services span more than 200 categories—such as food delivery, catering, hotels and travel, and shared mobility—covering over 2,800 counties and cities nationwide.

3.2 Case Background

As a dominant platform in China's life-services sector, Meituan relies heavily on its large rider workforce [5]. In September 2020, the widely circulated report "Food Delivery Riders Trapped in the System" argued that algorithmic scheduling systems pressured riders to shorten delivery times, leading to unsafe behavior such as running red lights and driving against traffic. The report noted that the compression of delivery times did not significantly improve customer satisfaction but was associated with a sharp rise in rider traffic accidents.

The report was read millions of times and placed Meituan at the center of public scrutiny. Its corporate image suffered substantial damage, and the stock price fell by 4.11% on the day of the report. Public attention intensified around rider workload, safety standards, employment protections, and welfare benefits, highlighting Meituan's latent ESG risks in the social domain.

3.3 Materiality Analysis

To quantify the impact of online public opinion, this study applies the event study method. Expected (normal) returns are estimated using the market model:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \epsilon_{it}$$

Abnormal returns (AR) and cumulative abnormal returns (CAR) are then calculated accordingly. The estimation window covers 100 trading days prior to the event (April 2, 2020–September 7, 2020), excluding suspension and market-closure days. The event window is defined as three days before and after the event [−3, +3].

Based on the 2020 rider rights dispute, Table 1 reports regression results from the market model. During the estimation period, R2=46.33%, adjusted R2=21.46%, and the standard error is 0.0332, indicating acceptable model fit for stock-market event analysis. The intercept is $\alpha = -0.00189$, and the systematic risk coefficient is $\beta = 1.164$. Since $\beta > 1$, Meituan’s stock return is more sensitive to market movements than the market average, consistent with the risk profile of a leading platform firm.

Table 1. Regression statistics table

Statistic Indicator	Value
Multiple R	46.33%
R Square	21.46%
Adjusted R Square	20.64%
Standard Error	3.32%
Observations	98.00

Table 2 presents AR and CAR results. On the event day, Meituan’s AR is −5.35%, far below the market return of 0.14%, suggesting a significant negative shock. CAR over the event window reaches −11.40%. The abnormal returns are statistically significant ($t = -8.51$, $p < 0.01$), indicating that the negative market response is not random but closely aligned with the timing of the rider-rights controversy. In short, online public opinion acted as the primary trigger for this market-level ESG risk reaction.

Table 2. AR and CAR during Meituan's Event Window Period

Date	Market rate of return	Normal rate of return	Corporate rate of return	Abnormal rate of return
2020/9/3	-	-	-	-
2020/9/4	-1.26%	-0.48%	-0.31%	0.17%
2020/9/7	-0.43%	0.49%	-5.33%	-5.82%
2020/9/8	0.14%	1.15%	-4.20%	-5.35%
2020/9/9	-0.63%	0.25%	-2.55%	-2.80%
2020/9/10	-0.64%	0.25%	0.43%	0.18%
2020/9/11	0.78%	1.90%	4.12%	2.22%
α	0.009888	-	CAR	-11.40%
β	1.166502	-	standard deviation	0.032786516
p	<0.01	-	t-value statistics	-8.513821047

These results illustrate that online public opinion functions as an external supervisory force through two mechanisms. First, as a signaling mechanism, public opinion makes latent social responsibility risks visible to investors and the broader market [6]. Second, as a reputation mechanism, sustained discussions and media exposure damage corporate reputation, intensifying stakeholder scrutiny over firm conduct.

From the perspective of stakeholder theory [7], the rider-rights controversy reveals a central contradiction in Meituan's social performance: the firm prioritized shareholder and platform efficiency goals while under-addressing the rights, safety, and welfare of riders—key stakeholders in the platform ecosystem [8]. Riders faced high work intensity and limited access to standard labor protections. This imbalance undermines long-term sustainability. Under intense online pressure, Meituan initiated substantive reforms. In 2021, rider protection became a core ESG topic, and the firm launched measures such as the “Rider Protection Fund.” As a result, Meituan's social-dimension rating improved from BB to A in 2022 (Table 3). The case suggests that firms must move beyond a narrow shareholder-value logic to a stakeholder-oriented ESG governance approach.

Table 3. Meituan ESG Rating Details (2020 -2022)

Date	ESG ratings	ESG score	E-rating	E-score	S-rating	S-score	G-rating	G-score
2022-10-31	BBB	82.49	BB	77.50	A	87.98	BB	78.42
2022-07-31	BBB	80.74	BB	77.50	A	87.50	BB	75.24
2022-04-30	BB	77.90	BB	79.00	BBB	81.53	B	74.45
2022-01-31	BB	78.00	BB	79.00	BBB	81.77	B	74.45
2021-10-31	BB	78.00	BB	79.00	BBB	81.77	B	74.45
2021-07-31	BBB	81.33	BB	79.00	BBB	81.77	BBB	81.33
2021-04-30	BBB	80.40	BB	79.75	BB	79.47	BBB	81.33
2021-01-31	BBB	81.14	BB	79.75	BB	79.72	BBB	82.66
2020-10-31	BBB	81.14	BB	79.75	BB	79.72	BBB	82.66
2020-07-31	BBB	80.93	BB	79.75	BB	79.23	BBB	82.66
2020-04-30	BBB	80.41	BB	79.75	BB	78.04	BBB	82.66
2020-01-31	BBB	80.52	BB	79.75	BB	78.28	BBB	82.66

3.4 Substantial Enterprise Transformation

The public controversy over the rights and interests of delivery workers in 2020 did not merely have a short-term impact on market reactions; instead, it profoundly influenced the internal governance and corporate responsibility practices of Meituan, prompting it to carry out a series of institutional and substantive reforms in the social (S) dimension. These subsequent actions constitute direct evidence of the substantial improvement in the ESG performance of the company driven by online public opinion.

First, under the pressure of online public opinion, Meituan elevated the issue of rider rights and interests protection to the core of its corporate strategy. In addition to explicitly listing "rider care" as a core topic in its 2021 ESG report, the company introduced a series of specific measures. It rolled out many "more user - friendly" initiatives, piloted a more flexible calculation model for "estimated delivery time" in some regions, and launched features such as rider fatigue alerts and route optimization for adverse weather, directly addressing the public's primary concerns about rider safety. Second, in 2021, the company established the "Rider Care Fund", which systematically built a social security network for riders, filling the gap in welfare provisions. Moreover, Meituan optimized the rider appeal and communication channels and established a more transparent point - scoring system and appeal feedback mechanism. The effectiveness of these reforms, spurred by external public opinion pressure, was verified in subsequent ESG ratings. The change in Meituan's ESG rating from 2020 to 2021 clearly shows that intense online public opinion not only acts as a "signal" that triggers a negative market reaction but also functions as a powerful "reputational" and "supervisory" force, compelling the company to face up to its shortcomings in social responsibility and achieve repair and improvement in the social dimension.

4 Conclusion

Using Meituan's 2020 rider-rights dispute as a case, this study confirms that online public opinion influences ESG evaluation through signaling and reputation mechanisms, effectively identifying and amplifying firms' latent ESG risks. While public opinion may not mechanically determine ESG rating downgrades, it reshapes market expectations and compels firms to undertake ESG-relevant reforms. The event study results show a CAR of -11.40% during the event window, providing quantitative evidence that online public opinion has a measurable effect on corporate ESG evaluation.

With the deep integration of digital media into social and economic life, enterprises should not only focus on report disclosures but also take substantial actions to safeguard the interests of stakeholders and mitigate their ESG risks. Enterprises should elevate the real - time monitoring and analysis of online public opinion to the strategic level of ESG risk management. This implies that public opinion should not be merely regarded as a public - relations crisis but as an early - warning system for identifying the "blind spots" of the enterprise in the social and governance dimensions. It is recommended that enterprises establish a systematic mechanism for public - opinion analysis and topic tracking. When the negative sentiment regarding specific ESG - related topics (such as labor rights, data security, and environmental protection) exceeds the warning threshold, a cross - departmental assessment and response process should be automatically triggered. Most importantly, enterprises need to shift from "passive response" to "active governance" and make the improvement process and results transparent through channels such as annual ESG reports, thereby restoring the corporate reputation and transforming public - opinion pressure into impetus for ESG governance improvement.

Investors can incorporate public - opinion signals into their ESG investment framework as an early - warning tool. When constructing ESG investment portfolios and risk

- assessment models, investors can consider online public - opinion big data as an incremental information source. This research indicates that significant negative ESG public opinions often precede the formal rating downgrades by rating agencies and are accompanied by significant negative market reactions. Therefore, using public - opinion signals as "early - warning indicators" for ESG investment can assist investors in identifying potentially risky enterprises earlier or discovering investment opportunities in companies that actively respond to online public opinion and engage in ESG practices.

ESG rating agencies should further improve their methodologies by more systematically and promptly integrating online public - opinion information. Rating agencies should reflect on and improve their data sources and rating mechanisms. Traditional ESG ratings highly rely on annual reports and questionnaires self - disclosed by enterprises, which may have time lags and "beautification" biases. This case shows that real - time and public information from news and social media can more accurately and quickly reflect the real ESG performance and risks of enterprises. Therefore, rating agencies need to increase their investment in this aspect of analysis and systematically incorporate online public - opinion data into their ratings, so that the rating results can more timely and comprehensively reflect the challenges faced by enterprises and the actions they take in a dynamic social environment.

This study is limited by its single-case design. Future research could employ large-sample empirical tests to quantify the relationship between online sentiment and ESG rating changes, and explore heterogeneity across industries and firm sizes.

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