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Administrative Monopoly Regulation, Greenwashing and ESG Performance: Evidence from China Fair Competition Review System

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Tables 1 to 18 are available in the supplementary files section.

Administrative Monopoly Regulation, Greenwashing and ESG Performance: Evidence from China Fair Competition Review System

Abstract: This study examines whether and how administrative monopoly regulation affects corporate ESG performance. We exploit the implementation of China's Fair Competition Review System (FCRS) as a quasi-natural experiment that strengthens competition policy and curbs administrative monopolies. Using a difference-in-differences design, we find that the FCRS significantly improves firms' ESG performance, reflected in higher ESG ratings and scores and a reduction in ESG greenwashing. Mechanism analyses indicate that this effect operates through a competition-driven incentive channel: by enhancing market competition and promoting competitive neutrality, administrative monopoly regulation increases firms' incentives to engage in substantive ESG activities. We further show that the effect is primarily concentrated in the environmental and social dimensions. Cross-sectional analyses reveal that the effect is stronger in settings with higher levels of external attention, including from banks, investors, the public, and government stakeholders, and is more pronounced among state-owned enterprises, firms in monopolistic industries, and regions with stronger policy enforcement. Finally, we document that the ESG improvements induced by administrative monopoly regulation have real economic consequences, including alleviating financing constraints and improving both product market and capital market performance. Overall, our findings highlight the role of competition policy as an important institutional driver of corporate ESG outcomes and provide new evidence on how market-oriented reforms can promote substantive sustainability engagement.

Keywords: ESG performance; Administrative monopoly regulation; market competition pressure; Fair Competition Review System (FCRS)

1. Introduction

ESG (Environmental, Social, and Governance) is a value framework for sustainable development that considers environmental, social, and governance outcomes. As sustainability-related issues such as environmental pollution, income inequality, and major public health events have become increasingly prominent, the ESG concept has gradually emerged as a new trend in global economic development. In response to this trend, the Chinese government has explicitly set the goals of reaching carbon peak by 2030 and carbon neutrality by 2060, and has incorporated them into the overall framework of economic development, fully demonstrating its commitment as a responsible major country. As the micro-level actors implementing ESG principles, firms' ESG performance

has attracted widespread attention from all sectors of society [1], which, while posing challenges to their operations and development, also provides them with highly important strategic opportunities. On the one hand, the characteristics of ESG activities—such as substantial capital requirements, long investment horizons, and positive externalities—may crowd out resources for other investment projects and increase firms' operating costs in the short run [2], thereby weakening firms' incentives to advance ESG strategies. On the other hand, strong ESG performance, as an important manifestation of firms' sustainable development capability, helps satisfy stakeholder demands [3], thereby enabling firms to obtain critical strategic resources and develop differentiated competitive advantages. Therefore, in the context of sustainable development, it is of great importance to explore a long-term incentive mechanism based on the trade-off between costs and benefits to stimulate firms' endogenous motivation to improve ESG performance.

Strategic choice theory emphasizes that market competitive pressure is one of the important factors influencing firms' strategic decision-making [4]. Existing discussions of strategic choice similarly stress that organizational choices are shaped by external environmental pressures rather than being fully predetermined. Therefore, to explore a long-term incentive mechanism for improving corporate ESG performance, it is first necessary to consider the role of firms' market competitive environment, whereas administrative monopoly is widely regarded as a major cause of the deterioration of the market competitive environment and the resulting inefficiency of market competition[5]. Administrative monopoly refers to government behavior that uses administrative power to restrict or exclude market competition [6]. Public discussions of China's competition regime describe administrative monopoly as government-imposed restraints on competition or the abuse of administrative power to eliminate or restrict competition. Such behavior leads to disorderly market competition and, in turn, distorts the genuine market competitive pressure faced by firms.

To regulate government behavior and curb administrative monopoly, the Chinese government issued the Opinions on Establishing the Fair Competition Review System in the Development of the Market System in 2016 (hereinafter referred to as the Fair Competition Review System, FCRS). The FCRS is designed to prevent government departments from formulating policy measures that exclude or restrict market competition through ex ante review, while progressively cleaning up and abolishing rules and practices that hinder the development of a unified national market and fair competition. Analyses of the FCRS likewise note that, compared with the Anti-Monopoly Law's more expost orientation, the FCRS provides a stronger ex ante control mechanism over government-induced restraints on competition. In this sense, the FCRS can reduce, at the source and in advance, the negative impact of administrative monopoly on the market competitive environment [7], thereby restoring, to a large extent, the genuine market competitive pressure faced by firms. Existing studies suggest that breaking administrative monopoly intensifies the market competitive pressure faced by firms, which in turn incentivizes them to increase cross-regional investment, advance green transformation, improve innovation performance, and lower the cost of debt financing[8–11]. Against

this background, an important question arises: can the market competitive pressure induced by administrative monopoly regulation alter firms' trade-off between the costs and benefits of ESG activities, thereby encouraging them to adopt proactive ESG strategies in response to market competition?

To address the above question, this paper takes A-share listed companies from 2011 to 2021 as the research sample and treats the implementation of the Fair Competition Review System as a quasi-natural experiment in the regulation of administrative monopoly, in order to empirically examine how such regulation affects corporate ESG performance. The marginal contributions of this paper are mainly reflected in the following three aspects. First, this paper enriches the literature on the determinants of corporate ESG performance from the perspective of competitive incentives. Existing studies have examined the determinants of corporate ESG performance from the perspective of changes in the external environment, such as environmental regulation, the judicial environment, and air pollution[12–14]; by contrast, this paper takes the market competitive environment—an important component of firms' external environment—as the point of departure, and exploits the implementation of the Fair Competition Review System to identify the causal relationship between changes in the external market competitive environment induced by administrative monopoly regulation and corporate ESG performance, thereby providing a useful complement to the literature on the determinants of corporate ESG performance. At the same time, this paper also investigates the moderating role of stakeholders, further deepening the research on how the competitive environment affects corporate ESG performance under different circumstances.

Second, this paper extends the literature on the economic consequences of the Fair Competition Review System from the perspective of non-financial performance. The existing literature has primarily explored the microeconomic consequences of the implementation of the Fair Competition Review System from the perspectives of vertical integration, investment and financing decisions, and innovation investment [8–10,15,16]; in contrast, this paper examines the impact of the implementation of the Fair Competition Review System on corporate ESG performance from the perspective of non-financial performance, thus providing new empirical evidence for evaluating the policy effects of the Fair Competition Review System.

Third, the findings of this paper provide policy implications for protecting market competition in emerging economies. Although many studies have shown that factors such as higher regulatory barriers, corruption, and market segmentation make developing economies less competitive than developed countries [16–18], the findings of this paper demonstrate that, under changes in the competitive environment, firms in emerging economies can achieve an organic unity between economic and social benefits by adopting proactive ESG strategies. Against the backdrop of growing international attention to how government action can promote and sustain economic growth, the findings of this paper offer valuable policy implications for other emerging economies seeking to better combine the roles of government and the market.

2. Institutional background and hypotheses development

2.1. Institutional background

Fair competition is not only a fundamental principle of the market economy, but also a crucial foundation for the efficient functioning of market mechanisms. Its purpose is to eliminate local protectionism, regional blockades, industrial barriers, enterprise monopolies, as well as illegal preferential policies or practices that harm the interests of market participants, all of which are detrimental to the business environment [19,20]. To promote fair market competition, the Opinions of the State Council on Establishing the Fair Competition Review System in the Development of the Market System, issued in June 2016, established the basic principles, review criteria, and safeguard measures of the Fair Competition Review System, with the aim of dismantling administrative monopolies at the source and curbing the improper exercise of administrative power. On June 29, 2021, the Implementation Rules for the Fair Competition Review System, jointly issued by the State Administration for Market Regulation and four other ministries, further clarified the review mechanism, procedures, standards, and exceptions. The Anti-Monopoly Law of the People's Republic of China, revised on June 24, 2022 and effective from August 1 of the same year, formally incorporated the Fair Competition Review System, thereby providing legal support for its implementation. The 2024 Government Work Report emphasized the need to "introduce administrative regulations for fair competition review" and to "carry out targeted measures to address prominent issues such as local protectionism and market segmentation," indicating that improving the Fair Competition Review System and fostering a fair and transparent business environment had become a key priority of government work. The Regulations on Fair Competition Review, which came into effect on August 1, 2024, have further advanced the implementation of the Fair Competition Review System.

2.2. Hypotheses development

Administrative monopoly originates from local protectionism driven by local governments' performance-oriented development incentives. Under the incentive structure of promotion tournaments, local governments are motivated to formulate preferential and discriminatory policies that restrict the entry of non-local firms while favoring local enterprises, thereby enabling local firms to gain competitive advantages in specific industries and promoting faster economic growth within their jurisdictions, which in turn highlights government performance [21]. However, administrative monopoly intensifies interregional market segmentation and undermines the environment of fair competition [22,23], thereby reducing the efficiency of market resource allocation. Against this background, the Fair Competition Review System (FCRS) is designed to regulate government behavior and dismantle administrative monopoly. Through ex ante review, it seeks to

prevent government departments from introducing policy measures that exclude or restrict market competition, while progressively abolishing rules and practices that hinder the construction of a unified national market and fair competition. In this sense, the FCRS serves as an effective institutional support for building a fair and orderly competitive market environment[1].

Based on this, this paper argues that the implementation of the Fair Competition Review System (FCRS) can enhance both the fairness and intensity of market competition by dismantling administrative monopoly, thereby restoring, to the greatest extent possible, the genuine competitive pressure faced by firms. On the one hand, the FCRS can increase the intensity of market competition by lowering market entry barriers, thereby raising the competitive pressure on local firms. Specifically, the FCRS prohibits the establishment of unreasonable or discriminatory entry and exit conditions, as well as approval procedures that lack a legal or regulatory basis or fall outside the negative list for market access. These provisions can directly constrain local governments' administrative monopoly behavior, reduce barriers to entry and entry costs in regional markets, and thereby attract more potential entrants into the market [24–26], which will undoubtedly intensify the competitive pressure faced by local firms. On the other hand, the FCRS can improve the fairness of market competition by restricting governments' preferential and discriminatory policies, which in turn increases the competitive pressure on local firms. The FCRS prohibits discriminatory pricing and subsidy policies, as well as preferential treatment for specific business operators and exemptions from taxes and related charges. These provisions help promote competitive neutrality in preferential policies concerning government subsidies, credit allocation, and tax burdens [8,27]. To some extent, this weakens local firms' advantages in resource acquisition and thus increases the market competitive pressure they face.

Building on this, strategic choice theory emphasizes that changes in the external environment can trigger shifts and adjustments in firms' strategic decisions [4]. In the context of intensified market competition caused by the dismantling of administrative monopoly, whether firms respond by adjusting their ESG strategies depends on how they weigh the costs and benefits of ESG activities. From the cost perspective, ESG practices are characterized by substantial funding requirements and long investment horizons [2]. Given resource constraints, ESG engagement may increase firms' production and operating costs in the short run and crowd out funds for other investment projects, potentially placing firms at a disadvantage in a highly competitive environment. Moreover, ESG activities also generate positive externalities, which implies that firms must bear the full costs of ESG practices without being able to capture all of the corresponding benefits [28], thereby weakening their incentives to implement ESG strategies. Therefore, under intensified market competitive

[1] According to data from the State Administration for Market Regulation, since the implementation of the Fair Competition Review System (FCRS), as of June 21, 2024, a cumulative total of 1.618 million policy measures had been reviewed nationwide, 4.47 million existing documents had been cleaned up, and 93,000 policy measures involving the exclusion or restriction of competition had been abolished or revised. These outcomes indicate that local governments' administrative monopoly practices have been effectively corrected.https://www.gov.cn/xinwen/jdzc/202406/content_6958660.htm

pressure, firms may be motivated to reduce ESG investment in order to maintain their competitive advantages, ultimately leading to lower ESG performance. From the benefit perspective, strong ESG performance, as an important manifestation of a firm's sustainable development capacity, helps satisfy stakeholder demands [3,29,30], thereby facilitating access to critical strategic resources and enabling firms to build differentiated competitive advantages. Strategic choice theory further suggests that corporate social responsibility constitutes an important component of firms' competitive strategy, and that fulfilling social responsibility can enhance firms' competitive advantage and market influence [31,32]. Existing studies show that strong ESG performance not only helps firms alleviate financing constraints and improve risk-taking capacity [33,34], but also improves operating performance and enhances long-term value [35,36]. Therefore, when market competitive pressure intensifies, firms may also have incentives to improve their ESG performance in order to obtain differentiated competitive advantages.

Taken together, it is not difficult to see that the costs and benefits of ESG activities are two sides of the same coin. However, this paper argues that, in the current context, the long-term benefits of firms' ESG engagement outweigh its short-term costs, which makes firms more likely to adopt proactive ESG strategies in response to the increased market competitive pressure arising from the dismantling of administrative monopoly. As ESG has emerged as a new trend in global economic development, firms, as the micro-level entities implementing ESG principles, have drawn widespread attention from investors, the media, and the public regarding their ESG performance [1]. Under such circumstances, if firms choose to cope with the market competitive pressure arising from the dismantling of administrative monopoly by reducing ESG investment, they may face stronger legitimacy pressure from stakeholders, which would also be unfavorable to their sustainable development.

By contrast, if firms adopt proactive ESG strategies in response to the increased market competitive pressure induced by the dismantling of administrative monopoly, they can not only meet stakeholders' heightened legitimacy demands, but also gain access to critical strategic resources and build long-term competitive advantages, thereby achieving an organic unity between social and economic benefits. Therefore, after weighing the costs and benefits, ESG performance is expected to become a key strategic tool through which firms obtain competitive advantages in responding to market competitive pressure. Consistent with this theoretical expectation, the White Paper on ESG Strategy and Practice of Chinese Enterprises, based on a survey of firms across various industries in China, shows that 100 percent of the surveyed firms regard ESG as one of their strategic priorities for the next five years, and that the importance attached to ESG increases with the level of external environmental uncertainty[2]. Accordingly, against the background of the growing strategic value of ESG, when facing the market competitive pressure brought about by the dismantling of administrative monopoly, firms are more likely to adopt proactive ESG strategies after fully

[2] https://finance.sina.com.cn/esg/2022-08-08/doc-imizirav7241424.shtml

weighing the costs and benefits of ESG, thereby improving their ESG performance to the greatest extent possible. Based on the above analysis, this paper proposes the following hypothesis:

Hypothesis 1. The implementation of the FCRS improves corporate ESG performance.

3. Research design

3.1. Sample selection

The initial sample of this study consists of data on Chinese A-share listed firms from 2011 to 2021. The sample is processed as follows: (1) firms in the financial industry are excluded; (2) firms under special treatment (ST) are excluded; (3) observations with missing variables are excluded; and (4) firms listed in 2016, the year in which the Fair Competition Review System (FCRS) was implemented, or in subsequent years are excluded. The final sample comprises 24,953 firm-year observations. To mitigate the influence of outliers, all continuous variables are winsorized at the 1% and 99% levels. Firm-level data are obtained from the China Stock Market and Accounting Research (CSMAR) database and the Wind database. The underlying data on administrative monopoly are drawn from the China Industrial Economy Statistical Yearbook, while data on regional GDP per capita and environmental regulation are obtained from the China City Statistical Yearbook.

3.2 Measures of variables

3.2.1. Dependent variable

Corporate ESG performance. Given that the Sino-Securities ESG rating index covers all A-share listed firms and has been widely recognized in the academic literature, this study uses the Sino-Securities ESG rating index as a proxy for corporate ESG performance (*ESG_R*)[37]. Specifically, the Sino-Securities ESG rating comprises nine categories—AAA, AA, A, BBB, BB, B, CCC, CC, and C—which are assigned values from 9 to 1 in descending order, with a higher value indicating better corporate ESG performance. Meanwhile, this study also uses the overall ESG score in the Sino-Securities ESG rating index *(ESG_S*) as an alternative proxy variable.

3.2.2 Independent variable

The Fair Competition Review System. Using the DID technique requires us to specify treatment and control groups as well as pre-event and post-event periods. For the treatment variable, given that the primary purpose of the Fair Competition Review System (FCRS) is to regulate government behavior and dismantle administrative monopoly, and that market segmentation is a major manifestation of local governments' administrative monopoly, this study uses the market segmentation index to quantify the level of regional administrative monopoly[38]. Based on the average level of administrative monopoly in the regions where the sample firms are located during 2011–2016, the sample is divided into groups: firms located in regions with a higher degree of

administrative monopoly are assigned to the treatment group, for which Treat=1, whereas firms located in regions with a lower degree of administrative monopoly are assigned to the control group, for which Treat=0. Although the FCRS was introduced in 2016, the State Council's policy document specified that fair competition review would begin in July 2016 and be gradually rolled out across provinces from 2017, so this study takes 2017 as the policy shock year and defines Post=1 for 2017 and subsequent years, and Post=0 otherwise.

3.2.3 Control variables

This study includes the following control variables[39]: firm size (Size), leverage (Lev), return on assets (Roa), cash flow (Cfo), firm age (Age), the ratio of fixed assets (Ppe), loss status (Loss), ownership concentration (Top1), board size (Board), board independence (Indep), institutional investor shareholding (Inst), and ownership nature (Soe). In addition, considering that the level of regional economic development and environmental regulation may affect the regression results, this study further controls for regional economic development (Pergdp) and environmental regulation (Envreg). Detailed definitions of these variables are reported in Table 1.

Insert Table 1. here

3.3 Model design

To examine the impact of dismantling administrative monopoly on corporate ESG performance, this study treats the implementation of the Fair Competition Review System (FCRS) in June 2016 as a quasi-natural experiment aimed at curbing administrative monopoly and constructs the following difference-in-differences (DID) model:

$$ESG_{i,t} = \beta_0 + \beta_1 Treat_i \times Post_t + Controls + \lambda_i + \mu_t + \varepsilon_{i,t} \quad (1)$$

where i and t denote firm and year, respectively. The dependent variable *ESG* represents corporate ESG performance, including ESG rating (*ESG_R*) and ESG score (*ESG_S*). Treat is the treatment indicator, and Post is the policy shock indicator. Controls denotes a set of control variables. λ_i and μ_t represent firm fixed effects and year fixed effects, respectively, which are included to control for time-invariant firm-level factors and the effects of changes in macro-level conditions across different years on corporate ESG performance[3]. In the regressions, this study uses robust standard errors and clusters them at the firm level. The coefficient of primary interest is β_1, the estimated coefficient on the interaction term $Treat_i \times Post_t$, which captures the difference in ESG performance between firms in the treatment group and those in the control group before and after

[3] Since $Treat_i$ is a cross-sectional variable and $Post_t$ is a time dummy, they are absorbed by the firm fixed effects λ_i and year fixed effects μ_t, respectively. Therefore, Model (1) does not additionally include the standalone terms of $Treat_i$ and $Post_t$.

the implementation of the Fair Competition Review System (FCRS). Consistent with the theoretical analysis above, ***Hypothesis1.*** is supported if β_1 is significantly positive.

4. Empirical results analysis

4.1 Descriptive statistics

Table 2 reports the descriptive statistics of the main variables, including the number of observations, means, and standard deviations. The mean value of *ESG_R* is 4.070, with a standard deviation of 1.133, while the mean value of *ESG_S* is 72.825, with a standard deviation of 5.625, indicating substantial variation in ESG performance across Chinese listed firms and considerable room for improvement. The mean value of *Treat* is 0.322, suggesting that approximately 32.2% of the sample firms are located in regions with a high degree of administrative monopoly and are therefore more likely to be significantly affected by the Fair Competition Review System (FCRS). The descriptive statistics of the remaining control variables all fall within reasonable ranges, suggesting that the influence of extreme values on the regression results can largely be ruled out.

Insert Table 2. here

4.2 Baseline regression results

To examine the effect of dismantling administrative monopoly on corporate ESG performance, this study employs Model (1) to conduct a difference-in-differences estimation in order to test the above hypothesis. The regression results are reported in Table 3. Columns (1) and (2) examine the impact of dismantling administrative monopoly on firms' ESG ratings (ESG_R), while Columns (3) and (4) examine its impact on firms' ESG scores (*ESG_S*). Among them, Columns (1) and (3) report the regression results controlling only for firm and year fixed effects, whereas Columns (2) and (4) further include the control variables. The results show that the estimated coefficients on the core explanatory variable, *Treat×Post,* are all significantly positive at the 1% level, indicating that dismantling administrative monopoly can significantly improve corporate ESG performance and thus supporting Hypothesis H1. In terms of economic significance, taking Column (4) as an example, the estimated coefficient on *Treat×Post* is 0.603 and is significantly positive at the 1% level, suggesting that the implementation of the Fair Competition Review System (FCRS) increases the ESG scores of firms located in regions with a high degree of administrative monopoly by 8.3% (=0. 603/72.825×100%), which is economically meaningful. These findings indicate that the implementation of the FCRS helps dismantle administrative monopoly and create a fairer and more competitive market environment for firms, thereby encouraging them to adopt proactive ESG strategies in response. This is because, although ESG strategies may increase firms' production and operating costs in the short run, they can help firms build sustainable competitive advantages in the

long run as ESG principles become increasingly important.

Insert Table 3. here

Facing the intensified market competitive pressure induced by the dismantling of administrative monopoly, and taking into account the trade-off between the costs and benefits of ESG activities, firms may also engage in a strategic response in their ESG practices, namely ESG greenwashing. This behavior mainly relies on manipulating information disclosure to exaggerate firms' ESG performance [40,41], which may help firms strike a balance between building competitive advantages and reducing production and operating costs. To examine the effect of the market competitive pressure arising from the dismantling of administrative monopoly on corporate ESG greenwashing, this study employs Model (2) below to measure firms' ESG greenwashing behavior.

$$ESG_Gw_{i,t} = \frac{ESG_{D_{i,t}} - \overline{ESG_D_{i,t}}}{\sigma ESG_D_{i,t}} - \frac{ESG_S_{i,t} - \overline{ESG_S_{i,t}}}{\sigma ESG_S_{i,t}} \quad (2)$$

where ESG_D denotes the ESG disclosure score, measured by the Bloomberg ESG disclosure score, and ESG_S is defined in the same way as above to capture the firm's actual ESG performance score. The first component on the right-hand side of Model (2) is the Z-score of the ESG disclosure score, while the second component is the Z-score of the actual ESG performance score. A higher value of the resulting measure indicates a larger gap between a firm's ESG disclosure and its actual ESG performance, and thus a more severe degree of ESG greenwashing[41]. Table 4 reports the effect of dismantling administrative monopoly on firms' ESG greenwashing behavior. The results show that, regardless of whether control variables are included, the estimated coefficient on the core explanatory variable, *Treat*×*Post*, is significantly negative. This indicates that dismantling administrative monopoly not only fails to induce the strategic behavior of ESG greenwashing, but instead significantly restrains it. One possible explanation is that ESG greenwashing is not sustainable as a means of obtaining competitive advantages; once such behavior is identified by stakeholders, firms may face a severe legitimacy crisis [42], which in turn may undermine their sustainable competitive advantages. Therefore, when confronted with intensified market competitive pressure, firms are more likely to engage in substantive ESG practices and maintain consistency between ESG disclosure and actual performance.

Insert Table 4. here

4.3 Robustness tests

4.3.1 Parallel trend test

Satisfying the parallel trends assumption is an important prerequisite for applying the difference-in-differences model; that is, in the absence of external policy shocks, the ESG performance of firms in the treatment group and the control group should follow the same trend over time. To this end, this study constructs the following Model (3) to examine the dynamic effects of dismantling administrative monopoly on corporate ESG performance[43].

$$\begin{aligned} ESG_{i,t} = {} & \beta_0 + \beta_1 Pre_{t\text{-}5} \times Treat_i + \beta_2 Pre_{t-4} \times Treat_i + \cdots + \beta_6 Current \times Treat_i \\ & + \beta_7 Post_{t+1} \times Treat_i + \cdots + \beta_{10} Post_{t+4} \times Treat_i + Controls_{i,t} \\ & + \lambda_i + \mu_t + \varepsilon_{i,t} \end{aligned} \tag{3}$$

Here, this study takes 2011 as the base year. Specifically, when an observation falls in the fifth year before the implementation of the Fair Competition Review System (FCRS), Pre_5=1; otherwise, Pre_5=0, and so on. When an observation falls in the year of the FCRS implementation, Current=1; otherwise, Current=0. When an observation falls in the first year after the implementation of the FCRS, Post_1 =1; otherwise, Post_1=0, and so forth. The definitions of the remaining variables are consistent with those in Model (1). Figure 1 illustrates the dynamic trends of the regression coefficients for *ESG_R* and *ESG_S* with 90% confidence intervals. It is straightforward to observe that, prior to the implementation of the FCRS (i.e., before 2017), the estimated coefficients on the core explanatory variable are not statistically significant, suggesting that the treatment and control groups satisfy the exante parallel trends assumption with respect to corporate ESG performance before the policy intervention. In addition, an examination of the estimated coefficients in the year of policy implementation and the subsequent years shows that the promoting effect of dismantling administrative monopoly on corporate ESG performance does not begin to emerge until the second year after the policy implementation (2019), indicating that the effect of the FCRS exhibits a certain time lag. One possible explanation is that, on the one hand, enforcement authorities require time to review and repeal relevant policies issued by government departments; on the other hand, firms also need time to formulate and implement ESG strategies in response to the intensified market competitive pressure brought about by the dismantling of administrative monopoly.

Insert Figure 1. here

4.3.2 Placebo test

To rule out the influence of omitted variables on the baseline regression results, this study follows Ferrara et al. (2012) and conducts a placebo test by randomly assigning firms in the treatment group. To reduce the role of chance and enhance the validity of the placebo test, the above randomization procedure is repeated 1,000 times. The logic of this approach is straightforward: if the baseline regression results are driven by omitted variables, the estimated coefficients obtained from the

placebo test should be significantly different from zero; otherwise, the influence of omitted variables on the baseline findings is likely to be limited. Figure 2 presents the kernel density distribution of the estimated coefficients on the "pseudo" core explanatory variable and their corresponding p-values based on the 1,000 random draws. The estimated coefficients on the "pseudo" core explanatory variable are all concentrated around zero and differ substantially from the estimated coefficient on the actual explanatory variable reported in Columns (3) and (4) of Table 3. This finding suggests that the improvement in corporate ESG performance is unlikely to be driven by omitted variables.

Insert Figure 2. here

4.3.3 Matching analysis

To mitigate the influence of sample self-selection bias on the baseline regression results, this study employs the propensity score matching (PSM) method. Specifically, firm-level control variables are selected as the matching covariates, and 1:3 nearest-neighbor matching is performed so that each treated firm is matched with the three most similar control firms. The regressions are then re-estimated using the matched sample. The balance test results based on *ESG_R* are reported in Table 5[4]. It is straightforward to observe that, after matching, the difference tests for all covariates are statistically insignificant, suggesting that the PSM procedure used in this study effectively alleviates sample self-selection bias.

Insert Table 5. here

Furthermore, given that PSM may involve self-matching and can lead to substantial sample loss, this study further introduces entropy balancing matching (EBM) to achieve balance between the treatment and control groups without reducing the sample size. The corresponding regression results are reported in Table 6. It is straightforward to observe that, after accounting for sample self-selection bias, the estimated coefficient on the core explanatory variable, *Treat*×*Post*, remains significantly positive, which confirms the robustness of the previous findings.

Insert Table 6. here

4.3.4 Excluding the impact of other competitive policies

To further rule out the interference of other pro-competition policies, this study includes such policies as additional control variables[15]. On the one hand, given that the negative list management system provides a market access rule of "entry unless prohibited," which helps foster a fair and

[4] The balance test results based on *ESG_S* are similar and are therefore not reported in detail here.

orderly competitive market environment, this study constructs a dummy variable, *Regulation*, indicating whether the negative list management system was implemented in the region where a firm was located in a given year, and incorporates it into Model (1) for regression analysis. On the other hand, pilot free trade zones can lower barriers to foreign market entry, thereby helping improve the competitive environment faced by firms. Accordingly, this study constructs a dummy variable, *Freetrade,* indicating whether a pilot free trade zone had been established in the region where a firm was located in a given year, and includes it in Model (1) for regression analysis. More importantly, this study further incorporates both above policy pilots into Model (1) simultaneously so as to jointly exclude their potential effects on corporate ESG performance. The corresponding regression results are reported in Table 7. The estimated coefficients on the core explanatory variable, *Treat*×*Post*, remain significantly positive at the 1% level, indicating that, after controlling for the effects of other pro-competition policies, dismantling administrative monopoly still has a significant promoting effect on corporate ESG performance. This further confirms the robustness of the previous findings.

Insert Table 7. here

4.3.5 Other robustness tests

(1) Replacing the dependent variable. Considering that the measurement of the dependent variable may affect the regression results, this study uses the ESG database in the CNRDS database and calculates firms' net ESG strength score, denoted as *CNRDS_ESG*, to measure corporate ESG performance[44]. It is then used as the dependent variable, and Model (1) is re-estimated. The regression results are reported in Column (1) of Table 8. (2) Reconstructing the treatment and control groups. This study uses the score for the "degree of government intervention in enterprises" from the provincial marketization index of China to measure the degree of local administrative monopoly[8]. Based on the average degree of government intervention in the regions where the sample firms are located during 2011–2016, firms in regions with a higher degree of government intervention are classified into the treatment group, for which *Treat1*=1*,* whereas firms in regions with a lower degree of government intervention are classified into the control group, for which *Treat1*=0. Model (1) is then re-estimated, and the results are reported in Columns (2) and (3) of Table 8. (3) Adjusting the policy shock variable. Since the Fair Competition Review System (FCRS) was introduced in June 2016, it may have generated certain anticipatory effects on local governments' regulation of administrative monopoly. Accordingly, this study reconstructs the policy shock variable as follows: when the year is before 2016, *Post1*=1; when the year is 2016, *Post1*=1/2; and when the year is after 2016, *Post1*=1. Model (1) is then re-estimated, and the results are reported in Columns (4) and (5) of Table 8. (4) Changing the sample period. Considering that the major public health event in 2019 may have affected firms' ESG strategy formulation and implementation, and thus may have influenced the conclusions of this study, the sample period is truncated at 2019.

The regression results are reported in Columns (6) and (7) of Table 8. It is straightforward to observe that the estimated coefficients on the core explanatory variable remain significantly positive at least at the 10% level in Columns (1) to (7), indicating that the baseline regression results are reasonably robust.

Insert Table 8. here

4.4 Mechanism analysis

According to the foregoing theoretical analysis, the implementation of the Fair Competition Review System (FCRS) can enhance the fairness and intensity of market competition by dismantling administrative monopoly, thereby intensifying the market competitive pressure faced by local firms. This, in turn, incentivizes them to adopt proactive ESG strategies, that is, to improve their ESG performance in order to obtain competitive advantages. Next, this study measures firms' market competitive pressure from two dimensions, namely the fairness and intensity of market competition, and empirically tests the competition-driven incentive mechanism through which dismantling administrative monopoly affects corporate ESG performance. At the same time, given that ESG consists of three components, environmental (E), social (S), and governance (G), this study further explores which specific ESG dimensions firms improve in response to the increased market competitive pressure caused by the dismantling of administrative monopoly.

4.4.1 Enhancing the intensity of market competition

The implementation of the Fair Competition Review System (FCRS) helps constrain local governments' administrative monopoly behavior and reduce entry barriers and entry costs in regional markets, thereby attracting more potential entrants and increasing the intensity of market competition, which in turn raises the competitive pressure faced by firms. To capture the intensity of market competition, this study uses the Lerner index (*PCM*) and the Herfindahl–Hirschman Index (*HHI*) at the firm and industry levels[45,46], respectively. The Lerner index reflects firms' monopoly power, with a larger value indicating lower market competitive intensity, while the Herfindahl–Hirschman Index (*HHI*) is an important measure of product market competition, with a larger value likewise indicating lower market competitive intensity. The corresponding regression results are reported in Columns (1) and (2) of Table 9. It is straightforward to observe that the estimated coefficient on the core explanatory variable, *Treat*×*Post*, is significantly negative, indicating that the implementation of the FCRS helps curb firms' monopoly power and enhance product market competition, thereby increasing the intensity of market competition. Taken together, these findings suggest that the implementation of the FCRS can suppress firms' monopoly power and improve product market competition by dismantling administrative monopoly, thereby enhancing the intensity of market competition and confirming the competition-driven incentive mechanism

underlying firms' ESG strategies.

4.4.2 Promoting the fairness of market competition.

The implementation of the Fair Competition Review System (FCRS) helps restrict the policy support instruments used by local governments and weaken local firms' advantages in accessing resources, thereby promoting the fairness of market competition and increasing the competitive pressure faced by firms in the region. Considering that local governments mainly support local firms by providing financing convenience, government subsidies, and tax reductions or exemptions, this study examines the impact of dismantling administrative monopoly on the fairness of market competition from three perspectives: debt financing costs, tax burden, and government subsidies[47–49]. Debt financing cost (*Dcost*) is measured by the ratio of net financial expenses to the firm's average total liabilities, with a larger value indicating a higher cost of debt financing[50]. Corporate tax burden (*Etax*) is measured by the ratio of income tax expense to earnings before interest and taxes, with a larger value indicating a heavier tax burden[51]. Government subsidy (*Subsidy*) is measured by the ratio of government grants to total assets, with a larger value indicating a higher level of government subsidies[52]. The corresponding regression results are reported in Columns (3)–(5) of Table 9. In Columns (3) and (4), the estimated coefficients on the core explanatory variable, *Treat×Post*, are both significantly positive at the 1% level, indicating that the implementation of the FCRS significantly increases the debt financing costs and tax burdens of firms located in regions with a high degree of administrative monopoly. In Column (5), the estimated coefficient on *Treat × Post* is significantly negative at the 1% level, suggesting that the implementation of the FCRS significantly reduces the level of government subsidies received by firms in regions with a high degree of administrative monopoly. These findings imply that dismantling administrative monopoly can promote the competitive neutrality of preferential policies related to government subsidies, credit resources, and tax burdens, thereby enhancing the fairness of regional market competition. To some extent, this weakens local firms' competitive advantages and thus incentivizes firms to improve their ESG performance in order to strengthen their market competitiveness, further validating the competition-driven incentive mechanism underlying firms' ESG strategies.

Insert Table 9. here

4.4.3 Specific channels: effects on ESG sub-dimensions

ESG consists of three components: environmental (*E*), social (*S*), and governance (*G*). Accordingly, based on the construction methods of the dependent variables *ESG_R* and *ESG_S* described above, this study further constructs three sub-indicators corresponding to the environmental, social, and governance dimensions, respectively, and employs Model (1) for regression analysis. The corresponding regression results are reported in Table 10. The estimated coefficients on the core

explanatory variable, *Treat*×*Post*, are significantly positive in Columns (1), (2), (4), and (5), indicating that, under the intensified market competitive pressure caused by the dismantling of administrative monopoly, firms mainly improve their overall ESG performance by enhancing their performance in the environmental (*E*) and social (*S*) dimensions. A possible explanation is that, in the context of sustainable development, stakeholders are more sensitive to firms' environmental and social performance. As a result, improvements in these dimensions enable firms to better satisfy stakeholder demands, thereby making it more likely for them to obtain critical strategic resources and, in turn, respond more effectively to the increased market competitive pressure arising from the dismantling of administrative monopoly.

Insert Table 10. here

5. Further analysis

5.1 Moderating effects analysis

Although the preceding results verify the competition-driven incentive mechanism through which dismantling administrative monopoly affects corporate ESG performance, this conclusion in fact rests on an implicit assumption: when firms face intensified market competitive pressure, the benefits of ESG strategies outweigh their costs. This also implies that when the potential benefits of ESG strategies are greater, the promoting effect of dismantling administrative monopoly on corporate ESG performance will be more pronounced. According to resource dependence theory, the survival of any organization depends on obtaining resources from its surrounding environment or from other organizations, and the formation of competitive advantage relies on the critical resources controlled by stakeholders. Resource dependence theory emphasizes that organizations are not self-sufficient and are shaped by external resource dependencies. From the perspective of stakeholder theory, improvements in ESG performance, as an important manifestation of firms' sustainable development, help satisfy stakeholders' legitimacy demands and thereby enable firms to obtain critical strategic resources held by stakeholders. Existing discussions of stakeholder-oriented ESG similarly emphasize that stronger ESG performance can enhance legitimacy, trust, and access to external resources[53]. Following this logic, when stakeholders pay greater attention to corporate ESG performance, the potential benefits of ESG strategies become larger; under such circumstances, the promoting effect of dismantling administrative monopoly on corporate ESG performance should be more evident. Based on this, and in order to further complete the logical chain of the foregoing theoretical analysis, this study examines the moderating role of stakeholder attention to ESG in the relationship between dismantling administrative monopoly and corporate ESG performance from the perspectives of banks, investors, the public, and government, respectively.

5.1.1 Bank ESG attention

First, under an indirect financing system dominated by commercial banks, banks constitute an important stakeholder of firms, as they are a major source of funding for corporate production and operating activities. Existing studies show that, in the context of sustainable development, corporate ESG performance has become an important reference standard for banks in designing loan contracts [3]. Therefore, when firms face intensified market competitive pressure, they are motivated to improve their ESG performance in order to strengthen their debt financing capacity. Accordingly, this study expects that the promoting effect of dismantling administrative monopoly on corporate ESG performance will be more pronounced when banks pay greater attention to ESG. With respect to bank ESG attention, a higher level of bank ESG performance generally implies a stronger degree of ESG attention.

Based on this, this study constructs a city-level indicator of commercial banks' ESG performance using data on commercial banks' ESG ratings and their branch networks across prefecture-level cities[3,54]. The sample is then divided into two groups according to the annual median of the regional commercial bank ESG performance indicator (*Bank_ESG*): a high-attention group (*Bank_ESG*=1) and a low-attention group (*Bank_ESG*=0). Model (1) is subsequently employed for the regression analysis. The corresponding regression results are reported in Table 11. It can be found that, in the subsample with higher bank ESG attention, the estimated coefficients on the core explanatory variable, *Treat*×*Post*, are all significantly positive at the 1% level, whereas they are insignificant in the subsample with lower bank ESG attention. Moreover, the bootstrap test indicates that the coefficients differ significantly across groups. This result is consistent with the expectation that, when banks pay greater attention to ESG, firms have stronger incentives to improve their ESG performance to enhance debt financing capacity and cope with intensified market competitive pressure.

Insert Table 11. here

5.1.2 Green investor attention

External investors are important stakeholders of firms in the capital market. In November 2018, the Asset Management Association of China issued the Green Investment Guidelines (Trial), with the aim of defining the scope of green investment, improving the institutional framework for green investment, and guiding investors to cultivate green and environmentally friendly investment concepts. At the same time, an increasing number of Chinese public funds have signed the UN-supported Principles for Responsible Investment (PRI)[55]. By 2021, the number of PRI signatories had reached 3,826, representing assets under management of US$121.3 trillion. Under the guidance of relevant policies and their implementation by financial institutions, corporate ESG performance has become an important screening criterion for external investors in the investment decision-

making process. In particular, compared with general investors, green investors, as socially responsible investors, place greater emphasis on social responsibility and public interests while pursuing economic returns, and therefore pay more attention to firms' ESG performance. Accordingly, this study expects that, when firms are followed by green investors, the promoting effect of dismantling administrative monopoly on corporate ESG performance will be more pronounced.

Based on this, this study identifies green investors according to each fund's "investment objectives" and "investment scope"[56]. If a firm is held by green investors, green investor attention (*GreenInv*) is coded as 1; otherwise, it is coded as 0. Model (1) is then used for subsample regressions. The corresponding regression results are reported in Table 12. It can be found that, in the subsample receiving attention from green investors, the estimated coefficients on the core explanatory variable, *Treat*×*Post*, are 0.149 and 0.780, respectively, both significant at the 1% level. In the subsample not receiving attention from green investors, the estimated coefficients on Treat× Post are 0.088 and 0.402, respectively, both significant at the 10% level. Moreover, the bootstrap test indicates that the coefficients differ significantly across groups. This result is consistent with expectations: when firms are followed by green investors, they have stronger incentives to improve their ESG performance to meet ESG investment preferences and enhance their capital market performance.

Insert Table 12. here

5.1.3 Public environmental attention

As the concept of sustainable development has become increasingly embedded in society, the public has come to play an increasingly important role in environmental and social governance. As an external manifestation of the public's perception of environmental risk, public environmental attention can exert a profound influence on firms' ESG strategies. On the one hand, greater public environmental attention increases public scrutiny of firms' ESG performance and thus creates external reputational pressure on firms. On the other hand, higher public environmental attention may encourage the public to "vote with their money" by supporting firms with better ESG performance in both capital markets and product markets[57]. Therefore, this study expects that the promoting effect of dismantling administrative monopoly on corporate ESG performance will be more pronounced when public environmental attention is higher.

Based on this, this study measures public environmental attention using the Baidu Search Index for keywords related to haze and environmental pollution[58]. The sample is then divided into two groups according to the annual median of public environmental attention (*Baidu_Index*): a high-attention group (*Baidu_Index*=1) and a low-attention group (*Baidu_Index*=0). Model (1) is subsequently employed for the regression analysis. The corresponding regression results are

reported in Table 13. It can be observed that, in the subsample with higher public environmental attention, the estimated coefficients on the core explanatory variable, *Treat* × *Post*, are all significantly positive at the 1% level, whereas they are insignificant in the subsample with lower public environmental attention. Moreover, the bootstrap test indicates that the coefficients differ significantly across groups. This result is consistent with expectations: when public environmental attention is higher, firms have stronger incentives to improve their ESG performance in order to meet public expectations and build a favorable reputation, thereby gaining market competitive advantages. Baidu search data have been used in prior studies as a proxy for public concern about haze, air quality, and environmental issues in China. Recent evidence also suggests that stronger public environmental concern is associated with better corporate ESG performance.

Insert Table 13. here

5.1.4 Government environmental attention

Institutional legitimacy theory emphasizes the important role of government in firms' production and operating activities, and firms' compliance with government institutions is conducive to their access to external resources, such as government subsidies and tax incentives[58]. As environmental problems have become increasingly salient, local governments have attached growing importance to environmental governance. Therefore, government environmental attention reflects the degree to which local governments prioritize environmental issues, which also implies that they impose higher requirements on firms' environmental performance. Accordingly, this study expects that the promoting effect of dismantling administrative monopoly on corporate ESG performance will be more pronounced when government environmental attention is higher.

Based on this, this study measures government environmental attention by the frequency of environmental keywords in prefecture-level city government work reports[59]. The sample is then divided into two groups according to the annual median of government environmental attention (*Gov_envatt*): a high-attention group (*Gov_envatt*=1) and a low-attention group (*Gov_envatt*=0). Model (1) is subsequently employed for the regression analysis. The corresponding regression results are reported in Table 14. It can be found that, in the subsample with higher government environmental attention, the estimated coefficients on the core explanatory variable, *Treat*×*Post*, are all significantly positive at the 1% level, whereas they are insignificant in the subsample with lower government environmental attention. Moreover, the bootstrap test indicates that the coefficients differ significantly across groups. This result is consistent with expectations: when government environmental attention is higher, firms have stronger incentives to improve their ESG performance to satisfy institutional legitimacy requirements and obtain external resources.

Insert Table 14. here

5.2 Heterogeneity analysis

The above findings confirm the competition-driven incentive mechanism through which dismantling administrative monopoly affects corporate ESG performance. However, the strength of this effect may also depend on firm characteristics, industry characteristics, and the intensity of policy implementation. Accordingly, this study further conducts subsample regressions to examine the heterogeneous effects of dismantling administrative monopoly on corporate ESG performance from three dimensions, namely ownership type, industry monopoly intensity, and policy implementation intensity. This is intended not only to provide more detailed empirical evidence for the theoretical logic developed above, but also to offer a basis for the formulation and refinement of relevant policies.

5.2.1 Ownership type

Compared with private firms, state-owned enterprises (SOEs) possess inherent political connections and are better positioned to help governments achieve policy objectives. This makes local governments more likely to prioritize SOEs in the allocation of resources and provide them with more preferential treatment, such as financing convenience, tax reductions, and government subsidies[60]. Therefore, SOEs are more likely to benefit from local governments' administrative monopoly. Following this logic, the market competitive pressure arising from dismantling administrative monopoly is more likely to be manifested among SOEs, thereby giving them stronger incentives to improve their ESG performance in response to external competition. Accordingly, this study expects the competition-driven effect of dismantling administrative monopoly on ESG performance to be stronger for SOEs.

Based on ownership type (*Soe*), this study divides the sample into state-owned enterprises (*Soe*=1) and private enterprises (*Soe*=0), and then employs Model (1) for regression analysis. The corresponding regression results are reported in Table 15. It can be seen that, in the SOE subsample, the estimated coefficients on the core explanatory variable, *Treat*×*Post*, are all significantly positive, whereas they are insignificant in the private-enterprise subsample. Moreover, the bootstrap test indicates that the coefficients differ significantly across groups. This result is consistent with expectations, indicating that dismantling administrative monopoly has a stronger effect on improving ESG performance among SOEs, which further supports the theoretical logic developed above regarding the promotion of fair market competition.

Insert Table 15. here

5.2.2 Industry monopoly intensity

From an industry perspective, administrative monopoly is particularly pronounced in important

industries and key sectors related to the control of the commanding heights of the state-owned economy, whereas its impact on other industries is relatively limited. Accordingly, industries can be divided into monopolistic industries and competitive industries. Following the theoretical logic developed above, the market competitive pressure induced by the dismantling of administrative monopoly is more likely to be manifested among firms in monopolistic industries, thereby giving them stronger incentives to improve their ESG performance in response to external competition. Therefore, this study expects that the competition-driven effect of dismantling administrative monopoly on corporate ESG performance will be stronger for firms in monopolistic industries.

To this end, based on the calculation of the industry entry barrier index, this study defines as monopolistic industries (*Monop_Ind*=1) both the monopolistic industries and sectors mentioned in the Several Opinions on Encouraging, Supporting and Guiding the Development of Individual, Private and Other Non-Public Sectors of the Economy and those industries with an industry entry barrier index of no less than 7; all other industries are classified as competitive industries (*Monop_Ind*=0)[61]. The corresponding regression results are reported in Table 16. It can be seen that the magnitude and significance of the estimated coefficients on the core explanatory variable, *Treat*×*Post*, are both greater in the monopolistic-industry subsample than in the competitive-industry subsample, and the bootstrap test further indicates that the coefficients differ significantly across groups. This result is consistent with expectations, suggesting that dismantling administrative monopoly has a stronger effect on improving ESG performance among firms in monopolistic industries, which further supports the theoretical logic developed above regarding the enhancement of market competitive intensity.

Insert Table 17. here

5.2.3 Policy implementation intensity.

The effectiveness of the Fair Competition Review System (FCRS) also depends on the intensity with which local governments implement the policy. This study expects that, when policy implementation is stronger, the competition-driven effect of dismantling administrative monopoly on corporate ESG performance will be more pronounced. To this end, this study examines how the implementation intensity of the FCRS affects the relationship between dismantling administrative monopoly and corporate ESG performance from three perspectives: whether the policy is incorporated into government performance appraisal (Appraisal), whether a third-party evaluation mechanism is established (Evaluation), and whether an accountability mechanism is formulated and improved (Account)[5]. Model (1) is then employed for the regression analysis. The corresponding

[5]*Appraisal* equals 1 if the implementation of the Fair Competition Review System (FCRS) is incorporated into government performance appraisal, and 0 otherwise; *Evaluation* equals 1 if a third-party evaluation mechanism has been established for the implementation of the FCRS, and 0 otherwise; and *Account* equals 1 if the local government has formulated and improved a relevant accountability mechanism, and 0 otherwise.

regression results are reported in Table 17.

It is straightforward to observe that, when the implementation of the FCRS is incorporated into government performance appraisal, the estimated coefficients on the core explanatory variable, *Treat*×*Post*, are all significantly positive at the 1% level, whereas they are insignificant when the policy is not included in the appraisal system. Similarly, when a third-party evaluation mechanism is established for the implementation of the FCRS, the estimated coefficients on *Treat*×*Post* are all significantly positive at the 1% level, whereas they are insignificant when such a mechanism is not established. At the same time, compared with the case in which no relevant accountability mechanism is in place, the magnitude and significance of the estimated coefficients on *Treat*×*Post* are both greater when local governments have formulated and improved relevant accountability mechanisms. In addition, the bootstrap test results show that the coefficients differ significantly across the above groups. These results are consistent with expectations, indicating that establishing safeguard and enforcement mechanisms for the implementation of the FCRS can effectively enhance local governments' policy implementation intensity, thereby strengthening the competition-driven effect of dismantling administrative monopoly on corporate ESG performance.

Insert Table 17. here

5.3 Economic Consequences Analysis

As discussed in the foregoing theoretical analysis, with the growing prominence of the concept of sustainable development, the fundamental reason why firms implement proactive ESG strategies is that improving ESG performance is expected to help them obtain scarce external resources and build competitive advantages, thereby enabling them to cope with the market competitive pressure induced by the dismantling of administrative monopoly. Existing studies have found that strong ESG performance not only helps firms gain recognition from creditors such as banks [3], thereby alleviating financing constraints, but also enables them to satisfy investors' investment preferences and consumers' consumption preferences, thus improving their capital market and product market performance[62]. Based on this, in order to verify whether ESG strategies can generate the expected effects, this study follows constructs a two-stage regression model to identify the value-creation effects arising from the changes in corporate ESG performance induced by the dismantling of administrative monopoly from three perspectives: financing constraints, product market performance, and capital market performance[63]. First, the baseline regression model is specified as the following differenced model (4) to estimate the changes in corporate ESG performance induced by the dismantling of administrative monopoly.

$$\Delta ESG_{i,t} = \beta_0 + \beta_1 Treat_i \times Post_t + \Delta Controls + \lambda_i + \mu_t + \varepsilon_{i,t} \quad (4)$$

where the fitted value of $\Delta ESG_{i,t}$ represents the extent to which the dismantling of administrative monopoly improves corporate ESG performance, including ESG rating (*ESG_R*) and ESG score (*ESG_S*). Next, Model (5) is specified as follows to estimate the economic consequences arising from the changes in corporate ESG performance induced by the dismantling of administrative monopoly.

$$\Delta Y_{i,t+1} = \beta_0 + \beta_1 \Delta \widehat{ESG}_{i,t} + \Delta Controls + \lambda_i + \mu_t + \varepsilon_{i,t} \quad (5)$$

where $\Delta Y_{i,t+1}$ denotes the difference between $Y_{i,t+1}$ and $Y_{i,t}$, including financing constraints, product market performance, and capital market performance. Financing constraints are measured by the SA index, denoted as *SA*, with a larger value indicating more severe financing constraints. Product market performance is measured by the industry-adjusted growth rate of operating revenue, denoted as *A_Growth*, with a larger value indicating better product market performance[64]. Capital market performance is measured by Tobin's Q, denoted as *TobinQ*, with a larger value indicating better capital market performance. The corresponding regression results are reported in Table 18. It is straightforward to observe that improvements in corporate ESG performance help improve firms' future financing constraints, product market performance, and capital market performance. This suggests that firms can obtain competitive advantages through ESG strategies, which helps them

effectively cope with the market competitive pressure induced by the dismantling of administrative monopoly and further provides strong support for the validity of the foregoing theoretical analysis.

Insert Table 18. here

6. Conclusion

As the concept of sustainable development has become increasingly prominent, ESG performance has become a factor that firms can no longer afford to ignore in strategic decision-making. Against this background, whether changes in the market competitive environment can influence firms' ESG strategy choices is an important issue worthy of investigation. Using Chinese A-share listed firms from 2011 to 2021 as the research sample, this study treats the implementation of the Fair Competition Review System (FCRS) as a quasi-natural experiment in the regulation of administrative monopoly and examines the impact of administrative monopoly regulation on corporate ESG performance. The results show that administrative monopoly regulation can significantly improve firms' substantive ESG performance. Specifically, after the implementation of the FCRS, both the ESG ratings and ESG scores of firms located in regions with a high degree of administrative monopoly increase significantly, while the level of ESG greenwashing declines significantly. Mechanism tests further reveal that administrative monopoly regulation mainly increases firms' market competitive pressure by enhancing the intensity of market competition and promoting the fairness of market competition, thereby incentivizing firms to improve their ESG performance. At the same time, administrative monopoly regulation improves firms' overall ESG performance mainly through the environmental (*E*) and social (*S*) dimensions. The moderating effect analysis shows that higher bank ESG attention, green investor attention, public environmental attention, and government environmental attention all strengthen the competition-driven effect of administrative monopoly regulation on corporate ESG performance. The heterogeneity analysis indicates that the promoting effect of administrative monopoly regulation on ESG performance is more pronounced for state-owned enterprises, firms operating in monopolistic industries, and firms located in regions with stronger policy implementation intensity. The economic consequence analysis further confirms that the positive effect of administrative monopoly regulation on corporate ESG performance helps firms obtain external resources and build competitive advantages, as reflected in the alleviation of financing constraints and the improvement of both product market and capital market performance.

The findings of this study have the following policy implications. First, policymakers should recognize that competition policy can serve as an important instrument for promoting corporate sustainable development. On the one hand, local governments should adhere to the principle of competitive neutrality, clarify the relationship between the government and the market, and allow

the market to play a decisive role, thereby reducing the adverse effects of improper government intervention on market competition ex ante. On the other hand, enforcement authorities should continue refining the procedures for fair competition review and improving review efficiency. They may also strengthen the intensity of fair competition review by enhancing both the independence of enforcement agencies and the professionalism of enforcement personnel, so as to gradually eliminate policy measures that hinder market competition. At the same time, policy safeguard mechanisms should be further improved. In particular, policy implementation can be strengthened through the establishment of internal review and external oversight mechanisms, thereby ensuring the smooth implementation of the Fair Competition Review System (FCRS).

Second, firms should attach great importance to the critical strategic role of ESG performance in building long-term competitive advantages. In the context of sustainable development, ESG performance not only poses challenges to firms' operations and development, but also provides them with highly important strategic opportunities. On the one hand, firms can formulate tailored ESG strategies by learning from the advanced experience of ESG benchmark firms within the same industry and integrating such experience with their own specific circumstances. At the same time, firms should embed ESG principles at the organizational level, establish dedicated institutions, and cultivate relevant talent to ensure the smooth implementation of ESG strategies. On the other hand, ESG strategies require sustained long-term resource commitment. Therefore, firms should actively balance short-term operating objectives with long-term strategic planning and may seek to organically integrate ESG principles into their core business activities. This would not only help avoid the negative effects that may arise from an excessive pursuit of ESG performance at the expense of core business operations, but also facilitate an organic unity between economic and social benefits.

Third, stakeholders should actively play an external governance role in shaping corporate ESG performance. As an important source of firms' competitive advantage, stakeholders constitute a key external factor influencing corporate ESG performance. Stakeholders should work jointly to form a multi-actor governance force and build a top-down ESG governance ecosystem. For example, banks can exercise external governance by raising ESG requirements in credit allocation; external investors can use corporate ESG performance as an investment criterion and thereby play a guiding role through ESG-oriented investment; the public can participate directly or indirectly in corporate ESG governance through social media and consumption preferences; and the government can incentivize firms to improve their ESG performance through policy guidance.

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Figures

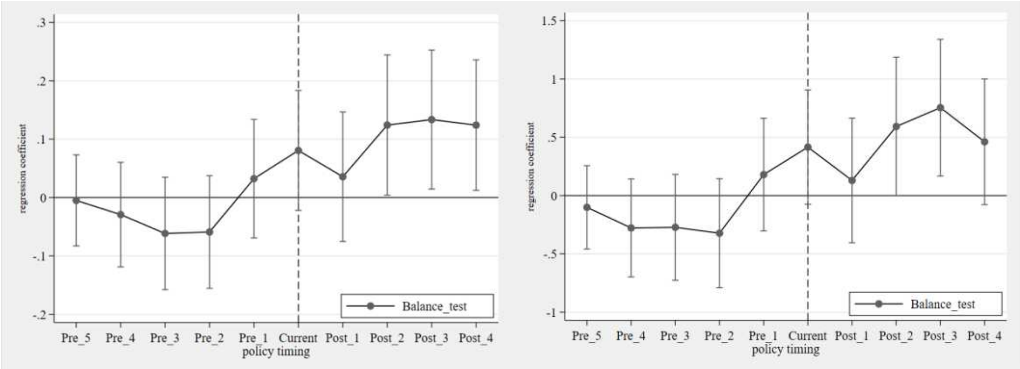


Figure 1. Parallel trends test based on ESG_R (Left) and ESG_S (Right)

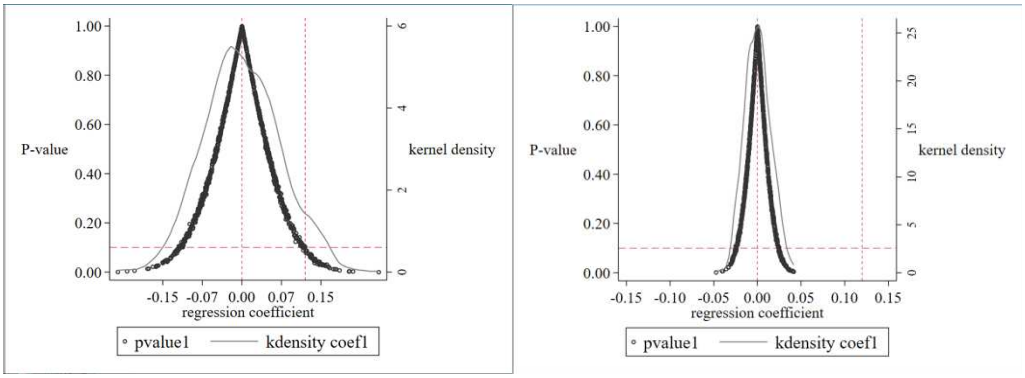


Figure 2. Placebo test based on ESG_R (Left) and ESG_S (Right)

Supplementary Files

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