

The Impact of ESG Practices on Corporate Performance in the Context of Digital Transformation: A Case Study of TBEA

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ABSTRACT

In the context of digital transformation, enterprises are facing unprecedented opportunities and challenges, and environmental, social, and governance (ESG) practices have gradually become a focus of attention for enterprises. How to improve their own ESG practices to enhance corporate performance is crucial for the sustainable development of enterprises. This article selects TBEA as a case study enterprise to study its ESG practices from the perspectives of environment, society, and corporate governance in the context of digital transformation. Furthermore, relevant indicators are used to analyze the impact of ESG practices on corporate performance. Research has found that good ESG practices can promote the improvement of a company's financial and non-financial performance, with non-financial performance mainly reflected in the value created by the company for stakeholders.

KEYWORDS

Digital transformation; ESG practices; Enterprise performance

1. INTRODUCTION

Digital transformation was first proposed by International Business Machines Corporation (IBM) in 2012, emphasizing the application of digital technology to reshape customer value propositions and enhance customer interaction and collaboration. Digital transformation refers to the use of digital technologies such as big data, cloud computing, blockchain, and artificial intelligence by enterprises to achieve efficiency improvements.

Investors have always been concerned about the performance of companies in environmental protection, social responsibility, and corporate governance, but there is no clear concept to define it. Until 2006, the United Nations initiated the establishment of the "United Nations Principles for Responsible Investment" and proposed an ESG evaluation system. Afterwards, market entities such as investment organizations and international organizations continuously improved and studied ESG issues, forming a systematic ESG concept, with the environment mainly focusing on the impact of a company's operations on the environment; Society mainly focuses on the responsibilities that enterprises fulfill to various stakeholders; Governance mainly focuses on the governance structure of enterprises.

In theory, on the one hand, digital transformation affects ESG performance and drives corporate performance growth. Nicola and Karen (2022) propose that digital transformation can benefit a company's ESG strategy by promoting the implementation of ESG strategies, helping to develop ESG assessment and monitoring technologies, improving corporate information transparency, thereby alleviating financing constraints, and promoting the improvement of financial performance and innovation levels [1]. Hu Jie et al.(2023) found that digital transformation of enterprises can improve

ESG performance and thus contribute to the enhancement of enterprise value, starting from the impact of digital transformation on enterprise ESG performance [2]. On the other hand, digital transformation is beneficial for creating value for enterprises, thereby enhancing their performance. Dai Fei et al. (2023) found based on sample data of Shanghai and Shenzhen listed companies that digital transformation of enterprises is beneficial for innovation and upgrading, thereby enhancing enterprise value [3]. Moreover, as industry concentration increases, digital transformation plays a more positive role in enhancing the value of enterprises. Wu Chen and Zhang Fan (2023) believe that with the rise of the digital economy, how to empower enterprises with digitalization to create is a current issue that needs to be considered [4]. Therefore, research has found that accelerating digital transformation can enable enterprises to achieve digital reform in their processes from development to production and management, providing guarantees for promoting enterprise innovation.

This article adopts a case analysis method to explore the impact of ESG practices on corporate performance in the context of digital transformation, providing useful references for companies to achieve sustainable development in the digital age.

2. ESG PRACTICES IN THE CONTEXT OF DIGITAL TRANSFORMATION

2.1. Introduction to the Digital Transformation of TBEA

TBEA was founded in 1993 and went public in 1997. TBEA is an enterprise engaged in the research and development, production, and sales of transformers, wires and cables, as well as new energy products. The company has a complete business system and continuously improves its own development through independent innovation and equipment advantages. The core businesses include power transmission and transformation, new energy, energy, and new materials.

Since 2010, TBEA has been exploring automation transformation, which is seen as the starting point of digital transformation. At that time, the company mainly focused on the single machine automation transformation of production line equipment, and gradually expanded these transformations to other systems in the factory; In 2019, the wiring workshop of TBEA Cable Company became the company's first digital transformation pilot project. The success of this attempt led the company to decide to accelerate its digital transformation efforts; In 2020, relying on a new digital factory, TBEA began to build a 5G industrial cloud based integrated platform for the full lifecycle of power transmission and transformation equipment. This platform aims to build three major functional systems: network, platform, and security, creating a new type of network infrastructure that comprehensively connects people, machines, and things, and forming a new form of intelligent development; By 2023, a number of digital projects such as the distribution network digital factory project and the ultra-high voltage bushing R&D and manufacturing base project will be put into operation, and digital empowerment will continue to strengthen.

2.2. The Role of Digital Transformation in ESG Practices

2.2.1. Improve energy efficiency

Through digital transformation, specialty electricians can achieve more precise energy management and monitoring, thereby improving energy efficiency. TBEA has been continuously optimizing the design and construction of photovoltaic and wind power stations, which has played a positive role in reducing the cost of new energy power generation. At the same time, enterprises are strengthening the construction of self operated new energy power stations to help more enterprises achieve their carbon peak and carbon neutrality goals as soon as possible. The annual self operated new energy power generation capacity of TBEA has continued to increase from 2019 to 2023, and reached 7.215 billion kilowatt hours in 2023, equivalent to saving 2.1696 million tons of standard coal and reducing 5.9453 million tons of carbon dioxide emissions.

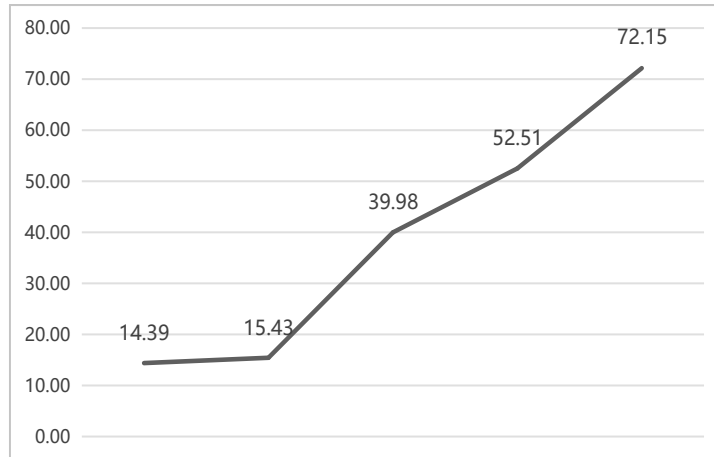


Figure 1. The annual self operated new energy power generation of TBEA from 2019 to 2023

2.2.2. Improve corporate transparency

Digital transformation can improve the operational transparency of enterprises, enabling investors and the public to better understand their ESG practices. TBEA has been releasing social responsibility reports since 2010, and has been doing so for 14 consecutive years until 2023. The report elaborates on TBEA's social responsibility philosophy, mainly focusing on environmental, social responsibility, and corporate governance. The report details TBEA's efforts to maintain daily business operations while actively promoting coordinated and sustainable development of the economy, society, and environment. By regularly releasing social responsibility reports, companies can establish trust with investors, consumers, employees, and other stakeholders, transparently demonstrate their positive impact and responsibility to society and the environment, and help enhance their corporate image.

2.2.3. Improve the company's quality management system

With the development of technology and the upgrading of manufacturing industry, digital transformation has become a key path to enhance industrial competitiveness and enterprise development. In 2022, the introduction of digital quality management concepts in specialty electricians is an important step towards achieving high-quality development and enhancing market competitiveness. Digital tools and platforms can monitor various indicators in the production process in real time, identify and solve problems in a timely manner, thereby improving product quality. Meanwhile, by collecting and analyzing a large amount of production data, enterprises can make more accurate production decisions and market forecasts. By establishing a digital quality management system, TBEA can not only improve product quality and production efficiency, but also accelerate the pace of innovation and enhance market competitiveness.

2.3. TBEA ESG Practice

With the research of domestic and foreign scholars on ESG concepts, as well as the increasing attention of enterprises to ESG, TBEA has been regularly releasing and disclosing social responsibility reports since 2010. This article studies the case based on the social responsibility report of TBEA from 2019 to 2023 and relevant elements of financial performance, and draws corresponding conclusions.

2.3.1. Environmental aspects

The environment has always been a focus of concern for TBEA, and its sustainable development goal is to build a green enterprise. In addition, TBEA belongs to the manufacturing industry, making environmental protection even more important. In 2018, the company formulated the "Three Wastes" and Noise Pollution Prevention and Control Management System", strictly implementing the "three simultaneousities" of environmental protection for engineering projects and the standard discharge of

three wastes "in the production process, further improving the company's environmental management level. Moreover, in order to effectively manage the discharge of wastewater and waste liquid, reduce the harm to the environment and personnel health, the company has formulated strict wastewater and waste liquid discharge control procedures, and built facilities such as neutralization, filtration, oil separation, biochemistry, and saponification wastewater treatment stations. Through measures such as recycling, sedimentation, neutralization, and biochemistry, the company achieves standard discharge of wastewater and waste liquid.

For the industrial wastewater generated by the company's holding subsidiary New Special Energy in the production process of polycrystalline silicon, a "clean wastewater reflux" system is implemented, and the comprehensive water recycling and utilization rate of the entire plant is over 98%. From 2019 to 2023, the company's investment in environmental protection has been increasing every year. In 2023, the company's cumulative investment in environmental protection amounted to 1.04 billion yuan, an increase of 304.66% compared to 2022. This also demonstrates the determination and attitude of TBEA towards environmental protection.

The company actively responds to the national "dual control of energy consumption" work deployment requirements, comprehensively promotes energy conservation and consumption reduction work in various factory areas, and creates a green, low consumption and energy-saving enterprise. Tianchi Energy Chang Thermal Power Plant, a subsidiary of the company, has implemented a series of technological upgrades to reduce coal consumption of its units; The southern open-pit mine and the second mine continuously reduce energy consumption by eliminating outdated motors, replacing diesel hydraulic excavators with electric hydraulic shovels, replacing diesel trucks with electric trucks, and constructing distributed photovoltaics in the waste dump. New Special Energy, a subsidiary of the company, conducted research on the high reflectivity coating project in the reduction furnace, optimized the control mode, temperature, feed ratio, and growth mode of the reduction furnace, and achieved an overall reduction in the electricity consumption of polycrystalline silicon reduction. The holding subsidiary of the company, Xinjiang Zhonghe, further reduces process electricity consumption through energy-saving and thermal balance optimization design of the electrolytic cell body; Revamp the equipment of thermal power plant units to achieve energy conservation.

2.3.2. Social aspects

The social issues of TBEA mainly include employee development, occupational health, and corporate public welfare activities. In terms of employee development, the company insists on providing an equal and fair working environment for employees, treating them equally in the selection process, selecting based on job requirements, without setting targeted conditions, and following the principles of fairness, equality, and consensus through negotiation. The company signs labor contracts with all employees, clarifying the rights and obligations of both labor and management. The signing rate of labor contracts for employees is 100%. Moreover, the company has established a comprehensive employee career development and training system, building a "dual channel" of management and professional skills, and expanding the development space for employees to realize their self-worth. In order to improve employees' job performance, the company actively builds a core talent training model of "job qualification standards+job qualification evaluation+precise system training", improves the job qualification traction mechanism, systematically carries out employee ability enhancement training, creates a learning organization, and accelerates employee growth.

In terms of occupational health, the company has established a sound occupational health management system and always adheres to the "prevention first, prevention and control combined" occupational disease prevention and control work policy. The company has clarified the "three simultaneities" of occupational disease prevention facilities, daily inspections, maintenance, and upkeep, occupational disease prevention and control publicity and education, normalized the identification, declaration, and notification of occupational hazard factors, comprehensively carried

out occupational hazard factor detection and evaluation, employee occupational disease physical examination and monitoring, occupational health record management, and other work responsibilities and requirements to ensure the implementation of occupational disease prevention and control work.

In terms of public welfare activities, TBEA insists on conducting various public welfare activities every year and donating various resources to areas affected by natural disasters. As early as 2010, TBEA mentioned in its first social responsibility report that it had donated a total of 1 million yuan and 343 tents to Yushu County, Qinghai Province. From 2019 to 2021, since the outbreak of COVID-19, the company has raised funds from various sources and continuously donated medical masks, disposable gloves, protective clothing, goggles, breathing, testing reagents and other materials to many countries in Central Asia, Southeast Asia, Africa and other overseas countries to solve the urgent problem of epidemic prevention. In 2023, companies will also provide heating coal to earthquake stricken areas in Gansu Province to help them resume production work as soon as possible.

2.3.3. Corporate governance

TBEA's corporate governance issues mainly include three parts: governance system, internal risk control, and anti-corruption. In terms of governance system, the company has established a modern organizational structure and operational mechanism that is decentralized and efficient among the shareholders' meeting, board of directors, supervisory board, and management team in accordance with laws, regulations, normative documents such as the Company Law, Securities Law, and Code of Conduct for Listed Companies, as well as the company's articles of association. The company's board of directors has a strategic committee, a compensation and assessment committee, a nomination committee, and an audit committee. Actively carrying out enterprise management reform and system construction, continuously strengthening the construction of internal control and risk control capabilities, has ensured the scientific, efficient, and standardized operation of enterprises.

In terms of internal risk control, from 2019 to 2023, the company has continuously improved and perfected a scientific and effective internal control management mechanism and business process system. A sound institutional and authorization system has been formed in the areas of major project risk prevention and control, compliance risk management, subsidiary control, etc., to adapt to the current business development status of the company. As the internal control audit institution of the company, ShineWing conducted an audit on the effectiveness of the company's internal control over financial reporting from 2019 to 2023. It was found that TBEA maintained effective internal control over financial reporting in all significant aspects in accordance with the Basic Norms for Enterprise Internal Control and relevant regulations.

In terms of anti-corruption, the company established and improved the responsibility mechanism for Party conduct and clean governance construction in 2019. According to the scope of work and responsibilities, various tasks have been refined and decomposed, forming a responsibility system for Party conduct and clean governance construction that is implemented at all levels. All middle-level and above leaders of the company have signed a clean governance target responsibility letter. In 2021, the company established a disciplinary inspection committee, clarified specific positions and responsibilities, formulated relevant management systems and standards, carried out anti-corruption and integrity work as planned, and continuously improved the integrity system. In addition, the company has established two levels of reporting platforms, company level and subsidiary level, with 24-hour free recorded phone numbers for reporting and complaining. The reporting email and address are publicly available and prominently displayed in public places, and all channels are kept open for timely handling of reporting information.

3. THE IMPACT OF TBEA'S ESG PRACTICES ON CORPORATE PERFORMANCE

3.1. The Impact on Financial Performance

3.1.1. Profitability

The profitability index mainly reflects the ability of enterprises to obtain profits. Based on the relevant data from the annual report of TBEA, this article selects ROE and ROA to measure the impact of TBEA's ESG practices on its profitability. The profitability indicators of TBEA from 2019 to 2023 are shown in the table below. Overall, both indicators are showing an upward trend and both reached their highest values in 2022. This is due to the company's implementation of a green and low-carbon themed strategy, adherence to ESG practices, continuous optimization of the design and construction of photovoltaic and wind power plants, continuous satisfaction of China's demand for green energy, and expansion of the production and sales of clean energy, which has brought about an increase in economic value. In 2023, both ROE and ROA have decreased compared to last year, due to the fact that the company's subsidiary Hengbian Company acquired all the equity of affiliated enterprises in 2023, resulting in an increase in shareholder equity and a decrease in both data.

Table 1. Profitability Indicators of TBEA from 2019 to 2023

Profitability indicators	2019	2020	2021	2022	2023
ROE	5.85%	6.93%	19.36%	33.14%	18.41%
ROA	2.45%	2.96%	8.24%	14.93%	7.77%

3.1.2. Operational capability

The operational capability indicator mainly reflects the capital operation turnover of the enterprise. Based on the relevant data from the annual report of TBEA, this article selects inventory turnover rate and accounts receivable turnover rate to measure the impact of TBEA's ESG practices on its operational capabilities. The profitability indicators of TBEA from 2019 to 2023 are shown in the table below. Overall, the inventory turnover rate and accounts receivable turnover rate are both on the rise. During the digital transformation process, TBEA has continuously improved its products, innovated technology, and optimized processes through ESG practices, maintained good cooperative relationships with customers, and continuously enhanced its inventory turnover. The decline in accounts receivable turnover rate only occurred in 2019, due to the continued deepening of the "three period superposition" impact and increased downward pressure on the domestic economy, resulting in some accounts receivable being difficult to collect.

Table 2. Operating Capacity Indicators of TBEA from 2019 to 2023

Operational capability indicators	2019	2020	2021	2022	2023
Inventory turnover rate	2.99	3.98	4.68	3.73	3.60
Accounts receivable turnover rate	2.79	3.18	4.38	5.87	6.25

3.1.3. Debt paying ability

The solvency index mainly reflects the ability of a company to repay its debts. Based on the relevant data from the annual report of TBEA, this article selects the current ratio and asset liability ratio to measure the impact of TBEA's ESG practices on its debt paying ability. The debt paying ability indicators of TBEA from 2019 to 2023 are shown in the table below. The average current ratio over the past five years is 1.31. In 2022, the current ratio was 1.20, which is lower than 1.31 compared to other years. This is because in 2022, TBEA completed its plan to increase its holdings of Xinjiang Zhonghe shares, with a shareholding ratio of 32.30%. The company included Xinjiang Zhonghe in

the scope of financial statement consolidation under the same control. Similarly, the average asset liability ratio is 55.98%, which is relatively low in 2022. In other years, the asset liability ratio remains around 56%. ESG practices may take up TBEA's cash flow, but at the same time, the company can use good ESG performance to strengthen communication and interaction with stakeholders, maintain cooperative relationships with customers and suppliers, improve cash flow efficiency, and to some extent enhance its debt repayment ability, keeping it within a reasonable range.

Table 3. Debt paying ability indicators of TBEA from 2019 to 2023

Debt paying ability indicators	2019	2020	2021	2022	2023
current ratio	1.47	1.30	1.40	1.20	1.21
Asset liability ratio	57.91%	57.47%	55.36%	52.97%	54.28%

3.2. The Impact on Non-financial Performance

Based on the relevant data from the annual report of TBEA, this article selects the per share social contribution value to measure the impact of TBEA's ESG practices on non-financial performance. This indicator considers the value created by the company for stakeholders, including loan interest, employee compensation, social donations, and taxes. The per share social contribution value also deducts other social costs caused to the company by environmental pollution and other factors. The social contribution value per share of TBEA from 2019 to 2023 is shown in the following figure. From the data, it can be seen that the social contribution value per share of the company has been increasing year by year from 2019 to 2022, and has remained at a high level. However, it has significantly decreased in 2023. This is also due to the exercise of the incentive objects in the company's 2019 stock option incentive plan and the conversion of the company's capital reserves into shares in 2022, resulting in an increase in the company's total share capital and a decrease in the social contribution value per share in 2023.

Overall, from 2019 to 2023, there is still an upward trend, indicating that while enhancing its own value, TBEA has also taken on the responsibilities of multiple stakeholders such as creditors, employees, government, and the general public. This helps to form a good relationship between the enterprise and stakeholders for mutual progress. By implementing ESG, TBEA has not only ensured its own development but also strengthened its relationships with various sectors of society, thereby enhancing its corporate and social value.

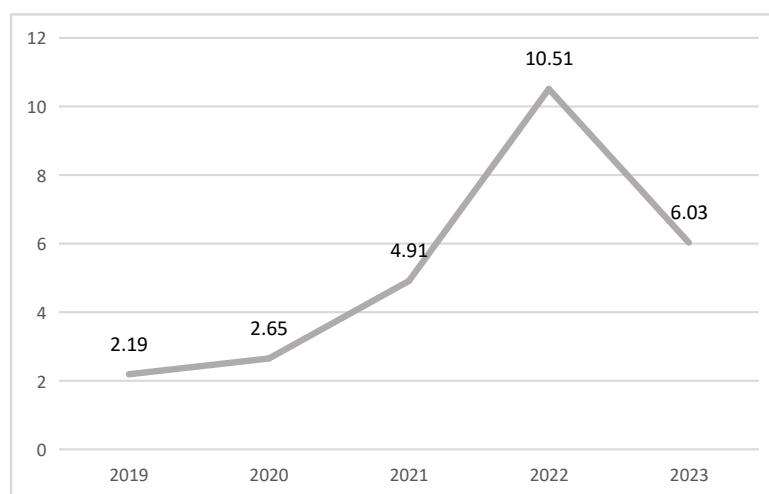


Figure 2. Social Contribution Value per Share of TBEA from 2019 to 2023

4. CONCLUSION AND IMPLICATIONS

4.1. Conclusion

This article analyzes the impact of ESG practices on corporate performance in the context of digital transformation, and draws the following conclusions: firstly, TBEA has good ESG practices, focusing on ecological protection and energy conservation and emission reduction in the environmental dimension, continuously improving resource utilization, and promoting green development; Pay attention to employee rights and development in the social dimension, focus on employee training, and continuously improve employee work enthusiasm; Continuously improving the ESG governance framework in the governance dimension, actively carrying out anti-corruption work, and promoting the formation of a good governance environment. Secondly, the continuous practice of ESG has a promoting effect on the improvement of corporate performance, but at present, the focus of digital transformation of TBEA is still on production, which is slightly insufficient compared to the intelligence in the sales process. Moreover, the direction of talent cultivation also lies in technical personnel, and there is a slight lack of digital training for other personnel in the company. Thirdly, digital transformation promotes enterprise innovation, especially for the manufacturing industry. Digital transformation can drive the upgrading of production lines, greatly improve production efficiency, and reduce labor costs for enterprises; Moreover, digital transformation can also promote corporate ESG practices, especially in terms of the environment, which has a positive impact. The continuous renovation and upgrading of projects such as sewage treatment, environmental monitoring, and hazardous waste disposal by TBEA has helped the company enter the path of sustainable development with low emissions and high output. The continuous upgrading and innovation of photovoltaic and wind power stations, as well as the annual increase in the power generation of new energy power stations, help more enterprises achieve their dual carbon goals as soon as possible.

4.2. Implications

4.2.1. Continuously improve the corporate governance system

Firstly, by continuously improving the organizational structure and job staffing management system, ensuring clear responsibilities and standardized processes for each department and employee, this can help improve work efficiency and ensure smooth progress of various tasks. Secondly, a clear organizational structure helps optimize management levels, simplify decision-making processes, and improve response speed, which is particularly important for responding to rapid market changes. Finally, it is necessary to establish and implement strict rules and regulations, regulate employee behavior, and maintain the company's image and interests for both internal management and external communication.

4.2.2. Enhance the diversity of sales channels

At present, the sales model of TBEA is direct sales, but while digitalization continues to drive, the enterprise should also make full use of digital platforms and regard digital marketing as an innovative point for the enterprise. During the digital transformation stage, TBEA has continuously increased its research and development investment, while maintaining the effectiveness of its internal control system, ensuring the stable operation of the enterprise. Therefore, TBEA should integrate online and offline sales channels, closely integrate the two, meet consumer needs, effectively improve corporate performance, and bring good economic benefits to the enterprise.

4.2.3. Strengthen cost control

Controlling costs for specialty electricians is not only to enhance the economic efficiency and market competitiveness of enterprises, but also a necessary means to ensure sustainable development, improve management efficiency, and respond to external environmental changes. By comprehensively applying methods such as technological innovation, large-scale production,

management optimization, and financial strategy adjustment, specialty electricians can maintain a leading position in fierce market competition and achieve long-term stable development.

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