

Internal Controls in Chinese Home Appliances Companies: Unlocking a New Engine of Non-Financial Performance Growth

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Abstract

With the end of the COVID-19, the global economy has entered a period of rapid recovery. China , in particular, has transitioned to a new stage of economic development. The home appliance industry, a trillion dollar sector, has playing a crucial role driving China's domestic demand. Its significant scale has consistently contributed to both economic growth and improvements in quality of life. Increasingly, attention is being paid to the impact of internal control effectiveness in home appliance enterprises on non-financial performance measures , such as intelligent green innovation and ESG (Environmental, Social, and Governance) performance. Many companies aim to strengthen internal controls to enhance operational efficiency, improve economic performance, and boost financing capabilities.

Keywords:Internal Control, Home Appliance Companies, Innovation Performance, Csr Performance , Esg Performance.

1 Introduction

As an important part of enterprise management , internal control plays a key role in ensuring the authenticity of financial reports, the safety of assets and operational compliance, and its effectiveness is directly related to the sustainable development capability of enterprises. More and more people are concerned about the sustainable development of enterprises calling for the inculcation of the principle of corporate social responsibility (CSR) in the home appliance industry. With the diversification of consumer demand, the acceleration of technological innovation, and the society's increasing emphasis on sustainable development, the role of non-financial performance in evaluating the comprehensive strength of enterprises is becoming more and more prominent, prompting us to explore the relationship between the effectiveness of internal control and non-financial performance in the home appliance enterprises. Since entering the 21st century, science and technology industries around the world, including China, have been developing rapidly, and the home appliance industry has been developing towards greening and intelligentization, with provinces and cities witnessing remarkable growth.

In China, the home appliance industry has become a member of the pillar industries of the national economy, and it is expected that by the end of 2025, a more complete digital home specification system will have been established; newly constructed, fully furnished homes and community adjuncts must be fully equipped with communication capabilities and carry the required smart tools. At present, China is still in the beginning stage of ESG performance and CSR performance. Most of the early studies on the effectiveness and performance of internal control are related to the financial performance perspective and the theoretical perspective. This study takes Chinese home appliance enterprises as the research object and adopts the case study mode. The impact of internal control effectiveness and non-financial performance (innovation performance, ESG performance) is discussed in depth, aiming to encourage enterprises to pay more attention to non-financial performance, so as to provide a powerful reference for enterprises to improve the effectiveness of internal control to promote the sustainable development of enterprises. This paper explores the influence of internal control effectiveness on innovation performance and ESG outcomes, analyzes the relationship between internal control effectiveness and these performance metrics, and uses empirical analysis to examine both the positive and negative effects. It also offers countermeasures and suggestions for strengthening internal control effectiveness, and considers future research directions. The findings are intended to serve as a reference for improving innovation capacity, social responsibility, and corporate governance in China's home appliance industry.

2 Literature Review

The essence of innovation lies in the advancement of human knowledge, science, and technology. However, in conditions of information asymmetry, opportunistic behaviors by insiders can cause innovation investments to deviate from maximizing shareholders' interests, resulting in lower innovation efficiency within enterprises[1]. The impact of internal control on innovation performance is viewed from two perspectives: the promotion theory of internal control and the paradox of internal control. The promotion theory suggests that strengthening internal control contributes to the improvement of technological innovation output[2][4]. Previous discussions on ESG performance and firm innovation have focused on short-term financial performance and firm value, outlining the positive correlation between ESG standards and financial performance. While these studies have confirmed the non-negative correlation between ESG and firm financial performance[4][5][6][7], and CSR can help companies reduce transaction costs due to institutional gaps and increase company value[8][9][10], Effective internal control significantly contributes to corporate social responsibility. At the same time, effective internal control significantly improves the fulfillment of corporate social responsibility [11], and internal control have a significant positive effect on investment efficiency; internal control negatively moderates the positive correlation between executive overconfidence and overinvestment[12]. High-quality internal controls help enhance post-merger integration of companies[13]. Technological innovation is the strategic support for building a modern economic system. Therefore, from the perspective of the effectiveness of internal control, it is of practical significance to explore the joint mechanism of internal control and CSR on innovation performance. From 2008 to 2010, Chinese five ministries and commissions, including the Ministry of Finance, successively issued the "Basic Norms for Enterprise Internal Control" and the "Supporting Guidelines for Enterprise Internal Control", promoting the development of the construction of internal control. Where, the

“Supporting Guidelines for Enterprise Internal control” include the “Application Guidelines for Internal Control”, the “Evaluation Guidelines for Internal Control” and the “Audit Guidelines for Internal Control”. These normative documents clearly point out that internal control is a process carried out by the board of directors, board of supervisors, managers and all employees to achieve the control objectives. The elements of internal control include the internal environment, risk assessment, control activities, information and communication, and internal supervision. As an institutional arrangement, internal control aims at reasonably ensuring the legal operation and compliance, safety of assets, and reliability of financial information, improving the efficiency and effect of operations, and thus promoting the realization of the development strategy of enterprises. Since the promulgation of the current standard system of internal control, Chinese listed enterprises have achieved some outstanding results in the implementation, evaluation and information disclosure of internal control, providing a good reference for the system construction of unlisted enterprises, and building a good micro foundation for the steady operation of the market economy. The improvement of the effectiveness of internal control can enhance the sustainable development of enterprises to a certain extent[13]. Enterprises need sound internal controls to guard against those moral risks and adverse choices that may arise from unclear positioning of development research and lack of capital management. In the current stage of China's rapid economic development, enterprises need to strengthen internal control construction to promote the steady development of the capital market and the national economy. Then, under the current context of internal control building, how do non-financial performances such as innovation performance and ESG performance affect the effectiveness of internal control and thus further improve the ability to bear CSR?

2.1 Research related to the effectiveness of internal controls

The effectiveness of internal controls is a crucial aspect of organizational governance and financial management. Several studies have been conducted to explore different dimensions of internal controls and their impact on various aspects of organizational operations.[14] focused on the importance of good corporate governance for rural banks in Indonesia and highlighted the role of internal control, manager's competency, and management accounting information systems in ensuring effective governance. The study utilized research questionnaires processed using SPSS applications to gather data directly from rural banks.[15] emphasized the need to reconceptualize internal control to combat bureaucratic occupational fraud in local governments. The authors conducted a survey of Indonesian auditor institutions to provide theoretical guidance on dealing with occupational fraud effectively. [16] examined the effectiveness of internal control in refocusing and utilizing village funds in Danurejo village during the COVID-19 pandemic. The study used a qualitative descriptive approach and collected data through online interviews to adhere to health protocols amidst the global pandemic. [17] explored the influence of internal control effectiveness, information asymmetry, and fidelity to accounting rules on accounting fraud in the regional work unit of Aceh Besar District. The study employed non-probability sampling with a purposive sampling method to gather data.[18] analyzed accounting fraud tendencies at village credit institutions in Gianyar Regency using the Pentagon fraud approach. The study focused on testing the influence of accounting fraud tendencies among 75 respondents from village credit institutions investigated the effect of internal control system effectiveness and financial reporting quality on fraud prevention in Bandung

Regency. Most of the previous studies have identified fraud prevention mechanisms through financial statements, the effectiveness of internal control systems and the implementation of good corporate governance. Overall, these studies provide valuable insights into the importance of internal controls in ensuring organizational integrity, governance and financial management. This study aims to explore the factors affecting the effectiveness of internal control in different performance environments through the association of internal control effectiveness with non-financial performance including (innovation performance, corporate social responsibility performance) Further research is needed to explore the factors affecting the effectiveness of internal control in different performance environments.

2.2 Studies related to non-financial performance

Non-financial performance covers a number of important aspects such as innovation performance , ESG performance and CSR performance, which are of far-reaching significance to the sustainable development of enterprises. Innovation performance is a key indicator to measure the innovation ability and transformation efficiency of an enterprise. Its connotation not only includes the research and development results of new products and technologies, but also involves the efficiency of the innovation process, cost control and market response speed and other dimensions. In terms of measurement indicators, scholars at home and abroad generally adopt R&D investment intensity, the number of patent applications, and the proportion of new product sales revenue to comprehensively assess the innovation performance of enterprises. The intensity of R&D investment reflects the strength of resources invested in innovation activities, which reflects the degree of importance attached by enterprises to innovation; the number of patent applications visualizes the output of enterprises in technological innovation; and the proportion of sales revenue of new products measures the market transformation ability of enterprises' innovation results, which reflects the actual contribution of innovation to enterprises' economic benefits. In the research on innovation performance of home appliance enterprises, scholars found that technological innovation is the core driving force for home appliance enterprises to maintain competitive advantage. As consumers' demand for intelligent and personalized home appliances continues to grow, home appliance companies must increase R&D investment and strengthen technological innovation in order to launch new products that meet market demand.

ESG performance is a comprehensive reflection of an enterprise's performance in environmental, social and corporate governance. In terms of environmental performance, the main focus is on the enterprise's initiatives and effectiveness in energy saving and emission reduction, resource utilization efficiency, pollution prevention and control, etc. Relevant indicators include energy consumption intensity, greenhouse gas emissions, and waste treatment compliance rate. Social performance covers employee rights and interests protection, consumer rights and interests protection, and community relations maintenance, etc., with measurement indicators such as employee satisfaction, labor disputes incidence rate, and product quality complaint rate. Corporate governance performance focuses on the enterprise's governance structure, decision-making mechanism, risk management, etc. Commonly used indicators include the independence of the board of directors, the effectiveness of internal audit, and the degree of improvement of risk management system. In terms of ESG performance of home

appliance enterprises, the current research mainly focuses on green manufacturing, social responsibility fulfillment and corporate governance optimization. With the increasing awareness of environmental protection, home appliance enterprises are paying more and more attention to green manufacturing, and reducing the impact on the environment by adopting environmentally friendly materials and optimizing production processes. In terms of social responsibility fulfillment, home appliance companies pay attention to employee welfare, career development and participation in public welfare undertakings in order to enhance the social image of the enterprise. In terms of corporate governance, a sound governance structure and effective decision-making mechanism help home appliance enterprises better respond to market changes and realize sustainable development.

2.3 Research related to innovation performance

Innovation performance is a crucial aspect for the success and competitiveness of organizations across various industries. Several factors have been identified to influence innovation performance in different contexts. [19]discussed the duality of digital and environmental orientations in the context of SMEs and its implications for innovation performance. This suggests that SMEs need to balance digital and environmental considerations to enhance their innovation performance effectively.[20] examined the relationships between external knowledge, internal innovation, firms' open innovation performance, service innovation, and business performance in the Pakistani hotel industry. This study emphasizes the significance of leveraging external knowledge and fostering internal innovation to improve innovation performance and overall business performance.[21] investigated how Industry 4.0 technologies and open innovation can enhance green innovation performance. The study suggests that adopting Industry 4.0 technologies and promoting collaborative innovation interactions can facilitate sustainable green innovations, contributing to competitive advantage and aligning with global sustainability goals. Overall, the literature suggests that factors such as university-industry collaboration, digital and environmental orientations, external knowledge, internal innovation, Industry 4.0 technologies, and green core competencies play crucial roles in influencing innovation performance across different industries and organizational contexts. These findings provide valuable insights for organizations seeking to enhance their innovation performance and Improve the effectiveness of internal control.

2.4 ESG Performance Related Research

ESG performance has become a significant area of interest in the realm of corporate sustainability and Improve the effectiveness of internal control. [21]explores the relationship between Environmental, Social, and Governance (ESG) performance and financial risk, highlighting the moderating role of ESG controversies and board gender diversity. This study sheds light on how ESG factors can impact a company's financial standing. [22]delve into the Sustainable Development Goals (SDGs) and Corporate Sustainability Performance, mapping out the extent and determinants of this relationship. Understanding the alignment between SDGs and corporate sustainability performance is crucial for companies aiming to contribute to global sustainable development efforts.[23]emphasize the importance of ESG disclosure in Initial Public Offerings (IPOs) as a proxy for ex-ante

uncertainty and aftermarket risk. ESG performance and disclosure play a vital role in building reputation capital with investors post-IPO. This study underscores the importance of considering a holistic approach to risk management and investment decisions beyond ESG factors alone.

2.5 A study of the relationship between internal control and non-financial performance

Several studies have explored the relationship between internal controls and non-financial performance. focused on the connection between internal control material weaknesses (ICMW) and CFO compensation, emphasizing the importance of non-financial performance measures in reflecting CFO fiduciary duties, conducted a study on the impact of internal control quality on the performance of mergers and acquisitions (M&A) in Chinese listed companies, using content analysis to quantify internal control quality. Additionally, research has been conducted on the impact of internal control on the performance of non-financial firms listed on the Vietnam Stock Exchange (Impact of internal control on the performance of non-financial listed firms). The importance of robust internal controls for non-financial reporting was highlighted in a framework presented to guide companies in developing such controls (Controlling Non-Financial Reporting). Furthermore, the role of accounting information and internal control systems quality in impacting non-financial information quality was explored (The impact of information systems and non-financial information on...). Government regulations and standards also play a role in internal control practices. Additionally, AS 2201 focuses on auditing internal control over financial reporting, emphasizing the performance of controls. Overall, the literature reviewed suggests a strong link between internal controls and non-financial performance, with studies focusing on various aspects such as compensation, voluntary reporting, M&A performance, and the impact on listed firms. The importance of robust internal controls and adherence to government regulations and standards is also highlighted in ensuring effective financial and non-financial performance. Existing research still has some shortcomings in the relationship between internal control and non-financial performance. On the one hand, the research method is relatively single, mostly based on empirical research, and lacks the comprehensive application of diversified research methods such as case analysis and field research, which leads to certain limitations in the in-depth understanding of the relationship between the two and practical guidance. On the other hand, the research on the specific mechanism of internal control affecting non-financial performance is not in-depth enough, and a systematic and comprehensive theoretical framework has not yet been formed, making it difficult to accurately explain the complex relationship between internal control and non-financial performance in different situations, which provides a broad space for subsequent research.

3 Status of China's home appliance industry

With the improvement of people's living standards and the continuous progress of technology, the home appliance industry's market scale has been expanding, China's home appliance industry has become a member of the pillar industries of the national economy. From the “Eleventh Five-Year Plan” to the “Fourteenth Five-Year Plan” period, the state's support policy for the home appliance industry has evolved from “guaranteeing the

sustainable development of the industry” to “moving from a large home appliance country to a strong home appliance country”. “from a large home appliance country to a strong home appliance country” to ‘actively promote innovative development’ change. Along with the rapid development and widespread popularization of 5G technology, Internet of Things (IoT) technology, AI and other cutting-edge technologies, the era of “everything is connected” is gradually approaching, and the development of China's home appliance industry is moving towards intelligence. The domestic home appliance market is no longer purely in the incremental stage, but into the period of incremental and stock co-existence. The effectiveness of internal control of Chinese home appliance enterprises determines their own competitiveness, future strategic direction, and whether they can increase their market share. Previous studies in the literature have focused on the interplay between financial performance and the effectiveness of internal control, while this paper focuses on the interplay between non-financial performance, such as innovation performance, ESG performance, and CSR performance, and the effectiveness of internal control. From the perspective of the Five Forces Competition Model, China's home appliance industry faces numerous competitors, of which the competition in the low-end and middle-end markets is particularly intense, the concentration of the industry is relatively high, while the leading firms are in a lower position in the competition than in the low-end and middle-end markets; they are in a monopoly position in the industry and have a tendency to develop towards oligopoly, but they are still facing a number of problems and challenges. Although the barriers to entry in the industry are at a medium level, there is a certain degree of potential risk due to the high attractiveness of the industry and the large number of new entrants; the main competitors in the industry are Haier, Gree and Midea. Currently, the upstream core component suppliers in China's home appliance industry have strong bargaining power, while the bargaining power of suppliers of basic raw materials and other raw materials is relatively average; China's home appliance companies achieve their profitability goals mainly through price competition, and price competitiveness is weak, but some home appliance companies are still adopting a differentiation strategy in order to improve their profit level. China has a large number of home appliance companies, and there is a great deal of homogenization in the functions of similar products, which gives consumers some strength in bargaining; the overall market for home appliances is large, but the development of each sub-category is unbalanced. In terms of technology, home appliances have their specific needs, so there are not many alternative products with similar functions and relatively low conversion costs, which also means that the risk of alternative products faced by home appliances is relatively small. Therefore, this paper argues that China's home appliance industry should adopt a differentiation strategy to enhance its competitiveness by improving its corporate innovation performance and improving its corporate social responsibility performance. According to the above analysis, all aspects of the competitive situation were quantitatively analyzed, in which 1 was set to represent the maximum threat level, while 0 represented the minimum threat level. Based on this model, the corresponding scores and rankings of the five force indicators were calculated for each home appliance company when they may be in different positions in the industry. At this stage, the following is a comprehensive overview of the five forces of competition in China's home appliance industry:

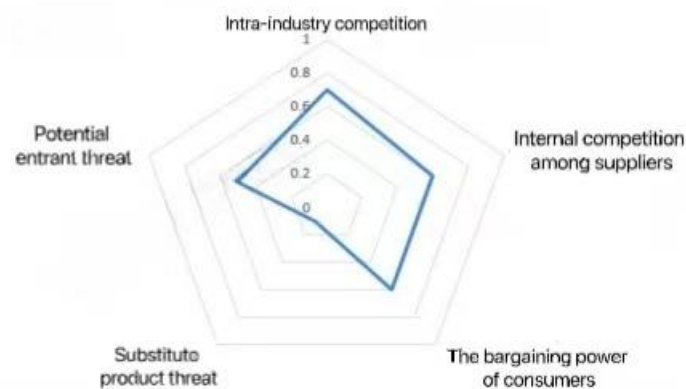


Figure 1 Summary of Competitive Landscape in China's Home Appliance Industry

3.1 Haier Status

According to public information, Haier 's MSCI-ESG rating for 2023 is A, and has been maintained for two consecutive years, and the MSCI-ESG rating will continue to rise from 2020 to 2024. 2024, Yunnan Baiyao has been selected as one of the “Best ESG Practices Companies in 2024” by New Fortune Magazine and “Best Corporate Governance G Responsibility Award Company” by Sina Finance's “2024 Corporate ESG” Golden Responsibility Award. In 2024, Yunnan Baiyao was selected by New Fortune Magazine as one of the “2024 New Fortune Magazine ESG Best Practice Enterprises” and Sina Finance's “2024 Corporate ESG” Golden Responsibility Award as the “Best Corporate Governance G Responsibility Award Enterprise”; and for its outstanding ESG performance, the company was selected as one of the “2024 Best Corporate Governance G Responsibility Award Enterprises”. By virtue of its outstanding ESG performance, the Company was successfully selected as one of the “2024 CBN-China Corporate Social Responsibility List Due Diligence Governance Contribution Award Companies”. As shown in Table 1 Haier's ESG rating change data from 2020 to 2024 comes from the MSCI official website.

Table 1 shows the changes in MSCI’s ESG rating of haier

	2020 year	2021 year	2022 year	2023 year	2024 year
AAA					
AA					
A				A	A
BBB			BBB		
BB		BB			

Compared with other types of patents, invention patents can more accurately and profoundly reflect the substantial innovation capability of an enterprise in terms of technology, products or services, etc. Therefore, this paper uses the number of patent applications to measure innovation performance. As of August 20, 2024, according to publicly available information, IPRdaily, a global IPR comprehensive information service provider of Haier Smart Home, published the “Global Smart Home Invention Patents (TOP 100) in the First Half of 2024” list. Among them, Haier Smart Home, a subsidiary of Haier Group, once again topped the list with 3,109 public patent applications, realizing 11 consecutive global titles and achieving global leadership. By now, the number of Haier's smart home public patents has reached a total of 32,595, firmly ranking first in the world. As of June 2024, Haier Group has accumulated 113,000 patent applications globally, of which more than 71,000 are invention patent applications; it has won a total of 12 China Patent Gold Medals, the first in the industry; it has led and participated in the issuance of a total of 109 international standards, and has formed a powerful innovation network integrating technology, talents and resources, and continues to explore smart home in a complementary and symbiotic manner. Haier continues to explore new possibilities in the field of cutting-edge technologies, such as smart home, by means of complementary advantages and symbiosis. Haier continues to explore new possibilities in the field of smart home from the perspective of user needs; at the same time, relying on the global layout of the “10+N” open innovation ecosystem, Haier has linked more than 250,000 global technical experts and more than 1 million first-class resources, which provides a constant stream of innovation power for the emergence of high-quality smart home patented technologies. The “10+N” open innovation ecosystem system links more than 250,000 global technologists and 1 million first-class resources, providing a steady stream of innovation power for the emergence of high-quality smart home patent technologies. As shown in Table 2 and Figure 1.

Table 2 Haier's Cumulative number of patent applications from 2020 to 2024 comes from the Green Data

Network			
Serial number	year	Cumulative number of patent applications (items)	Year-on-year change%
1	2024	113000	1.3
2	2023	100000	8.70
3	2022	92000	22.67
4	2021	75000	-

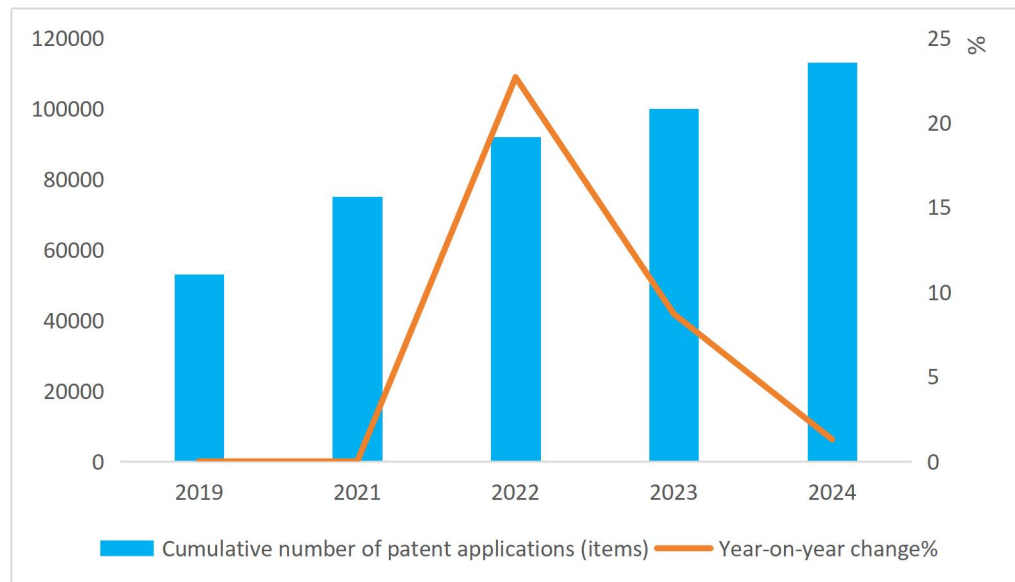


Figure 1: Haier's Cumulative number of patent applications from 2020 to 2024 comes from the Green Data

Network

4 Impact of ESG Performance, Innovation Performance on the Effectiveness of Corporate Internal Controls

In this study, financial performance indicators are used as a measure of the effectiveness of internal control. The financial report data of Haier for the past five years are selected to provide an in-depth analysis of Haier 's financial performance by calculating three financial performance indicators, namely profitability, operating ability and growth ability, and comparing them with the industry average financial performance indicators. This process aims to explore how Haier 's ESG performance and innovation performance interact with each other to influence the effectiveness of the company's internal control, which in turn affects the company's sustainable development.

4.1 Profitability Analysis

Figure 2 and Figure 3 shows that Haier 's ROA and ROE are on a downward trend from 2019-2023, remaining relatively stable and high in the same industry. Comparative analysis: 2019: Haier 's ROA (9.21%) and ROE (19.12%) are both higher than the average of ROA (4.25%) and ROE (13.57%) in the same industry. 2020: Haier 's ROA (7.62%) and ROE (17.68%) are significantly higher than the average of the same industry, which

indicates that the company has a strong profitability during the year. 2021 and 2022: Haier 's ROA (7.91% and 8.28%) and ROE (17.26% and 16.8%) decrease, but are still higher than the average ROE range of the industry, with ROA close to or slightly lower than the average of the best companies in the industry. 2023: Haier 's ROA (8.92%) and ROE (16.85%) are significantly higher than the average of the industry, indicating that the company has strong profitability during the year. average level of the same industry, indicating the company's strong profitability during the year.

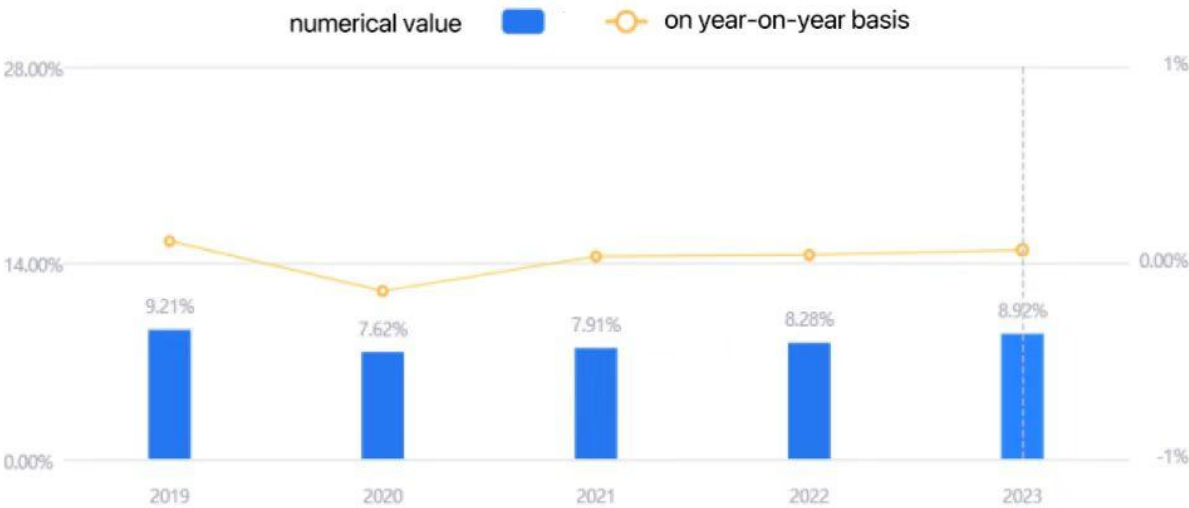


Figure 2 Haier and home appliance manufacturing ROA



Figure 3 Haier and Electrical Machinery and Equipment Manufacturing ROE

Between 2019 to 2023, Haier's ESG performance and innovation performance have both achieved steady improvement. However, Haier's return on assets (ROA) and return on equity (ROE) have declined due to the combined effects of multiple factors, such as the complex and volatile market environment, intensified competition in the industry, and continuously rising costs. Although in the short term, the positive effects of ESG performance and innovation performance on profitability have been overshadowed by other factors, resulting in a decline in ROA and ROE, these positive effects should not be underestimated in the long term, as improved ESG performance and innovation performance not only help companies to improve operational efficiency and minimize potential risks, but also significantly enhance brand value.

Haier has demonstrated strong earnings potential despite a number of unfavorable factors that have had a significant impact on the market. This fact proves that excellent ESG performance and advanced innovation concepts can, to a certain extent, effectively minimize operational risks and lay a solid foundation for the long-term development of an enterprise. In the long run, the continuous promotion of good ESG performance practices and the continuous improvement of innovation performance will become an important driving force for Haier to realize stable growth and enhance its competitiveness in the market.

4.2 Analysis of Growth Ability

The growth capacity of an enterprise refers to its ability to expand its scale and enhance its strength research and development, including revenue growth and financing expansion. As shown in Table 3, Haier's growth potential is evaluated by observing the changes in two key indicators: the growth rate of total revenue and the growth rate of net profit attributable to parent company.

Table 3: Growth Capacity Indicators for Haier and the Household Appliances Industry

Index(%)	Annual Report 2019	Annual Report 2020	Annual Report 2021	Annual Report 2022	Annual Report 2023
Haier operating income growth rate	9.05	4.46	8.29	7.25	7.33
Haier Net Profit Attributable to Parent Company Growth Rate	9.66	8.25	47.23	12.49	12.81
Operating income growth rate of household appliances industry	6.57	12.56	26.82	-1.26	1.69

Growth rate of net profit
attributable to parent
company of household
appliances industry

23.45

-28.08

29.51

30.02

-21.64

Note: Data from Sina Finance database and Haier's annual report.

According to the data, Yunnan Baiyao's total operating income growth rate reached a peak of 9.05% in 2019, fell sharply to 4.46% in 2020, and rebounded to 8.29% in 2021, with large fluctuations, especially after 2022, slowing down significantly. The growth rate of operating income in the same industry is volatile, peaking at 26.82% in 2021, far exceeding Haier's 8.29%, and plummeting to -1.26% in 2022,, related to the tightening of regulatory policies in the real estate market.The growth rate of net profit in the same industry is 23.45% in 2019, but declines in 2020 and 2023.In 2023, the revenue of the home appliance industry declines to 8.26% due to the high base in 2022 and the declining demand, revenue and profit in the household appliances industry declined, with bulk purchasing and insurance negotiations compressing margins. Haier's net profit growth varies more dramatically at 8.25% in 2020 but rises to 47.23% from 2020 to 2021, which is related to ESG rating upgrades, increased R&D investment, and innovation performance. It has a growth rate gap compared to the industry. Improved ESG performance, more social responsibility of companies, increased R&D input-output ratio, and improved innovation performance may enhance their core competitiveness and growth.

5 Conclusions

To summarize, good ESG performance and innovation performance of enterprises can have a positive impact on the effectiveness of internal control, and thus enhance corporate value. Take Haier as an example, in the environmental dimension, Haier actively promotes the green production mode, and is committed to reducing energy loss and emissions to help realize the “double carbon” goal, which not only enhances the social image of the enterprise, but also strengthens the trust of consumers in its brand. In the social dimension, Haier has been actively involved in various public welfare programs, reaping widespread acclaim and further consolidating the social influence of its brand. In terms of corporate governance, Haier continues to optimize its internal structure to build a solid foundation for the stable development of the enterprise. These ESG practices have enhanced Haier's brand value, market competitiveness and profitability, and strongly contributed to the growth of corporate value.

In the field of innovation, Haier insists on increasing R&D investment year by year, and the cumulative number of invention patents has been rising year by year, taking the lead in the industry for many years in a row. The advancement of the “dual-carbon” goal has brought new opportunities and challenges to the household appliance industry. Haier can realize sustainable development by continuously increasing environmental investment and deepening innovation initiatives; of course, this also puts forward more stringent requirements for enterprises.

At present, the industry as a whole still has many problems in terms of ESG and innovation. Some companies do not pay enough attention to ESG concepts and lack a perfect and effective institutional system; environmental information disclosure is insufficient, making it difficult to meet the supervision needs of the market and the society; and in terms of innovation, the input-output ratio of R&D is relatively low, and the efficiency of innovation needs to be improved. These problems constrain the overall development of the industry and need to be solved urgently.

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