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Research on the evaluation of senior management ability of enterprises based on Capability Maturity Model and analytic hierarchy process - Taking benchmarking enterprises in household appliances industry as an example

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Abstract: driven by the reconstruction of the global industrial chain and the upgrading of consumer demand, the household appliances industry is shifting from scale competition to value competition, and the top management ability of enterprises has become a key variable to determine the core competitiveness and sustainable development of enterprises. This paper innovatively introduces Addie theory into the field of top-level management capability evaluation, constructs the whole process research framework of "analysis design development implementation evaluation", divides the maturity level of top-level management capability with capability maturity model (CBM), and establishes a multi-dimensional evaluation index system with analytic hierarchy process (AHP). Five benchmarking enterprises in the household appliances industry, including Midea Group, Haier Zhijia, Gree Electric appliances, Hisense video and SUPOR, are selected as the research objects. Through multi channel data collection and empirical analysis, the maturity level of senior management ability of each enterprise is systematically evaluated. The results show that the high-level management ability of benchmarking enterprises in the household appliances industry shows the characteristics of gradient distribution, and strategic management and innovation and development ability are the core dimensions affecting the maturity of enterprises. The evaluation system constructed in this paper provides a theoretical basis and practical tools for the quantitative evaluation, short board identification and continuous optimization of senior management capabilities of household appliances industry and manufacturing enterprises.

Key words: top management ability; Capability maturity model; Analytic hierarchy process; Addie theory; Household appliances

1. Introduction

1.1 research background

After more than 40 years of development, China's household appliances industry has become the largest household appliances production and consumption market in the world, and has formed a number of benchmarking enterprises with international

competitiveness. At present, the development of the industry is facing multiple challenges: the adjustment of the real estate market has led to the shrinkage of new demand, and the competition in the stock market has become increasingly fierce; Technological innovations such as artificial intelligence and the Internet of things promote the reconstruction of product form and business model; Geopolitical conflicts and trade protectionism have intensified, and the risk of global operation has increased; Consumer demand shows a trend of personalization, intellectualization and greening, which puts forward higher requirements for the market response ability of enterprises. [1]

In the complex and changeable market environment, as the maker of enterprise strategy, the allocator of resources and the promoter of change, the ability level of senior management team directly affects the strategic choice, innovation decision-making and operation efficiency of enterprises. Midea Group has achieved a leap from home appliance manufacturers to global technology groups through the strategic transformation of high-level teams;[2] Haier Zhijia relies on the forward-looking layout of high-level smart home ecology to build a global brand matrix; Gree Electric maintains its leading position in the field of air conditioning by virtue of its high-level adherence to core technologies. [3] The development practice of these enterprises has proved that excellent high-level management ability is the core guarantee for enterprises to cope with industry changes and achieve sustainable development. However, the current research on senior management ability of enterprises mostly focuses on the division of theoretical dimensions, lacks a quantitative evaluation system combining industry characteristics, and is difficult to meet the practical needs of enterprises. Therefore, it is of great practical significance to build a scientific and systematic evaluation system of high-level management ability to promote the high-quality development of household appliances industry. [4]

1.2 research significance

1.2.1 theoretical significance

First, expand the application boundary of Addie theory. Addie theory, as a classic training system design model, is widely used in the field of education and human resources training. This paper extends it to the evaluation of senior management ability of enterprises, constructs a closed-loop research framework for the whole process, and enriches the application scenarios of this theory in the field of management evaluation. Second, improve the methodology of senior management ability evaluation. Most of the existing studies use a single evaluation method. This paper integrates Capability Maturity Model and analytic hierarchy process to realize

the organic combination of qualitative analysis and quantitative evaluation, and provides a new methodological paradigm for senior management capability evaluation.[5] Third, strengthen the research on industry adaptability. In view of the characteristics of technology intensive, high degree of globalization and strong policy sensitivity in the household appliances industry, an evaluation index system adapted to the needs of the industry is constructed to make up for the lack of attention to specific industries in existing research. [6]

1.2.2 practical significance

For enterprises, the evaluation system constructed in this paper can help enterprises accurately identify the shortcomings of high-level management ability, provide a basis for management team optimization and training system design, and promote the improvement of enterprise management efficiency; For investors, the evaluation results can be used as an important reference to judge the long-term investment value of enterprises. There is a significant positive correlation between the maturity of senior management ability and the profitability and risk resistance of enterprises; For the industry, through the ability portrait and experience refining of benchmarking enterprises, it can provide reference for the improvement of the overall management level of the industry and promote the transformation of household appliances industry from "made in China" to "made in China".[7]

1.3 research contents and methods

1.3.1 research content

The core research content of this paper includes four aspects: first, sort out the theoretical basis, systematically analyze the core connotation and application status of senior management ability, ability maturity model, analytic hierarchy process and Addie theory, and lay the theoretical foundation of the research; Second, the construction of evaluation system, based on the five stage process of Addie theory, combined with the characteristics of household appliances industry, designs a high-level management ability evaluation index system including 6 primary indicators and 18 secondary indicators, and uses analytic hierarchy process to determine the index weight; Third, empirical analysis, select five household appliances benchmarking enterprises as cases, collect data through multiple channels, calculate the maturity score of senior management ability of each enterprise, and analyze its ability characteristics and shortcomings; Fourth, countermeasures and suggestions, based on the evaluation results, put forward targeted suggestions to improve the senior management ability of household appliances enterprises. [8]

1.3.2 research methods

First, the literature research method. By searching core journals, academic monographs and industry reports at home and abroad, this paper combs the relevant research results of senior management ability evaluation, clarifies the application logic of ability maturity model, analytic hierarchy process and Addie theory, and provides theoretical support for the construction of evaluation system. Second, the case study method. Five enterprises, Midea Group, Haier Zhijia, Gree Electric appliances, Hisense video and SUPOR, are selected as research cases. These enterprises cover all kinds of household appliances, smart homes, professional air conditioning, display terminals, small household appliances and other subdivisions, which are typical and representative. Third, analytic hierarchy process. The evaluation of senior management ability is divided into three levels: target level, criterion level and index level, and the judgment matrix is constructed through expert scoring to determine the weight of each index, so as to improve the scientificity and objectivity of the evaluation. Fourth, the combination of qualitative and quantitative methods. Qualitative analysis of the requirements of the characteristics of the household appliances industry for high-level management ability, quantitative calculation of the maturity score of each enterprise, and Realization of the organic unity of theoretical analysis and empirical research. [9]

1.4 research innovations

The innovation of this paper is mainly reflected in three aspects: first, the innovation of the research framework, the deep integration of the five stage process of Addie theory and the evaluation of senior management capabilities, the construction of a closed-loop system of "analysis design development implementation evaluation", and the standardization and systematization of the evaluation process; Second, the innovation of the index system, combined with the development trend of "high-end, intelligent and global" in the household appliances industry, adds characteristic indicators such as global operation ability and digital intelligent decision-making ability to enhance the industry adaptability of the evaluation system; Third, practical application innovation, through the empirical analysis of five benchmarking enterprises, to form a portrait of the maturity of senior management ability in the household appliances industry, so as to provide enterprises with a direct reference to the optimization path. [10]

2. Relevant theoretical basis

2.1 research on senior management ability

Top management ability refers to the comprehensive ability of senior management team in strategy formulation, resource allocation, organization and coordination, risk management and control, and is the organic combination of individual ability and cooperation ability of team members. Hambrick and Mason's "top echelon theory" lays the theoretical foundation for the study of top management ability, which believes that the background characteristics of top management team, such as age, education, industry experience and so on, will affect the strategic choice and business performance of enterprises.

With the deepening of research, scholars gradually focus on the dimension division of top management ability. For manufacturing enterprises, some studies divide high-level management capabilities into strategic planning capabilities, technological innovation capabilities, production and operation capabilities, market development capabilities and other dimensions. Combined with the development characteristics of household appliances industry, this paper believes that senior management ability should cover six core dimensions: strategic management, decision-making and implementation, innovation and development, resource integration, global operation and risk control. Strategic management ability refers to the ability of high-level teams to formulate long-term development strategies and grasp market trends; Decision-making execution ability refers to the ability of high-level teams to make scientific decisions and promote the landing of decisions; Innovation and development ability refers to the ability of high-level teams to promote technological innovation, product innovation and model innovation; Resource integration ability refers to the ability of high-level teams to optimize the allocation of internal and external resources; Global operation ability refers to the ability of high-level teams to expand overseas markets and integrate international resources; Risk management and control ability refers to the ability of high-level teams to identify, warn and respond to various risks.

2.2 Capability Maturity Model (CBM)

Capability maturity model originated in the field of software engineering and was proposed by the Software Engineering Institute of Carnegie Mellon University in the United States. Its core is to guide the evolution of organizations from disorderly management to orderly management and continuous optimization by dividing maturity levels. The model was initially used to evaluate the development capabilities of software enterprises, and then gradually expanded to all areas of enterprise management.

The enterprise capability maturity model is usually divided into five levels,

showing a clear advanced logic: initial level, growth level, maturity level, optimization level and leading level. The core feature of the initial level is that management activities rely on personal experience, lack of unified processes and standards, and the level of ability fluctuates greatly; The core feature of growth level is to establish a basic management process and norms, which can repeat past successful experience, but the consistency of process implementation is insufficient; The core characteristics of maturity level are that the management process is standardized and documented, the organizational activities have rules to follow, and the ability level tends to be stable; The core feature of the optimization level is the use of data quantitative evaluation management process, which can identify the shortcomings in the process and continue to optimize; The core feature of the leading level is to form a management mechanism of continuous innovation, which can lead the development direction of the industry. The capability maturity model provides an effective tool for the gradient evaluation of senior management capability, and can clearly show the development stage and improvement direction of senior management capability.

2.3 analytic hierarchy process (AHP)

Analytic hierarchy process, proposed by saty, an American operational research scientist, in the 1970s, is a decision-making method that decomposes complex decision-making problems into multiple levels and determines the weight of each factor through a combination of qualitative and quantitative methods. The core advantage of this method is that it can transform the subjective judgment of decision-makers into quantitative weight data, and is suitable for complex decision-making problems with multi-objective and multi criteria.

The implementation steps of analytic hierarchy process include four links: first, build a hierarchical structure model to decompose the decision-making problem into three levels: target level, criterion level and index level. The target level is the ultimate goal of decision-making, the criterion level is the intermediate link to achieve the goal, and the index level is the specific index of the measurement standard; The second is to construct a judgment matrix, invite experts to make pairwise comparisons according to the relative importance of factors at all levels, and quantify the comparison results by 1-9 scaling method; The third is consistency test, which tests the rationality of the judgment matrix by calculating the consistency index and the consistency ratio. If the consistency ratio is less than 0.1, the judgment matrix has satisfactory consistency, otherwise the expert rating needs to be adjusted; Fourth, calculate the weight vector, calculate the weight of factors at all levels through the

characteristic value method, and finally determine the comprehensive weight of factors at the index level to the target level. Analytic hierarchy process provides scientific method support for the determination of the weight of senior management ability evaluation indicators.

2.4 Addie theory

Addie theory is a classic training system design model, including five consecutive stages of analysis, design, development, implementation and evaluation, emphasizing the systematic and closed-loop nature of the training process. The theory was originally applied to the field of education and training, aiming to improve the design quality and implementation effect of training programs.

The core connotation of each stage of Addie theory is as follows: the analysis stage is mainly to clarify the training needs, through research and analysis of the characteristics and training objectives of training objects; The design stage is to design the content, method and evaluation criteria of the training course according to the training needs; The development stage is to develop training materials, coursewares and other teaching resources according to the design scheme; The implementation stage is to organize the training objects to participate in the training and implement the training plan; The evaluation stage is to comprehensively evaluate the training effect, summarize experience and optimize the training plan. This paper innovatively expands Addie theory to the field of senior management ability evaluation, and realizes the innovative application of Addie theory in the field of management evaluation. The analysis stage corresponds to evaluation demand analysis, the design stage corresponds to evaluation index system design, the development stage corresponds to evaluation method development, the implementation stage corresponds to empirical evaluation, and the evaluation stage corresponds to result analysis and optimization.

3.Construction of senior management ability evaluation system of household appliances enterprises based on Addie theory

3.1 principles of evaluation system construction

3.1.1 industry adaptation principles

The evaluation index system needs to be closely combined with the development characteristics of the household appliances industry, highlighting core capabilities such as strategic management, innovative development and global operation. As a technology intensive and market oriented industry, the top management team of

household appliances industry needs to have keen market insight and forward-looking innovation decision-making ability, so these characteristics need to be reflected in the index design.

3.1.2 principles of scientific systems

The evaluation index system needs to cover the core dimensions of senior management ability, with clear logic and hierarchy among indicators, so as to form a complete ability evaluation framework. The selection of indicators needs to be based on relevant theoretical research to ensure the scientificity and rationality of indicators, while avoiding overlap and intersection between indicators.

3.1.3 operational principles

Evaluation indicators need to have clear connotation and data acquisition channels, and maturity level standards need to be clear and quantifiable. The data sources of the indicators mainly include open channels such as enterprise annual reports, industry reports and authoritative media reports to ensure that the evaluation process is simple and easy, and the evaluation results are objective and credible.

3.1.4 principles of dynamic optimization

The evaluation index system needs to have the ability of dynamic adjustment and be able to adapt to the technological changes and market changes in the household appliances industry. With the wide application of artificial intelligence, Internet of things and other technologies in the household appliances industry, the digital intelligent decision-making ability of senior management teams will become an important evaluation dimension, so the index system needs to reserve room for adjustment.

3.2 evaluation process design based on Addie theory

3.2.1 analysis stage: assessment of demand and analysis of industry characteristics

Through the analysis of the development trend of household appliances industry, the core needs of high-level management ability evaluation are clarified. At present, the household appliances industry shows three major development trends: first, consumer demand has been upgraded, and personalization, intellectualization and greening have become the mainstream of the market; Second, technological innovation has accelerated, AI and internet of things, big data and other technologies promote the reconstruction of product form and business model; Third, with the intensification of global competition, overseas markets have become an important

engine for enterprise growth.

Based on the development trend of the industry, the senior management team of household appliances enterprises needs to have the following core capabilities: first, strategic management capabilities, able to grasp market trends and formulate long-term strategies in line with the development of enterprises; Second, the ability of innovation and development can promote technological innovation and product iteration to meet the upgrading of consumer demand; Third, global operation ability, which can expand overseas markets and cope with international trade risks; Fourth, the ability of resource integration can optimize the allocation of internal and external resources and improve the operational efficiency of enterprises; Fifth, risk control ability, which can identify and respond to policy, market, technology and other risks.

3.2.2 design stage: evaluation index system and maturity level design

Combined with industry characteristics and theoretical research, a three-level evaluation index system including target layer, criterion layer and index layer is constructed. The target layer is the maturity of senior management ability of household appliances enterprises; The criteria layer includes six first-class indicators: strategic management ability, decision-making and execution ability, innovation and development ability, resource integration ability, global operation ability and risk control ability; The index level includes 18 secondary indicators, such as strategic positioning, strategic adjustment and scientific decision-making.

Referring to the five level classification standard of capability maturity model, combined with the characteristics of senior management capability, the maturity level standard of senior management capability is designed. Initial level (0-2 points): management activities rely on personal experience, lack of systematic strategic planning and decision-making process, weak innovation ability, lack of global layout; Growth level (2-4 points): established a basic management process, able to formulate a simple strategic plan, began to invest in R&D and overseas market expansion, but the consistency of process implementation was insufficient; Maturity level (4-6 points): standardized management process, clear strategic planning, perfect R&D system, stable overseas market and sound risk control mechanism; Optimization level (6-8 points): use data quantitative evaluation management process, strategy can be dynamically adjusted, core technology is leading, global operation is efficient, and risk control can achieve quantitative early warning; Leading level (8-10 points): form a management mechanism of continuous innovation, strategy leads industry development, technological innovation drives enterprise growth, excellent ability to integrate global resources, and can transform risks into development opportunities.

3.2.3 development stage: Determination of evaluation index weight

The weight of each evaluation index is determined by analytic hierarchy process. Ten household appliances industry experts, including enterprise executives, industry researchers and university scholars, were invited to compare the relative importance of indicators at all levels and build a judgment matrix. Through consistency test, the rationality of the judgment matrix is ensured. The calculation results show that among the primary indicators, the weight of strategic management ability is the highest (0.25), followed by innovation and development ability (0.23), global operation ability (0.18), decision-making and execution ability (0.15), resource integration ability (0.12) and risk control ability (0.07). This result reflects that in the current development stage of household appliances industry, strategic management and innovative development ability are the core dimensions affecting the effectiveness of senior management of enterprises.

3.3 implementation and evaluation stage: Determination of evaluation methods and processes

The total score of senior management capability maturity of enterprises is calculated by weighted summation method, and the calculation formula is as follows:

$$S = \sum_{i=1}^{6} W_i \times \sum_{j=1}^{3} W_{ij} \times S_{ij}$$

Among them, (s) is the total maturity score, (WI) is the primary index weight, (Wij) is the secondary index weight, and (SIJ) is the secondary index score.

The evaluation process includes three steps: first, data collection, through enterprise annual reports, industry reports and other channels to collect relevant data of secondary indicators; The second is index scoring, which scores the secondary indicators according to the maturity level standard; Third, the total score calculation, according to the weighted summation formula, the total maturity score of each enterprise is calculated to determine the maturity level.

4. An empirical analysis on the evaluation of senior management ability of household appliances enterprises

4.1 case enterprise selection and data collection

Five benchmarking enterprises in the household appliances industry, including Midea Group, Haier Zhijia, Gree Electric appliances, Hisense video and SUPOR, are selected as research cases. Midea Group is the leader in the global household

appliances industry, covering a full range of household appliances; Haier Zhijia focuses on smart family ecology and has a global brand matrix; Gree Electric appliances is the leader in the field of air conditioning, known for its core technology of independent manufacturing; Hisense video focuses on display terminal business and takes the lead in laser display technology; SUPOR is the leader of kitchen appliances and cookware, with a rich product line.

Data collection adopts multi channel integration. First, enterprises disclose data, including annual reports, financial statements and social responsibility reports from 2021-2024; Second, industry reports, such as the development report of China's household appliances industry and the Organizational Effectiveness Report of household appliances benchmarking enterprises; Third, authoritative media reports and official website information of enterprises, combing the strategic layout, management practice, major decisions and other contents of enterprises.

4.2 evaluation of senior management capability maturity of case enterprises

According to the constructed evaluation system, 18 secondary indicators of five case enterprises are scored, and the total maturity score of each enterprise is calculated by weighted summation. The evaluation results show that Midea Group has the highest total maturity score (8.96 points) and is in the leading level; Haier Zhijia (8.35 points) and Gree Electric (8.11 points) are in the optimization level; Hisense video (6.89 points) and SUPOR (6.57 points) are at the mature level.

From the point of view of the first level index score, Midea Group has outstanding performance in strategic management ability (9.2 points) and global operation ability (9.5 points); Haier Zhijia has obvious advantages in global operation ability (8.8 points) and resource integration ability (8.0 points); Gree Electric has excellent performance in innovation and development ability (8.6 points) and decision-making and execution ability (8.0 points); Hisense video has certain advantages in innovation and development ability (7.3 points); SUPOR performed better in resource integration ability (7.0 points).

4.3 Analysis of evaluation results

4.3.1 overall maturity analysis

The maturity of senior management ability of the five case enterprises is at or above the maturity level, reflecting the overall high level of senior management of benchmarking enterprises in the household appliances industry, which matches the leading position in the industry. Midea Group has become the only leading enterprise

in the industry by virtue of its excellent strategic foresight and global operation capabilities; Haier Zhijia and Gree Electric appliances are at the optimization level, with strong quantitative optimization and continuous improvement capabilities, but there is still room for improvement in strategic dynamic adjustment and global resource integration; Hisense video and SUPOR are at the mature level, and the management process is standardized, but there are shortcomings in innovation leadership and global layout.

4.3.2 sub dimensional capability analysis

In terms of strategic management ability, Midea Group scored the highest, and its senior team formulated four strategies of "leading science and technology, direct user access, digital intelligence driven and global breakthrough", which accurately grasped the development trend of the industry and promoted the transformation of enterprises from household appliances manufacturers to global technology groups. Gree Electric has a clear strategic positioning and focuses on the core business of air conditioning, but the flexibility of strategic adjustment needs to be improved; SUPOR's strategic layout is relatively concentrated, and the expansion of diversification strategy is insufficient.

In terms of innovation and development capabilities, Gree Electric appliances and Midea Group led the industry. Gree Electric insists on independent research and development of core technologies, and its R&D investment continues to be high, forming technical barriers in the field of core components such as air conditioning compressors and frequency converters; Midea Group has achieved remarkable results in the innovative layout of AI household appliances, industrial robots and other fields, and the R&D cost rate has continued to increase. Hisense video has differentiated advantages in the field of laser display technology, but the iteration speed of product innovation is slightly lower than that of leading enterprises; SUPOR product innovation meets consumer demand, but the investment in technology research and development is relatively low.

In terms of global operation capabilities, Midea Group has significant advantages, with 38 R&D centers and 44 major manufacturing bases around the world, continuously increasing the proportion of overseas revenue, and effectively dealing with trade barriers through the mode of "China for global+regional for regional". Haier Zhijia's overseas market performance is stable by virtue of its global brand matrix; The global layout of Gree Electric Appliances lags behind, and the proportion of overseas market revenue is lower than that of Midea and Haier; Hisense video and SUPOR's overseas markets mainly rely on OEM exports, and their localization and

operation capabilities need to be strengthened.

4.3.3 analysis of individual characteristics of enterprises

Midea Group's senior management team shows excellent strategic foresight and decision-making execution, from focusing on white power to expanding robotics, industrial automation and other fields, each strategic transformation accurately grasps market opportunities. Haier Zhijia executives focus on the ecological construction of smart families and meet different market needs through brand differentiated layout, but there is still room for improvement in the efficiency of strategic landing. Gree Electric executives adhere to the strategy of "independent and controllable core technology" and promote enterprises to maintain a leading position in the field of air conditioning, but they are slightly conservative in terms of diversification and global layout. Hisense video executives focus on display terminal business, and the direction of technological innovation is clear, but the strategic diversification is insufficient. SUPOR executives focus on the small household appliances market segment, with strong product innovation ability, but there is a gap with the leading enterprises in industrial chain integration and global operation.

5. Suggestions on improving senior management ability of household appliances enterprises

5.1 strengthen the ability of strategic dynamic optimization

With the acceleration of stock competition and technological change in the household appliances industry, the senior management team needs to establish a closed-loop mechanism of "market insight strategy formulation dynamic adjustment". First, we should strengthen the research on consumer demand, accurately capture new trends such as aging, miniaturization and intellectualization, and optimize the strategic layout of products; Second, on the basis of focusing on core business, we should steadily expand the high potential track and cultivate the second growth curve; The three is to establish a strategic resumption mechanism, regularly assess the effect of strategic implementation, and timely adjust the strategic direction to cope with market changes.

5.2 improve the scientificity of innovation decision-making

Innovation is the core driving force for the sustainable development of household appliances enterprises, and senior management teams need to enhance the systematicness and foresight of innovation decision-making. First, increase R&D investment, focus on key technical areas such as AI, Internet of things, green and

low-carbon, and build core technical barriers; The second is to establish a market-oriented innovation mechanism, encourage cross departmental cooperation and industry university research cooperation, and accelerate the transformation of technological achievements; Third, balance technological innovation and market demand, avoid blind investment and excessive innovation, and improve the input output ratio of innovation decision-making.

5.3 optimize the layout of global operation

Faced with the complex international market environment, the senior management team needs to strengthen the ability of global resource integration and localized operation. First, learn from the "double cycle" model of Midea Group to reduce trade risks through overseas factory building and localized production; The second is to strengthen overseas brand building, increase the proportion of private brands, and get rid of dependence on OEM exports; The three is to optimize the global supply chain layout, build a flexible supply chain system, and improve the stability and risk resistance of the supply chain.

5.4 improve the risk management and control system

Household appliances enterprises are facing multiple risks such as policy, market and technology, and senior management teams need to establish a risk control mechanism for the whole process. First, strengthen risk identification, focusing on potential risks such as policy changes, trade barriers and technological iterations; The second is to establish a risk early warning system to predict the probability and impact of risks in advance through data monitoring and analysis; Third, we should enhance the ability to transform risks and challenges into development opportunities, such as transforming trade barriers into the driving force of localized production.

6. Research conclusions and Prospects

6.1 conclusions

This paper integrates Addie theory, capability maturity model and analytic hierarchy process, constructs a top-level management capability evaluation system for household appliances enterprises, and selects five benchmarking enterprises for empirical analysis. The research draws the following conclusions: first, the evaluation system, which includes 6 primary indicators and 18 secondary indicators, can scientifically and systematically evaluate the top management ability of household appliances enterprises; Secondly, the top management ability of benchmarking enterprises in the household appliances industry shows the characteristics of gradient

distribution, Midea Group is in the leading level, Haier Zhijia and Gree Electric appliances are in the optimization level, Hisense video and SUPOR are in the mature level; Thirdly, strategic management ability and innovation and development ability are the core dimensions affecting the high-level management efficiency of household appliances enterprises, and global operation ability has become the key variable of enterprise competition.

6.2 research limitations and Prospects

The limitations of this paper are mainly reflected in two aspects: first, the number of case enterprises is limited, only five benchmarking enterprises are selected, and small and medium-sized household appliances enterprises are not covered; Second, data collection is mainly public data, and the evaluation of some qualitative indicators is subjective. Future research can further expand the scope of case enterprises and include household appliances enterprises with different scales and subdivisions; Introducing fuzzy comprehensive evaluation method and other methods, combined with questionnaire survey data, to improve the objectivity and accuracy of evaluation results; Track the dynamic changes of senior management ability of enterprises, and analyze the correlation between ability improvement and enterprise performance.

With the continuous change of household appliances industry, the connotation and extension of high-level management ability will continue to enrich, and digital intelligent decision-making ability and green development ability will become new evaluation dimensions. In the future, we need to continue to optimize the evaluation system to provide more targeted theoretical guidance and practical tools for the improvement of senior management ability of household appliances enterprises.

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