Academic Journal of Management and Social Sciences
ISSN: 2958-4396 | Vol. 9, No. 1, 2024

Research on Dynamic Flexible Performance Evaluation System of Geely Automobile under the Background of Digital Transformation

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Abstract: As a pillar industry of the country, the automobile manufacturing industry implements the digital transformation strategy in the era of intelligent innovation, which is not only an objective requirement for the development of the digital economy in the era of big data, but also an internal driving force for diversified consumer demand and improving the core competitiveness of products, reducing costs and increasing efficiency and improving the operating efficiency of enterprises. Under the premise of analyzing the necessity and feasibility of the construction of Geely Automobile's dynamic flexible performance evaluation system under the background of digital transformation, this paper constructs Geely Automobile's dynamic flexible performance evaluation system from four aspects: target layer, criterion layer, scheme layer and influence layer, based on the principles of dynamic flexibility and reflecting key success factors. The empirical results show that the Geely Automobile dynamic flexible performance evaluation system constructed in this paper has relevance, stability and explanatory ability.

Keywords: Digital Transformation; Geely Automobile; Dynamic Flexibility; Performance Evaluation.

1. Introduction

The Geely Auto dynamic flexible performance evaluation system built under the background of digital transformation has relevance, stability and explanatory ability. In terms of financial dimension, both the profit level and debt repayment level of Geely Automobile have been improved; In terms of customer dimension, after-sales service satisfaction and market share showed an overall upward trend, and satisfaction was improved; In terms of internal process dimensions, the ratio of selling expense and administrative expense decreased in the early stage of the transformation, but increased in the late stage of the transformation. After the transformation, the inventory turnover rate was stable and higher than the overall level of the industry, and the operation capacity was enhanced. In terms of learning and growth, research and development investment show an upward trend, the growth rate of net profit is stable and higher than the overall level of the industry, and the sustainable development ability is strong and the growth rate is higher.

2. Introduction of Geely Automobile

In 1986, Zhejiang Geely Holding Group Co., Ltd. was formally established. After more than ten years of development, it began to set foot in the automotive field in 1997. Geely Auto is an innovative global technology enterprise, which mainly researches, produces and sells key components and complete vehicles, etc., and has achieved brilliant results. Geely Auto has been included in the Fortune Global 500 for 10 consecutive years and ranks 225th in 2023, up four places from 2022. The company is committed to building multiple brands, such as Geely Automobile, Volvo Cars, Polar Hydrogen, Caocao Travel, Lynk & Co, etc., and implementing multi-brand collaborative development. Over the years, under the guidance of the values of "truth seeking, pragmatism, hard work and collaborative innovation", Geely Automobile has deeply implemented the digital transformation strategy, continuously improved its resource allocation and integration capabilities, improved its core competitiveness, and actively integrated into the new pattern of world development.

in terms of operating conditions, Geely Holding Group's operating income exceeded 400 billion yuan in 2022, an increase of 12.8%. Total sales for the year were 2.3 million units, an increase of 4.3%, of which Geely Auto sold 1.433 million units. In terms of new product launch, Geely Auto has formulated the "Intelligent Geely 2025" strategy, launched new products such as Geely Boyue L and Geometry E, and continuously improved its brand value by adopting models such as power replacement. In terms of product exports, Geely Auto has exported to a number of countries, with operations in more than 100 countries and regions around the world. In terms of intelligent construction, Geely Auto has built a commercial vehicle electronic and electrical architecture GCVEEA2.0 platform, which is based on the digital closed-loop and Dev Ops system and is an advanced autonomous driving platform. Geely Auto has a comprehensive layout in various fields, such as intelligent driving, big data, on-board chips, and the three power fields, and continues to strengthen its systematic competitive advantage.

3. Necessity for Geely Automobile to Build a Dynamic Flexible Performance Evaluation System

The traditional performance evaluation system mainly includes the financial model evaluation index system based on the balance sheet, income statement, cash flow statement and other accounting statements, the value model performance evaluation index system based on economic added value and the balanced scorecard based balance model performance evaluation index system. [1] Based on the

dynamic flexible perspective, the traditional performance evaluation system has obvious defects, such as focusing on the past but not reflecting the future, too much emphasis on financial assessment and evaluation, and insufficient evaluation of intangible assets, and lack of sustainable development indicators in performance evaluation. The improvement and perfection of these defects requires objective analysis and evaluation of the changes and challenges faced by modern enterprises. From the analysis of economic environment factors, these changes and challenges at least include:

1. The profound changes of enterprise operation and management environment make the emphasis on customers, the development and investment of intangible assets and intellectual assets become the most important forces of competition in the new economic environment. Therefore, the enterprise performance evaluation index should pay more attention to customer, technological innovation, development potential, social environmental protection and other indicators reflecting enterprise competitiveness and sustainable development;

2. The era of strategic orientation emphasizes that enterprises should change from "backward looking" management mode to "forward-looking management mode";

3. Network economy and information technology provide technical support and concept derivation in organizational structure and management mode, especially the construction and operation of enterprise integrated information platform, so that enterprise performance evaluation must be related to management elements such as strategy, operation, resource allocation and value measurement;

4.The formation and development of surplus economy and buyer's market structure and the improvement of customer's bargaining power on this basis - "fierce competition" will make enterprises face greater risks than in a thousand years in history.

In the face of these changes and challenges, the traditional performance evaluation system seems to be a rigid analysis system: (1) focusing on the evaluation of the past operating results, lacking the feasibility prediction of the future development situation, and failing to reveal the key drivers of the improvement of enterprise performance; (2) The lack of dynamic flexibility is not conducive to the realization of enterprise strategic objectives; [2](3) Can not be used for horizontal comparison between enterprises of different sizes; (4) The customer-oriented era objectively requires that the performance of enterprises should be evaluated in a larger scope beyond the enterprise.

It can be seen from the above that traditional performance evaluation research needs to change its perspective. Only a dynamic and flexible performance evaluation system can adapt to the unpredictable market environment, be consistent with the strategic objectives of enterprises, be comparable and operable, and reflect key success factors to enhance the core competitiveness of enterprises. This is the only way to improve the adaptability of the performance evaluation system to the enterprise environment. [3] In order to adapt to the new economic development, it is not only necessary but also feasible to integrate the dynamic flexibility concept into the traditional performance evaluation system of enterprises. Only in this way, can we reconstruct the dynamic flexible comprehensive performance evaluation index system of Chinese enterprises in a scientific and systematic way, comprehensively and objectively, so as to reflect the current performance status, predict the future development situation and control and manage the enterprise operation in real time. Based on the above analysis, the author tries to study and reconstruct Geely Auto's comprehensive performance evaluation system from the perspective of dynamic flexibility.

4. Operation Mechanism and Construction of Geely Automobile's Dynamic Flexible Performance Evaluation System

SWOT analysis is used to sort out and summarize the influencing factors of the enterprise dynamic flexible performance evaluation index as follows:

4.1. Internal Influencing Factors

First, the industry to which the enterprise belongs. The service industry pays attention to the performance evaluation at the customer level, and the product production enterprises pay attention to the performance evaluation at the business process, financial level and technological innovation level. Second, enterprise scale. Large enterprises pay more attention to sustainable development, and small and medium-sized enterprises are more inclined to financial performance evaluation. The third is the enterprise life cycle. The focus of performance evaluation can be determined and the index system can be designed from four aspects: start-up period, growth period, maturity period and decline period. Take the start-up period as an example, the goal of the enterprise in this stage is to explore and create a competitive product market. Therefore, in the design of non-financial evaluation indicators, product development period and recovery period of all development costs should be taken as important aspects of performance evaluation, and more attention should be paid to operating cash flow, internal rate of return, investment recovery period and other evaluation indicators at the financial level. Fourth, enterprise specific development goals. [4]In view of the specific development goals, enterprises should design evaluation indicators according to local conditions, so that the evaluation indicators have pertinence.

4.2. External Influencing Factors

The first external influencing factor is the economic environment. In addition to financial aspects, corporate performance evaluation indicators should also consider customer, technological innovation, development potential and social and environmental protection, which reflect corporate competitiveness and sustainable development. Second, strategic factors. Enterprise organizational strategy is usually divided into three kinds: low cost strategy, product differentiation strategy and concentration strategy. Under different strategic conditions, the emphasis of evaluation index design is different. For example, the low-cost strategy means that the production cost of the enterprise is lower than that of the competitor, so the enterprise should pay special attention to the cost reduction rate index and establish the supply chain to reduce the cost of the enterprise. Third, market competition environment. With the increase of market competition, the performance evaluation of enterprises should be extended to development potential, technological innovation, social evaluation and other aspects that can help motivate operators to improve competition.

4.3. The Construction Principle of Enterprise Dynamic Flexible Performance Evaluation System

(1) is consistent with enterprise strategic objectives. The purpose of performance evaluation is to provide useful information for the management to formulate the optimal strategy and implement the strategy. Therefore, the theoretical design and practical implementation of the performance evaluation system should meet the needs of enterprise strategic development and reflect the key points of enterprise strategic planning. (2) Dynamic flexibility. It should be based on the SWOT analysis of different enterprise investment and management environment and consider the core competitiveness measurement and other factors to screen indicators; The weight of the index should be determined dynamically with the change of the influencing factors. (3) Systematic. The evaluation indexes of the same level and different levels should be interrelated and complementary to form a comprehensive evaluation system that can fully reflect the historical operation effect of enterprises and predict the future development trend. (4) It is comparable and operable. Comparability requires that the evaluation results can achieve horizontal comparison between different enterprises and longitudinal comparison in time. The source of operability index data should be easy to collect, and the performance evaluation method should be easy to operate. (5) Reflect key success factors.[5] Key success factors are closely linked to a particular business and a particular period of time. The key success factors vary among different enterprises, the same enterprise in different internal and external environments, and at different stages of development. Generally speaking, enterprises can choose 1-2 of the most important from six key success factors such as technological innovation, marketing channels, product manufacturing, skill innovation, marketing, and corporate organizational ability.

4.4. Reconstruction of Analytic Hierarchy Process and Enterprise Dynamic Flexible Comprehensive Performance Evaluation Index System

The dynamic flexible performance evaluation index system must have the characteristics of base wood which can be adjusted according to the changing operating environment and management requirements. Therefore, it is necessary to design a complex and comprehensive evaluation index system based on contingency theory to meet the requirements of "random measures and concrete analysis of specific problems". In view of this, AHP can be used to stratify the whole dynamic flexible performance evaluation index system and specific evaluation indicators to facilitate problem research. The specific steps are as follows:

(1) The target layer (the first layer) is determined. Enterprises should make clear their strategic development direction and formulate scientific strategic objectives when designing evaluation indicators.

(2) The criterion layer (the second layer) is established. The criterion layer should be set up according to the production and operation characteristics, management decision-making and sustainable development strategic objectives of each enterprise, combined with the analysis of internal and external influencing factors. On the basis of systematic review of existing research results by means of frequency statistics and theoretical analysis, the author takes performance evaluation at the financial level as the starting point (reflecting the production, operation and management results of enterprises), focuses on customers and technological innovation as the core (reflecting the core competitiveness of enterprises), and takes social responsibility and attention to ecology and environmental protection as the sustainable development direction. In order to expand the idea of the main aspects affecting the realization of enterprise strategic goals (reflecting the requirements of enterprise strategy, operation and management), [6] the paper innovatively proposes the establishment of dynamic flexible comprehensive performance evaluation indicators from six main levels, including finance, development potential, customers, technological innovation, internal business process, social ecology and environmental protection.

(3) Specific design of the scheme layer (the third layer). In order to make the performance evaluation index can be listed according to the importance degree, the six levels of performance evaluation index can be set according to the basic evaluation index and the auxiliary evaluation index. The basic evaluation index is the necessary and basic index in performance evaluation. The auxiliary evaluation index is a supplement to the base wood evaluation index selected according to the internal and external influencing factors of the enterprise.

(4) Description of the impact layer (fourth layer). The influence layer is a supplementary explanation of the internal and external influence factors of the enterprise. Specifically include: enterprise scale and industry, market competitiveness, economic environment, enterprise specific development goals and policies and systems affecting enterprises.

5. Empirical Study of Geely Automobile's Dynamic Flexible Performance Evaluation System

From a vertical perspective, before the digital transformation of Geely Automobile in 2015, the net profit growth rate showed an overall trend of fluctuation decline, from 12.79% in 2011 to negative 46.28% in 2014, indicating that the development potential of the enterprise was weak and the sustainability was insufficient. After the digital transformation, Geely Auto's net profit growth rate rose rapidly to 126.16% in 2016, and the company's net profit growth rate was relatively high at this time. This is because after the digital transformation, the company's sales performance became better, in 2016, Geely Auto sales reached 765,000, an increase of 50%. The increase in sales volume promotes the rapid rise in net profit and increases the growth potential of enterprises. The growth rate of net profit in 2017-2020 has decreased, which may be due to increased competition in the market. The growth rate of net profit in 2021-2022 increased rapidly again, which may be due to the improvement of the market consumption environment, and the good sales situation of Geely Auto's high-end brand models, and the profit of technical service and authorization have also become a new profit growth point.

From a horizontal perspective, the change in net profit growth rate of Geely Automobile is not as dramatic as that of Dongfeng Automobile and Changan Automobile, which means that the change in net profit growth of Geely Automobile is relatively stable. In terms of changing trends, after the digital transformation in 2015, Geely Auto's net profit growth rate was higher than that of the industry as a

whole until 2019, which may be due to the promotion effect of digital transformation on Geely Auto sales. The net profit growth rate of Geely Auto in 2020-2021 is slightly lower than that of the industry as a whole, which may be due to the chip shortage Geely Auto faced during this period, resulting in a decline in the growth rate of the enterprise. However, the growth rate of Geely Auto's net profit in 2022 was higher than that of the industry as a whole, which may be due to Geely Auto's emphasis on the production and sales of high-end automobile products in the process of digital transformation. In 2022, the sales revenue per vehicle was L3,000 yuan, an increase of 29.6% over the same period last year, and the overseas exports increased significantly, 198,242 vehicles were exported overseas in 2022. Year-on-year growth of 72.4%. The advantages of digital transformation are further reflected, and the growth of enterprises is getting better and better, and the sustainable development ability is enhanced.

6. Research Conclusion

After the digital transformation, Geely Auto's overall corporate performance in the financial dimension has been improved. The overall profitability and operating income showed an upward trend, while the net profit increased rapidly after the transformation and then declined. During this period, the overall net profit of the industry showed a downward trend. In terms of debt paying ability, after the transformation, the asset-liability ratio is controlled more reasonably, the debt paying level is higher, and the risk is lower.

At the same time, Geely Auto's overall corporate performance in non-financial dimensions has been improved. From the customer dimension, after the transformation, Geely Automobile's after-sales service satisfaction and market share showed an overall upward trend, and its satisfaction was improved. In terms of internal process, in the early stage of the transformation, the sales expense and administrative expense ratio showed a downward trend, but in the later stage of the transformation, the expense ratio increased, which was because Geely Auto launched a series of new models during this period, resulting in an increase in marketing expenses and R&D and technology amortization in administrative expenses. After the transformation, the inventory turnover rate was stable and higher than the overall level of the industry. The turnover speed is faster, the operation capacity is enhanced; In terms of learning and growth, after the transformation, R&D investment shows an upward trend, R&D capability is continuously enhanced, net profit growth rate fluctuates within the normal range, is stable and higher than the overall level of the industry, and has strong sustainable development ability and higher growth rate.

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