

The Development Direction of Manufacturing Enterprise Management Accounting under the Background of Internet +——Take an Example of Haier

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Abstract

The arrival of “Internet+” era has changed the way of production and operation of enterprises, and Chinese manufacturing companies are faced with the problem of transformation and upgrading. If we want to seize the opportunities of the times and make full use of the “Internet + manufacturing” wave, we must rely on corporate management accounting to achieve refined management. However, at present, most enterprises in China are still at the starting point of traditional management accounting. Faced with various problems such as weak foundation, insufficient attention, and ineffective information, it has been unable to adapt to the “Internet +” requirements of this era. This paper takes the Haier Group as a typical case. According to Haier’s exploration and success in management accounting, enterprise management accounting grasps “informatization” and “value creation”, realizes the development of a new era of the enterprise, and brings management accounting to manufacturing enterprises in the “Internet +” era of practical inspiration.

Keywords

Internet+, manufacturing enterprises, management accounting.

1. Introduction

With the emergence of the new normal of social economy in China and the rapid development of science and technology in the era of mobile Internet, the extensive application of Internet thinking in daily production and business activities of enterprises has spawned the emerging term “Internet+”. As the most important symbol of this era, the interactive operation of the Internet and enterprises has become ubiquitous. For example, “Internet + Transportation” has seen DiDi Chuxing, “Internet + Finance” has appeared in Yu EBao, and “Internet + Shopping Mall” has appeared in Tmall. These emerging industries from the Internet have quietly entered our daily lives. “Internet +” promotes the healthy development of e-commerce, industrial internet, and internet finance by promoting the close integration of mobile internet, cloud computing, big data, and internet of things with modern manufacturing industries. And further guide the Internet companies to expand the international market a broad expression. The soul of “Internet +” is customer-oriented and advocates a personalized production and business model [1]-[3].

Under the background of this era, China's manufacturing-oriented traditional enterprises have been transformed, grasping the opportunity of the times, and making full use of the “Internet + manufacturing” wave. “Internet+ manufacturing” is a new model. It can use developed Internet platforms and big data information technology to allow the Internet to blend with the traditional manufacturing industry to a new level and present new development formats, improve the competitiveness, productivity and innovation of the company. To successfully complete the transformation and upgrading of the Internet, this requires scientific and precise management within the company [4]. This requires management accounting as a powerful tool and means to achieve this. How can management accounting comply with the development of the Internet period, adapt to the

needs of enterprise transformation and upgrading, and further innovate knowledge and capabilities for enterprises to create more wealth profits, is a proposition that is worth exploring[5].

This paper mainly elaborates the trend of management accounting under the new background of "Internet +" era. Taking Haier's exploration experience as an example, we hope to bring inspiration to the application of management accounting in manufacturing enterprises in China.

2. New Opportunities and Challenges of Traditional Management Accounting in the "Internet+" Era

2.1 The Emergence of "Internet +" Brings Opportunities for Management Accounting

2.1.1 "Internet +" can Accelerate the Focus of Accounting Changes from Financial Accounting to Management Accounting

Traditional accounting services focus on the provision of financial information, and the information is simple and standardized. The arrival of the "Internet +" era shifts the focus of accounting services to management accounting services, providing support for enterprise decision analysis, value creation, and strategy formulation, promoting the upgrading of management accounting services. Traditionally, the management accounting budget is static, and the feedback, control and evaluation of the system are mechanical. The management accounting of the new era will dynamically forecast according to internal business operations and external market changes, optimize resource allocation, continuously improve performance, plan financial strategies for enterprises, operate capital markets, manage overall budgets and comprehensive risks, and create business models. It is important to promote the transformation and upgrading of management accounting.

2.1.2 "Internet +" Will Help Management Accounting Platform Construction

In the "Internet+" era, an accounting service platform must be established. An open financial sharing service platform can collect data related to business decisions, all of which depend on the Internet and big data. The enterprise financial sharing service platform is a distributed management platform based on the financial service processing process and market orientation. It provides information technology and cloud computing technology to provide professional services for all units with the purpose of optimizing the organizational structure, standardizing the process, and improving efficiency. Reduce costs and create business value. This is the "Internet +" era of technology to help enterprises improve efficiency, strengthen internal control, reduce the risk of financial sharing service platform, achieve centralized management, the formation of a synergy effect. This is particularly important for large group companies. Subsidiaries can import data into the system[6]. The parent company can use the shared platform to guide the management accounting of subsidiaries, give opinions, and implement advance reminders, control in events, and feedback afterwards.

2.2 Status and Problems of Management Accounting in Traditional Manufacturing Enterprises

2.2.1 Some Companies do not Pay Enough Attention to the Application of Management Accounting and the Foundation is Weak

The introduction of management accounting in our country came late, and the lack of a complete summary and regulations on the concept of management accounting has led to the disregard of management accounting. The application of management accounting is based on the high-level management of the business activities in the enterprise. Most of them are small and medium-sized enterprises. Their foundation is weak, management is not standardized, and management accounting is not valued, and they are used as they like, making internal management confusing. Even for some large enterprises, the management accounting adopted by them is still limited to the analysis of the internal product cost behavior, which is far from the value management required in the era of "Internet Plus". At the same time, the data needed by companies in the past may be only business data [7]. The most important feature of management accounting in the era of "Internet+" is the integration of big data, including not only business data, but also Internet of things data and Internet data. The new data sources faced by accounting, how to find valuable core data in massive data, only to start

with management accounting .Therefore, the position of management accounting in the "Internet +" era is becoming more prominent, and those enterprises that do not attach importance to management accounting will certainly lag behind the times.

2.2.2 The Management Accounting Theory is out of Touch with Practice, and the Practical Operation is not Strong

On the one hand, the theory of management accounting was introduced from the West and was nurtured in Western capitalist markets[8]. China did not integrate well with national conditions and actual conditions during the introduction process. The unique content structure of China's unique socialist market economy is complex and diverse, and management accounting applications The scope is limited, resulting in dissatisfaction with management accounting. On the other hand, the current theoretical basis for management accounting research stems from the era of industrial economy. At that time, the mode of thinking was large-scale production and large-scale sales. Management accounting focused on internal management and emphasized product-centric product management, and "Internet+". In the era, instead of open Internet thinking, the focus has also shifted to a customer-centric industry chain, emphasizing customer experience. Therefore, the focus and methods of management accounting must also be changed, but the existing content of the theory of management accounting system still needs to be improved.

3. The Development Direction of "Internet +" Management Accounting

There are several new hot spots in the "Internet Plus" era of enterprise management accounting: financial sharing service model with value creation as the core, working capital management on the basis of liquidity, and comprehensive budget and decision analysis based on cloud computing and big data Responsibility Center Accounting for Performance Evaluation, and Human Capital Accounting for Development in Modern Service Industry. Based on these major hot spots and the problems mentioned above in China's manufacturing enterprise management accounting in the "Internet +" context, this paper believes that corporate management accounting should start with the following aspects:

3.1 Enterprises Should Innovative Management Accounting Concepts based on the "Internet +"

The "Internet Plus" era is open, which requires that the concept of corporate management accounting must also change with the development of the times: (1) the concept of the market. Many companies constitute the market, management accounting provides services for enterprises, but also must serve the market, management accounting should always pay attention to the trend of market demand, according to business direction and strategic adjustment, only tightly follow the market this windward, in order to remain undefeated in the market place. (2) Dynamic concept. In the era of "Internet+", the ability to collect and analyze data in enterprises has been greatly strengthened. Management accounting must analyze and grasp changes in the frequent information exchanges within and outside the company in a timely manner, and dynamically manage decisions in real time. (3) overall concept. The Internet not only links the different business departments within the company, but also enables the company and its external affiliates to form a whole such as upstream companies, consumers, competitive companies, and governments. For example, modern enterprises cannot regard economic benefits as the sole objective and take social responsibility. Environmental cost accounting is also a factor that companies need to consider. (4) Value concept. The value of an enterprise is not only derived from products and services, but also from the customer experience, the sense of belonging and management of the employees, and the use of the Internet as a platform to create a complete flow of the value chain cycle[9].

3.2 The "Internet +" Era Management Accounting Should Pay More Attention to the Integration of Human Resources Management

An important branch in management accounting is human capital accounting. Traditional manufacturing industry used to focus on products. In the "Internet+" era, it not only emphasized the "people" of customers, but also paid attention to "people" as employees[10].

On the one hand, the mobility of people in the era of "Internet Plus" has increased, which has led to an increase in the cost of substitution. Therefore, human resources management must not only manage personnel and salary, retain talents and employees, but also work hard on recruitment methods. Looking at talent recruitment as a "strategic procurement plan" reflects the importance of human resources[11]. On the other hand, the "Internet Plus" era of big data technology makes it possible to comprehensively and accurately consider employee performance. The company can analyze employee's job performance, daily words and deeds, and other network data analysis to truly consider employees in an all-round way and effectively improve job matching. Management accounting can also analyze the analysis of labor costs and benefits to manage performance appraisal and human capital pricing for non-management personnel [12],[13].

4. Haier's Exploration in Management Accounting

4.1 Haier's Approach to Management Accounting Innovation

4.1.1 "Ren Dan He Yi" Business Model, Creating Unique Accounting System with Individual Index.

In the Internet age, companies and customers have experienced changes in their relationships. To adapt to this change, Haier began exploring and trying to improve its business model in 2005. This is the beginning of Haier's transition to the Internet era. During practice, Haier gradually formed the famous "Ren Dan He Yi" model. "Ren" refers to employees of enterprises and "Dan" refers to consumers and users of products. Each employee is seen as a self-financing unit. Haier divides several tens of thousands of employees into self-help businesses. This flattens the pyramid of organizational structures. Each employee is seen as a self-financing unit. Haier divides several tens of thousands of employees into self-help businesses. This flattens the pyramid of organizational structures. Each employee has the right to make decisions based on market changes. At the same time, the remuneration of employees depends on how much value he can bring to customers. Employees have the right to determine their own treatment based on the value created for the customer. Then employees and customers will become a community of interests, which really realize "My users I create, my value I share", the maximization of employee wealth is the goal of the company's value pursuit. This model, on the one hand, enhances the sense of belonging of employees and enables them to regard themselves as the owner of the enterprise, stimulating the potential and enthusiasm of the employees, from passive tasks to active service and innovation, and on the other hand, injecting new vitality into the enterprise. For the sustainable development of enterprises to provide impetus. Why Haier attaches so much importance to the role of employees, because it is an in-depth understanding of the "Internet +" era, only the most cutting-edge employees know what services customers need, what products the market needs, employees are the most front-end of market demand information, this model Achieve a win-win situation for employees.

In the context of such a business model, Haier's management accounting innovation emphasizes employee accounting. The system creates a unique new "four tables" and "three budgets".

(1)four tables

They are the strategic profit and loss statement, the daily clear list, the single premium list and the flow chart. The most important of these is the strategic income statement. First, the traditional profit and loss statement can only reflect the company's on-balance sheet assets. The fundamental purpose of the strategic income statement is to create value. It can reflect many off-balance-sheet assets such as brand reputation, human capital, channel assets, and user value. Second, the previous profit and loss statement is a post-mortem analysis that can only reflect the performance of the company after

the end of the current period, but cannot know the reason, cannot find the main responsibility. The strategic profit and loss statement of Haier is calculated in advance. Based on the division of self-employed entities, Haier dynamically analyzes the added value of the business process and key nodes at work. On the strategic profit and loss statement, companies must first have users' re-manufactured products and services. The possibility of creating value first then consumes costs to operate, so it is more predictable.

Strategic income statement can be divided into four quadrants from strategies, employees, users, and incentives, as shown in Fig. 1.

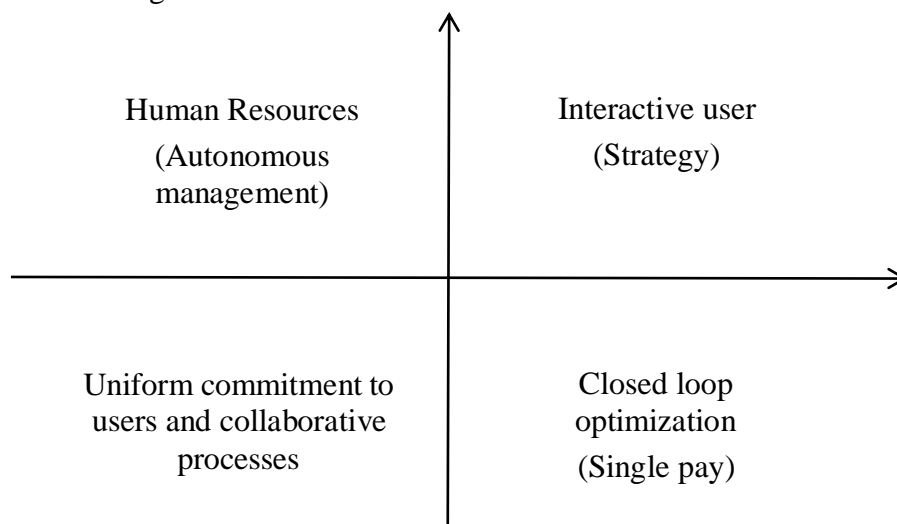


Fig. 1 Strategic Profit and Loss Statement

“Daily table” is an information platform established by Haier through the Internet. It can dynamically display the performance of each self-service operation on a daily basis, monitor the differences in the tasks performed by independent operators in real time, and then analyze the causes, continuously improve task allocation, and continuously optimize resource allocation. “Single pay table” refers to the value linked to the value created by employees and his clients and the company. The employees will move from passive implementation to the initiative to achieve goals, and allow employees to change from managers to independent operators who strive to maximize value. The “flow chart” shows the business process of employees for improvement.

The management information system constructed by the four tables of Haier can reflect the performance of different teams and employees, and provide management with timely and valuable decision support information.

(2) National budget system

The traditional budget system breaks down budget data from top to bottom. It is simple and straightforward, and Haier is robbed by the competition of independent business units. Haier gives each team the power to call personnel at any time, the power to allocate resources, and the decision-making power of daily operations. It has made three forecasts, set its own goals, and formulated strategies based on the goals, which drives the team to operate independently. This continuous practice of management accounting practices has accumulated some precious experience for Chinese enterprises in promoting management accounting.

4.1.2 Innovation of Haier Performance Evaluation

Haier put forward a two-dimensional lattice in performance evaluation, taking the market performance as the horizontal axis, reflecting the current market value of the company, and using strategic performance as the vertical axis to reflect the user value. In the past, information was blocked, information asymmetry led enterprises to have a strong position in the transaction, and then in the “Internet +” era, users grasped the initiative and dominance, when the user’s consumption hot spots and habits changed, the company’s production methods and The flagship product must also change, and explosive information will make the market more dynamic and unstable. The needs of

customers are turning to the pursuit of a superior user experience. Enterprises must be customer-centric and enhance their interaction with users. The core connotation of the “Internet Plus” era is the value of users. It is precisely based on this that Haier determines the company’s value proposition and performance evaluation system.

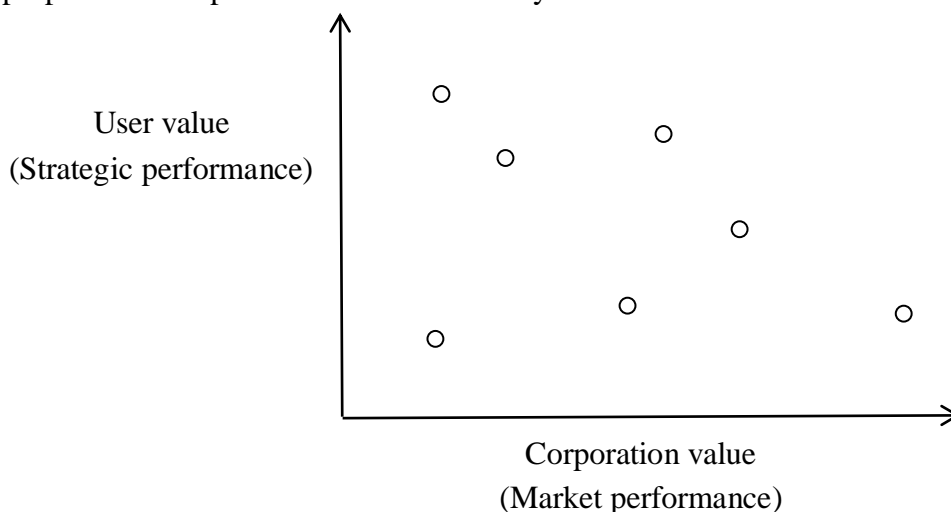


Fig. 2 Performance evaluation two-dimensional lattice

Haier's two-dimensional lattice takes into account the short-term and long-term benefits of the company, and achieves the unity of market performance and strategic performance, so that individual efficiency and overall synergy can be balanced.

4.1.3 Establish a Financial Sharing Center and Create an Internet Information Platform

Haier has established a financial sharing center in 2006. First, Haier concentrated many units in the management of a shared center, reducing the cost of financial management. Second, Haier has increased its businesses and positions such as strategic finance, M&A investment, tax planning and transfer pricing. Third, deepen the strategic research capabilities of Haier's financial personnel, and cultivate research finance and macro-environmental capabilities. Haier integrates the corporate culture into the use of management accounting, so that it is rooted in the hearts of each Haier and truly realizes the value of management accounting. Haier has established a customer-value-oriented management accounting information support system to realize the expansion of accounting information from accounting information management and strengthen financial support for enterprise decision-making.

Haier Group builds a U+ smart platform outside the company, and internally builds interconnected factories linked to eco-circle platforms. It builds on the customer's needs and completes the process of private custom experience. It has independently developed and led the global COSMO connected plant cloud platform and will “Internet + “The demand for fragmentation in the era is to be integrated to realize the transformation of mass customization and to quickly meet the individual needs of customers. Haier’s management accounting information system is based on strategy, value-creation, market-driven, and self-employed team. It has played an important role in enhancing corporate value, reducing corporate risks, optimizing resource allocation, and improving management levels.

4.1.4 Haier Actively Transforms Its Financial Organization and Realizes the Transformation of Financial Personnel's Role

In the “Internet +”era, Haier actively changed management accounting, and put forward higher requirements for the financial personnel's strategic driving ability, risk insight ability, and information integration ability. Haier actively promotes the transformation of financial organizations and encourages employees to innovate. Haier Group divides the company's financial human capital into three parts: business finance, professional finance, and financial sharing service center. Business finance provides analysis, decision-making and other services for companies from the perspective of management accounting; professional finance is from the global Visual field integration of resources,

to achieve capital chain and investment value-added; and financial services center from the financial accounting perspective, unified accounting processes and information sharing, reduce costs. Through this series of measures, the quality of Haier's financial staff has improved, the number of accounting-type financial personnel has decreased, the number of business finance personnel responsible for management accounting has increased, the organizational structure has been optimized, staffing has been reduced, and the total number of financial personnel has decreased.

4.2 Inspiration from Haier's Management Accounting to Manufacturing Enterprises

Haier's management accounting and control system uses information systems and big data to organically combine strategy, goals, budgets, processes, organizations, people, KPIs (key performance indicators), assessments and incentives, so that they can effectively operate and deeply grasp the "Internet + The core connotation of the manufacturing industry integrates and unifies the values of customers, employees, and companies, achieves win-win results, and effectively supports the realization of strategic goals. China's other manufacturing companies also need to influence Haier, like Haier, closely follow the trend of the "Internet +" era, grasp the core connotation of "Internet +", attach importance to the role of management accounting, establish advanced scientific management accounting concepts, and be creative in exploring.

We believe that manufacturing companies in the era of "Internet +" must grasp two aspects: information and value creation. Informatization is means, such as big data, cloud computing, Internet of things, management accounting information systems, financial sharing service centers, etc. are all informatization; value creation is the purpose; traditional management accounting focuses on product manufacturing, manufacturing and sales to create value, the Internet The management accounting of the era focuses on creating value for customers, employees, technology, and management. As long as enterprises keep firmly in mind these two points, the "Internet +" era of management accounting will not go in the wrong direction.

Haier has found a way to adapt to his own management accounting, but this cannot be duplicated. The same management accounting method has different implementation methods in different companies. Other companies should combine their own actual situation, can not copy, should be in the specific implementation according to the actual needs of enterprises and industries to adjust and improve management accounting, to create its own unique characteristics of corporate management accounting, use of management accounting to promote the company in the "Internet + "The times are developing rapidly.

5. Conclusion

From the perspective of the arrival of the "Internet +" era and the transformation and upgrading of manufacturing enterprises, this paper discusses the status quo and problems of China's current traditional management accounting from the aspects of concepts, practice, personnel, and innovation, and cannot meet the requirements of the times. Performance, "Internet Plus" and management accounting have added new vitality to management accounting, and put forward that the "Internet +" era of manufacturing enterprise management accounting faces great opportunities and challenges. The key is "informatization." And "value creation." Through analysis of typical and representative Haier Group's exploration experience in management accounting, we hope to help other Chinese manufacturing companies keep up with the "Internet +" wave and upgrade and transform as soon as possible and create a characteristic management accounting that suits the company itself.

References

- [1] J. van Helden and S. Uddin: Public sector management accounting in emerging economies: A literature review, *Critical Perspectives on Accounting*, Vol. 41(2016) p. 34-62.
- [2] W. A. Van der Stede: Management accounting in context: Industry, regulation and informatics, *Management Accounting Research*, Vol. 31(2016) p. 100-102.

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- [3] A. Uyar and C. Kuzey: Does management accounting mediate the relationship between cost system design and performance, *Advances in Accounting*, Vol. 35(2016) p. 170-176.
- [4] P. Rikhardsson and O. Yigitbasioglu: Business intelligence & analytics in management accounting research: Status and future focus, *International Journal of Accounting Information Systems*, Vol. 29(2018) p. 37-58.
- [5] K. Maas, S. Schaltegger, and N. Crutzen: Integrating corporate sustainability assessment, management accounting, control, and reporting, *Journal of Cleaner Production*, Vol. 136(2016) p. 237-248.
- [6] H. Latan, C. J. Chiappetta Jabbour, A. B. Lopes de Sousa Jabbour, S. F. Wamba, and M. Shahbaz: Effects of environmental strategy, environmental uncertainty and top management's commitment on corporate environmental performance: The role of environmental management accounting, *Journal of Cleaner Production*, Vol. 180(2018) p. 297-306.
- [7] K. E. Horton and C. d. A. Wanderley: Identity conflict and the paradox of embedded agency in the management accounting profession: Adding a new piece to the theoretical jigsaw, *Management Accounting Research*, Vol. 38(2018) p. 39-50.
- [8] T. Hopper and B. Bui: Has Management Accounting Research been critical, *Management Accounting Research*, Vol. 31(2016) p. 10-30.
- [9] H. Englund and J. Gerdin: Management accounting and the paradox of embedded agency: A framework for analyzing sources of structural change, *Management Accounting Research*, Vol. 38(2018) p. 1-11.
- [10] H. C. Dekker: On the boundaries between intrafirm and interfirm management accounting research, *Management Accounting Research*, Vol. 31(2016) p. 86-99.
- [11] M. Bromwich and R. W. Scapens: Management Accounting Research: 25 years on, *Management Accounting Research*, Vol. 31(2016) p. 1-9.
- [12] M. Boučková: Management Accounting and Agency Theory, *Procedia Economics and Finance*, Vol. 25(2015) p. 5-13.
- [13] R. Ambrus, M. Izvercian, A. Artene, and L. Ivascu: Considerations Regarding Inbound Regenerative Management Accounting Application on Eco-efficient Business Models, *Procedia - Social and Behavioral Sciences*, Vol. 238(2018) p. 460-465.