

Research on the Application of ERP System in Manufacturing Enterprise Cost Management

Huidong Ma^{1,a*}

Shandong Vocational College of Science and Technology, Weifang, Shandong, 261053

^a654729048@qq.com

*Corresponding author

Keywords: ERP system, Manufacturing enterprise, Cost management.

Abstract. Cost management is an important part of strategic management of manufacturing enterprises and plays an irreplaceable role in the development of manufacturing enterprises. The reality is that many manufacturing companies have problems with cost management. For example, the cost accounting cycle is long, and the cost allocation method is not scientific, and the cost management method is obsolete. The application of ERP system can solve the cost management problem of manufacturing enterprises. Therefore, this paper puts forward some suggestions from the aspects of optimizing the selection of ERP system, and strengthening the application of ERP system, and strengthening personnel training, and doing well the maintenance of ERP system.

1. Introduction

As the foundation of industrial economy, manufacturing industry plays an important role in China's economic development and national economic security. China is one of the world's leading manufacturers and one of the world's leading manufacturers. Data show that in 2018, China's manufacturing added value accounted for more than a quarter of the world's manufacturing added value. It should be pointed out that China's manufacturing industry is developing rapidly, but it is also facing fierce competition. For many manufacturing enterprises, how to stand out from the fierce competition environment has become the key to the development of manufacturing enterprises. From the reality of the situation, China's manufacturing enterprises are more homogeneous development. With the improvement of people's living standards, the quality of products produced by manufacturing enterprises is also improving step by step. Therefore, in order to succeed in the fierce competition, cost management has become the focus of research on manufacturing enterprises. In the cost management of manufacturing enterprises, ERP system plays an important role. Because ERP system is a set of modern information management system, it has the advantages of high efficiency, systematic strength, multiple value and low error.

2. Characteristics of ERP system

ERP management system contains a lot of content, which is not only influenced by the external factors of the enterprise, but also contains some internal factors and management ideas. Through analysis, it is found that the characteristics of ERP management have many aspects. First, ERP system contains a large number of information resources, it is mainly through the integration of the corresponding technical departments of the production situation to achieve the acquisition of enterprise comprehensive information resources, and then comprehensive control and management, so as to better play the role of ERP system management. Second, the main management method of ERP is from top to bottom. Through corresponding extension, the management of production chain is realized and the role of comprehensive management of ERP system is played. Third, through the management of production chains of different companies, the ERP system has realized the strict control of the whole company, played a better role in the production chain control, and transformed the production chain into an important part of the enterprise development, which has a very important role and significance for the enterprise to reduce the management cost and improve the

production efficiency.

3. Manufacturing enterprise cost management problems

Many manufacturing enterprises propose to strengthen the control of cost management and improve the efficiency of enterprise cost management. It seems to attach great importance to cost management, but in the implementation process, many enterprises are difficult to achieve effective cost management. In particular, many small and medium-sized manufacturing enterprises have a more extensive way of cost management. At present, many manufacturing enterprises in China still have the following problems in cost management.

First, there is the problem of information isolation between different departments of the enterprise and information cannot be Shared. As we all know, manufacturing enterprises have many departments, such as purchasing department, storage department, production department, sales department. Different departments have different responsibilities in enterprise production. As far as the actual situation is concerned, information asymmetry exists between the departments of many manufacturing enterprises and information cannot be timely Shared and exchanged. This has led to the emergence of "information islands" to a large extent. However, the information asymmetry between different departments makes it impossible to obtain the production cost information accurately. Thus, the decision makers can not make timely and accurate judgment. More serious will lead to production and management decision-making mistakes.

Second, the cost accounting cycle is long, which cannot provide useful production cost information for enterprise operation decision-making. Most manufacturing enterprises have complex production processes and cost accounting requires a large amount of basic data. In the form of manual accounting, enterprises usually summarize the production information and material supply information on a monthly basis, and then roughly calculate the production cost at the end of the month. In the face of the rapidly changing market environment, a longer cost accounting cycle will inevitably be difficult to adapt to the rapidly changing market environment, resulting in the final accounting costs can not be timely used for enterprise decision-making. Therefore, the long cycle of cost accounting is not conducive to the timely adjustment of production management and the benign development of enterprises.

Third, the manufacturing cost distribution method is not scientific, and can not reflect the actual cost situation. At present, most manufacturing enterprises adopt the allocation method based on working time coefficient to allocate manufacturing cost. The finance department sets the standard working hours according to the product design, estimates the working hours according to the actual output, and finally allocates the manufacturing costs according to the estimated working hours. Obviously, this empirical method of manufacturing cost allocation does not reflect the actual costs incurred and therefore does not reflect the true cost information of the product.

Fourth, cost management method is too old, and cost management system is single. At present, the cost management of many small and medium-sized manufacturing enterprises in China is still in the manual statistical accounting stage. Although most enterprises have realized financial computerization, they are limited to ex post cost accounting, unable to control the cost during the event, unable to predict the cost in advance, and unable to conduct cost analysis after the event.

Fifth, many companies ignore the links with upstream and downstream companies. Generally speaking, establishing good strategic partnership with upstream and downstream companies plays a positive role in effectively reducing product cost and improving product competitiveness of manufacturing enterprises. It is also a method frequently adopted by domestic and foreign advanced manufacturing enterprises. However, many domestic manufacturing enterprises, especially small and medium-sized ones, have a narrow vision and tend to only pursue short-term interests. They do not pay attention to maintaining the relationship with upstream and downstream customers, or do not know how to maintain it, thus leading to vicious competition between suppliers and sellers. The use of ERP system can help enterprises to analyze the supply and sales data between upstream and downstream customers to a great extent, so as to help manufacturing enterprises to identify which upstream and downstream enterprises should be maintained, so as to help enterprises to establish a

good upstream and downstream relationship, thus reducing the production costs of enterprises.

4. Application strategy of manufacturing enterprise cost management under ERP system

4.1 Optimize the selection of ERP system

Strengthening the application of ERP system is an important way to improve the cost management effect of manufacturing enterprises. At present, many manufacturing enterprises have begun to build ERP systems, and it is particularly important to choose suitable ERP systems. There are many ERP system manufacturers in the market, while the ERP systems of foreign manufacturers are more mature. However, the ERP system developed by foreign manufacturers is mainly based on the management practices of foreign enterprises, which may not be suitable for the use of domestic enterprises. The maturity of the ERP system developed by domestic manufacturers needs to be improved. For this reason, when establishing ERP system, domestic manufacturing enterprises should fully consider the actual needs of enterprises, combine the enterprise's own cost management objectives, take increasing cost efficiency as the principle, and try to choose the current mainstream ERP system.

4.2 Strengthen the application of ERP system

ERP system needs to be fully applied to cost management. In short, the application of ERP system should be implemented in all stages of cost management. For example, in the product design stage, product design is the initial stage of cost management, and the design scheme has a huge impact on cost management. Manufacturing enterprises not only need to use ERP system to simulate different product design plans, but also need to clarify the standard cost of each product plan, laying the foundation for the subsequent cost management. In the material procurement stage, the cost mainly consists of the procurement cost and the material cost. The enterprise must take the market price and the government's price limit into consideration and choose the material with good quality and reasonable price. In the stage of cost planning, manufacturing enterprises can set different cost rates and cost drivers to comprehensively compare the advantages and disadvantages of different schemes in cost management.

4.3 Strengthen ERP system personnel training

The effective application of ERP system in manufacturing enterprises is both an opportunity and a challenge. First of all, ERP system provides an effective means for cost management of manufacturing enterprises and is an important way for enterprises to realize modern management. However, the use of ERP system requires the operation personnel of manufacturing enterprises to have strong working ability and information analysis ability. For this reason, enterprises need to strengthen the training of operators, clear operators' responsibilities. Secondly, the application of ERP system requires the participation of all employees. Full participation in ERP system construction, can give full play to the advantages of ERP system. The participation of all staff can ensure the timely, accurate and comprehensive input of information into the system to obtain high-quality production cost management data.

4.4 Maintain ERP system

For the application of ERP system, system maintenance is an important part of the application. The quality of system maintenance has a huge impact on the value of the system. Therefore, in the practical application of ERP system, manufacturing enterprises should fully consider the later maintenance of ERP system and take the latter maintenance of ERP system as the focus of cost management. Most ERP systems have a certain warranty period. Problems within the warranty period can be solved by the manufacturer, but after the warranty period, the enterprise needs to bear high maintenance costs. For this reason, enterprises can hire specialized technical maintenance personnel to be fully responsible for the maintenance and repair of the ERP system, improve the security and stability of the operation of the ERP system, and reduce the maintenance cost of the enterprise.

5. Summary

In the current increasingly fierce market competition environment, manufacturing enterprises to carry out effective cost management to improve their competitiveness has a positive role. ERP system is a modern means of information technology, which has certain advantages in effectively reducing the production cost of manufacturing enterprises and improving the quality of enterprise decision-making. Therefore, manufacturing enterprises should face the influence brought by ERP system correctly, combine the characteristics of enterprises and the current situation of cost management, strengthen the application of ERP system, improve the efficiency of cost management, and create more profits for enterprises.

Reference

- [1] Zhou Qian, Research on cost management innovation of manufacturing enterprises under the background of intelligent manufacturing, *Communications finance and accounting*, vol.11, pp. 36-40, 2019.
- [2] Cui Yunchao, Problems in cost management of Chinese manufacturing enterprises and countermeasures, *Enterprise reform and management*, vol. 18,pp. 145-146, 2019.
- [3] Zhang Xinmin, Application of ERP system in cost management of manufacturing enterprises, *Management and technology of small and medium-sized enterprises*, vol.02, pp. 9-10, 2018.
- [4] Gao Yan'e, Research on cost management of small and medium-sized manufacturing enterprises in ERP environment, *Tianjin university of finance and economics*, 2014.
- [5] Jiang Yang, Design and implementation of cost management system for large manufacturing enterprises based on ERP system, *Jilin university*, 2013.
- [6] Kong Xiangrui, Research on the application of ERP cost management in China's manufacturing industry, *Beijing jiaotong university*, 2010.