# Intelligent Optimization of Management Mode of Small and Medium-sized E-commerce Enterprises

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*Abstract:* In recent years, the development of e-commerce enterprises in China has become more mature, and the market competition has become increasingly fierce. The sales records of e-commerce platforms have been continuously refreshed. However, in this rapid development, many problems have been exposed. This paper first studies and analyzes small and medium-sized e-commerce enterprises, and builds a fuzzy comprehensive evaluation model based on Analytic Hierarchy Process (AHP) to analyze its specific business management measures in business processes. Under the mode of the shortcomings of the management of small and medium-sized e-commerce enterprises, this paper proposes solutions and improvement suggestions. In response to the problem of insufficient information security management of enterprises, enterprises should strengthen the awareness of risk prevention of information security, strengthen personnel management, and timely update information security technologies and backup data; In view of the imperfect management of human resources in this enterprise, enterprises should enhance the importance of talents, analyze the turnover rate of employees, implement a perfect retraining system, set up a complete incentive mechanism, and broaden the recommendations of multiple parties; In view of the problem of information asymmetry in the enterprise, enterprises should expand and improve the consumer's understanding channels, grasp the quality of goods, avoid the asymmetry of credit information, and improve the consumer's credit evaluation system.

## 1. Introduction

Because the e-commerce business mode is different from the traditional business mode, there are many fundamental differences between the risks faced by traditional e-commerce companies and traditional enterprises. Compared with traditional enterprises, the risks faced by e-commerce enterprises have greater uncertainty and complexity, and the relevant management measures have not fully kept pace with the development of e-commerce, and are still in the stage of continuous

exploration. Therefore, in the big environment where every e-commerce enterprise wants to stand out from the fierce market competition, the quality of enterprise management is undoubtedly a direct factor affecting the competitiveness of enterprises, which affects the survival and development of enterprises. How to strengthen the management of e-commerce enterprises has become a very practical issue.

In [1], the authors propose a new management model that enables leaders to prevent and effectively address quality/ethical issues through operational excellence and use spiral research models to develop and improve assessment procedures. Comprehensive business excellence is the new management model for excellence. This new model has three main purposes. First, it enables companies to responsibly deliver innovative and competitive products defined and measured by ten CSFs. Second, it enables management to prevent costly quality/ethical issues by developing a unified, responsible planning, execution and quality strategy. Most importantly, it provides a platform for missing opportunities that allow individuals to grow and develop as they add meaningful personal, professional and social value. In [2], the authors discuss the possibility of designing industry-oriented courses in business management and information technology, including industry and research experience components. This student-centered curriculum improvement model will take care of the rapid growth of these two areas and the requirements for updating the curriculum based on current developments. The author discusses the opportunities and challenges of student-centered curriculum design and development in business management disciplines and information technology disciplines, and lists the strengths, constraints, and shortcomings of such systems. In [3], the author confirms the essence of human resources, that is, the total number of employees of the company. These employees are self-accumulating carriers of human assets that are inseparable from themselves, such as physical ability, education, experience and expertise, and related use. The elements of the accounting methodology laid the foundation for the presentation of human assets as a company's right to use it as part of an intangible asset. Implementing the proposed methodology based on understanding the accounting nature of human resources, based on the recognition of the company's use of employee-owned human assets, creates a premise for displaying information about human resources in the company's accounts and reporting systems that meet value needs. In [4], the author studied the use of some historical cases to help students understand some of the management issues faced by multinational corporations. The author reviews the application of history in business and management discipline research and then studies how to construct historical examples related to the history of Hong Kong colonial entrepreneurs for teaching. Then, the article examines the impact of using this historical case on understanding and satisfying teaching, and discusses the ways in which historical cases can be constructed. In the end, it was found that the whole student likes to learn through historical cases. This is the first paper to discuss how to build a multinational enterprise history case for international management teaching. In [5], the author examines the role of enterprise systems (ES) in UK management accounting practices (MAP) through a relatively negligent description of business process management (BPM) and reveals the different ESs to cope with BPM differences. The authors found that the analytics framework can be used as the basis for building the best solution, and that the ES approach can take advantage of the potential of future ES applications and avoid the organization's implementation difficulties. The study helps to address existing deficiencies in ES-MAP interactions by expanding the scope of the image and presenting an analytical framework. The latter enhances our understanding by focusing on the properties of ES-BPM-MAP, which identifies informal changes in the use of MAP.

In [6], the author established a game model under unconstrained market conditions to illustrate the basic evolution of the e-commerce payment method market. The conclusion is that under the unrestricted market conditions, the establishment of e-commerce payment market is not

standardized, which indicates that the introduction of third-party payment is of great significance for establishing a standardized e-commerce transaction market. The authors analyze model parameters to illustrate strategies and methods for achieving good market behavior, and improve the model by increasing legal oversight and penalties for illegal firms and other market constraints. It turns out that market regulation is very important for creating a good market environment and exit barriers. In [7], the author explored the changes in total factor productivity (TFP) of e-commerce companies and their influencing factors using the DEA Malmquist model. Studies have shown that the growth of total factor productivity is usually attributed to a combination of technological advancement, efficiency improvement, and scale expansion, but technological change plays a more important role in driving changes in total factor productivity (TFP). The return of total factor productivity of e-commerce companies is more due to the combination of efficiency changes, technological changes and scale changes. These findings inspire managers to correctly handle the relationship between technology, scale and efficiency, and should increase total factor productivity (TFP) based on different e-commerce models. In [8], the authors found that the rapid growth of e-commerce has changed the ability of jurisdictions to enforce commodity taxes on a destination basis. The author analyzes the recent EU reforms on value-added tax for e-commerce and examines various policy options in the United States, including maintaining the status quo, changing contact rules, states that use information reporting, and countries that require companies to pay taxes regardless of entity. Reform and link them to recent European reforms. Based on the author's analysis and recent EU experience, the article concludes that reform at the national level appears to be an important next step in the implementation of commodity taxes at US destinations. In [9], the author proposes an integrated framework for e-commerce performance that can organize complex literature at the same time. The study found that e-commerce performance shows three key dimensions, and is influenced by the market e-commerce environment, the organization's e-commerce environment, and the dynamic and interactive relationship between the two. The proposed framework provides industry practitioners with an opportunity to understand the determinants and can be updated based on current e-commerce performance practices. The findings of this study further point the practitioners to the direction that can lead to better e-commerce performance. This study establishes a cohesive framework for e-commerce performance that addresses the current fragmented understanding of e-commerce performance in hotels and tourism. In [10], the authors summarize experiences from multiple literature domains to examine the relationship between electronic satisfaction and multiple types of loyalty performance. The data shows that electronic satisfaction strongly influence attitude loyalty, behavioral loyalty and comprehensive loyalty. The research results can serve as a data foundation to guide theoretical and empirical research on the relationship between satisfaction and loyalty in the field of e-commerce in the future, and provide support for practical development. In addition, the author provides guidance for enterprise management in e-commerce by demonstrating e-satisfaction, enhancing brand satisfaction, and understanding the industry structure to increase revenue for companies.

In order to solve many problems exposed in the rapid development of e-commerce, this paper first studies and analyzes small and medium-sized e-commerce enterprises, and builds a fuzzy comprehensive evaluation model based on AHP, and analyzes the specific enterprises in the business process. Under the mode of the shortcomings of the management of small and medium-sized e-commerce enterprises, this paper proposes solutions and improvement suggestions.

## 2. Method

### 2.1. E-commerce Related Concepts

E-commerce has different definitions in various countries and fields, but in general, e-commerce

can be divided into broad and narrow sense. The term e-commerce in a broad sense comes from "Electronic Business", which means that by using various electronic tools, the business processes between enterprises are electronicized, and the company's own electronic management system is used to improve the efficiency of all aspects of production and circulation. The narrow e-commerce "Electronic Commerce", referred to as EC, refers to the global trade through the use of electronic tools such as telephone, fax, computer network, etc., including suppliers of goods, consumers, advertisers, etc. Generally referred to as e-commerce refers to e-commerce in the narrow sense.

B2C E-Commerce:

The full name of B2C in English is "Business-to-Customer". Translating into Chinese is business-to-guest, that is, business-to-individual, so B2C e-commerce model is carried out by enterprises for personal use, through computer networks, and by means of electronic data. In this model, companies use the Internet to conduct online sales, which are directly to the consumer to carry out commercial activities, which are generally based on the retail industry, so it is also called online sales or electronic retail. The B2C e-commerce website carries out commercial activities, and its composition consists of three parts: one, providing consumers with shopping malls that can purchase goods online; second, after consumers purchase the goods, they are responsible for customer identification and loan settlement. Third, after the consumer completes the payment of the goods, there is a logistics distribution system responsible for distributing the goods purchased by the customer and sending them to the consumers.

Risk Management:

Risk Management refers to the management process of how a company or project can minimize the adverse effects of risks in an environment that is definitely at risk. Effective risk management of various risks is conducive to reducing the chances of decision-making mistakes in the process of self-operation, enabling enterprises to make correct decisions, protect the security and integrity of corporate assets, and relatively increase the added value of enterprises themselves. These are of great significance to modern enterprises. Risk management first needs to identify risks, determine what types of risks may have adverse effects on the production and operation process, quantify the possibility of occurrence of risks and the adverse consequences on the enterprises after the risks occur, which is most likely to occur. After identifying risks, secondly, we must focus on risk control, take proactive measures to control risks, and establish a variety of contingency plans to fully prepare for risks, reduce the probability of losses or reduce the impact of risks. Finally, risk management must learn to avoid risks. If the established goals are not changed, the path of the implementation plan can be changed, and certain specific risk factors can be fundamentally eliminated, such as improving the employee incentive system and training programs.

## 2.2. Theoretical Basis of Enterprise Management

(1) Information Asymmetry Theory

As information economists gradually deepen their research on information asymmetry, they believe that due to the existence of information asymmetry, people in the process of market transactions will cause imbalances in the interests of both parties, affecting the efficiency of market allocation of resources and undermining social equity. However, information economics is only based on the analysis of existing economic phenomena. It is still in the exploratory stage on how to specifically resolve this information asymmetry. For example, the seller's information in the transaction process is always better than the buyer. There is a lot of information to be mastered. Because of this information asymmetry, the transaction relationship becomes a principal-agent relationship. The party with more information is the principal, and the person with less information is the agent. The two parties actually do nothing.

The existence of information asymmetry makes the two parties lose confidence in the transaction due to the incomplete information obtained during the transaction process. This brings the transaction cost is expensive, but solutions can be found, for example, the seller grasps the goods. Quality, not shoddy, do not waste money, do not deceive consumers, establish a good corporate brand image, long-term in the past can improve their reputation, increase buyer trust, and greatly reduce the cost of commodity transactions. People's pursuit of the brand is because the brand provides more information than the general product, is synonymous with product assurance, and is more acceptable to consumers.

(2) Stakeholder theory

According to the theory, stakeholders are individuals or groups that are not only related to business operations, but also have a stake in business results. It includes not only trading partners of corporate shareholders, corporate creditors, consumers and suppliers of enterprises, but also pressure groups such as local residents, local communities, local trade unions, social media, national governments and environmentalism, and even natural some objects such as the environment that can be affected by corporate activities. Some of these stakeholders share risks for the company's business operations, some pay for the company's business practices, and others monitor and restrict the company. Each stakeholder wants the company to prioritize itself when formulating and implementing strategic decisions, so as to achieve its own interests. However, there are often big differences between the interests of these stakeholders, and even contradictions, so that companies must make trade-offs between the parties, and based on their own dependence on different stakeholders. However, as people pay attention to the social effects of corporate behavior, they require that the management of the enterprise must comprehensively consider the interests of all parties in the governance of the enterprise, taking into account the interests of all parties.

Compared with the traditional "shareholder priority" governance model, the theory should pursue the interests of the stakeholders as a whole, as well as the e-commerce enterprises under the B2C model, not only considering the interests of the shareholders themselves, but also need to take into account the interests of stakeholders, such as: consumers who buy enterprise goods, business partners, and so on.

## 2.3. Fuzzy Evaluation Model Based on E-commerce Enterprise Management

This paper adopts a combination of qualitative and quantitative, and a higher degree of comprehensive evaluation method - fuzzy comprehensive evaluation method. The method uses the fuzzy membership degree theory to rationalize the qualitative indicators, which can solve the problem of quantitative conversion of qualitative indicators in the evaluation system. Using fuzzy mathematics theory of comprehensive evaluation, the first-level evaluation index (criteria level) is established from three aspects: business process, upper and lower node enterprise relationship, innovation and learning ability, and is subdivided into 12 secondary evaluation indicators (measurement level).

After the evaluation index is determined, an evaluation method can be selected to evaluate the application performance of the three models. The available evaluation methods include fuzzy comprehensive evaluation method, analytic hierarchy process (AHP), DEA analysis method, ideal solution approximation method, etc. Considering that E-SCM is affected by many factors, it is advisable to adopt a multi-level fuzzy comprehensive evaluation method. On the method of determining the weight, the AHP method is selected to determine the index weight.

The AHP method is used to calculate the index weight coefficient. In fact, based on the establishment of an ordered index system, the indicators in the system are judged by the pairwise comparison between the indicators, and the results are used to synthesize. Specific steps are as

follows:

1. Establish indicator set

The model to be built in this paper contains a target layer indicator U, three first-level indicators Ui (i=1~3), and 12 second-level indicators Uij. The details are as follows: target level U=(U1, U2, U3), where U1=(U11, U12, U13, U14), U2=(U21, U22, U23, U24), U3=(U31, U32, U33, U34).

2. Determining indicator weights

Let the target-level weight be F=(F1, F2, F3), which represents the weight of the first-level indicators U1, U2, and U3 to the target level. Let the first-level index weights be D1=(D11, D12, D13, D14), D2=(D21, D22, D23, D24), and D3=(D31, D32, D33, D34). Represents the weight of 12 secondary indicators against U1, U2, U3, and $\sum_{j=1}^{n} Dij = 1, \sum_{i=1}^{3} Fi = 1, i = (1, 2, 3)$.

3. Structural judgment matrix

In order to reduce the influence of subjective factors, the relative importance of each index belonging to the same indicator is first compared to form a judgment matrix. Generally, the 1-9 scale method is applied, and the indicators are compared by the experts repeatedly, and the importance of the index is assigned. The judgment matrix B=(bxy)t*t, t is an index relative to a certain index of the previous layer. The number of layer indicators, bxy is the comparison value of the X-th indicator and the Y-th indicator in the indicator layer.

Establish a rating level that evaluates the competitive advantages of the three models. A collection of reviews is a collection of possible outcomes for various indicators, and is a standard for experts to evaluate and rank. According to the purpose of the enterprise supply chain comprehensive management ability evaluation, the establishment of the comment set Y=(strong, strong, general, poor).

4. Establish fuzzy evaluation set for U1, U2, U3, U4

(1) Establish an indicator evaluation matrix for Ui

The membership degree of the appraisal index level obtained by using the expert group opinion (that is, the proportion of experts who play " √ " in each evaluation level to the total number of the entire expert group signed) constitutes the membership degree matrix, and 10 experts are found here. Ri = {ri11, ri12,...ri1m}.

$$
R = \begin{pmatrix} Ril \\ Ri2 \\ M \\ Rin \end{pmatrix} = \begin{pmatrix} rin1 & ril2 & \dots & rilm \\ riz1 & ri22 & \dots & ri2m \\ & & \dots & \\ & & & \dots \\ rin1 & rin2 & \dots & rinm \end{pmatrix} \tag{1}
$$

Where rijh=Vijh/V.

Vijh is the number of experts who have " √ " the Uij indicator on the h-th comment, V is the number of experts, and rijh is the expert's probability of commenting on the rij indicator. i is the number of indicators for each level, n is the number of secondary indicators corresponding to Ui, and m is the number of comments in the commentary.

(2) Finding the fuzzy comprehensive evaluation set of the first-level indicator layer G

Gi=Ci*Ri (* stands for ordinary matrix multiplication). Gi = {gi1, gi2,...gim}.

(3) Calculate the evaluation fuzzy set of the evaluation object E

The first-level indicator weight set F is a fuzzy composite of the comment matrix G composed of the comment sets of the first-level indicators. E=F*Gi. Finally, the normalization of E can be used

to fuzzyly evaluate the advantages of the three systems.

## 3. Experiment

### 3.1. Data Source

This paper studies the capital management, accounting information disclosure and financial organization of SMEs as the entry point. All the research data needs to be obtained through questionnaire survey. According to the above scale design, this paper selects 12 indicators to measure the three sub-models of enterprise management, and selects the basic information of SME managers in the e-commerce environment as a reference indicator for the respondents of the research questionnaire. Features are used for statistical analysis.

The questionnaire consists of two parts. The first part is the investigation of the capital management, accounting information disclosure and financial organization's influencing factors indicators of the SMEs in the e-commerce environment. They all use closed-ended items, which can relatively understand the SMEs. The status quo of management mode and its influencing factors. The second part is about the basic information about the respondents, to deepen the understanding of the sample. The following table shows the 12 indicator parameters selected in this paper.

*Table 1. Screening indicators for influencing factors of financial management mode of SMEs*

| Variable | Variable description |
|---|---|
| U11 | Age |
| U12 | Education |
| U13 | Position |
| U21 | Existing project |
| U22 | New project |
| U23 | Weakening investment projects |
| U31 | Financial risk |
| U32 | Financial Information |
| U33 | Management status |
| U41 | Employee participation in decision making |
| U42 | Power allocation of each department |
| U43 | Independent decision-making by each department |

The questionnaire adopts the scale of 1-9, with 1 being the lowest and 9 being the highest. All the values in the questionnaire are based on the values answered by the respondents, and the data collected is as reliable as possible. A total of 200 questionnaires were sent out for a month-long survey, of which 180 were valid questionnaires, accounting for 90.00% of the total number of questionnaires.

### 3.2. Evaluation Indicators

1. Calculate the product of each row of the judgment matrix Mx:

$$M_x = \prod_{y=1}^{t} b_{xy} \quad (x = 1, 2 \ldots t) \tag{2}$$

2. Calculate the t-th root of the Mx WX:

$$\overline{W}_X = \sqrt[t]{M_X} \tag{3}$$

3. Normalize the square root vector:

$$W_X = \frac{\overline{W_x}}{\sum_{x=1}^{t}\overline{W_x}}$$

(4)

Get the sort weight vector: $W = (W_1, W_2, \ldots, W_t)$.

4. Calculate the maximum eigenvalue of the judgment matrix λmax

$$\lambda max = \frac{1}{t}\sum_{x=1}^{t}\frac{(BW)x}{Wx}$$

(5)

Where: (BW)x is the xth element of the vector BW.

5. Consistency test

In order to ensure the reasonableness of the weights obtained, it is usually necessary to check the consistency of each judgment matrix to see if it has satisfactory consistency. Otherwise, the judgment matrix should be modified until the consistency requirement is met. Calculated as follows:

$$CR = \frac{\lambda_{max} - t}{(t-1)RI} < 0.1$$

(6)

Where: RI - average random consistency indicator. Relative to the 1-9 order judgment matrix, the values of the corresponding RI are shown in Table 2.

*Table 2. RI values of the 1-9 order judgment matrix*

| T | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| RI | 0 | 0 | 0.57 | 0.96 | 1.17 | 1.31 | 1.38 | 1.45 | 1.51 |

## 4. Results and Discussions

### 4.1. Optimization of Procurement and Sales Management Mode for Small and Medium-sized E-commerce Enterprises

The risk management of small and medium-sized e-commerce enterprises in the procurement and sales links is mainly divided into the following aspects: supplier selection, procurement authorization management and payment risk management. The chart below shows the statistics of the popularity of e-commerce users and e-commerce in China in 2009-2018.
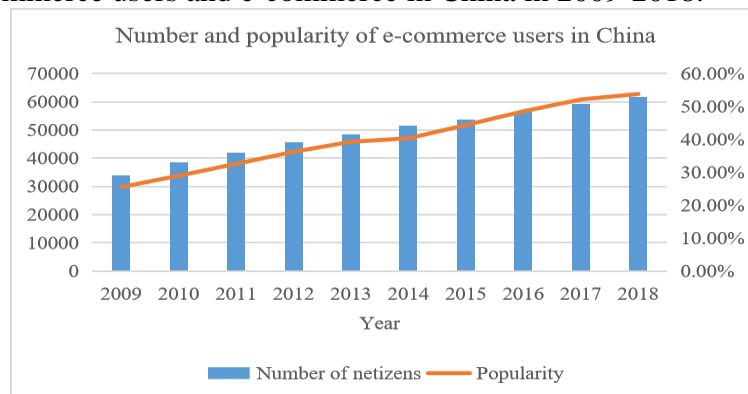


*Figure 1. China's e-commerce users and e-commerce penetration in 2009-2018*

In terms of supplier selection. First of all, small and medium-sized enterprises will require a procurement plan to be procured before the purchase, and all the potential suppliers will be publicly queried. In order to ensure the reasonableness of the purchase channels and the transparency of the procurement information, all the inquiry information will be in the period. It is recorded and retained, and then the product manager reports to the relevant responsible person for approval. After the multi-party comparison, the responsible person selects the appropriate supplier while ensuring his own profit margin. In order to avoid the risk of fraud of the product manager, the enrollment and procurement information is also entered by the management information department staff. In addition, the internal audit department of small and medium-sized enterprises will also require product managers and responsible persons to provide relevant information and procurement channels for suppliers, conduct occasional and post-event inspections, and blame the problems found.

When the goods are put into storage, the product manager first submits the purchase order in the enterprise's system. The purchase order indicates the specific content of the purchase and the necessary relevant notes. When the purchase order is received in multiples, the supplier will deliver the goods according to the contents of the purchase order when receiving the purchase order. After being sent to the designated warehouse, the warehouse management personnel also check the goods according to the purchase order. After ensuring the correctness, the warehouse management personnel must not only confirm in the system, but also sign and confirm with the supplier on the list to ensure that the information in the system is consistent with the real thing. In this process, the relative accounts payable voucher is automatically generated in the enterprise information system, which is checked by the financial personnel, and then paid online or by check. Every day, the company will generate a corresponding payment summary form, which will be reviewed by the chief financial officer. At the end of the month, the reconciliation will be carried out, and the designated person will be authorized to check the evidence.
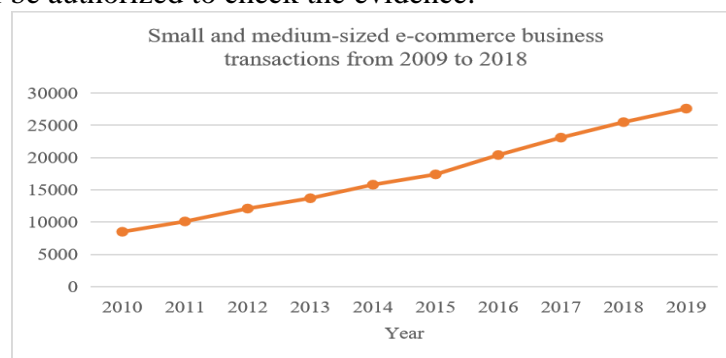


*Figure 2. Small and medium-sized enterprises' e-commerce transaction volume in 2009-2018*

Figure 2 shows the e-commerce transactions of small and medium-sized enterprises in the decade of 2009-2018. As can be seen from the figure, in the e-commerce industry, product prices change rapidly. In order to avoid risks to business operations, small and medium-sized enterprises are given the opportunity to win price wars. The scope of this pricing is set by the financial personnel in the system after analysis according to relevant data. If the price set by the product manager exceeds this range, it cannot be modified. It is necessary to add the remark information and submit it to the person in charge of the business department. After the person approves the approval, the product manager will receive feedback and the online price will be modified simultaneously. For the risk management of sales receipts, it mainly includes the payment of goods during the processing of cash on delivery, as well as the fraud of financial personnel.

## 4.2. Optimization of Human Resource Management Mode for Small and Medium-sized E-commerce Enterprises

In order to better achieve their own development goals, small and medium-sized enterprises have formulated and implemented a number of talent projects around the established goals, and implemented internal and external strategies. Figure 3 shows the talent allocation diagram for small and medium-sized enterprises, and Figure 4 shows the reasons for the limited management of enterprises through questionnaires.
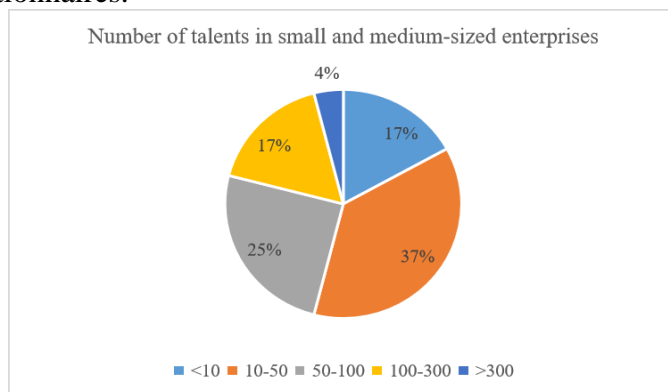


*Figure 3. Talent allocation for small and medium-sized enterprises*

It can be seen from the figure that small and medium-sized enterprises lack innovation in enterprise management, and the most important reason is the lack of professional talents in e-commerce. In terms of forward-looking talent pools, small and medium-sized enterprises first launched the Guan Peisheng project, which selected outstanding graduates from the school's freshmen and trained them. In order to let Guan Peisheng have a more comprehensive understanding of the operation of the company, Guan Peisheng needs to be rotated for 6 to 8 months after entering the enterprise. In addition to participating in some core positions that must be rotated, he can choose to go. In the rotation department, the general training period is 3 to 4 years. At the end of the training, the assessment will pass and will gradually move into the important management positions and strategic projects of the enterprise. In addition, in order to cultivate international talents and reserve fresh blood of internationalization, small and medium-sized enterprises have also launched the International Management Program, which is mainly for talent recruitment in top international business schools, targeting MBA graduates. After entering the enterprise, the rotation of the ten-month core system will be carried out, and then one-on-one coaching will be carried out by senior leaders of the company to reserve and train a group of excellent managers.
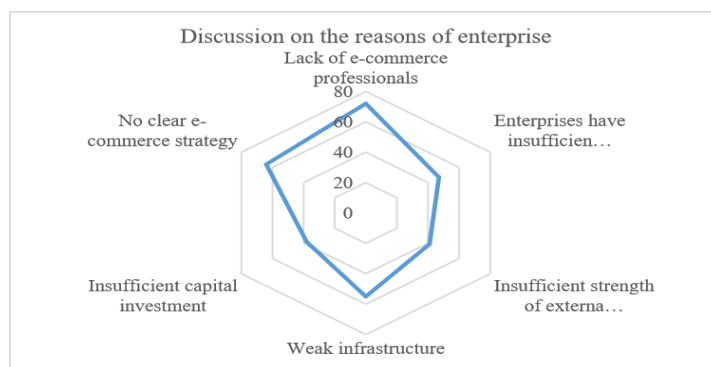


*Figure 4. Discussion on the reasons of the enterprise*

Small and medium-sized enterprises have a set of performance appraisal standards that are in line with their own development, and are closely related to the remuneration of employees. The results of the performance appraisal are also small and medium-sized enterprises to judge whether to terminate the labor contract with the employees or its promotion is an important basis. For the dismissal of employees, SMEs also have a complete mechanism and dismissal process to indicate the circumstances under which employees will be dismissed. For small and medium-sized enterprises, employees who fail to pass the assessment will be given secondary training or directly terminate the labor contract according to their reasons for non-qualification. If the employees need to be trained twice, the relevant personnel of the human resources department will conduct secondary training and pass the assessment. After re-arranging the post, if the second training still fails to pass the appraisers, the small and medium-sized enterprises will terminate the labor relationship with them and request the handover work before leaving the job.

### 4.3. Optimization of Information System Management Mode for Small and Medium-sized E-commerce Enterprises

Figure 5 is a survey of whether small or medium-sized enterprises maintain web pages. As a small and medium-sized e-commerce industry, small and medium-sized e-commerce companies are different from traditional enterprise sales processes. All aspects of the transaction process are carried out online, including the company's own operations, as well as small and medium-sized e-commerce. The risk control and management of all links in the business process are closely related to the information system. Small and medium-sized e-commerce enterprises have adopted the establishment of security departments, security product matrix building and internal system management in the risk prevention and management of information systems.
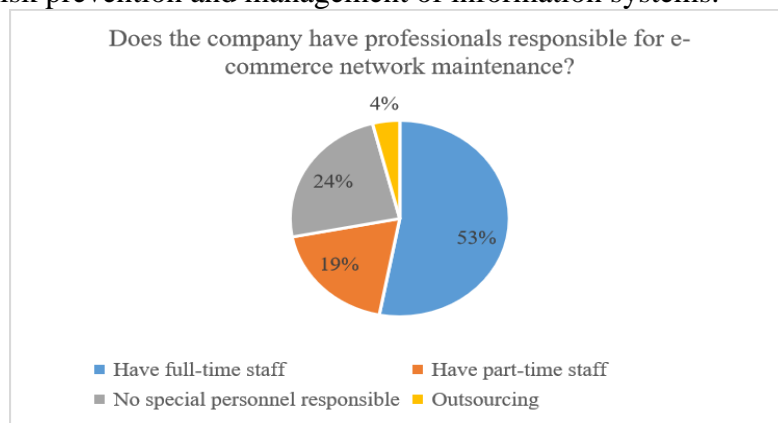


*Figure 5. Does the company have someone responsible for the maintenance of the website or webpage?*

Figure 6 is a survey of why companies do not hire full-time staff to maintain e-commerce pages, but instead contract them to outside companies. In the process of information management, small and medium-sized enterprises have not updated their information system security systems in a timely manner. Because the network environment is complex and changeable, the old information security system may be cracked or may not be able to adapt and to prevent the invasion of network hackers and new computer viruses.

In terms of system permissions, each employee of a small and medium-sized e-commerce enterprise has its own unique job number, which is also the account that the employee logs into the system. The password is set by the employee himself. No one knows except the employee himself. Therefore, if a password leak occurs and causes damage to the company, the employee is

responsible for it. In addition, after an employee logs into the system, the permissions are different depending on the category and level of his or her position. Every time an employee's operation record is recorded, the background will be recorded and saved to clarify the responsibility. When an employee leaves the company, the personnel department will cancel the account for it. In terms of information storage and delivery, the daily work of small and medium-sized e-commerce enterprises mostly communicates through the network. Therefore, in order to ensure the information security inside the enterprise, small and medium-sized e-commerce enterprises have their own dedicated chat software, which can be downloaded on mobile phones. It is convenient to check at any time. This information is not the personal privacy of the employee. It will be stored in the system, and the back office of the enterprise can export the chat record after approval. In terms of information risk management, in order to prevent system administrators from abusing their powers and changing the authority of others, small and medium-sized e-commerce enterprises will regularly review employee rights. In addition, the transactions of small and medium-sized e-commerce enterprises are established, operated and maintained on the computer platform. A large amount of data entry is not in the enterprise. Therefore, in order to prevent data errors and frauds of internal personnel, small and medium-sized e-commerce enterprises have information. Implement dynamic monitoring, set up rules and regulations, require data backup, avoid data loss, and cause risks to the enterprise.
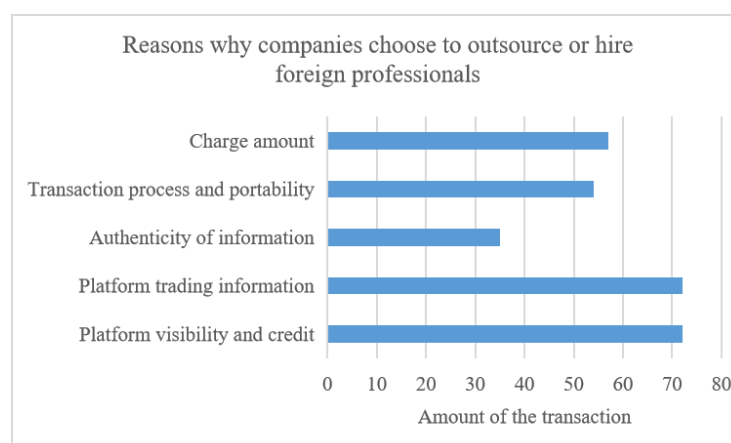


*Figure 6. Main factors to consider when choosing a third-party e-commerce platform*

## 5. Conclusion

This paper first studies and analyzes small and medium-sized e-commerce enterprises, analyzes their specific enterprise management measures in business processes, and finds that there are some shortcomings in enterprise management. The inadequacies are: insufficient information security management, imperfect human resource management, and still exist. There are shortcomings in information asymmetry and logistics. Under the mode of the shortcomings of the management of small and medium-sized e-commerce enterprises, this paper proposes solutions and improvement suggestions. In view of the insufficient information security management of enterprises, enterprises should strengthen the risk prevention awareness of information security, strengthen personnel management, update information security technology and backup data in a timely manner; in view of the imperfect human resource management of enterprises, enterprises should enhance the importance of talents and analyze employees. The turnover rate, the implementation of the perfect retraining system, the establishment of a complete incentive mechanism, and the multi-party recommendations; for the company still has information asymmetry, enterprises should expand and improve the consumer's understanding channels, and grasp the quality of goods to avoid asymmetry

of credit information, Improve the consumer's credit evaluation system.

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## Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

## Conflict of Interest

The author states that this article has no conflict of interest.

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