

Design and Optimization of Accounting Computerization System for Small Firms

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Abstract. With the development of science and technology, informationization and networking has become rather common in economic development. Information technology has turned to an important force that drives the productivity in global economy. Although Chinese small firms are not largely scaled, they are quite innovative and energetic and account for a considerable share of the market. However, due to the limited internally generated fund, a lot of small firms can't afford large financial software. As a result, they are often strongly willed but weakly powered against the rapid rate of economic development. In accordance with their own characteristics and scale, this paper designs a special accounting computerization system that is easy to learn and convenient to operate. In order to meet the requirements of managers of small firms, this system is designed based on the scale of their day-to-day business transaction and other properties to replace the traditional manual accounting. With the item of basic user information, accounting subject and accounting account, it can significantly improve small firms' market competitiveness by guaranteeing the efficiency and accuracy of financial accounting.

Introduction

Although Chinese small firms are not largely scaled, they are quite innovative and energetic and account for a considerable share of the market. Small firms are involved in a wide range of business and contact with many strongly competitive corporations of commodity retail industry and manufacturing. Constrained by industrial factors, many small firms have diversified requirements for the accounting computerization system. Due to the limited internally generated fund, a lot of small firms choose low-price or free downloadable financial software. However, such financial software has unguaranteed security, and the system settings often disaccord with the practical business of the firms. Besides, since the financial software is applied mechanically, it has the disadvantage of low flexibility and so on. Therefore, it's extremely urgent to develop specially-designed financial software easy to learn and operate based on the characteristics and scale of small firms of China.

Design of Accounting Computerization System

Overall System Framework Design

The accounting computerization system discussed and designed specially by this paper for small firms meets the requirements of managers of small firms. Based on the scale of their day-to-day business transaction and other properties, it can replace the traditional manual accounting with the set item of basic user information, accounting subject and accounting account. It can significantly improve small firms' market competitiveness by guaranteeing the efficiency and accuracy of financial accounting. Fig.1, Fig.2 and Fig. 3 show the overall system structural design, business operation flow under the system and the flow of system data processing (for accountant), respectively.

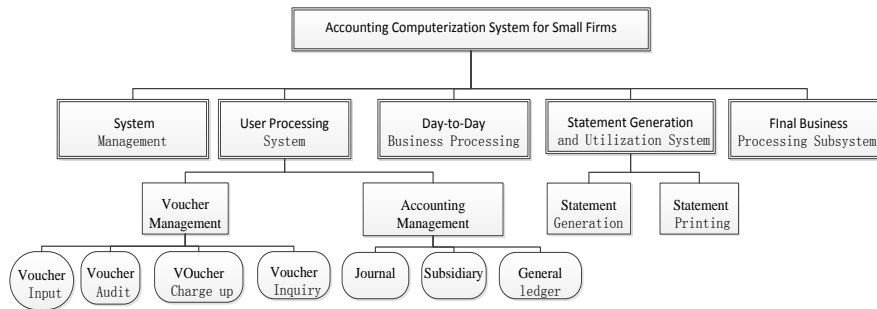


Fig. 1 Overall system structure

Notes for the data flow:

In normal production and operation, small firms can get original vouchers obtained from outside and developed inside. These vouchers should be further classified and kept.

Professional personnel should strictly audit all kinds of vouchers obtained by the small firm and further classify vouchers according with national laws and regulations. Vouchers with errors should be modified immediately and examined again after the modification. Vouchers without any error should be kept in the credential vault.

Other account books and related subsidiary accounts generated in the production and operation should be registered regularly and the balance statements of various subjects should be adjusted.

At last, small firms' accounting statement should be generated based on all vouchers and the balance statements of various subjects.

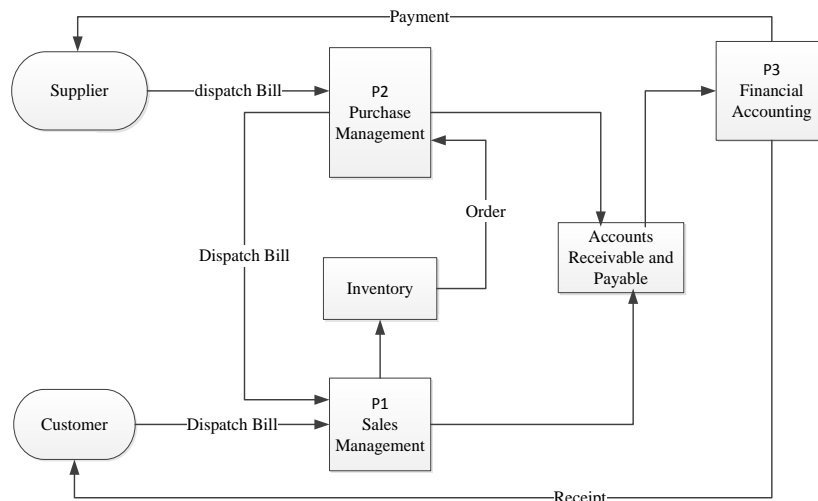


Fig.2 Business operation flow under the system

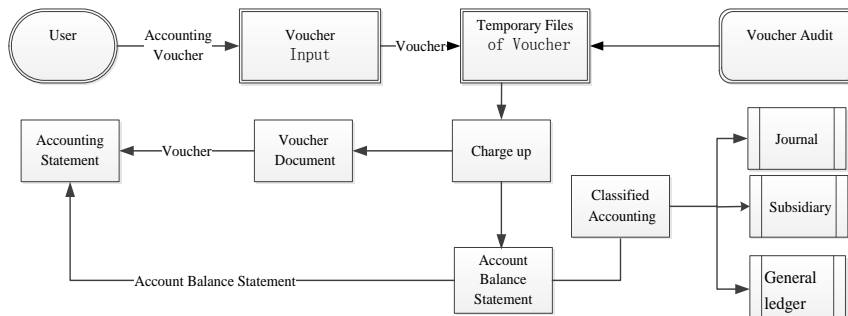


Fig.3 The flow of system data processing (for accountant)

The basic voucher processing flow under this system is as shown in Fig.4.

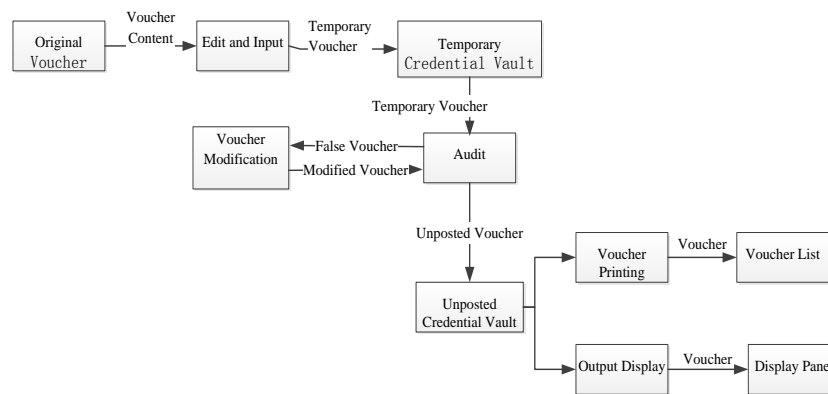


Fig.4 Basic voucher processing flow under this system

Functional module design

In accordance with the business flow and specific financial requirements, the software designed consists of several functional modules, including system management, day-to-day business processing system, user processing system, statement generation and utilization system and final business processing subsystem. To be specific:

System management: The small firm should build up an overall system management mechanism based on their practical business. First all of, the name, route, language and the initial time of application of the corporate account suit should be determined; secondly, the registered name, registered address, legal person, zip code, contact number, fax, e-mail, duty paragraph, corporate logo and other related items should be input; thirdly, the accounting information of the firm should be input, including the code of the standard money, name of the standard money, account suit director, corporate property and corporate type, etc. fourthly, other information of the small firm should be input, including the specific classification of objects of business transaction, breakdown of goods kept in storage and business accounting in other currencies. The requirements for items include: 1. the item name should be set in figures and Chinese characters; there shouldn't be any wrongly written character in the subject name, nor should it be unspecified; 2. the direction of the balance should be set in accordance with the property with the accounting subject of the small firm; 3. classification items should be set based on the features of business run by the small firm so as to conduct the assistant accounting of business; 4. levels and bit lengths of different codes of the firm's key transaction objects should be specified precisely.

User processing system: the small firm can assign the rights of business processing in accordance with the allocation of internal financial personnel, to be specific: Account suit director: the account suit director should be assumed by the executive of the small firm. He/she should make sure that the accounting software can be compatible with the computer and operate normally. The account suit director should take full responsibility from data audit to the generation of the final statement. Software operation: software operator should be eligible for the occupation of accounting and receive further education every year to be up to the standard. The software operator should screen and input data generated in the day-to-day business transaction of the small firm and audit the data accuracy. Data should be stored after the input. The operator must strictly follow the professional ethics and back up data timely while maintaining the confidentiality. Data generated in normal business operated by the small firm should be audited and put in the system after the audit; the internal account books should be registered and the finally generated financial statement should be audited. Software maintenance and update personnel should be proficient in computer operation skills and basic financial knowledge and able to guarantee the normal operation of the firm's financial software. Audit and review: computer supervision should be conducted based on the compatibility with the accounting software; accountants must strictly follow the professional ethics and never play favouritism or commit irregularities with relevant accounting knowledge; they should review the perfection degree of the internal management system. The job of audit and review should be assumed by personnel proficient in specialized accounting and audit knowledge. Financial analysis: in order to analyse the generated intra-system data of the small firm, financial

analysts must be professional in accounting and skilled in computer operation. They are mainly responsible for analysing the internal data of the accounting computerization system and the operation condition of the firm, so that problems existing in the firm's management can be found timely and solved effectively. File keeping: While strictly following the professional ethics of accounting, accountants must keep all kinds of corporate data, system subpanel, accounting vouchers, accounting books, financial statements and other accounting data that are required to be stored and maintain the confidentiality.

Day-to-day business processing system: this system can be subdivided into voucher utilization and management module and the accounting management module. The small firm can inquire and output data as they need.

Statement generation and utilization system: financial statements can be produced automatically with the system module. The small firm can inquire and print data as required by the regulation of management.

Final business processing subsystem: the account suit director should check and settle accounts related to all kinds of business.

Database design

The design of the system database is mainly the design of the data in the database list of E-R diagram and system design. Database table mainly includes: the accounting course, course nature, beginning balance sheet, voucher input and voucher borrowing comprehensive list. The relationship between tables is as shown in Fig.5.

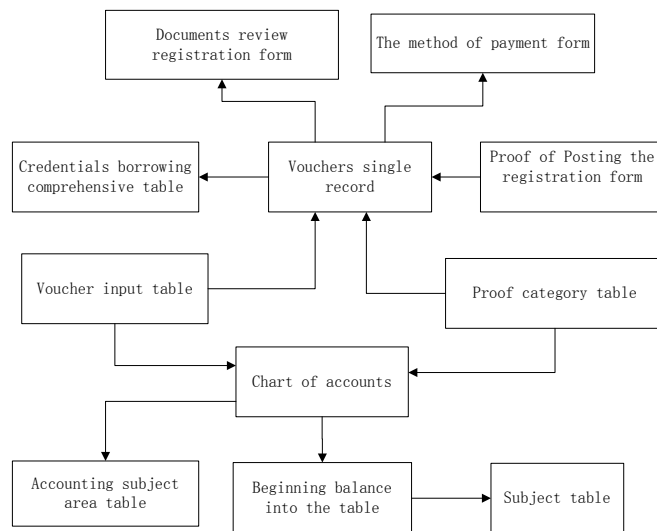


Fig.5 Data table diagram

E-R diagram is a model of information system diagram which can reflect the relationships between entities in the system. The E-R diagram of this system design as shown in Fig.6.

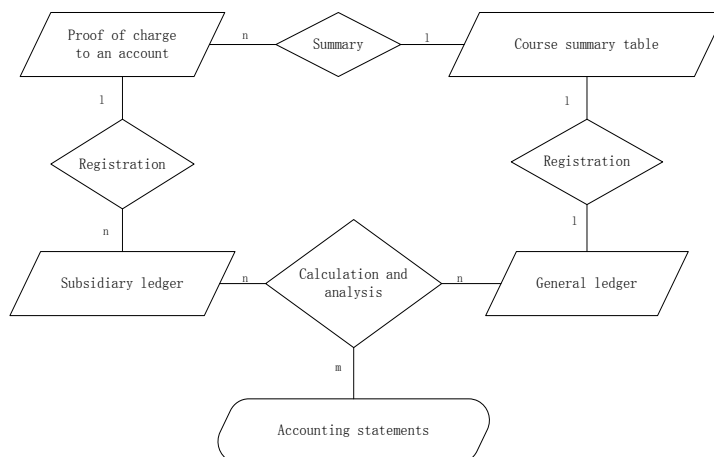


Fig.6 The system of E-R

Conclusion

Small firms have been playing a very important role in the development of Chinese economy. The accounting computerization system designed by this paper based on the characteristics of small firms is simply structured and quite practical. Design of the whole process of this system, from the basic collection of daily economic data, voucher filling and input of initial balance to the application of accounting methods and generation of financial statements, is consistent with the practical condition of small firms. The application of this system will not only realize the intellectualization and scientization for small firms in daily financial management, but will also promote their market competitiveness by significantly saving their manpower and financial resources.

Acknowledgements

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