

# The role of the performance of accounting information systems in meeting the expectations of the stakeholders of private companies in Zahedan city

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## Abstract

Among the most important quality factors of accounting information systems is the degree of meeting users' expectations from said systems, and accounting information systems play a significant role in providing information needed by various internal and external users. Accordingly, these systems' effectiveness depends on meeting stakeholders' expectations. and since the used accounting softwares, which are at the center of accounting information system components, have considerable differences in their structure, function, performance, and the degree of meeting users' information needs and expectations, therefore, the issue of knowing the characteristics of each of these softwares The software and the comparison and comparison of these software in meeting these expectations in the collection of companies and economic enterprises of the private sector of Zahedan city are in the focus of the goals of this research. For this purpose, the set of accounting information systems software used by the devices above were identified and listed, and in the second step, the measurement and evaluation indicators and the comparison and comparison criteria were identified, and then, from among this set of software, the ten software that are used the most have been selected and based on this set of criteria, the accounting information systems software of the subject of the study have been reviewed and ranked.

Keywords: accounting information, stakeholder expectations, accounting information systems, information systems performance

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## 1 Introduction

Many large to mid-sized companies invest a significant portion of their time, money, and efforts in information systems. Systems are a combination of hardware, software and network capacity to increase productivity and efficiency of business processes. Reports based on accounting information generated through the organisation's accounting information system are vital for effective strategic decisions. The functional characteristics of the accounting information

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system affect the quality of accounting information reports [16, 19]. If an organisation can continuously analyse and evaluate high-quality accounting information for its strategic decisions, it can create a competitive advantage for itself. The organisational benefits obtained by investing in information technology are often not easily visible due to the increase in technical, organisational, etc., complexity in today's business environment. Of course, these complications can also create new growth opportunities [15].

The collection, storage, processing and analysis of business events and accounting data, as well as the production and distribution of accounting information reports, are managed by accounting information systems. The quality of the system and the quality of information, individually and together, affect the satisfaction of users. A quality information system can meet the needs of its users well and optimise the performance of users and, accordingly, the organisation. Therefore, the organisation should support such technology and information systems as much as possible [14]. All organisations have some form of accounting information systems, and these systems also perform similar tasks for related organisations. Accordingly, this system appears to be a generic technology and therefore inappropriate to be recognised as a potential source of competitive advantage based on the resource-based view of the firm. However, the same accounting information system can also be highly specific and customised to meet different organisational needs or provide complex information for decision-making [16]. When the accounting information system works well, it provides a source of quality information for the business activity of an organisation, which leads to the growth and efficiency of a business's performance [6, 10].

The importance of stakeholders in accounting has been greatly emphasised, especially stakeholders who have valuable knowledge for the company. Based on the information that the company provides to the stakeholders in the accounting process, they decide to provide their knowledge, resources and work to the company or not. Also, the participation of stakeholders in the accounting information system and the reporting process enables organisations to identify the concerns, perceptions, needs and material expectations of the stakeholders. In this regard, Feijoo et al. [8] recommend that the opinions of different stakeholders be taken into account to improve the credibility and transparency of reporting. According to the stakeholder theory, managers are expected to consider the interests of all stakeholders, but few tools have been provided for managers to realise this. In other words, the major weakness of the stakeholder theory is not providing a general criterion for weighting and balancing the interests of different groups. But the accounting process affects the interests of the stakeholders directly by measuring and prioritising them. The accounting information system is flexible and is effectively used by managers to bring together the various and incompatible interests of the stakeholders [11].

One of the ways that some IT experts recommend to the top managers of large organisations is to implement integrated information systems development projects that help to establish an integrated information system to eliminate the organisation's information problems. According to many experts, one of the major problems of businesses is the lack of information transparency and the lack of written financial reports to measure the performance and efficiency of organisations. One of the basic solutions to eliminate the mentioned problem is the existence of integrated accounting information systems in the organisation, which, in addition to eliminating the information needs of managers, employees and the community of stakeholders, contributes a lot to the stability of financial procedures [9]. Based on this, this research investigated the role of accounting information systems in meeting the expectations of the stakeholders of private companies in Zahedan city.

## 2 Theoretical foundations and research background

The lack of a formal theoretical framework to analyse and interpret the quality of accounting information and the multiplicity of criteria has confused stakeholders. On the other hand, stakeholder management can be a touchstone for identifying criteria related to the interests of stakeholders and analysing the type of tendency between them [11]. The quality of accounting information is one of the concepts of interest to different groups of stakeholders in the company. The reason for this is due to the inherent limitations in accounting measurements and the use of methods that cannot be proven in the real world. Based on this, in the first part of the common conceptual framework, the International Financial Accounting Standards Development Board expresses the need for high-quality financial reporting. The quality of information has decreased over time, and more objective measures should be used, such as to evaluate the company's performance for stakeholders [7].

The developments and changes of the current years in the field of information technology have had a very wide impact on accounting information systems. In the current competitive environment and changing business conditions, the survival and growth of organisations depend on their ability to adapt to these changes. In such a situation, accounting information systems, as the main information system, in the majority of organisations, to maintain the provision of useful information and optimal functioning to help management in decision-making, planning and control,

should have appropriate flexibility [3]. Among the main and basic systems of the management information system is the accounting information system, whose main task is to provide the information needed by different levels of managers in the fields of planning and resource control, performance evaluation and decision making. The desirability of the quality of accounting information is considered as one of the qualitative features required by users to make decisions to achieve organisational goals [13, 21]. Based on the mentioned materials, the design of accounting information systems and the problems related to it have attracted the attention of many researchers. Based on the contingency theory, accounting information systems lead to achieving optimal performance in the organization, and the role of accounting information systems is established as a dynamic link between the organization's strategies and common accounting criteria; Therefore, the characteristics of accounting information systems can affect the performance of the system based on the process-oriented model in conditions of work uncertainty [4].

Alrfai et al. [2] conducted research titled The influence of artificial intelligence on the AISs efficiency: Moderating effect of the cyber security. The community includes all Jordanian industrial companies admitted to the Amman Stock Exchange, including 55 industrial companies. Respondents include men for whom 275 questionnaires were distributed electronically, with an average of 5 questionnaires for each company among the respondents of the study, and 142 valid questionnaires were retrieved for statistical analysis. The results showed that the dimensions of artificial intelligence (ie expert systems, genetic algorithms, intelligent agents) have a significant and positive effect on the efficiency of accounting information systems in Jordanian industrial companies. But the result showed that the dimensions of the neural network as an artificial intelligence have an insignificant effect on the efficiency of accounting information systems. Also, the results showed that the effective use of cybersecurity moderates the relationship between artificial intelligence and the efficiency of accounting information systems. Considering the importance of industrial companies in Jordan, the results are useful for these companies regarding the efficiency of accounting information systems and the role of artificial intelligence applications in this efficiency. The results also showed the importance of effective application of cybersecurity in such a technological age.

Rapina et al. [17] tested and analysed the effect of personality characteristics and organisational structure on the success of accounting information systems in Indonesia. This research was conducted on 43 accounting employees of the Indonesian Children's Foundation. Data were analysed using multiple linear regression analysis using SPSS Statistics. The results of statistical tests showed that personality traits are not significant in influencing the success of accounting information systems. Meanwhile, the organisational structure affects the success of the accounting information system.

Al-Okaily et al. [1] investigated the effect of the success or effectiveness of the accounting information system, i.e. system quality, information quality, service quality, and training quality, on the organisational benefits of Jordanian companies. The statistical sample of the collected data was 117 senior managers of financial affairs in Jordanian companies. Data were analysed through Partial Least Squares-Structural Equation Modelling (PLS-SEM). The results showed that the quality of information, the quality of services and the quality of education have a positive and significant effect on organisational benefits. However, system quality has no significant effect on organisational benefits in the context of this research. Finally, the implications of these results for researchers and practitioners are discussed at the end of this article.

Gilani Niya et al. [9] required research information by interviewing 10 high-ranking managers of Iran's government organisations who have They were experts in the field of accounting and obtained their opinions with a qualitative approach. The collected data were analysed using Interpretive Structural Modelling (ISM). In this research, a comprehensive model for integrated accounting information systems was designed using interpretive structural modelling. The results of interpretative structural modelling in this research showed that the variables of improving organisational performance and reducing organisational violations have the greatest impact on the variables of information quality, service quality, education quality, increasing transparency, improving strategy, accelerating the performance of tasks and integrated accounting information systems. Also, the variable of integrated accounting information systems has the greatest influence and influence on other variables. Therefore, it can be said that the increase in the use of integrated accounting information systems in government organizations leads to the improvement of the components of information quality, service quality, education quality, increasing transparency, improving strategy and speeding up the performance of tasks, and the increase of these variables improves organizational performance and reduces organizational violations.

Hosseinzadeh et al. [11] testing the theory of stakeholder management investigated how to change the relationship between these criteria by considering the management of the interests of stakeholders as an effective factor in the governance process. The statistical sample of the research includes 163 companies listed on the Tehran Stock Exchange between 2008 and 2018. The collected data has been analysed by the method of combined data and least squares regression. The findings of the research show that there is a positive and significant relationship between the

management of the interests of the beneficiaries and the criteria related to the quality characteristics of accounting information. Also, no significant relationship was observed between the management of the interests of the beneficiaries and the criteria related to external groups. In addition, the management of the interests of the stakeholders changed the relationship between the quality criteria of accounting information in the form of convergence and divergence. Therefore, firstly, capital market supervisors, auditors and stakeholders can consider the company's attention to the management of stakeholders' interests as a positive message regarding the fair presentation of financial statements. Second, legislators should pay more attention to the criteria related to the characteristics of accounting information to enact regulations related to quality improvement from the perspective of stakeholders.

Tajveidi and Ahmadi [19] to achieve competitive advantage, the leadership ability of the chief information technology manager as an information technology management communication mechanism to help create a competitive advantage from They studied the way of improving the performance of the accounting information system of organisations. The data were collected using a questionnaire among the active employees in the field of accounting from among the companies admitted to the Tehran Stock Exchange and were analysed using the partial least squares method. The results showed that under the effective guidance and control of information technology management and by using this special mechanism, the capabilities of information technology management can improve the performance of the accounting information system and thus achieve a competitive advantage.

## 2.1 Check the market information on the market crash

Market crash period: the month in which the industry index has fallen by more than 6% or the months in which the industry index has fallen by more than 5% per month and for at least three consecutive months.

( $R_{it}$  stock return): In this research, stock return is the dependent variable. Stock return during the market crash period, which is calculated according to the price changes during the period in question and the effects of capital increase, shareholders and cash profit using the following relationship.

Market risk ( $\beta$ ): Beta of the share in the CAPM model, which is calculated from the following relationship and is an independent variable.

$$\beta = \frac{\text{Covariance of market return and stock return}}{\text{Variance of market return}} \quad (2.1)$$

Company size (SIZE) Company size is an independent variable and is the natural logarithm of the company's market value.

Book value to stock market value (BVMV): This variable is independent of book value division

Equity is obtained at the market value of the stock.

Debt-to-Equity Ratio (TDE): This independent variable by dividing the sum

Debts are obtained by the sum of equity.

Ratio of current debt to total debt (independent variable CDTD): CDTD from the division of total debts

Current is obtained by summing up all debts.

Current ratio (CR): It is an independent variable and is divided by total current assets by total liabilities

Current is obtained.

Profitability (BEP): is an independent variable and is the ratio of profit before interest and tax to is the sum total of assets.

Cash Flows per Share (CFPS): It is an independent variable from the net dividend

Operating cash flows are obtained by the number of issued shares of the company [18].

## 2.2 Integrated financial reporting regression model with profit forecast bias, profit forecast accuracy, profit due to mutual effects of bias

Information uncertainty, investor behaviour, information production, and trade restrictions. With increasing uncertainty, investors' predictions will probably be biased. Also, when investors to information, fewer companies have access. Anna's forecast is not accurate, as a result, information is incompletely processed, and they determine a point of support for themselves. Also, when restrictions on stock trading, such as (arbitrage), if there is buying and selling in the short term, the stock price awareness will decrease. The stock price awareness model 1 can be calculated as follows.

$BIAS_t^T$ : Behavioral bias in profit forecasting

$$BIAS_t^T = \frac{1}{N_t} \sum_{i=1}^{N_t} ERR_{i,t}^T \quad (2.2)$$

$ERR_i$ : Residual regression is a set of company-specific factors including dividend, risk-free return, stock market value.

$$ERR_{i,t}^T = \frac{P_{i,t} \left( -\frac{ACE_{i,t}^T}{R_{i,t}^{t+T} - 1} \right)}{P_{i,t}} \quad (2.3)$$

$ACE_i$ : dividend  $R_t^{t+T}$ : t: risk-free return,  $P_{i,t}$ : stock market value

$STD_t$ : accuracy of profit prediction.

$$STD_t^T = \sqrt{\frac{1}{N_t} \sum_{i=1}^{N_t} (ERR_{i,t}^T - BIAS_t^T)^2} \quad (2.4)$$

### 2.3 Stock price awareness

According to the research of Jiang et al. [12], to measure the awareness of the stock price in terms of the reaction rate of the stock price to the announcement of a company's profit, which is the five-day absolute cumulative abnormal return average. The date of the annual dividend announcement is defined. A stock price announcement is an inverse reaction to the stock price. The stock price awareness index shows that the higher (lower) stock price, the market reaction to the stock price, the smaller (larger) the company's profit announcement. Sometimes, stock price volatility is a function of forecasting bias and forecasting inaccuracy, when the amount of expected generalised prediction error in stock price is non-zero. Biased, biased predictions as a result of the awareness, the stock price decreases. However, a lack of prejudice means high awareness. It is not, but the inaccuracy, i.e. the standard deviation of the prediction error, is also important in informing the stock price. It decreases with the increase of prediction inaccuracy.

$RMSE_t^T$

Mutual effects of behavioral bias and profit forecasting accuracy as profit awareness.

$$STD_t^T = \sqrt{\frac{1}{N_t} \sum_{i=1}^{N_t} (ERR_{i,t}^T - BIAS_t^T)^2} \quad (2.5)$$

The regression model was used to conduct the test following the research of Wahl et al. [20]. Model number (2.6): examines the relationship between integrated reporting and profit forecasting bias.

$$BIAS_{it} = \beta_0 + \beta_1 IRQ_{it} + \beta_2 BETA_{it} + \beta_3 CF_{it} + \beta_4 EXRETURNRISK_{it} + \beta_5 LEV_{it} + \beta_6 P/S_{it} + \beta_7 PPE_{it} + \beta_8 RET_{it} + \beta_9 RISK_{it} + \beta_{10} ROE_{it} + \beta_{11} SIZE_{it} + \varepsilon_{it} \quad (2.6)$$

Model number (2.7) follows the research of Bakker et al. [5]; examines the relationship (between integrated financial reporting and the accuracy of profit forecasting).

$$STD_{it} = \beta_0 + \beta_1 IRQ_{it} + \beta_2 BETA_{it} + \beta_3 CF_{it} + \beta_4 RISK_{it} + \beta_5 LEV_{it} + \beta_6 P/S_{it} + \beta_7 PPE_{it} + \beta_8 RET_{it} + \beta_9 SIZE_{it} + \beta_{10} ROE_{it} + \varepsilon_{it} \quad (2.7)$$

Model number (2.8), following the research of Bakker et al. [5], examines the relationship (between the integrated reporter of the relationship and the awareness of profit due to the mutual effects of bias and the inaccuracy of profit forecasting).

$$RMSE_{it} = \beta_0 + \beta_1 IRQ_{it} + \beta_2 BETA_{it} + \beta_3 CF_{it} + \beta_4 EXRETURNRISK_{it} + \beta_5 LEV_{it} + \beta_6 P/S_{it} + \beta_7 PPE_{it} + \beta_8 RET_{it} + \beta_9 RISK_{it} + \beta_{10} ROE_{it} + \beta_{11} SIZE_{it} + \varepsilon_{it} \quad (2.8)$$

### 3 Research questions

The main purpose of the current research is to investigate the role of accounting information systems in meeting the expectations of the stakeholders of private companies in Zahedan city. Based on this, to achieve the mentioned goal, considering that this research is descriptive, it has no hypothesis and aims to investigate and test the relationship between the variables in the format. It is not a proposal of hypotheses, but answering the main research problem by finding answers to the key questions of this research will be done as follows:

Research questions:

1. What are the most important information systems used by private sector institutions in Zahedan city?
2. What are the most important structural features regarding the performance of accounting information systems of private sector institutions?
3. What are the main legal and contractual requirements regarding the performance of accounting information systems of private sector institutions?
4. What are the main expectations of users regarding the performance of accounting information systems of private sector institutions?
5. What are the main components and criteria for measuring and evaluating the capabilities of accounting information systems?

### 4 Research methodology

This research is categorised as descriptive and survey research according to the way of data collection. Descriptive research includes a set of methods that aim to describe the conditions or phenomena under investigation. In this research, a combination of library study methods and field data collection methods including observation, interviews, questionnaires and analytical studies have been used, so that the first part of the information required for the research, with the help of sampling from the available library information sources, including books, Magazines, articles and in the second part other functional information about accounting information systems in the temporal and spatial domain of the research statistical community with the help of interview tools and questionnaires as well as other available techniques such as examining functional and functional characteristics, data collection methods, information processing patterns, The control structures, the intelligence of the systems and the reporting quality of these systems have been compiled. Then the researcher has categorised and classified the collected information based on a logical system and subjected it to data mining and analytical review. Data collection is cross-sectional. The time domain of this research includes the financial period leading to the end of the financial year 2021. The spatial territory of this research is private sector companies and enterprises of Zahedan city.

The society investigated in this research includes the collection of private sector companies and institutions of Zahedan city that have used computer-based accounting information systems for at least one fiscal year, and includes 971 private sector companies or institutions. The researcher's information collection tool in this research, in the first part, includes all printed documents such as books, accounting magazines, newspapers, weekly, monthly, printed interviews, research papers, books of scientific conferences, printed texts indexed in databases and the Internet and intranet and any source. which can be identified in printed form, and the second part, information is gathered through the review and analysis of the functions of accounting information systems, as well as interviews with users, managers, auditors, tax auditors, and other users and beneficiaries of these systems. Is. In this research, to collect the required information, the library method was used in the theoretical basics section, and a set of specific information collection checklists was used in the field information section. Information related to theoretical foundations and research background in a library style and field information related to laws and regulations, requirements, expectations and functional features of software to identify and extract criteria and components of measurement and evaluation of computer-based accounting information systems, through checklists designed and compiled by the researcher. In this research, according to the theoretical foundations, the main problem of the research, the questions asked and consultation with professors and subject experts, a set of indicators and components were determined and defined, and based on this, the data of the case The need to research to collect the information required for this research, a special information collection checklist has been designed by the researcher, which is the main basis for the collection of research field data. The information collection checklist used in this research is a tool consisting of a set of targeted tables, which By using the expected indicators and components, the status, manner and functional characteristics of the studied subjects, including the structure of the organization, the system environment, the range of system performance, system infrastructure, system capabilities, characteristics and expectations of the users of the studied systems, compilation, organization and analyzed. The selected sample includes 147 private sector institutions and

organisations that have used computer-based accounting information systems during the research period and were among the users of the most widely used software among the institutions of the research community.

## 5 Research findings

### 5.1 Reliability (reliability) of the measurement tool

Reliability is one of the technical characteristics of the measuring instrument. The mentioned concept deals with how much the measurement tool gives the same results under the same conditions. Alpha has been calculated for the set of checklists for data collection, as described in the following table:

Table 1: Reliability of measurement tools

A set of questions	Cronbach's alpha
First checklist	%84
Second checklist	%72
Third checklist	%86
Fourth checklist	%81
Fifth checklist	%69

### 5.2 Validity of data collection tools

The validity has focused on the ability of the information gathering tool to measure the desired characteristic. The validity of the information gathering checklists of this research is at the optimal level according to the judgment of experts and consultation with professors and subject matter experts.

### 5.3 System user components

In this section, the collection of information related to the users of the systems has been studied and examined. Regarding the characteristics of the users of the systems, things such as education, expertise, skills, records, trainings, etc. have been examined and tested as described in the table below.

Table 2: The components of recognition of system users

Row	Characteristic description
1	Distribution of users in terms of education level
2	Distribution of users in terms of academic fields
3	Distribution of users in terms of the amount of work records
4	Distribution of users in terms of skill
5	Distribution of users in terms of the amount of training
6	Gender distribution of users

### 5.4 General components of institutions and organizations

In this section, the characteristics of the organization or institution using the system, including the subject of activity, type of ownership, goals, activities, size of the organization, etc., have been investigated and studied.

Table 3: Components of recognizing the general characteristics of the studied organizations

Row	Characteristic description	Condition
1	The purpose of the organization or institution	Profit / non-profit
2	Ownership of the organization	Private / cooperative
3	Legal personality	Special shares, limited liability and...
4	The subject of the activity	Commercial / production / service / contracting / royalties
5	Location	The center of the province/city
6	The size of the organization	Small / medium / large
7	Life cycle of the organization	Creation / growth / maturation / aging

Table 4: Environmental components of the system

Row	The subject of the activity	Number	Percent
1	Productive	31	21
2	Commerce	76	52
3	Service	17	11
4	Contracting	14	10
5	Contract work	9	6
	Total	147	100

### 5.5 Demographic components of institutions and organizations

The demographic distribution of the company or institution studied in this research in terms of the subject of activity is as described in the following table

In this section, the characteristics related to the environmental status of the system, which have been examined according to the environment of the system and how to use it and the relevant communication infrastructure of the data related to the information system software, the purpose of compiling this collection of information is to know how The conditions and how to establish and implement the system, in this regard, indicators such as operating system infrastructure, programming language, system communication status, number of users, user territory, and the degree of integration of the systems have been investigated.

Table 5: Demography of systems in terms of general components of systems

Row	Characteristic description	Condition
1	Operating system	Operating system type
2	Operating system version	Win XP-7-8-10
3	System execution platform	Under the web / under the network / single
4	How to use the system	Single user / multi-user
5	Coding language	foxpro -C- oracel -dot net
6	Integrity	disconnected/connected
7	Information exchange protocols	Excel / Word / Text

Table 6: Demographics of the systems in terms of the type of software us

Row	The title of the system software	Abundance	Percent
1	Accounting and financial management system software	147	100
2	Warehouse and inventory system software	94	64
3	Recruitment and personnel system software	9	6
4	Payroll system software	37	25
5	Budget and credits system software	6	4
6	System software Property and fixed assets	7	5
7	System software fixed price	5	3

### 5.6 Demographics of the studied systems in terms of the degree of integration of the systems

Out of the total of 147 studied companies, 7% of them have used integrated systems and 93% of them have been used as islands and independently from each other as described in the table below.

Table 7: The studied systems in terms of the degree of integration of the systems

Row	The subject of the activity	Number	Percent
1	Integrated user	11	7
2	Island use	136	93
	Total	147	100

### 5.7 Demographics of systems in terms of communication domain of systems

Of the total systems studied, 11% are used as web, 16% as internal network and 73% as single user as described in the table below.

Table 8: Demographics of systems as the domain of communication of systems

Row	The subject of the activity	Number	Percent
1	Web user	16	11
2	Internal network user	23	16
3	Individual user	108	73
	Total	147	100

## 5.8 Components of functional capabilities of accounting information systems

In this section, the functional capabilities of the studied information systems are examined and analyzed in four categories as described in the table below.

Table 9: Components of the performance capabilities of accounting information system

Row	Characteristic description
1	Structural capability of the system
2	Ability to comply with laws and requirements
3	Reporting capability
4	The ability of system intelligence and auto-control mechanisms

## 5.9 Structural capability of the system

In this section, inherent features related to the system, such as security, ease of use, quality of system upgrade and development, flexibility and coordination of the system with environmental changes and other related criteria are examined as described in the table below.

Table 10: The components of measuring the structural capability of the system

Row	Characteristic description
1	comprehensiveness
2	integrity
3	System flexibility
4	System security
5	Ease of use
6	Ability to develop and upgrade the system
7	System support
8	Cost considerations

## 5.10 Components of measuring the ability to comply with laws and requirements

In this section, the ability of the system to comply with a set of laws and requirements governing the performance of accounting information systems is focused on, including the possibility and extent of compliance with legal and contractual requirements, compliance with accounting principles, criteria and standards, as well as compliance with organizational approvals and instructions. And management tasks have been questioned and analysed.

Table 11: Compliant components of laws and requirements

Row	Characteristic description
1	Control compliance with the requirements of the Trade Law
2	Controlling compliance with the requirements of the direct taxes law
3	Control compliance with the requirements of the labor law, social security and insurance
4	Control compliance with accounting principles
5	Control compliance with accounting standards
6	Control of organizational requirements
7	Management expectations control
8	Control the expectations of regulatory bodies

## 5.11 Components of the system's reporting capability

The purpose of this section is to investigate and recognise the capabilities and capabilities of the system in preparing and providing information, reports and outputs required by the users and beneficiaries of the system. The quality of the reports, the diversity of the reports, the comprehensiveness of the reports and the comparability of the output information have been investigated.

Table 12: Components of the system 's reporting capabilities

Row	Characteristic description
1	Preparation of financial statement / balance sheet
2	Preparation of profit and loss statement
3	Preparation of cash flow statement
4	Preparation of budget and performance reconciliation statement
5	Preparation of notes attached to financial statements
6	Preparation of projected financial statements
7	Preparation of proposed budgets
8	Preparing the statement of bank discrepancies
9	Preparation of standard financial statements (scale 100)
10	Preparation of comparative financial statements (three years)
11	Ratio analysis
12	Analysis of trends
13	Interim financial reports
14	Preparation of value-added outputs
15	Preparation of quarterly transaction outputs
16	Preparation of performance tax returns
17	Ability to report inventory order point
18	Six months comparative reports
19	Quarterly comparative reports
20	Monthly comparative reports
21	Project cost reports
22	Product cost reports
23	Projects gross profit reports
24	Product gross profit reports
25	Commercial documents maturity reports

### 5.12 Components of intelligence and auto control mechanisms

This set of indicators has been identified as follows in order to evaluate the degree of intelligence and auto-control mechanisms of accounting information systems.

Table 13: Components of measuring intelligence and self-control mechanisms

Row	The agent under study
1	User access permission control
2	Financial year control
3	Historical serial control of documents
4	Document serial number control
5	Control of priority and delay of registrations
6	Document balance control
7	Control the nature of the account
8	Account balance control
9	Budget control
10	Customer credit limit control
11	Control of duplicate articles
12	Duplicate document number control
13	Early and late registration control
14	Cost center control
15	Control of the payee or beneficiary
16	Control the due date of receivables
17	Control the due date of payable documents
18	Document verifier control
19	Definitive document control
20	Serial control of issued checks
21	Controlling the permitted use of raw materials in production
22	Control the expiration date of materials and goods
23	Controlling the due date of payment of loan installments
24	Controlling the accuracy of financial event registration
25	Checking the accuracy of numerical calculations

## 6 Conclusion

In today's economic conditions, where the number of companies, institutions and economic enterprises of the private sector and in parallel the development of the volume and diversity of the activities of such organizations, which has led to the occurrence of a large amount of financial and operational events in the environment of their economic activities, the use of accounting information systems for Processing exchanges, transactions and preparing their financial and functional reports is an inevitable necessity. In such a situation, the issue of choosing the appropriate accounting information systems is at the center of attention of the management and the users of the accounting information system on the one hand and their creators on the other hand. Also, knowledge of the components and selection criteria of various software accounting information systems and the issue of compliance of these systems with the requirements, goals and expectations of the stakeholders are among the most important selection criteria of this software. This research was conducted with the aim of identifying the components and designing the appropriate model for the selection and selection of different accounting information systems software based on identifying and gathering the opinions of different stakeholders and while determining the functional indicators and components of the accounting information systems in four categories of system structural capability, compliance rules and requirements, reporting and finally the intelligence capability of the system and auto-control mechanisms for each of these components, the criteria and indicators of measurement and evaluation of the quality of the performance of the accounting information systems have been defined and determined in order to recognize and extract the functional characteristics and indicators To evaluate the quality and performance of accounting information systems used by companies and economic enterprises of the private sector of the target society, a four-factor model was used, and for this purpose specific checklists were designed to identify, compile and collect the views and points of view of the stakeholders and for each of these The set of criteria means points and finally, based on the points belonging to each of the factors, a model has been obtained to measure and evaluate the systems. The most important indicators of points assigned to each of the investigated factors or components from the point of view of managers, users and different stakeholders are as described in the following table:

Table 14: Scores of system measurement and evaluation indicators from the point of view of stakeholders

Row	Characteristic description	Score
1	Structural capability of the system	21
2	Ability to comply with laws and requirements	29
3	Reporting capability	32
4	The ability of system intelligence and auto-control mechanisms	18
	Total	100

As the results show, the ability to comply with laws and requirements and the ability to report have the most assigned points regarding the performance of accounting information systems. There are laws, regulations and requirements governing the operation of these systems, and the structural capabilities and intelligence capabilities of the systems are important from the point of view of the stakeholders.

## Research limitations

The target community of this research is the private sector companies and enterprises of Zahedan city, and the results can only be generalised to for-profit institutions and private sector institutions. The impossibility of studying the subject in public sector institutions is one of the limitations of the research.

## References

- [1] A. Al-Okaily, M. Al-Okaily, F. Shiyab, and W. Masadah, *Accounting information system effectiveness from an organizational perspective*, Manage. Sci. Lett. **10** (2020), no. 16, 3991–4000.
- [2] M.M. Alrfai, H. Alqudah, A. Lutfi, M. Al-Kofahi, M. Alrawad, and M.A. Almaiah, *The influence of artificial intelligence on the AISs efficiency: Moderating effect of the cyber security*, Cogent Soc. Sci. **9** (2023), no. 2, 2243719.
- [3] M. Arab Mazar Yazdi, A. Naseri, M. Nakoizadeh, and A. Moradi, *Investigating the impact of accounting information system flexibility on firm performance using a dynamic capabilities approach*, Account. Audit. Rev. **24** (2016), no. 2, 221–242.

- [4] F. Azizi, F. Rahnema Roodposhti, M.H. Khan Mohammad, and M. Khodayi Waleh Zakard, *Providing a model of the effect of characteristics of accounting information systems on system performance based on the moderating role of work uncertainty*, *Financ. Account. Audit Res.* **12** (2019), no. 47, 31–54.
- [5] R. Bakker, G. Georgakopoulos, V.A. Sotiropoulou, and K.S. Tountas, *The impact of integrated reporting on analysts' forecasts*, *Int. J. Econ. Financ.* **12** (2020), no. 1, 76–89.
- [6] S. Caulkin, *An end to the numbers game*, The Observer, Available via [http://www.bbrt.org/bb-briefing/files/Observer\\_030413.pdf](http://www.bbrt.org/bb-briefing/files/Observer_030413.pdf), 2003.
- [7] C.A. Cheng, S. Li, and E.X. Zhang, *Operating cash flow opacity and stock price crash risk*, *J. Account. Public Policy*, **39** (2020), no. 3, 106717.
- [8] B. Feijoo, S. Romero, and S. Ruiz, *Effect of stakeholders' pressure on transparency of sustainability reports within the GRI framework*, *J. Bus. Ethics* **122** (2014), no. 1, 53–63.
- [9] B. Gilani Niya Some'e Saraei, K. Rabiei, and H. Fotuhi Fashtami, *Developing a model of integrated accounting information systems in Iran's government organizations in order to improve performance and reduce organizational violations*, *Knowledge Account. Manag. Audit* **12** (2023), no. 46, 201–216.
- [10] J. Hope and R. Fraser, *Beyond Budgeting*, Boston, MA: Harvard Business School Press, 2003.
- [11] A. Hosseinzadeh, S.M. Mousavi Shiri, Z. Hajiha, and H. Nikumram, *Assessing convergence and divergence between accounting information quality measures: A test of stakeholder management theory*, *Knowledge Account. Manag. Audit* **12** (2023), no. 46, 141–154.
- [12] J. Jiang, L. Liao, Z. Wang and H. Xiang, *Financial literacy and retail investors' financial welfare: Evidence from mutual fund investment outcomes in China*, *Pacific-Basin Finance J.* **59** (2020), 101242.
- [13] K.C. Laudon and J.P. Laudon, *Essentials of Management Information Systems: Managing the Digital System*, Canada, Prentice Hall, 2012.
- [14] I. Muda and A.A. Erlina, *Influence of human resources to the effect of system quality and information quality on the user satisfaction of accrual-based accounting system*, *Contad. Admin.* **64** (2019), no. 2, 1–25.
- [15] P.A. Pavlou and O.A. El Sawy, *Understanding the elusive black box of dynamic capabilities*, *Decis. Sci.* **42** (2011), no. 1, 239–273.
- [16] A. Prasad and P. Green, *Organizational competencies and dynamic accounting information system capability: Impact on AIS processes and firm performance*, *J. Inf. Syst.* **29** (2015), no.3, 123–149.
- [17] R. Rapina, C. Yenni, S. Santy, M. Currye and P. Mita, *The success of accounting information systems observed from individual and organizational factors*, *TEST Eng. Manage.* **82** (2020), 6011–6016.
- [18] S. Sheri and M. Nikbakht, *The impact of accounting information on the stock returns of companies during the stock market crash*, *Sci. J. Account. Soc. Interests* **2** (2013), no 4, 37–53. [In Persian]
- [19] E. Tajveidi and P. Ahmadi, *The effect of information technology management communication mechanism on the performance of accounting information system in order to achieve competitive advantage*, *Account. Knowledge Manag. Audit* **9** (2019), no. 33, 91–105.
- [20] A. Wahl, M. Charifzadeh, and F. Diefenbach, *Voluntary adopters of integrated reporting—evidence on forecast accuracy and firm value*, *Bus. Strat. Environ.* **29** (2020), no. 6, 2542–2556.
- [21] I. Wahyudi, *Accounting information quality and market reaction: A survey of banking industries listed in Indonesia Stock Exchange*, *Res. J. Finance Account.* **9** (2018), no. 5, 26–30.