

Study of role software's of accounting on relevance and reliability of accounting informationIman Zare^{1*}, Jafar Nekounam², Mohammad Reza Samaei Baghbadorani³, Hamid Reza Malak Hossini⁴^{*1.} Department of Accounting, khomein Branch, Islamic Azad University, khomein, Iran^{2.} Department of Accounting, khomein Branch, Islamic Azad University, khomein, Iran^{3.} Department of Accounting, Mobarakeh Branch, Islamic Azad University, Mobarakeh, Iran^{4.} Department of Accounting, khomein Branch, Islamic Azad University, khomein, Iraniman.accounting@yahoo.com

Abstract: software packages as computer AIS, and regarding to the continuous changes and rapid developments of economical units, provision of relevant, reliable, financial information is necessary. To investigate this, the question is that whether softwares of accounting affects on relevance and reliability of accounting information in financial statements? To do this research, a sample of 105 confidant auditors from Tehran Stock Exchange and professors of Islamic Azad University, region 5, was selected by Simple Random Sampling (SRS) method as questionnaires. Inferential statistical method, Clemogrov-Smironov test, and t-student test were used. It was found that accounting information systems and softwares highly affect on relevance of financial statement, but they lowly affect on reliability of them.

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1. Introduction

Most part of information in organizations include accounting information [11].

Accounting is an information system and managers should obtain high-quality and suitable information from formal and informal channels for decision-making [6].

Since at first, people appeal to multiple information sources, and because of increasing trend of information volume and its production speed, a system must be produced to refine, store, and transfer this information. This forms management information system [17].

Most economical decisions and strategies to maximize profits and minimize costs conclude to accounting information. Since accounting measures economical information and offers it to users and we know it as an information system, therefore, managers need high-quality information for success of organizations [4].

On the other hand, information technology (IT) are key elements for removal of location and time limitations, better and rapid access to information, up to date information, etc.

It means creating AIS and software packages by well-known companies changes work methods and provides an electronic base instead of paper [8].

On the other hand, the goals of financial statements and accounting sources requires special features for financial statements to be used by investors and other users. These features are called "qualitative features of accounting information"

(QFAI), which include relevance, reliability, and comparability [12].

Therefore, sequential changes and rapid advances are taking place in economical units that severs provision of financial information, which are relevance, reliability, and comparability. Also, increasing growth of society complexities justifies requirement of economical information related to information systems and information generating processes [9].

Therefore, regarding to potential capabilities of software packages as computer AIS, this research is going to study usage of IT and its role on relevance and reliability.

2. Theoretical fundamentals**2.1. Software and its role in accounting systems**

Software is an insensible part of a computer system. In other words, if a thing in not hardware, it is software. Software includes programs, documents, and instructions. All documents including flowcharts and gathered data for designing are part of software [2].

Accountants and auditors must be skillful about computer systems that is required to play their roles from creating relationship between managers and analysts to designing and execution of AIS and maintenance of systems [7].

Computer softwares have two categories:

- a) Basic softwares or operating systems
- b) Application softwares

Application softwares are for special uses of computer. For example, application softwares in

accounting systems are programs to calculate salaries and fees, stock control, and accounting and financial systems, which are written in different languages [3].

2.2. Qualitative features of accounting information

Qualitative features are those features that make information suitable for users [5]. Some qualitative features relate to information contents in financial statements and some others relate to quality of information [18].

1. Relevance: include well-timed information, suitable anticipation, and suitable evaluation.
2. Reliability: include confirmation capability, comprehension, correctness, priority of contents on forms, and neutrality.
3. Comparability: include procedure stability and disclosure. [12]

3. Research history

In a research titled "Concepts of accounting information value", Theodore J. Mack emphasized on recognition of value of information and suggested that information value requires using suitable AIS [15].

Ashback, Johnson, and Warfield studies significant changes in financial statements in internet, especially well-timed information [14].

Graham & Baldwin (2003) suggested that using information in financial statements affect judgment trend. In other words, it affects relevance of information [17].

In Iran, there are several essays about information systems and role of accounting software in changing traditional space, registration of events, and reporting by students and professors.

Arab Mazar and Pajuhi (1993) in an essay titled "Study of application of computer and software packages in provision of financial information by Iranian companies".

Manian (1994) in an essay titled "Study of effective factors in satisfaction of final users and official planning to use application softwares and literacy of users [13].

Khadem (1978) from University of Tehran, in his thesis titled "Effect of accounting information on decisions of managers of companies accepted in Tehran Stock Exchange" [10];

Jadidi (2002) from University of Esfahan, in his thesis titled "Effect of features of AIS on improvement of decisions of managers of Bahman Group" [8] suggested importance of information systems and their role in improvement of decision-making by managers, investors, creditors, and users of financial statements.

4. Research assumptions

1. Software packages affect relevance feature of information of financial statements.

2. Software packages affect reliability feature of information of financial statements.

5. Research method

This is a descriptive-application research based on field studies. This is a sectional research by time.

A questionnaire was prepared to investigate and analyze the variables and ideas of statistical society for effect of information systems and accounting software packages. Lickert Scale was used to response the questions. A broad response area and more options are from features of this scale. Thus, respondents wanted to choose an option.

6. Statistical society and sample

The specifications for statistical society of this research are:

1. Confidant auditors member of Bourse
2. Professors of Islamic Azad University, region 5
3. Familiars with and accounting packages

Simple Random Sampling (SRS) was used in this research. In this method, each element has an equal chance for selection.

Two stages were taken to determine sample volume [1].

Formula for sample volume (Kukeran Formula) is:

$$n_0 = \frac{z^2 \left(\frac{a}{2}\right) \text{var}(\theta)}{d^2}$$

in which,

$z_{a/2}$ = standard normal for $100(1-\alpha)$

$\text{var}(\theta)$ = variance of estimated parameter

d = error value

If society volume is infinite, the above formula is used. But, if society volume is definite and equal to N , the following formula is used:

$$n = \frac{n_0}{1 + \frac{n_0}{N}}$$

Of course, $\text{var}(\theta)$ is unknown. If a parameter has two cases, $\text{var}(\theta)=pq$ is considered. Its goodness is that maximum value for $\text{var}(\theta)$ is calculated. This is when $p=q=1/2$.

$$n_0 = \frac{(1.96)^2 (0.5)(0.5)}{(0.08)^2} = 150.06$$

Thus, $n_0=150.06$ when $d=0.08$ and $N=300$.

$$n_0 = \frac{150.06}{1 + \frac{150.06}{300}} = 100.04 \approx 101$$

Thus, sample of this research is $n=105$ for $N=300$.

7. Research variables

Dependent variables of this research are relevance, and reliability of accounting information in financial

statements. Also, software packages are independent variables. Therefore, effect level of independent variables on dependent variables was included in the question of questionnaire.

8. Data analysis method

Two descriptive and inferential methods were used in this research.

8.1. Descriptive statistics

This part of questionnaire consists 26 questions. Then Lickert Spectrum was used to analyze data.

8.2. Inferential statistics

In this research, Clemogrov-Smirnov test was used to normalize data, single-sample t-student test was used to study effect of software packages on relevance and reliability, and variance test was used to compare effect of software packages on relevance and reliability. Also, pair comparison tests and average of each index were used for ranking effect of accounting software packages on relevance and reliability.

9. Data analysis

9.1. Normalization test in assumptions

Normalization test (Clemogrov-Smirnov) in the main assumption to test the effect of software packages on relevance and reliability

H0: Data is normal (data is from a normal statistical society)

H1: Data is not normal (data is not from a normal statistical society)

If sig. level $> \alpha = 0.05 \rightarrow H0$

If sig. level $< \alpha = 0.05 \rightarrow H1$

Sig. level of this test = $0.068 > \alpha = 0.05 \rightarrow H0$: data is normal

Significance level for all cases is $> \alpha = 0.05$, then data is normal. Thus, variables are tested by parametric methods.

9.2. Study of effect of software packages on relevance and reliability by single-sample t-student test

9.2.1. Main assumption: effect of software packages on relevance and reliability

Single-sample t-student test for effect of software packages on relevance and reliability.

Table 1: Single-sample t-student test for effect of software packages on relevance and reliability

Number	Average	StD	St. average	T	Freedom degree
105	3.2468	0.4923	0.0696	3.55	0.000

H0: $\mu \leq 3$

H1: $\mu > 3$

H0: software packages highly affect relevance and reliability

H1: software packages lowly affect relevance and reliability

If freedom degree $> \alpha = 0.05 \rightarrow H0$

If freedom degree $< \alpha = 0.05 \rightarrow H1$

Freedom degree = $0.000 < \alpha = 0.05 \rightarrow H1$

Therefore, we conclude that software packages highly affect relevance and reliability.

9.2.2. assumption 1: effect of software packages on relevance of information in financial statements

The results are:

1. Software packages highly affect relevance of financial statements.

9.2.3. assumption 2: effect of software packages on reliability of information in financial statements

The results are:

2. Software packages lowly affect reliability of financial statements.

9.3. Effect of software packages on relevance and reliability

Variance analysis test for effect of software packages on three indices (relevance, reliability)

H0: $\mu_1 = \mu_2 = \mu_3$

H1: $\mu_i \neq \mu_j$ at least for one i, j

If freedom degree $> \alpha = 0.05 \rightarrow H0$

If freedom degree $< \alpha = 0.05 \rightarrow H1$

Freedom degree = $0.000 < \alpha = 0.05 \rightarrow H1$

Therefore, they are not equal at least for one i, j . Thus, we examine each index by pair comparison test.

Then, the indices (relevance, reliability) are ranked according to parametric variance analysis and pair comparison test:

Rank 1 = relevance

Rank 2 = reliability

10. Findings of research

assumption 1

According to the results, it was found that software packages highly affect on relevance of financial statements.

By discussion about theoretical fundamentals it can be said that wonderful progress of accounting packages help users in better decision-making, because they increase relevance of information. Findings indicate that software packages affect well-timed information.

assumption 2

According to the results, it was found that software packages lowly affect on reliability of financial statements.

Using accounting information mostly depends on providers of this information than the providing tools, because providers have different effects if they use correct measurement methods and act neutrally. Generally, financial information is confident when independent auditors confirm it.

In this research, effect of software packages was studied and the results are as follows:

Table 2: Effect of software packages on relevance and reliability

Row	Qualitative feature	Effect level	Rank
1	Relevance	High	First with α error
2	Reliability	Low	Third with α error

The results show that using software packages significantly affect financial statements of companies accepted in Tehran Stock Exchange. It is especially dominant in relevance of information, which comes from well-timed information.

Also, the above tables show that relevance of information is on the first rank.

effect on reliability is low, because information always is measured correctly and reliably by accountants, and auditors can increase this feature.

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