



**Examining the effect of computerized accounting information system on managers' decision making process**

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**Examining the effect of computerized accounting information system on managers' decision making process**

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**Abstract**

The extreme requirement for true and reliable information by organizations in direction of using it for decisions of managers is an unavoidable point. in this direction the information accounting system as the most important proper subset of information management system gives different financial information to users of this kind of information specially organization's managers of each organization .nowadays by arising computer accounting systems and by superfluity development of information technology , expected that quality properties of accounting information will be improved day-to-day. And improving quality properties will be caused to making better decisions by managers . for this mean in this research a sufficient try has been operated that ; in one side ;the effect of computer information accounting system will be marked and in other direction the effect of quality properties on the manager decisions will be marked. For doing this research, 124 numbers of questionnaire distributed between financial managers ,accountants and auditors of accounts supreme court and accountants of administrator of ALBORZ state .the results of this research shows that computer information accounting system increases the reliability of information and this in own rotate facilitates the matter of decision makings by managers.

**Key words:** make decisions, accounting information, computer information accounting system, properties of information accounting system.



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## 1. Introduction

Making decisions is the main matter of managers activity, and we can consider making decisions is the most important duty of management .the management for making different decisions needs to different tools that one of this tools is the accounting information system, which assembles main part of necessary information in direct of making decisions. Accounting as an information system by supplying information's requirement of managers offers a vital service for them up to they can choose the best option between different selection switches for using scarce sources to perform financial and economic activities. So accounting information is the linkage ring between financial activities and investors and determiners. for success of organizations , by considering the importance of affection exploitable reports from this system ,the managers for decisions need to true utilizing of outcome information , that this principal can be ascertained by relevant information which supplied from accounting information system .

## 2. Review of the literature

Accounting forms of; identity procedure , measurement and economic information reporting for awareness determines by users of those information ,so accounting is an information system that helps to investors , authenticators ,managers and government by assembling information up to they can making better decisions in related to economic problems . accounting information system is a component of company that give the base of making decisions to users by processing financial events , financial information and information . in fact , purpose of accounting information system is that ;the information's users can enter in system and find needful information in each form and unlimited(time/place) form.

By lapse and in parallel with extension of economic activities and by increasing its complexities, purposes and accounting methods for being amenability to information's requirements have been developed. Because, the persons , companies and government for making decisions about proper financial distribution need for reliable information . In the other side, one of basic sources to accounting marketing risks of companies is using of produced information by accounting system. Professor Youjeary in his famous lecture at Harvard university (October 1982) annunciated that theoretical framework can codified by determining base or replication base (4).He believes that on rhetorical framework basis on determining , the purpose of accounting is assembling useful information for economic decisions



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### **Useful accounting information for the managers must have following characteristics:**

**Understandability:** financial statements must be understandable for the people with some general knowledge of accounting.

**Relevance:** it is one of the important features of accounting information. Any information which is useful in decision making is called relevant information. Therefore relevance of information must be interpreted in the degree of its efficacy in the decision of its user in evaluating the results past events and in predicting the consequences of current or future events or revision of the expectation.

**Reliability:** refers to the degree of reliability of the reported measurements in the financial statements. The results are reliable in so far as they are free from errors and bias are prepared impartially and honestly based on expected criterion.

**Comparability:** entails that the evaluation and presentation of financial outcomes of the transactions or other similar events in any accounting period or across the accounting periods be done with stability and the coordination among business entities be maintained.

Using computerized accounting information facilitates the accounting tasks and enables the accountants to access reliable and needed the information on time compared to the information which is provided manually. In Iran also the third 5- year economic, social and cultural program is the first development program which deals with information technology including computerized accounting information. Thus, in the current research, to clarify the close relationship between the system of the computerized accounting information and decision making, we will investigate the effect of the system of the computerized accounting information on the public managers' decision-making process.

### **Significance of the study**

Decision making underlies the managers' responsibilities and it is claimed that the degree of success or failure of any system depends on the manner of the exercising those obligations in the system. In effect, decision making process is likened to neural system of an organization. It forms the ground of the any planning. The existence of any plan, program and policy rests on the presence of decision making and it can be stated that decision making is crucial part of the managers' task as he should all the time think of what to do, what route to opt for and how to distribute the responsibilities among the forces and decide who must do what and when it must be performed and how must it be done. Today, employment of computerized accounting information system has eased the accountants' task. Therefore, to clarify the close relationship between the computerized accounting information system



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and decision making, we will examine the effect of the system of the computerized accounting information on Iranian public managers' decision-making.

### **Research goal**

The main purpose of this research is to investigate improvement of decision- making through using related and reliable information presentation in non-profit financial reports by computer accounting information system .so, it is essential to use computer accounting information system on qualitative characteristics of accounting information for managers decision- making in non-profit section. If it proved that using computer accounting information system can cause increase in reliability, dependency, comparability, decision- making improvement, management control and appropriate information process. It can help managers to choose the best investment method. So, we can propose to use computer accounting information system in improving decision – making in organization.

### **General purpose**

Decision- making is the main duty of management and accounting information system is one of the main tools for it. This research aims at investigating influence level of accounting computer information system on manager's decision- making.

### **Minor goals**

Practical goal of this research is to investigate the influence of accounting computer information systems on qualitative, financial control and responsibility of managers for managers decision-making.

### **3. Background**

Dastgir and Jamshidian ( 1382) investigated the influence of accounting information system characteristics on manager's decision- making improvement in Bahman group companies. They claimed that accounting information system has influence on management decision- making improvement.

In other research on accounting information system influence on performance indexes and productivity in some of small and medium spanish companies. Results showed that accounting information system has influence on organization performance as a resource for information preparation. Performance of an organization is indebted of management performance. But managemnet performance quality is function of decision- making.

### **4. Variables of research:**

Accounting computer information system is Independent variable and dependent variables are:



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1. Manager's decision- making
2. Qualitative characteristics of accounting information
3. Management controls

It is tried to investigate the influence of independent variables on dependent variables by questions.

### **5. Hypotheses**

Main purpose of this research is to investigate computer accounting information system on managers decision- making. So, a main question presented as below: if computer accounting information systems are effective in manager's decision- making? Three question were presented and so three hypothesizes were presented.

#### **Main hypotheses:**

Computer accounting information system is influential in manager's decision- making.

#### **Sub-hypotheses:**

1. Computer accounting information systems is effective by influencing qualitative characteristics of financial information on manager's decision- making.
2. Computer accounting information systems causes strict control of management on financial affairs of executive organization.
3. There is a significant relation between using computer accounting information systems and manager's responsibility.

### **6. Methodology**

This research combines field and library methods. This is a cross-sectional research, because it has been done in limited time duration and investigated reality in a time period. It has been done in non-profit organization by considering level and domain. This is a practical research.

#### **Statistical Sampling**

##### **Current study considers three major characteristics:**

1. At least holds a Bachelor of Science in Accounting and a discipline related to research topics such as Management and Economies.
2. At least three years of accounting and financial accounting experience.
3. Sufficient knowledge of accounting principles and the impact of each of them In fact, the statistical community has been chosen to include individuals that They are practically influenced by the computerized accounting information system. Like financial managers and accountants.

The statistical population includes financial managers, beneficiaries, auditors, and accountants in the province of Alborz.



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### **Sample size and sampling method**

In the present study, given that the data are qualitative, to calculate the sample size Formulas that are suitable for qualitative data are used. In this way, the size of the sample was determined by the success ratio (p), and after the calculations, 124 managers were considered as examples.

### **Data Collection**

To test the hypotheses of the research, a questionnaire was compiled including four parts. By the first part, the level of familiarity of respondents with computer accounting and decision makers of government managers, the degree of education and the degree of their work record are measured and by other parts, Research hypotheses are measured.

The table below summarizes the questionnaire's questions in relation to the research hypotheses.

### **Data analysis method**

In this research, the data obtained from the questionnaire were processed by SPSS software.

To describe the data, a two-dimensional frequency table and plot are used for data analysis. Two methods of inferential statistics T-TEST and FREIDMAN have been used to confirm or disprove assumptions.

### **Study hypotheses**

Since the information collected is non-quantitative, in the first step, this information should be converted into quantitative information. One of the conversion methods is the use of Likert law. In this rule, numbers 1,2,3,4, and 5 (quantitative information) replace the effect very little, low impact, moderate effect, high impact and the impact is very high (non-quantitative information). So Weights of 1 to 3 lies of hypotheses and weights 4 and 5 confirm the hypotheses then, in the next step, quantitative information is analyzed using statistical methods.

### **Study of the first hypothesis**

As in Table 1 and Figure 1, seen Appendix, The highest amount is attributable to the "intelligibility feature" with an average of 3.6210 (close to high) and the least amount is belonged to the attributed to the reliability attribute, with an average 3.2339 (close to the average).

In general, the total average in this group is equal to 3.4294 (close to high).

In this research, for scattering subscales (Relevance, % Reliability, understandable and comparable) Friedman test has been used in terms of scale and qualitative features and the result obtained from Friedman indicates that the four attributes are relevance, reliability, comprehensibility and



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comparability act as an angel and has very little dispersion to the overall scale of qualitative characteristics.

$H_0: \mu \leq 3$  Counter-claim

$H_1: \mu > 3$  Claim

Observation Count	Average	Calculated Statistics of t	Freedom Rate	p-value
124	3,249	10,170	123	0,00

After comparing the test statistics (170/10) is determined by the critical value (64/1) that the test statistics are in the claimed area, Therefore, at 95% confidence level, it can said that Observations do not adequately reject claims. So at an error level of 5%, the research hypothesis can be confirmed. The hypothesis "between the use of computerized accounting information system and the increase of qualitative characteristics of accounting information, There is a meaningful relationship" is accepted.

**Studying the second sub-hypothesis**

As we can see in table 1 and table 2, the maximum rate is government assets with an average of 4.5 (nearly maximum) and the minimum rate is government revenue with an average of 3.2742. In general total average is 3.6734 in these groups.

The result of Friedman test shows that four factors include government asset, government revenue, Government debt and government spending act the same and has a smaller dispersion than the overall financial status.

$H_0: \mu \leq 3$  Counter-claim

$H_1: \mu > 3$  Claim

Observation Count	Average	Calculated Statistics of t	Freedom Rate	p-value
124	3,673	14,86	123	0,00

After comparing statistician test(14.86) with critical amount(64.1) , statistician test place on hypothesis claim area, so in %95 confidence level we can say that observation supported the



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hypothesis. It means the hypothesis” there is significance relation between using Computer Accounting Information System and more precise control over financial management” is supported. Managers can use report with confidence that is provided by Computer Accounting Information System.

**Studying the Third sub-hypothesis**

As we can see in table 2 and appendix3 ,the maximum rate is executive procedures with an average of 4.581 ( nearly a lot) and the minimum rate is Operational results with an average of 3.2742 (nearly too much). In general total average is 3.6734 in these groups.

The result of Friedman test shows that executive procedures work the same by operational result , and has a smaller dispersion than the overall scale of” Methods and results of operations”

$$\left\{ \begin{array}{l} H_0: \mu \leq 3 \text{ contradictory claim} \\ H_1: \mu > 3 \text{ claim} \end{array} \right.$$

<b>P-value</b>	<b>Degree of freedom</b>	<b>T. calculated statistic</b>	<b>average</b>	<b>Number of observations</b>
0,0	123	12,574	3,714	<b>124</b>

After comparing statistician test(12.572) with critical amount(64.1) , statistician test place on hypothesis claim area, so in %95 confidence level we can say that observation supported the hypothesis. It means the hypothesis” there is significance relation between using Computer Accounting Information System and Accountability of managers” is supported. Managers can evaluate the practices and government work results using report that is provided by this method.

In each three hypothesis, the average obtained from the sample is greater than the average assumption of society so we can't agree with claim assertion assume (based on table4 in appendix). Giving that in Separate review, all sub- hypothesis are supported and in general review, Average answers are greater than 3, the main hypothesis of the research is supported it means that using Computer Accounting Information System is effective.





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### **7. Conclusion**

#### **Conclusion based on the first hypothesis**

Based on finding, Research hypothesis1, “Computer Accounting Information System increase Accounting Information”, is supported in %95 confidence level. Giving to statistician test, supporting first hypothesis means Accounting System increase qualitative characteristics of accounting information that is the same as research results. Giving to descriptive data, among relevance and reliability, understandable and comparable in evaluation, understandable is has the most impact.

As using Information Technology (especially the Internet and its tools) in accounting result in direct financial report that in this report, Information is available through internet, so decision makers can increasingly use timely and varied information to make decisions and look for information for a Special purpose (using strong Search tool). For these reasons, related financial information is provided to through direct financial report (online).

discussing on theoretical foundations, it is expected that the ability of the Internet and, consequently, direct financial reporting(online) will increase while information technology and the use of new and emerging technologies are progressing and it helps users to make a better management and finance decision so the relatedness of information increase.

#### **Conclusion based on the second sub hypothesis**

Based on finding, Second research hypothesis, “Using computer accounting information system control accurately management of finance”, is in %95 confidence level. It means Computer Accounting Information System increases the ability to control finance executives .giving to Descriptive data, among four factor include government assets, government revenue, Government debt and government spending, government assets have a biggest effect.

As computer accounting information system can provide different report in different time, so managers and decision makers of government agencies can control asset, revenue, debt and spending through reporting in different time and know the situation and plan for organization needs and better performance so accounting information users able to receive comprehensive reports through computer accounting information system.

Computer information system increase account information via control tools such as allegations against the nature and non-submission of unbalanced and incomplete documents and also decrease human involvement in processing and providing information.

In general, we conclude that as Increasing information technology and reducing human interventions in processing and output of information from a computer and the possibility of using a digital



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signature, computerized audit and flexibility of computer Systems in preparing different accounting reports increase reliability of accounting information it means users can control properly and accurately through controlling computer system.

### **Concluding based on third sub hypothesis**

Based on finding, third research hypothesis,” there is significance relation between using Computer Accounting Information System and accountability of managers”, is in %95 confidence level. It means Computer Accounting Information System increases accountability of managers. Giving to descriptive data, among executive procedures and results, The result of the government work has more effect.

The reason for this can be stated as follows: as mention, using information technology , The financial reporting of government agencies leads to direct financial reporting that in direct company reporting, the company uses a specific format and also defines uniform procedures and method for reporting, so The procedural stability of the company increases, and on the other hand, in this reporting ,The procedural stability of the company increases, and on the other hand, financial disclosure increases in this type of reporting through disseminating additional and differentiated information.

### **Concluding**

There is no doubt that computer accounting information system change the information flow between suppliers and users of information. Years ago, all the accounting cycle phase, except reporting, were done electronically. The increasing development of information technology such as the emergence of internet and its tools and using reporting since 1997, creates new mechanism and Financial reporting has led to financial reporting , as soon as transactions are registered , The result is available to all users through the Internet . Research results show the use of information technology makes a significant change in quality of financial reporting and control of operations and activities of executive agencies and responsiveness of executive administrators. The reason for this can be using of information technology (Particularly the Internet and its tools, protocols and software-based formats) that result in Financial direct reporting that Information will be available on the Internet at all times Therefore, decision makers can increasingly use timely and varied information to make decisions and also search information for Special purpose (using strong Search tool) . so the related financial information is provided to through direct financial report and accountant can use the IT tool to respond to a timely and accurate flow of information. Then we can say accounting can increases Government accountability Through the use of information technology.



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The result of research shows that computer accounting information system increases Information Trust that has two main reasons: one is control factors on the computer and alert the user when registering information and the other is using digital signatures. In other words, the computer prevents user errors and gives more control to accounting information users and also improve procedural modalities (due to greater disclosure of procedural stability). This is because using information technology lead to direct financial reporting that in direct financial report , government is used in a specific format and defines uniform procedures for reporting. So the stability of the device is increased on the other hand, in this type of reporting, more disclosure is made through the dissemination of additional and differentiated information so The ability of comparing financial information of the company is increased. Since people of the have the right to know in state democracies and facts are available publicly in order to able to evaluate the government performance in comparison with other ones and can analyses the process of changing the financial situation and government operations results; so disclosure as much as comparable information helps it and Accountants can help the government respond to the use of IT in the accounting information system.

### **8. Practical suggestions**

The research results showed that the computer accounting information system affects the qualitative characteristics of accounting information, which is through reporting. In fact, as was said, IT leads reporting to direct financial reporting(Online) and this reporting provides information with various features that on the one hand, due to the increasing advances in information, it is expected that Its impact on reporting and on the quality characteristics of accounting information will increase day to day, using future technologies, as discussed in the conclusion, it is expected not only to be related to more information but reliability and comparability of information is increased and On the other hand, according to the users' information needs, The financial reporting model should ultimately lead to direct financial reporting(online).

Therefore, it is expected from the country accounting system that, in keeping with information technology developments, the accounting profession will transform and take steps in this direction and matched comprehensive accounting and financial reporting and disclosure with fast changes that is created in the business world. Otherwise, the position of the accounting profession and accountants will be confronted with a crisis in the modern world.

According to the results of the research, the following suggestions are presented separately for each hypothesis.



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1-Given the confirmation of the hypothesis of increasing the relevance of accounting information through the use of computer accounting information system, it can be suggested that users can use timely reports from computer systems.

2-Regarding the confirmation if the hypo thesis of the twofold increase in financial condition through the use of the computerized accounting information system, it can be suggested that users can rely more and more on reports from computer system about their assets. Benefits and

3-regarding the confirmation of the hypothesis of increasing the accountability of government devices through the use of computer accounting information systems it could suggest that users ,using reports from computer systems ,be able to evaluate the performance of the government compared to other.

### **9. Suggestions for future research**

By doing any practical work, the path to the new path will be opened and the continuation of the path will REQUIRE a follow up research in this regard ,the research that is recommended in the following research is as follows

1-the impact of computer accounting information system on the budgeting system of the country

2-the effect of computerized information accounting system on the satisfaction of users using government services

3-the impact of computerized accounting information system on the performance of governmental organization

4-the impact of computerized accounting information system on financial and management decisions in government organizations

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**Attachments**

Table1.frequency distriution . assumption.

Number in shape	features	average
1	Reiate	3.6210
2	reliable	3.2339
3	understandable	3.427
4	comparable	whole

**The chart 1**

Table2. Frequency distribution “Financial situation”

Number in shape	features	average
1	Government owned	4.5
2	Government debt	3.5242
3	Government revenue	3.2742



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4	cost	3.3952
whole	State of finance	3.6734

**The chart2**

Table3. frequency distribution "methods and results of operation"

Number in shape	features	average
1	Executive procedures	4.581
2	Operational results	3.4355
3	whole	3.7419



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**The chart 3**

Table4. frequency distribution of high triple assumptions

Number in shape	features	average	result
1	Assumption1	3.4294	Reject H0
2	Assumption2	3.6734	Reject 0H
3	Assumption3	3.7419	Reject 0H

Assumptions	Standard deviation of responses	Calculated t	Critical t	Result
Sub-hypothesis1	1.25	10.17	1.64	Reject H0
Sub-hypothesis2	1.19	14.86	1.64	Reject H0
Sub-hypothesis3	1.48	12.572	1.64	Reject H0

**(Accounting informaton system)**