



The usefulness of cloud computing in improving the value of accounting information in financial statements (In case of company registration in the Tehran Stock Exchange)

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Abstract

Cloud accounting will be a new organizational model where IT and IT-support firms will provide the accounting services online in the form of software applications on the Internet that can access specific applications without the specific infrastructure, operating systems and partial licenses, in exchange as online service providers. Due to the development of technology and growth of the significance of cloud accounting, in this research, the researcher seeks to conduct a study to examine the benefits of cloud accounting in Iran through the interpretive structural modeling. The qualitative and quantitative approaches are combined in the research methodology. The qualitative stage has been carried out by determining the elements of cloud accounting benefits based on examining the theoretical underpinnings and a fuzzy Delphi analysis where 16 accounting faculty members served as experts. During the quantitative stage, a structural self-interaction model was constructed based on a structural self-interaction matrix, and 12 accounting faculty members were involved. The findings show that the key benefits of cloud accounting, in terms of their prioritization, are the reduction of costs and remote access, though the benefits of the most significant but least significant level are the improved security.

Keywords: Cloud Computing, Cloud Accounting, Cloud Accounting Advantages, Information Technology in Accounting, Interpretive Structural Modeling

مدى فائدة الحوسبة السحابية في تحسين قيمة المعلومات المحاسبية في القوائم المالية (في حالة تسجيل الشركات في بورصة طهران)

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المستخلص

تمثل المحاسبة السحابية نموذجًا تنظيميًا جديدًا، حيث تقوم شركات تكنولوجيا المعلومات وشركات دعم تكنولوجيا المعلومات بتقديم الخدمات المحاسبية عبر الإنترنت، في شكل تطبيقات برمجية على شبكة الإنترنت، تتيح الوصول إلى تطبيقات محددة دون الحاجة إلى بنية تحتية معينة، أو أنظمة تشغيل، أو تراخيص جزئية، وذلك في مقابل كونها مقدمي خدمات عبر الإنترنت. ونظرًا للتطور التكنولوجي وتنامي أهمية المحاسبة السحابية، يسعى الباحث في هذا البحث إلى إجراء دراسة لفحص فوائد المحاسبة السحابية في إيران باستخدام نمذجة التفسيرية الهيكلية (ISM). تعتمد منهجية البحث على دمج المنهجين النوعي والكمي. تم تنفيذ المرحلة النوعية من خلال تحديد عناصر فوائد المحاسبة السحابية بالاستناد إلى دراسة الأسس النظرية وتحليل دلفي الضبابي (Fuzzy Delphi)، بمشاركة 16 من أعضاء هيئة التدريس في قسم المحاسبة كخبراء. أما في المرحلة الكمية، فقد تم بناء نموذج تفاعل هيكلية (Structural Self-Interaction Model) استنادًا إلى مصفوفة التفاعل الهيكلية الذاتي، بمشاركة 12 من أعضاء هيئة التدريس في قسم المحاسبة. تُظهر النتائج أن الفوائد الرئيسية للمحاسبة السحابية، من حيث ترتيب الأولويات، تتمثل في خفض التكاليف وإمكانية الوصول عن بُعد، في حين أن الفائدة الأقل أهمية (رغم أنها الأكثر تأثيرًا على المستويات الأخرى) هي تحسين مستوى الأمان.

الكلمات المفتاحية: الحوسبة السحابية، المحاسبة السحابية، مزايا المحاسبة السحابية، تقنية المعلومات في المحاسبة، النمذجة الهيكلية التفسيرية

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Paper Info.

Published: Aug. 2026

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المؤلف المراسل

معلومات البحث

تاريخ النشر: آب 2026

1. Introduction

Modern world is the world of the great changes and significant development in the sphere of electronic communications [1]. The information and communication technology has broadly and radically transformed every aspect of human life due to its rapid development [2][3]. In the era of communication and electronic technologies, all organizations are experiencing rapid and constant changes [4]. The dramatic changes in communication technologies in the last two decades have caused rudimentary changes in the structure of bureaucracies, which has dramatically increased the expectations of both the employees and the clients regarding time, cost and modes of operation.

The electronic exchange of correspondences between different systems is a necessary and crucial need with the extensive application of electronic systems at the organizational level, as such organizations can communicate efficiently and effectively and think better. A review of the uses of electronic communication systems reveals that the automation of offices and electronic correspondence has thus far the biggest influence in the business communication industry, which is inclusive and transformative of most business interaction areas [1]. Electronic communication has been identified as one of the crucial elements in the setup of online businesses in academic literature. As a result, there has been a lot of research on the electronic communication services [7]. The modern aspect of life including the information and communication technology is fast evolving and new ideas have emerged like the e-learning and cloud computing [8].

Following the meaning as expressed by the National Institute of Standards and Technology, cloud computing is a model that allows on-on-command access, anywhere, of common pool of configurable computing resources, such as networks, servers, storage, applications, and services, which can be provisioned and published quickly and with little management or direct service provider involvement [9]. Public access to services is known to enhance the adoption of cloud computing and especially by organizations as it provides advantages of greater flexibility and agility [10]. Besides, cloud computing improves the learning process giving access to data at any place and any time [11]. Cloud technology is an important feature in the contemporary digital environment as it can facilitate the transfer of data among departments, agility, analysis of data, and decision making of the executive. Every organization should have a proper approach in implementing cloud computing considering its strategies, policies, security factors and business demands [12]. Therefore, considering its vast benefits, the implementation and acceptance of the concept of cloud computing has emerged as a central concern among the policy makers [13]. Cloud computing has also been applied in accounting profession, and this has led to cloud accounting, or online accounting. Software application in cloud accounting is not installed in the computers of the users, but it runs on server on which the online services are available and the users can access the software applications using web browsers. Under this form of accounting, every transaction including recording transactions, classification, reporting, and analysis of financial statements is done through the web. These activities are based on cloud storage, and public and private storage systems are part of the

increased responsiveness and efficiency of corporations [14].

The studies on cloud computing in the accounting field have been mainly focused on the benefits of cloud accounting in a disjointed form. Although there has been an increased body of empirical evidence there has never been an extensive research that exhaustively addresses the merits of cloud accounting. Thus, this paper aims at determining these advantages in a holistic approach and in elaborating a structural-interpretive model. The potential scholarly contributions and academic value of the findings of this study can be as follows: To start with, this paper addresses the theoretical and empirical gap related to the discussion of the benefits of cloud accounting in Iran as one of the developing countries because there is limited domestic academic literature on the subject and past researchers have concentrated on the adoption of cloud accounting [15]. Second, the given study is empirical and analyses the advantages of cloud accounting and determines interdependency between them and their degree of impact under a hierarchical system, based on a new method of analysis. Third, it is essential to determine the advantages of cloud accounting because this may lead to the formation of cloud accounting infrastructure. To this end, the findings of this research offer beneficial information to the researchers, capital market regulators, as well as the practitioners, which can be used to enhance cloud accounting infrastructure. Lastly, this study can assist companies to understand more about the benefits with the least and most influence on cloud accounting.

2. Theoretical Foundations

2.1. Theoretical Foundations of Cloud Accounting

A cloud accounting is a cloud computing application that is specially created to process financial data. According to this model, accounting systems and services processing, storage and installation is moved out of local environments and to remote servers managed by cloud services providers [16][17]. In addition, cloud accounting is a type of web-based accounting and reporting that facilitates data mining and storage on a cloud platform [15]. Cloud accounts programs are provided as internet-based services [18]. The resources are mobile and can be used on different authorized devices including computers, tablets, and smartphones [19][20]. According to the U.S. National Institute of Standards and Technology (NIST), cloud computing refers to a model that allows access to ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources, including networks, servers, storage, applications and services, that can be during the rapid provisioning and release with little management oversight or interaction with service providers [21]. Cloud-based accounting has become a current reality of the business where financial calculations and data storage is carried out within cloud [22]. In this model, the accounting software is not installed on the local computers of the users, rather the processing of the data is done on the servers offering online services and the users can access these services by using web browsers. As a result, the accountants or the owners of the business can access and operate their financial data anywhere within the boundaries of an internet connection.

This model of accounting is vital in increasing the dynamism of the business and has developed into collaborative model, which contributes value to all the financial and non-financial operations of the business [14].

In cloud accounting, the information of clients is stored safely in the servers of the company providing the cloud (the cloud). Here, intellectual property of the assets is owned by the server provider whereas the client is given user rights without owning the software. The access to cloud accounting services requires only an internet connection, which only means that companies can access information about financial data at all times and no matter the location [23]. The other characteristic of cloud accounting is that it can process several, complex and concurrent requests and activities via integrated system which lowers the workload on accounting processes by a considerable margin [14].

2.2. Advantages of Cloud Accounting

The study for researcher [24] was the first to conduct a study that focused on the benefits of cloud accounting and determined the major benefits of this technology to be cost reduction, flexibility and remote accessibility. This was followed by the study by researchers [25] on cloud-based accounting of small and medium-sized enterprises (SME) in Lithuania. Their results showed that there are four benefits, which include increased processing power of data, financial data-timeliness, less cost of investment and less long-term maintenance of IT. On the same note, the team of researchers [26], when comparing and contrasting the traditional versus the cloud-based accounting, arrived at the conclusion that, cost

savings are the most significant difference and benefit of cloud accounting over the traditional methods. Cost reduction and provision of accurate and timely financial information were also found by the researchers [27] as the main benefits of financial outsourcing in their study on the effects of financial outsourcing in the adoption of cloud accounting. In their study entitled *Some Considerations Regarding Cloud Accounting*, the researchers [22] highlighted data and transactions centralization, access to accurate and timely information and better quality in management as the key benefits of cloud accounting. In their research concerning the role of cloud computing in the Albanian accounting sector, the team of researchers [28] proved that recent developments in information technology have had a significant impact on the accounting and financial reporting practices, the most noticeable of which is cost efficiency. Similarly, the same year, researchers [14] during an exploration of a new paradigm of accounting which relates to cloud computing, have identified four main benefits; it includes lower initial costs, enhanced flexibility, the timeliness and currency of financial information and lowered capital expenditures. In addition, data accuracy and quality were identified by researchers [29] as one of the major advantages of cloud accounting. The researchers [14] also indicated cloud accounting to be a new business model in a tough environment, putting cost reduction and additional organizational efficiency, as the two main benefits of the new business model. Researchers. Cloud computing is also changing the accounting profession and becoming a global concern, and [30] cited remote accessibility and increased flexibility as its chief advantages. Lastly, the researchers [31] also found that cost savings and increased security were considered to be the key

benefits of cloud accounting, and the team of researchers [32] also discovered that smaller businesses tend to have a more favorable view on cloud accounting and have a higher degree of agility and ability to adapt to the use of this technology than larger companies.

2.3. Research Questions

As seen through the analysis of theoretical backgrounds, the majority of international research has studied the benefits of cloud accounting in a disjointed fashion, with most studies in the country having centered on the factors that affect its adoption. Not many studies like the current one have conducted a thorough research of the advantages of cloud accounting and creation of structural-interpretive model. That is, the advantages of cloud accounting have not been comprehensively and holistically discussed in any of the reviewed studies as in the present study. Moreover, with the tremendous technological growth that is being experienced globally, the research can be used to form the theoretical formulation and proliferation of ideas surrounding cloud accounting, both in practice and research. The current study, therefore, aims at answering the following research questions: a) What is the value of using cloud accounting? b) What are the ways of designing the benefits of cloud accounting and modeling them within a structure-interpretive framework?

3. Research Methodology

The In terms of outcomes, the study belongs to the category of developmental researches as the key

purpose of it is to create the structural-interpretive model (ISM) with the purpose of creating the advantages of cloud accounting in Iranian businesses. According to purpose, it is an applied research study. The research process was undertaken in three basic steps to have a holistic conceptual framework of the advantages of cloud accounting:

- Stage One: An extensive literature review concerning the theoretical background and literature related to the topic of cloud accounting was conducted to determine the elements and advantages related to cloud accounting.
- Stage Two: Once a list has been made of identified benefits, a fuzzy Delphi analysis was conducted to narrow and confirm these benefits. This was done in collaboration with 16 faculty members in the field of accounting, who were sampled on purpose with the aim of choosing them due to their expertise in the field of accounting.

The decision to use academic experts as participants was supported by the fact that the concept of cloud accounting is relatively new. Since most of the working accountants and auditors are not familiar or well equipped with this new concept in the technical aspect, it was decided to take data among the academic and scholarly community in the qualitative phase of the study. table (1) depicts the demographic features of the participants in the qualitative study of the research.

Table (1): Demographic Characteristics of Participants in the Qualitative Phase of the Study

Participant No.	Gender	Age (years)	Academic Degree	Work Experience (years)	Field of Study
1	Male	45	PhD	13	Accounting
2	Female	47	PhD	15	Accounting
3	Female	41	PhD	12	Accounting
4	Male	49	PhD	17	Accounting
5	Male	42	PhD	14	Accounting
6	Male	43	PhD	10	Accounting
7	Female	42	PhD	9	Accounting
8	Male	43	PhD	12	Accounting
9	Male	43	PhD	13	Accounting
10	Female	44	PhD	11	Accounting
11	Male	43	PhD	10	Accounting
12	Male	43	PhD	14	Accounting
13	Female	44	PhD	10	Accounting
14	Male	48	PhD	16	Accounting
15	Male	43	PhD	15	Accounting
16	Male	47	PhD	16	Accounting

To verify the validity of the expert questionnaire, the Content Validity Ratio (CVR) method was employed. Table (2) presents the components and benefits of cloud accounting, which were identified based on the theoretical and conceptual foundations of the study. Given that the CVR value for all components exceeded **0.42**, the content validity of all research constructs was confirmed.

Furthermore, to assess the reliability of the questionnaire, Cronbach's alpha coefficient was calculated. The results indicated that the reliability coefficient was greater than **0.7**, confirming the internal consistency and reliability of the instrument.

Table (2): Cloud Accounting Benefits and Content Validity of Identified Advantages

No.	Cloud Accounting Benefits	Sources	CVR	Approval/Rejection	Agree	Disagree	Content Validity Status

No.	Cloud Accounting Benefits	Sources	CVR	Approval/ Rejection	Agree	Disagree	Content Validity Status
1	Cost reduction	Arsenie-Samuil (2011), Zhang & Gu (2013), Yunesco et al. (2013), Dimitriu & Matei (2015), Shukla & Mocha (2014), Sony et al. (2018)	1	Approved	16	0	Essential
2	Reduced capital expenditures	Kristauskas & Misovisine (2012)	0.75	Approved	14	2	Essential
3	Reduced long-term IT maintenance costs	Kristauskas & Misovisine (2012)	0.87	Approved	15	1	Essential
4	Lower initial costs	Dimitriu & Matei (2014)	0.75	Approved	14	2	Essential
5	Reduced capital costs	Dimitriu & Matei (2014)	0.62	Approved	13	3	Essential
6	Increased flexibility	Arsenie-Samuil (2011), Corkern et al. (2015), Dimitriu & Matei (2014)	1	Approved	16	0	Essential
7	Enhanced productivity	Dimitriu & Matei (2015)	1	Approved	16	0	Essential
8	Remote access	Arsenie-Samuil (2011), Corkern et al. (2015)	1	Approved	16	0	Essential
9	Improved security	Sony et al. (2018)	1	Approved	16	0	Essential
10	Increased information processing capacity	Kristauskas & Misovisine (2012)	1	Approved	16	0	Essential
11	Accurate and timely financial information	Zhang & Gu (2013), Picurari & Nechita (2013)	0.87	Approved	15	1	Essential

No.	Cloud Accounting Benefits	Sources	CVR	Approval/ Rejection	Agree	Disagree	Content Validity Status
12	Timeliness and currency of financial data	Kristauskas & Misovisine (2012), Dimitriu & Matei (2014)	0.87	Approved	15	1	Essential
13	Assurance of data accuracy and quality	Prichici & Yunesco (2015)	0.87	Approved	15	1	Essential
14	Centralized financial data	Picurari & Nechita (2013)	0.75	Approved	14	2	Essential
15	Improved quality of managerial activities	Picurari & Nechita (2013)	1	Approved	16	0	Essential

The reason for selecting 12 participants in this study is based on the nature of qualitative research and the limitations of interpretive-structural analysis. In the final step, after the components and indicators were finalized, a structural–interpretive model questionnaire was distributed to 12 faculty members in the field of accounting. Based on the interpretive-structural analysis, the prioritized and influential layers in cloud accounting were identified.

The adequacy of the data at this sample size is entirely acceptable, as increasing the number of participants could lead to deviations in the interpretive-structural analysis. This is because the analysis requires the use of modeling indicators, and a larger sample may complicate the interpretation of results. Table 3 provides the necessary demographic information about the participants.

Table (3): Demographic Characteristics of Participants in the Quantitative Section

Participant	Gender	Age	Academic Degree	Work Experience	Field of Study
1	Male	51	PhD	17 years	Accounting
2	Male	42	PhD	13 years	Accounting
3	Male	46	PhD	12 years	Accounting
4	Male	47	PhD	14 years	Accounting

Participant	Gender	Age	Academic Degree	Work Experience	Field of Study
5	Male	44	PhD	11 years	Accounting
6	Male	42	PhD	14 years	Accounting
7	Female	42	PhD	13 years	Accounting
8	Female	45	PhD	11 years	Accounting
9	Male	44	PhD	15 years	Accounting
10	Female	43	PhD	14 years	Accounting
11	Male	46	PhD	15 years	Accounting
12	Male	42	PhD	12 years	Accounting

Identification of Components in the Interpretive Structural Modeling (ISM) Framework

In this section, to determine the research components in the model, the initially identified components were first compiled into a scoring checklist (Table 4) and distributed among 16 panel members, who were selected using a homogeneous sampling method. The objective was to assess whether, in their opinion, the identified characteristics of cloud accounting benefits met the required threshold.

A fuzzy Delphi analysis using triangular fuzzy numbers was conducted, and the output of this stage was the defuzzified score for each benefit. If this score exceeded 7, the component was accepted; otherwise, it was rejected.

In the first round of the fuzzy Delphi, some of the 15 identified benefits were consolidated based on expert opinion, as follows:

- **Cost Reduction:** Cost reduction, reduced capital expenditures, reduced long-term IT maintenance costs, lower initial costs, and reduced capital costs were all combined into the single factor “Cost Reduction.”
- **Accurate and Timely Financial Information:** Accurate and timely financial information, timeliness and currency of financial data, and assurance of data accuracy and quality were consolidated into the factor “Accurate, Timely, and Up-to-Date Financial Information.”

Considering the consolidated benefits, a second round of the Delphi was conducted among the panel members for final confirmation. The defuzzified scores of all components exceeded 7, and all were approved. After the final determination of the research components, the abbreviations for the cloud accounting benefits were defined as shown in the following Table 4.

Table (4): Coding of Cloud Accounting Benefits

Benefit Code	Cloud Accounting Benefit	Benefit Code	Cloud Accounting Benefit
C1	Cost Reduction	C6	Increased Information Processing Capacity
C2	Increased Flexibility	C7	Accurate, Timely, and Up-to-Date Financial Information
C3	Enhanced Productivity	C8	Centralized Financial Data
C4	Remote Access	C9	Improved Quality of Managerial Activities
C5	Improved Security	—	—

Determining Relationships and Hierarchical Levels of Components

Since each expert provides a self-interaction matrix, after collecting opinions and combining each element of the matrices, a structural self-interaction aggregated matrix is obtained. To compute the initial reachability matrix, the mode (i.e., the most frequently occurring value) among the experts' opinions is first calculated. Then, each number greater than the mode is assigned a value of 1, while numbers equal to or less than the mode are assigned a value of 0.

After preparing the initial reachability matrix, its internal consistency is checked and ensured. By combining the identity matrix with the adjusted initial matrix, the secondary reachability matrix is obtained.

To determine the rank and level of the components, the adjusted secondary reachability matrix is used. In this process, the Reachable Set

and Antecedent Set of each indicator are defined as follows:

- **Reachable Set (Output):** Includes the indicator itself and the indicators it influences, marked with 1s in the corresponding row.
- **Antecedent Set (Input):** Includes the indicator itself and the indicators that influence it, marked with 1s in the corresponding column.

After defining these sets, the indicators for which the Reachable Set and Antecedent Set are identical are assigned as the first level of cloud accounting benefit components. These indicators represent the most influential components. Once this level is determined, these indicators are removed from the table, and the process is repeated for the next level using the same method. This procedure continues until all components are categorized into different hierarchical levels. In this study, the final table (5), showing the hierarchical levels of the indicators has been disclosed.

Table (5): Ranking and Hierarchical Levels of Cloud Accounting Benefit Components

Cloud Accounting Benefit Component	Code	Reachable Set	Antecedent Set	Intersection Set	Level
Cost Reduction	C1	C1 - C2 - C3 - C4 - C5 - C6 - C7 - C8 - C9	C1 - C4	C1 - C4	6
Increased Flexibility	C2	C2 - C3 - C9	C1 - C2 - C4 - C6 - C7 - C8	C2	4
Enhanced Productivity	C3	C3 - C5	C1 - C2 - C3 - C4 - C7 - C9	C3	2
Remote Access	C4	C1 - C2 - C3 - C4 - C5 - C6 - C8 - C9	C1 - C4	C1 - C4	6
Improved Security	C5	C5	C1 - C3 - C4 - C5 - C6 - C7 - C8	C5	1
Increased Information Processing Capacity	C6	C2 - C5 - C6 - C7 - C8 - C9	C1 - C4 - C6 - C7 - C8	C6 - C7 - C8	5
Accurate, Timely, and Up-to-Date Financial Information	C7	C2 - C3 - C5 - C6 - C7 - C8 - C9	C1 - C6 - C7 - C8	C6 - C7 - C8	5
Centralized Financial Data	C8	C2 - C5 - C6 - C7 - C8 - C9	C1 - C4 - C6 - C7 - C8	C6 - C7 - C8	5
Improved Quality of Managerial Activities	C9	C3 - C9	C1 - C2 - C4 - C6 - C7 - C8 - C9	C9	3

Final Interpretive Structural Model The Final Interpretive Structural Model can be drawn as illustrated below: At this point, the research model is given, based on the levels of the variables and the end reachability matrix. The factors in this study have been grouped in to six levels as represented in the Figure 5 whereby the highest level is Improved Security followed by Cost Reduction and Remote Access as the lowest level.

It is essential to mention that the factors in the higher levels are less influential and mostly influenced by the factors in the lower levels. On the other hand, the consideration of lower-level factors is the basis and infrastructure of the benefits of cloud accounting in Iran and should be considered particularly. Other relationships and interconnections are shown in Figure (1).

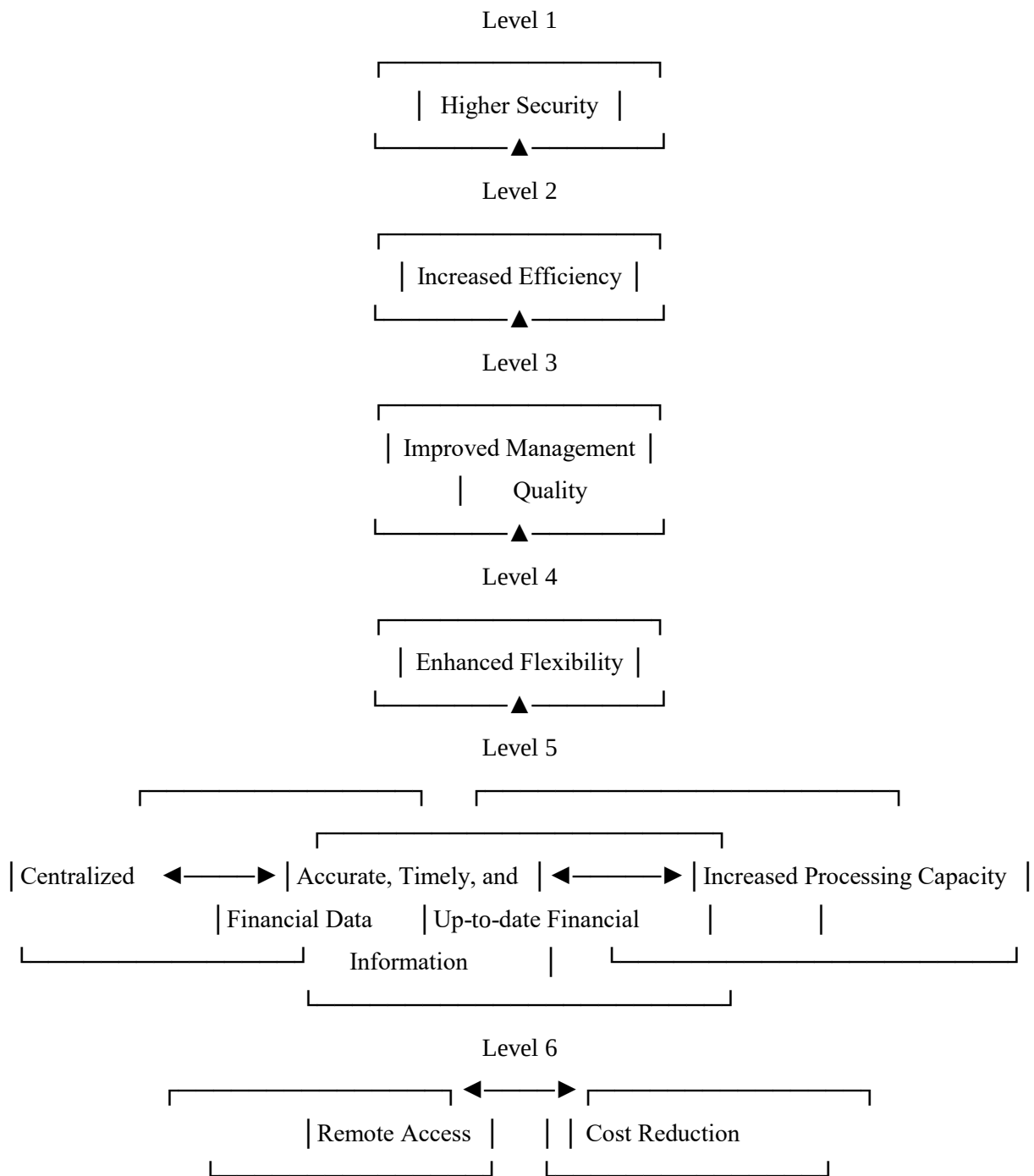


Figure (1): Model of Structure-Interpretation of Cloud Accounting Advantages

5. Discussion

The concept of cloud computing that was first developed in information technology has gradually spread out in every sector in society. Cloud accounting is the term used in application in finance and accounting. The advent of cloud accounting has been an impressive phenomenon in terms of financial outsourcing that is fast evolving,

and could appear as a new resource of financial and accounting activity evolution. Since cloud accounting is yet to be applied in Iran, its adoption and implementation must be severely researched to reveal the most important benefits with their interconnection and the most efficient ways to integrate them. Thus, this study aims to enhance the management quality, enhance productivity, flexibility, ensure well-guaranteed security, greater

processing capacity, delivery of correct, timely, and updated financial data, centralization of financial data, cost reduction, and remote accessibility.

The current research suggests the model of cloud accounting advantages based on Interpretive Structural Modeling (ISM) methodology which provides new knowledge and perception of such advantages and assists in prioritizing activities in the decision-making environment. The results indicate that the two components of cost reduction and remote access are the most important benefits of cloud accounting in the highest level (Level 6). In particular, there are several ways through which cloud accounting saves money. After financial outsourcing, firms do not have to buy the corresponding software and hardware and this reduces initial and capital costs. Also, outsourcing reduces maintenance and system upgrade expenses since the system is automatically updated enabling companies to have access to the latest technologies at a low cost.

Lastly outsourcing saves labor expenses, as well as, costs of IT experts to service the system. There are no concealed expenses besides the need to have an internet connection, a browser, and a subscription fee (per month). Remote access is also another important advantage at this level as it allows managers and accountants to view company accounting operations wherever they are and at any time through the internet and browser which allows decision-makers to view company information at non-working hours or when they have free free-time. In Level 5, the following three elements were defined to be the major benefits of cloud accounting: centralized financial data, accurate, timely, and updated financial

information, and higher information processing capacity. Lastly, Level 1 showed improved security as one of the major advantages of cloud accounting. Given that the servers are not located within the company, company data has been secured against the many risks that may affect a server, including hard drive failure, theft, and fire. It is suggested that the policymakers and capital market regulators, taking into account the development of cloud accounting in the developed nations and its unavoidable rise in the nearest future, should establish appropriate infrastructure preconditions of its evolution. Moreover, capital market regulators ought to work with professionals and scientists and create a set of comprehensive laws and regulations that will regulate clouds accounting and clarify the role of service providers and clients. The government being the monitoring body can encourage the accounting infrastructure in the clouds, organize continuous training programs to sensitize both the people and the accountants and introduce incentive policies in encouraging both the public and the private companies to adopt it.

6. Conclusion

Cloud accounting is not very expensive to buy any infrastructure or software and hence all financial data is consolidated in a data center that is hosted by the service provider. Since the system is integrated, all the financial data can be accessed and tracked by the managers allowing accountants to present accurate timely and current financial data. Also, the service requests can be configured and standard formulas of many accounting operations can be enhanced to augment capacity. Flexibility was also found as a major benefit of cloud accounting at Level 4. The cloud accounting

systems are dynamic, versatile and empirical accounting studies indicate that optimal utilization of available resources and correspondence to the current accounting demands improve organizational dynamism. Level 3 was a further benefit of cloud accounting where better quality of management was achieved. The quality of financial activities is improved because the professional skills and managerial experience of outsourcing providers of financial services reduce the possibility of inaccurate accounting information, which guarantees the quality of financial data and allows the management to make decisions based on credible information, thereby improving the quality of managerial operations. In Level 2, productivity was determined as a considerable advantage. Financial outsourcing has the following advantages: with the right and timely financial information, the companies can make better decisions and respond to the changes in the market in a shorter period of time. It also removes time and space barriers of financial management to enable managers to conduct their activities online and enhance efficiency and effectiveness of the organization.

Concerning the weaknesses of the current research, it is necessary to mention that the model proposed follows the Interpretive Structural Modeling (ISM) strategy according to which a hierarchical model of the benefits of cloud accounting is created, but the overall effect of the benefits is not considered. Even though this article dwells on the advantages of cloud accounting, how the advantages can be improved and the effectiveness of cloud accounting implementation in Iran were not discussed. It is thus advisable that future studies be conducted on these aspects.

Besides, it is implied to use the grounded theory or data-driven analysis methods in future research.

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