International Journal of Latest Research in Science and Technology **ISSN (Online):2278-5299**
Volume2,Issue 2 :Page No.17-20 , March - April 2013
https://www.mnkpublication.com/journal/ijlrst/index.php

ISSUES AND PROBLEMS RELATED TO DATA QUALITY IN AIS IMPLEMENTATION

[1]Dr.muhannad ahmad, [2]Dr.ahmad ayasra, [3]Dr.farah zawaideh
[1,2]Accounting information system department,Irbid national university
[3]Computer information system department,Irbid national university

Abstract*— *One of the most competitive advantages for an organization is the quality of information. The quality of the information provided is imperative to the success of the systems in an accounting information system. In this paper, the main issues that related to data quality in implementation of any accounting information systems is presented and discussed. A solution for the problems were suggested and discussed. A case study to address the important systems, stakeholders, and organizational factors that influence the data quality in accounting information systems' implementation is being illustrated and discussed in this paper too.

Keywords. AIS, Data quality, System factors, Stakeholders, Organizations

INTRODUCTION

The management of organizations in the contemporary world has much more focus on systematical issues than was previously required. Accounting Information System (AIS) as one of the most critical systems in the organization has also changed its way of capturing, processing, storing and distributing information. Nowadays, more and more digital and on-line information is utilized in the accounting information systems. Organizations need to take an approach which put such systems at the forefront, and consider both the system and the human related factors while managing their accounting information systems. They must focus on critical factors if they are to attain high-quality accounting information. Failure to do so has negative impacts on the organizations' financial process. Poor information quality may have adverse effects on decision making (Huang, Lee and Wang 1999, Clikeman 1999). This paper first reviews the literature in relevant areas and then uses a case study to discuss the data quality issues for accounting information systems' implementation, by analyzing systems, stakeholders' and organizational factors influencing accounting information quality. Finally, it draws some conclusions from the analysis of the case study.

As informatics expert system and information systems, the general factors those affecting the information systems techniques are the same factors those affecting the accounting information systems (AIS). Many researches (i.e. total quality management) are concentrating on success factors and critical process factors that are affecting the information systems in general and AIS as special case.

Those factors are being considered as critical factors form data quality side.

Four types of stakeholders have been identified those are

- Data custodian
- Data consumer
- Data producer
- Data manager

The stakeholders play different roles in accounting information systems. The data producer has the role of information collection, where AIS development and operation is the task of data custodian stakeholder.The customer is the organization that uses the AIS system in its entire system. The entire data quality management is the issue of data manager stakeholders.

PROBLEM

In modern technology, AIS becomes the main used techniques in accounting and managing of financial information. The large scale organizations become completely automated in their informatics and processes. But the fact that, the accounting information systems have to deal with different levels of people and processes makes many questions to be flushing.

The organization accountants actually are the front line of AIS system, where the internal audit is the first line of processes that really need to be fully trusted in dealing with any informatics, and specially, finance. The financial issues are very sensitive and critical, so, the data quality is a real challenging problem that needs to be achieved in 100% accuracy.

Another process is the external audit. The external audits have to meet a 100% of accuracy in any accounting information system and financial informatics. The external audit trust of informatics includes different focuses, including customer focus, managerial focus, organizational accountants focus, internal audit, and many other criteria.

Any financial and accounting informatics should be subjected to high security, safety, and retrieval. The administrator shouldn't have any administrative permissions

Publication History
Manuscript Received : 22 March 2013
Manuscript Accepted : 3 April 2013
Revision Received : 10 April 2013
Manuscript Published : 30 April 2013

on should information. The overall records must bounded by all lows of the organization and audits.

OBJECTIVES

This paper aims to study the effectiveness of the accounting information systems (AIS) from different viewpoints related to data quality issues; stakeholders' viewpoint, and audit viewpoint. This research takes into account Jordan organizations as study sample that are considered to be small scale or medium scale organizations. The Jordan organizations have the characteristics of high variety and adaptability organizations.

A questionnaire is being adapted to study the view of different stakeholders and organization. The questionnaire was built depending on different hypothesized principle about the different stages and points of data quality.

RELATED WORK

Actually, the current researches are studies such field form very acute and small angles do not including full study of data assurance and quality in different organizational processes. Firstly, (saraph, 1989) represents the role of top management in addition to data quality management as the first critical issues that could be controlled in order to achieve better trust of the information consideration. The author also demonstrated a strategy that depends on employee's ability enhancement including training strategy and performance evaluation. But he didn't consider any external factors and based on non-continuous improvement scheme.

In (English, 1999) the author repeated the work of (saraph, 1989) but he considered the performance evaluation technique in order to achieve managerial changes. But the author in this research didn't consider any audit process, thus, the overall criteria and work are virtual and don't take any importance. Hence, the goal of data quality is to make the audit definitely trusted and happy with the automated AIS system.

The author of (Bowen, 1993) represents the critical data quality issues form the view point of customer only. This research has many weaknesses because of negliting all process stages from the organization view point. In the fact, the customer focus does not include real measurement of the data quality in such fields. It only represents an agent measurement.

(Huang, 1999) did very precise work focusing on role of management, organizational structure, supply quality management, total quality management, and external factors. The weakness points of this research are ignoring the managerial changes, in addition to do not study the internal control and audit issues.

In fact, many researches studies different areas and parameters that are related to quality of accounting information. But in real world, the real data quality needs complete and comprehensive study of different parameters and processes in the overall process.

METHODOLOGY

The use of different organizations as a part of study sample (i.e. as illustrated in section 6) make the evidence of information and results reliability. It provides multiple measures of the same hypothesis or factor. The different organizations have different scales, different processes, and different audits. The methodology of this research depends in major with interviews with stakeholders in situation. The direct interview with stakeholder could ensure the correct and trust analysis; this confidence (i.e. correct information about data quality) couldn't be achieved by the traditional methodologies of data collections, like questionnaire. Whereas, the collected data should include the complete documents including policy instructions, description of the position, charts, organization structure, published information, career path, and reports. Actually, the process that the organization obeys in data collection represents an important factor in data quality. The detailed description and role of AIS officers could be concluded form the position description of them, while the fuzzy description may lead in many cases to wrong behavior of the officers, technical processes, and managerial processes. In contrast, the clear position description and job analysis make clear understanding from the side of the employee about the exact role that he/she are subjected to do, and what is expected form he/she. The internal dataflow and processes between different department, and different divisions in the same department could be understood from the organizational charts and diagrams. It is very important factor that affects the data flow, and thus, data quality. Where, the unreasonable relationship between divisions cannot suffer trusted data, and thus, good data quality, at old.

For example, consider the IT and Finance departments within an organization. Training documents provide evidence of training that has been undertaken by an organization. Annual reports and financial statements provide the general background information about an organization and its financial position.

All case study interviews together with the additional documents obtained from the case study organizations were transcribed and entered into a software package for qualitative data analysis. A content analysis of those documents and interview transcripts was conducted. All transcript material was coded and an index tree was also developed to aid in categorizing and grouping of the qualitative materials.

Direct quotations from the case study interview transcripts were used to illustrate the factors or sub-factors which could assist in building the explanation. Quotations from case study interviewees represented their own opinions, perceptions, and experiences regarding particular factors or situations. They also provide the respondents' true feelings and beliefs on certain issues. Therefore, these quotes have the potential to assist readers to obtain insights into the respondents' understanding of the data processes in all AIS stages.

SAMPLE

The sample of this research is the case study organization, includes an overview of the company, its information systems, and the data analysis of the case study follows.
In this case study, there is no data manager position; therefore, three other stakeholders are interviewed:

- Data producers: CFO and accounting officer

- Data custodian: IT manager
- Data consumer: General user

Case study organization E is an education and training Infrastructure Company in Jordan those partners with universities and professional education providers to market and deliver their courses over the Internet to students and organizations. It's a medium size organization with approximately one hundred staff. They use an off the shelf commercial software package which basically performs the group's accounting information. The program is also used to report against budgets. The organization's business units throughout the world have different entities with their own local budgets and they run a separate analysis in the software package for each of those divisions.

The collected information were organized and filtered by different stages in order to be analyzed. The analysis will be illustrated clearly in the next section.

RESULTS

The research process that depends on direct interviews with real stakeholder, got result of data and information that could be analyzed and studied to determine the needed data quality issues. The following analysis and results was been gotten by the paper research study.

The importance of the issues of data quality in any AIS is addressed the participants of the research, where the data quality is considered as main priority in different organizations. The organization needs to monitor there crash balance closely, fairly, and high priority of data quality. In fact, the organization normally forecast to predict those needs and tries to meet them in there process and planes. But that increase the need of finding earlier warnings and measurements for the part of business to be determined if it performed or not. Also, the issue should be defined by exact numbers to enable understanding of the issue and recognize the data quality level, behaviors, and reaction that would be affected.

When studying the fun transfer in electronic way, it is easier than the traditional way and more controllable. Hence, the money transfer needs two managers approval (at least), so, the control of the process is the most important issue in data quality. Normally, the people (i.e. specially the employees) prefer to do any process that directly relates to money transfer in the right and save way, rather than effective way. Because of that, the senior employee requires to have very trusted procedure in order to make a save transfer, so, it puts the trust of the data in the top level of data quality issues. Also, the accounting information system should ensure time saving in all of its steps and performance.

Most of organizations don't have any dedications for the employees those are responsible for data quality and information system maintainability. According to many employees of different organizations, the real trust of the data needs hard effort sometimes. To keep that hard effort, dedications should be presented from the side of organizations during the annual work. In most, the organizations tend to hire well experienced and trained persons to avoid the data quality violation issues.

Even though, the well experienced persons are have the enough – or the most of enough – knowledge to do the specified work, but they generally requires a side dedication to keep good work. In many times, expressing of management with it happiness of the employees performance is considered as better dedication than financial awards. But this couldn't be enough overall time. Putting the data quality criteria in job description of the employee returns negative performance. So, the employee should consider the issues without keeping the employee in critical section over the time. Also, different persons need to corporate them work together as a team or even in different team. When co-operating the work, the process got fixed property and stable. The error that faced during well-organized communicated employees will be very controllable and ease to be solved in the current process, and also, in the future coming processes. An important criterion to achieve such corporation is to keep good relations in different stages of process employees and managers.

Many organizations of the study sample were young companies and are growing in their size and work. In such case, the most of employees becomes very excited and dedicated to keep good work and innovative, creative, and energetic behavior of the work. The most of employees of such cases are evaluated above expectations or as expected in the annual performance evaluation process. The high quality work and performance – in fact – needs to be recognized from the senior of management. Where the commitment of the management – specially, top management – to data quality is a very important factor in the overall process. If the managements do not keep the continuous review process of the work flow, it definitely will fail or be bad supervision. This will lead to fail in near future. Hence, we work on data quality and the research study the better cases and bad cases, the better case is to follow the process daily by the management. In continuous low high duty evaluation and follow up, the management will be able to control the resources, work pressure, and flow conditions.

In medium scale organizations, the middle layer of management is not considered in most cases. This mean, there is no middle layer management. So, the daily follow up and evaluation will be the responsibility of the top management.

Each information system customer has a timing pressure, weather it is an internal or external customer. The work plan usually has day by day deadline, weakly deadlines, monthly deadlines, and project wise deadlines. The timing in such cases represents major influence. So, the information will suffer the complete accuracy over the deadline. And the responsibility of planning department or planning persons is to keep major concern in data quality subjected to deadline. The large scale companies are welling to coordinate a data quality officer / manage, or even to create a team for data quality issues. But that is differing in the small scale and medium scale companies. They didn't tend to coordinate such position, instead, the accountants and accounting information systems employees have to setup, flow, and review the different stages and conditions of the data quality issues.

CONCLUTION

This study focused on the investigation of systems', stakeholders' and Organizational factors' impacts on data quality of accounting information systems' implementation. After the initial literature reviews of the important factors that could influence data quality in general, the case study methodology was utilized to further exploring the issues especially related to accounting information systems' implementation.

There are some important points that could be drawn from the analysis of the case study data. These are summarized below:

- Competent personnel is as important as the suitable system;
- Input control is the most important control, and in the online transaction environment, it should be incorporated with data suppliers' quality management;
- It is hard to have DQ manger positions in small and medium organizations. However, organizations should incorporate DQ manager functions into those relevant stakeholders' job functions that should be responsible for DQ in AIS.

This study showed that in order to have a successful accounting information systems' implementation, organizations should pay attentions to both systems and organizational factors. Different stakeholders of the systems and data quality controls need to work together to ensure the data quality in AIS. Future studies could look into the relationship between the systems', stakeholders', and organizational factors' with the data quality outcomes in organization's AIS. Cross cultures and cross-countries research in this topic may also help better understanding the related issues.

REFERENCES

[1] H. Nach and A. Lejeune, "Implementing ERP in SMEs: Towards an Ontology Supporting Managerial Decisions," in International MCETECH Conference on eTechnologies 2008, pp. 223-226.

[2] Badri, M. A., Davis, Donald and Davis, Donna (1995). A study of measuring the critical factors of quality management. International Journal of Quality and Reliability Management, 12(2), pp. 36-53.

[3] M. Y. Zain, "Minimizing the Problems of Enterprise Resource Planning (ERP) Implementation for Small to Medium Cigarette Company Through Framework for Applications of Systems Thinking (FAST)," Media Informatika, vol. 6, 2008.

[4] Clikeman, P. M. (1999). Improving information quality. Internal Auditor, 56(3), pp. 32-33.

[5] C. Doom, K. Milis, S. Poelmans, and E. Bloemen, "Critical success factors for ERP implementations in Belgian SMEs," Journal of Enterprise Information Management, vol. 23, 2009, pp. 378 – 406.

[6] English, L. P. (1999). Improving Data Warehouse and Business Information Quality:

[7] Methods for Reducing Costs and Increasing Profits, John Wiley and Sons, Inc.

[8] M. Argyropoulou, G. Ioannou, and G. P. Prastacos, "Enterprise Resource Planning implementation at Small and Medium Sized Enterprises: an initial study of the Greek market," International Journal of Integrated Supply Management, vol. 3, 2007, pp. 406.

[9] Huang, Huan-Tsae, Lee, Y. W. and Wang, R. Y. (1999). Quality information and knowledge, Prentice Hall PTR.

[10] Winkelmann and K. Klose, "Experiences While Selecting, Adapting and Implementing ERP Systems in SMEs: A Case Study," in Americas Conference on Information Systems (AMCIS), 2008.

[11] Wang, Y. and Strong, D.M. (1996). Beyond Accuracy: What data quality means to data consumers. Journal of Management Information Systems, 12, pp. 5-34.

[12] Vilpola and I. Kouri, "Improving ERP Requirement Specification Process of SMEs with a Customer-Centered Analysis Method," in Frontier of e-Business Research (FeBR), Tampere, 2005, pp. 140-151.

[13] P. Iskanius, R. Halonen, and M. Mottonen, "Experiences of ERP Use in Small Enterprises," in International Conference on Enterprise Information Systems (ICEIS), 2009.

[14] W.-L. Shiau, P.-Y. Hsu, and J.-Z. Wang, "Development of measures to assess the ERP adoption of small and medium enterprises," Journal of Enterprise Information Management, vol. 22, 2009, pp. 99.

[15] B. Ramdani and P. Kawalek, "Predicting SMEs Willingness to Adapt ERP, CRM, SCM & E-procurement Systems," in European Conference on Information Systems (ECIS), 2008.