

Factors Influencing The Quality of Accounting Information System And Its Implications on The Quality of Accounting Information

Rapina

Accounting Doctoral Student, Economics Faculty, Padjadjaran University
Bandung, West Java, Indonesia

rapinacen@yahoo.com

Abstract

The purpose of this study was to determine the influence of organizational factors (management commitment, organizational culture and organizational structure) to the quality of the accounting information system and its implications on the quality of accounting information. The unit of analysis in this study is the accounting staff of 33 cooperatives in Bandung-Indonesia. The results showed that the commitment of management, organizational culture and organizational structure have a significant effect on the quality of accounting information systems. Furthermore it was found that the quality of accounting information system has implications for the quality of accounting information.

Keywords: management commitment, organizational culture and organizational structure, accounting information system, accounting information

1. Introduction

Without quality accounting information system, there will be no quality accounting information (Sacer *et al*, 2006:62). Each company uses accounting information system (Chandra,2002:34; Boockholdt, 1999:1) ranging from the manual, and some use a combination of computer (Davis, 1999:1; Wilkinson *et al.*, 2000:7; Hansen *et al.*, 2009:4).

Azhar Susanto (2008:72) said accounting information system is an integration of hardware, software, brainware, procedures, telecommunication network and an integrated data base. Accounting information system has an important function in the organization, are as leverage to improve the effectiveness and efficiency of operations and to support managerial activities including management decision making (Gelinis *et al*, 2012:18).

To provide added value, in order to produce a competitive advantage for an organization, management will use a device called an accounting information system (Stair dan Reynolds, 2006:6). According to Mitchell *et al* (2000) accounting information systems is used as a management tool in controlling the short-term and long-term, so the existence of these information resources making corporate executives gain a strategic, tactical excellence and operational excellence (McLeod dan Schell, 2008:29). Accounting information will be used in the decision-making process for the user both for internal management and external management (Mitchell *et al*, 2000), and accounting information mentioned above produced by the accounting information system (Hall,2004:21).

Investors as external users will not trust accounting information with poor quality, and this makes investors will allocate their funds to other investments (Kieso *et al*, 2007:3). Gellinas (2012:19) said the quality of accounting information is used to help users for making useful decisions (*usefulness decisions*). Therefore, the quality of accounting information of course, is needed by investors to create an efficient market (Kieso *et al*,2007:3).

Criteria of quality information stated by Gelinis *et al* (2012:19) that the information must be accurate, relevant, timely and complete (Song Lin dan Xiong Huang, 2011:301-302; Azhar Susanto, 2008:13). Information is accurate, it means that the information has sufficient precision and close to the actual reality (Eppler, 2003:68). Information is relevant if the information is capable of making a change in decision-making in accordance with the objectives of user and problems faced by users (Azhar Susanto,2008:13; Gelinis *et al*,2012:21).

Timely information, it means that the information must be available to decision makers when required and the information does not appear in the time that has passed or earlier (Bidgoli, 2004:164). Research has been done by Ponte *et al* (2000), Xu (2009), Siti Rahayu Kurnia (2012) and Adeh Ratna Komala (2012) found that the quality of accounting information is influenced by the quality of accounting information systems.

There are several key success factors in the development of accounting information systems including the ongoing support and commitment of the leadership of the organization (Galliers, 2011:508; Heavrin *et al*, 1997:95) , understanding of the organizational culture (Joia, 2003:288) and the organizational structure (Wilkinson *et al*, 1999:39; Laudon dan Laudon, 2007:86). Siti Rahayu Kurnia (2012) in his empirical study, said there is influence between management commitment, quality of data with the accounting information system.

Research conducted by Wang and Yeoh (2009) stated that there is the influence of organizational culture on the effectiveness of information systems. Research conducted by Gordon and Narayanan (1984) found a significant relationship between information systems in an organization with the organizational structure. In connection with this background, the research needs to be conducted to provide empirical evidence about the influence and relationship between management commitment, organizational culture and organizational structure on the quality of accounting information systems and their impact on the quality of accounting information.

The objectives in this research is to measure (1) the influence of management commitment, organizational culture and organizational structure on the quality of accounting information systems and (2) the influence of management commitment, organizational culture and organizational structure on the quality of accounting information systems and their impact on the quality of information accounting.

2. Review of Literature

2.1. *Quality of Accounting Information Systems*

Definition of Accounting Information Systems as said by Bodnar and Hopwood (2004:3) is a collection of resources, such as human and equipment designed to alter financial data and other data into information that can be communicated to decision makers. Romney and Steinbart (2006:6) states that understanding the accounting information system as a system to collect, record and process data to produce information for decision-making. In line with Romney and Steinbart (2006:6) then Azhar Susanto (2008:72) provide a definition of Accounting Information Systems as a collection of sub-systems / components of both physical and non-physical are interconnected and cooperate with each other in harmony to process the transaction data related to financial issues into financial information. The accounting information system has a component consisting of hardware, software, brainware, procedures, database and technology of communication network (Azhar Susanto,2008:72; O'Brien, 2004:35-36; Turban *et al*, 2003:16). Piccoli (2008:25) says that a good information system has four components: information technology, people, processes and structures. All these components can be grouped into two subsystems: the technical subsystem and the social subsystem. Technical subsystem, consisting of technology and processes, here indicate that the human element is not included in the information systems. Social subsystem consists of people, including his relationship with one another (eg, structure), which reflecting the elements of information systems. Based on some of the opinions that have been stated above, in this study the dimensions that will be used for the quality of accounting information system is a technical subsystem (Piccoli, 2008:25) with the indicator is hardware, software, databases, procedures (Turban *et al*, 2003: 16; Azhar Susanto, 2008:58; Romney and Steinbart, 2012:30) dan social subsystem (Piccoli, 2008:25) with the indicator is brainware (Turban *et al*, 2003:16; Piccoli, 2008:25; Romney and Steinbart, 2012:30) and the management must pay attention to the application of AIS (Mc Leod and Schell , 2001:220-221).

2.2. *Quality of Accounting Information*

Information has good quality if it is the integrated information to meet the requirement that the information must be accurate, complete, consistent, timely and unique (Baltzan, 2012:217). According to Gelinas *et al* (2012:19) quality information is information that give benefits for decision makers. User have specific criteria for quality of information in order to determine the quality of decision by providing additional emphasis on the relevance, timeliness, accuracy and completeness. Quality of information is information that is suitable for use by consumers or users. The quality of information has characteristics that can meet or even exceed customer expectations or user of information (Lesca dan Lesca, 1995). Eppler (2006:365) explains the quality of information is a word that describes the characteristics of information that make information useful for the users. Song Lin and Xiong Huang (2011: 301-302) states the quality of information refers to the quality of the output produced by the information system can be either reports or online screens. The definition of information quality is related to the four dimensions of the quality of information that is accurate, complete, consistent and currency. The dimension of the quality of information used in this study is in accordance with the opinions that have been expressed by Gelinas *et al* (2012:19), Song Lin and Xiong Huang (2011:301-302) to measure the quality of accounting information is accurate, relevant, timely and complete.

2.3. *Management Commitment*

Management commitment is a total commitment not only to participative management and employee empowerment but also to intra and interdepartmental teamwork and improved communication throughout the organization (Liebler and McConnel,2012:6). Armstrong (2008:56) said that commitment management is as a form of management which is aimed at eliciting a commitment so that behaviour is primarily self-regulated rather than controlled by sanctions and pressures external to the individual, and relations within the organization

are based on high levels of trust. Connection with management commitment, in the development of information systems, influenced by the participation of the top management, middle management in goals the formulation and development of information systems, and clear commitment to documenting the work plan performance, in order to account in an effort and to direct, approve, measure, supports the activities from start to finish a development project as a form of active participation of top management and middle management (Chalk, 2008:3; Englund and Bucero, 2006:8). Kutz(2011:6) said that characteristics of strong management commitment include: top management advocates change and empowers employees to make changes, performance measures are aligned with corporate goals, investment in, and realized return on, technology and systems, development and retention of human capital, communication of goals and results. Gilmore and Williams (2013:259) stated that high commitment management approach encompasses four key components: the presence of formal teamworking initiatives, the presence of formal teamworking initiatives, component concerns the use of sophisticated reward incentives. The dimension of management commitment used in this study is the presence of formal teamworking initiatives dan performance measures aligned with corporate goals, the presence of formal teamworking initiatives and assess consistency of policy is needed in the implementation process.

2.4. Organizational Culture

The culture of a group, is a pattern of assumptions which learned by a group to solve problems of external adaptation and internal integration is carried out for consider and then introduced at organization members (Schein,2010:18). Culture is a social knowledge among members of the organization. Member organizations should learn the important aspects of cultures. Culture can be studied through the transfer of knowledge in the form of communication, as well as simple observation, so that the organizational culture shaping attitudes and employee behaviors, based of control system for all employees (Colquitt *et al*, 2011:528). Furthermore dimension to be used in this study is (1) Value, which is the basis of faith, and is a source of inspiration and motivation in moving and controlling human behavior to the formation of corporate culture, (2) Norms, are members behave in guiding of an organization in the form of unwritten rules, (3) Artifacts, is a concrete manifestation in systems and procedures within the organization, (4) Basic Assumption, is a basic assumption of how organizational issues should be addressed, (5) Stability, is the degree to which organizational activities emphasise maintaining the status quo in contrast to growth (Schein, 2010:18; Armstrong, 2005:387; Robbins *et al*, 2009:424).

2.5. Organizational Structure

The organizational structure is the arrangement of the components (work units) within the organization. The organizational structure shows the division of labor and shows how the functions or activities that are different, integrated (coordinated) to achieve the goals that have been set (Robbins, 2003:425; Nagarajan, 2005:165; Lussier, 2008:191). Meanwhile, according to Starling (2008:304) an organizational structure is the formal framework by which job tasks are divided, grouped, and coordinated. When managers develop or change an organization's structure, they are engaged in organizational design, a process that involves decisions about four key elements: division of labor (specialization), hierarchy (scalar principle), span of control, and line and staff. Further dimension to be used in this study is work specialization, departmentalization, chain of command, span of control, centralization & decentralization, and formalization (Robbins dan Judge, 2009:553; Schermerhorn, 2011:237; McShane and Glinow, 2005:449).

3. Theoretical Framework

The information system has become a topic of interest for researchers and practitioners for decades. There are many success stories about the implementation of information systems, but also a story of the failure of the implementation of information systems. It is affecting every implementation of accounting information systems and organizations require a strong management commitment (Magyar *et al*, 2007:47). Galliers and Currie (2011:508) says that the most important criteria for assessing the success of the implementation of accounting information systems projects is management commitment. This is because by having a strong top management support will help address deficiencies in the implementation of the project. From the research Sharma and Yetton (2003), Daoud dan Triki (2013) it was concluded that the commitment of management to be one of the critical factors in the successful implementation of accounting information systems. Ovaska (2009) suggest a link organizational culture and information systems because the organizational culture is viewed aas a phenomenon manifested in an organisation's work practices, norms and artefacts. There is connection between content themes and cultural manifestations in the custom information system. The same thing expressed by O'Brien and Marakas (2009:17) that the success of information systems should not only be measured by the efficiency in

terms of minimizing the cost, time and resource use information, but also measured the success of organizational culture. The study results of Salehi *et al* (2010) suggests that organizational culture is an important factor in the implementation of enterprise information systems in organizations. Similarly, the results of the study of Yeganeh (2009) which gives the conclusion that organizational culture affects information systems implementation project. In line with these findings, then Syler (2003) concluded that the findings of his research is very significant value of the relationship between organizational culture on the effectiveness of information systems. The organizational structure has significant impacts on the information system and its component, the AIS. Several critical relationships exist that should be understood by systems developers: The organizational structure dictates many of the key flows generated by the AIS (and MIS). These vertical flows carry information needed by managers to carry out their responsibilities (Wilkinson *et al*, 1999:39). Stair dan Reynolds (2011:41) stated that an organization's structure can have an impact on the type of information system used. Although there are a large number of possibilities, organizational structure typically falls into one of these categories: traditional, project, team, or multidimensional. Gordon dan Narayanan (1984) report their findings there is relationships among an organization's environment, structure and information system. The same thing was found in a study conducted by Gurbaxani and Wang (1991) to develop an understanding in the field of economics have to consider some key measures of organization structure that influence information systems.

4. Study Model and Hypothesis

Based on the theoretical framework have just described, then the theoretical framework is as below:

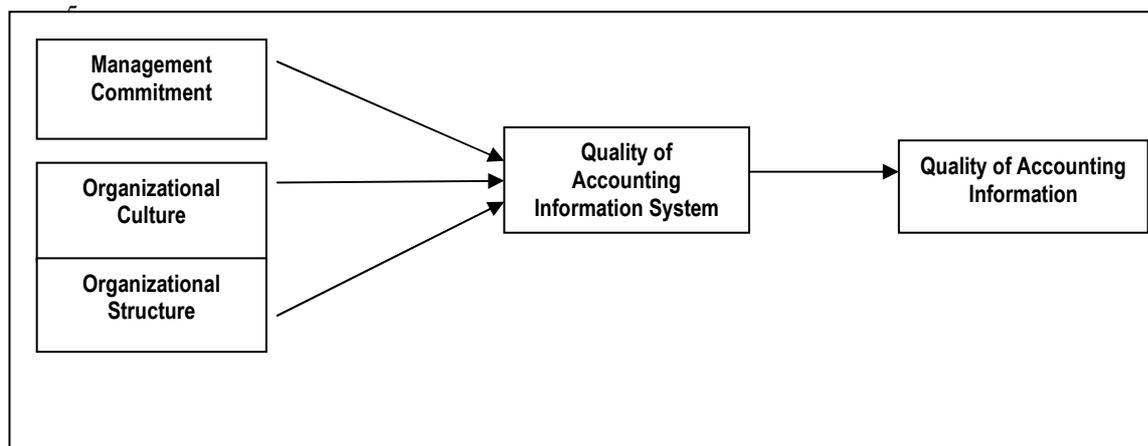


Figure 1: Theoretical Framework of The Study

This study is aimed to determine the causal relationships between variables through hypothesis testing:

Hypothesis 1: The Quality of Accounting Information System is significantly influence by Management Commitment, Organizational Culture and Organizational Structure

Hypothesis 2: The Quality of Accounting Information is significantly influence by Accounting Information System, Management Commitment, Organizational Culture and Organizational Structure

5. Methodology, Finding and Discussion

Research methodology used in this study is survey method, by means of a questionnaire measuring. Respondents of this study are accounting staff from 33 cooperatives in Bandung. Analysis of the data in this study using path analysis with the help of LISREL 8.70 software. The first hypothesis tested found that when the three independent variables together (management commitment, organizational culture and organizational structure) will give the effect of 67% (R²) of the accounting information system at the cooperative in Bandung, while the remaining 33% is the influence of other factors outside of management commitment, organizational culture and organizational structure. From F Table for a significance level of 0.05 and degrees of freedom (3; 27) obtained a value of 2.96 F-table. Because the F value (18.2727) is greater than the F table (2.96), with the error rate of 5% so it was decided to reject Ho and received Ha. So based on the test results it can be concluded that organizational commitment, organizational culture and organizational structure together influence the accounting information system at the cooperatives in Bandung. The second hypothesis tested, resulted in findings that of F table with a significance level of 0.05 and degrees of freedom (3; 26) obtained F-table value by 2.98. Because the F value (13.8125) is greater than the F table (2.98), with the error rate of 5% so it was decided to reject Ho and received Ha. So based on the test results it can be concluded that the organizational culture, organizational

structure and information systems together affect the quality of information on cooperatives in Bandung. Through the influence of the sum of three independent variables partially obtained total influence of organizational culture, organizational structure and information systems together affect the quality of information on cooperatives in London = $23.31\% + 2.44\% + 12.53\% + 29.72\% = 68\%$, meaning 68% change in the quality of information on cooperatives in London caused or explained by organizational culture, organizational structure and information systems. While the remaining 32% is the influence of other factors beyond the four variables.

6. Conclusion

Management commitment, organizational culture and organizational structure affects the quality of accounting information systems and the quality of accounting information both partially and simultaneously. The theories that already exist about accounting, management and organization make more emphasized linkages, that the influence of management commitment, organizational culture and organizational structure of the quality of accounting information systems and their impact on the quality of accounting information. The results of the empirical evidence from this study can be used to solve problems that occurs on the quality of accounting information systems and the quality of accounting information as an accounting information system output. The quality of accounting information systems can be improved through increased commitment to better management, organizational culture and better organizational structure

References

- Adeh Ratna Komala. (2012). The Influence of The Accounting Manager's Knowledge and The Top Managements' Support on The Accounting Information System and Its Impact on The Quality of Accounting Information: A Case Of Zakat Institutions in Bandung. *Journal Of Global Management..* July 2012. Volume 4. Number 1. p.53-73.
- Azhar Susanto. (2008). Sistem Informasi Akuntansi, Struktur-Pengendalian Resiko-Pengembangan. Bandung:Lingga Jaya.
- Armstrong,M. (2005). A Handbook of Human Resource Management Practise: Fully update to reflect current thinking, practice and research. 9th edition. London: Kogan Page Limited.
- Armstrong, M. (2008). Strategic Human Resource Management-A Guide To Action 4th ed. Replika Press Pvt Ltd
- Baltzan, P. (2012). Business Driven Information Systems. Third Edition. New York: McGraw Hill. International Edition.
- Bidgoli, Hossein. (2004). The Internet Encyclopedia Vol 2. USA: John Wiley&Sons,Inc
- Boockholdt, L.J. (1999). Accounting Information Systems. Fifth Edition. USA: Mc Graw Hill International Edition.
- Bodnar, G.H. dan Hopwood,W.S. (2010). Accounting Information Systems. Ninth Edition. USA: Pearson Education, Inc
- Chalk,N.D. (2008). Management by Commitment. Author House. ISBN:978-1-4343-9464-4 (sc.). 1663 Liberty Drive, suite 200.USA:Indiana. Bloomington IN47403
- Chandra, R. (2002). Management Information System. New Delhi: Kalpaz Publications.
- Colquitt, J.A., *et al.* (2011). Organizational Behavior: Improving Performance and Commitment in the Workplace. NewYork: McGraw Hill/Irwin. International Edition.
- Daoud,H. and Triki,M. (2013). Accounting Information Systems in an ERP Environment and Tunisian Firm Performance. *The International Journal of Digital Accounting Research* Vol. 13, 2013,ISSN: 1577-8517
- Davis, G.B. (1999). Encyclopedic Dictionary of Management Information Systems. USA: Blackwell Publishers
- Englund,L.R and Bucero,A. (2006). Project Sponsorship: Achieving Management Commitment for Project Success. San Fransisco: John Wiley & Sons.
- Eppler, M.J. (2003). Managing Information Quality: Increasing the Value of Information in Knowledge-Intensive Products and Processes. Germany: Springer Berlin-Heidelberg.
- Eppler, M.J. (2006). Managing Information Quality: Increasing the Value of Information in Knowledge-Intensive Products and Processes. Germany: Springer Berlin-Heidelberg.
- Galliers, R.D. and Currie,W.L. (2011). The Oxford Handbook of Management Information Systems. NewYork: Oxford University Press.
- Gelinas, J.U.,*et al.* (2012). Accounting Information Systems. South Western: Cengage Learning
- Gillmore,S. and William,S. (2013). Human Resource Management.2nd edition. . Oxford University Press.
- Gordon, L.A. and Narayanan,V.K. (1984). Management accounting systems, perceived environmental uncertainty and organization structure: An empirical investigation. *Accounting, Organizations and Society*. Vol.9,

Issue 1

- Gurbaxani,V and Wang,S. (1991). The impact of information systems on organizations and markets. *Magazine Communications of the ACM*. Vol 34. Issue 1, Jan
- Hansen, D.R., *et al.* (2009). *Cost Management: Accounting and Control*. 6e. South Western: Cengage Learning
- Hall,A.J. (2004). *Accounting Information Systems*.4th Edition.Singapore: South Western.
- Heavrin,C., *et al.* (1997). *Fundamentals of Organizational Behavior*. USA: Prentice Hall,Inc
- Joia, L. A. (2003). *IT-Based Management: Challenges and Solutions*. USA: Idea Group Publishing.
- Kieso, D.E.,*et al.* (2007). *Intermediate Accounting*. Twelve Edition. USA: John Wiley and Sons Inc
- Kutz,G.D. (2011). *Executive guide best practices in achieving consistent, accurate physical Counts of Inventory and Related Property*. US: GAO-01-763G. *Best Practices in Inventory Counts*.
- Laudon,K.C. and Laudon, J.P. (2007). *Management Information Systems Managing The Digital Firm*, 10th Edition. Pearson Prentice Hall.
- Lesca,H. and Lesca,E. (1995). *Information Quality and Enterprises Performance, Gestion de l'information, qualite de l'information et performances de l'entreprise*. Paris:Litec.
- Liebler,J.G. and McConnel,C.R. (2012). *Management Principles for Health Professionals*. Sixth Edition. USA: Jones & Bartlett Learning,LLC
- Lussier,L.N. (2008). *Human Relations in Organizations: Application and Skill Building*. Seventh Edition. New York: Mc Graw-Hill.Irwin.
- Magyar,G,*et al.* (2007). *Advances in Information Systems Development: New Methods and Practice for the Networked Society*. Volume 1. Springer Science-Business Media. ISBN-13 978-0-387-70760-0
- McLeod,R. dan Schell,G. (2001). *Management Information Systems*. Eight ed. New Jersey: Prentice Hall International,Inc.Upper Saddle River.
- McLeod, R. and Schell,G.P. (2008). *Management Information Systems*, Tenth Edition, Upper Saddle River New Jersey 07458: Pearson/Prentice Hall.
- McShane,S.L. and Glinow, M.A.V. (2005). *Organizational Behavior*. Mc Graw Hill-Irwin.
- Mitchell, F., Reid, G., and Smith J. (2000). *Information System Development in the Small Firm: The Use of Management Accounting*. CIMA Publishing.
- Nagarajan,K. (2005). *Elements of Project Management*. New Age International Publishers
- O'Brien,J.A. (2004). *Management Information Systems: Managing Information Technology in the Networked Enterprise* 6th-Edition. NewYork: Mc Graw Hill Companies,Inc
- O'Brien,J.A. and Marakas, G.M. (2009). *Management Information Systems*. Ninth Edition. NewYork: Irwin-McGraw Hill.
- Ovaska, P. (2009). *A Case Study of Systems Development in Custom IS Organizational Culture Information Development*. 405-416,DOI: 10.1007/978-0-387-68772-8-3.www.springerlink.com/index/n29.pdf
- Piccoli, G. (2008). *Information Systems for Managers: Text & Cases*. USA: John Wiley & Sons,Inc
- Ponte, E. B., *et al.* (2000). *The Improvement of Accounting Information Systems through the Integration of Emerging Technologies*. [*Revista de Contabilidad - Spanish Accounting Review*](#). Volume (Year): 3 (2000) Issue (Month): 6 (july-december) Pages: 21-48
- Robbins, S.P. (2003). *Organizational Behavior*. Pearson Education,Inc. International Edition
- Robbins, S.P.,*et al.* (2009). *Organisational Behavior Global and Southern African Perspective*, 2nd edition. Pearson Education,Inc,publishing as Prentice Hall
- Robbins,S.P. and Judge,T.A. (2009). *Organizational Behavior*. USA: Pearson International Edition.Prentice Hall
- Romney, B.M. dan Steinbart, J.P. (2006). *Accounting Information Systems*. Tenth Edition. USA: Pearson Education,Inc.,Upper Saddle River, New Jersey, 07458
- Sacer, I.M., *et al.* (2006). *Accounting Information System's Quality as The Ground For Quality Business Reporting*, *IADIS International Conference e-commerce*, ISBN: 972-8924-23-2.
- Salehi,M., *et al.* (2010). *Usefulness of Accounting Information System in Emerging Economy: Empirical Evidence of Iran*. *International Journal of Economics and Finance* Vol.2, No.2
- Schein,E.H. (2010). *Organizational Culture and Leadership*. Fourth Edition. San Fransisco: Jossey Bass-A Wiley Imprint,Market Street.
- Schermerhorn, J. (2011). *Introduction to Management*. 11th Edition. USA: John Wiley & Sons.
- Sharma,R. and Yetton,P. (2011). *Top management support and IS implementation: further support for the moderating role of task interdependence*. *European Journal of Information Systems* Vol.20 No.6
- Starling,G. (2008). *Managing The Public Sector*. Eight Edition. USA: Thomson Wadsworth
- Siti Kurnia Rahayu. (2012). *The Factors That Support The Implementation Of Accounting Information System: A Survey In Bandung And Jakarta's Taxpayer Offices*. *Journal of Global Management*. July 2012. Volume 4.

Number 1. p.25-52.

Stair,R. dan Reynolds,G. (2009). *Fundamentals of Information Systems* 3rd/4th. USA: Thomson

Stair,R.M. and Reynolds,G.W. (2011). *Principles of Information System*. Course Technology-Cengage Learning

Song Lin & Xiong Huang. (2011). *Advances in Computer Science, Environment, Ecoinformatics, and Education*. New York: Springer Verlag Berlin Heidelberg.

Syler, R.A. (2003). *Exploring the Fit of Organizational Culture Traits and Information Technology Infrastructure Flexibility: A Partial Least Squares Latent Variable Modeling Approach*. Proquest Information and Learning Company Copyright.

Turban, *et al.* (2003). *Information Technology*. Second Edition. USA: John Wiley & Sons, Inc.

Xu, H. (2009). Data quality issues for AIS' implementation: Systems, stakeholders, and organizational factors. *Journal of Technology Research*.

Wang,S. and Yeoh, W. (2009). How does Organizational Culture Affect IS Effectiveness: A Culture-Information System Fit Framework. *International Conference on Electronic Commerce and Business Intelligence*.

Wilkinson, J.W., *et al.* (1999). *Accounting Information Systems: Essential Concepts And Applications*. Fourth Edition. USA: John Wiley & Sons, Inc.

Wilkinson, J.W., *et al.* (2000). *Accounting Information Systems: Essential Concepts and Applications*. Fourth Ed. USA: John Wiley & Sons, Inc.

Yeganeh, M.E.(2009). The impact of national and organizational culture on information technology (IT). *MLS in Library and information Science*, Islamic Azad University, Qom branch.2009.old.nlai.ir/Portals/2/files/faslname/69/en_content.pdf