Role of the Internal Audit in ERP Implementation

Vikram Phulari

Abstract: The aim of this study is to investigate how internal audit can contribute to the successful implementation of projects (ERP Enterprise Resource Planning). ERP projects are well documented for the high dropout rate and the negative impact on the beneficiaries. Although there is little literature on the role of internal audit in ERP implementations, there are many available in ERP implementations risks, challenges and critical success factors associated with these projects complex and strategic document. The results of the literature shows that there is no general agreement on which a number of factors are the key to success in ERP implementations, which in turn puts more emphasis on the ability of management to their agreed requirements differ from company to deliver to company. Internal audit is typically a central function operating within the governance and control system of an organization and is recognized as having expertise in reviewing control which includes ensuring that adequate governance structures are in place and effective risk management processes are activated that can mitigate the problems that occur. According to the evolutionary nature of the internal audit, auditors are constantly increasing their skill levels to enable them to independently review the ERP projects and report issues in time for the action of the management of business. It is the depth of investigation that is part of an internal audit that achieves most of the benefits and this became evident in the most success factors, risks and issues identified by respondents compared to documented items ERP in the related documentation. The interviews of the population of ERP experienced auditors show that the benefits of using them to examine the ERP projects have been positively recognized within their companies. In many cases the audit reviews are now included in the project planning process.

Index Terms: ERP Audit, Risk Assessment, Challenges, System Implementation.

I. INTRODUCTION

Nowadays, financial and operational transactions are increasing in volume and increases complexity every day. In today's business environment, auditors have knowledge of both accounting and technology. The technical complexity of ERP system has forced auditors to enhance their knowledge of information technology. When a company uses an ERP system of the audit focus shifts from content control of the books of account for the understanding of the business processes, testing systems and applications checks etc. to ensure the auditors at the same time that the system is to automate the process correctly. The ERP solution brings new changes to the organization and its information systems. It requires to re-engineer the ability to control the flexibility of the system, and the ability to cope with high levels of complexity. Most companies prefer their business processes manipulates simultaneously with an ERP implementation. A survey of Gemini Consulting shows that 88 % of European companies had more advantages when implemented business process reengineering simultaneously with SAP software (Peak, 1996). [1] In ERP systems, the operational and financial data are connected to each other by means of a complex information flow. Transactions can be entered automatically without review or pre-check with the ERP system. To do such controls should be designed to avoid entering incorrect or false information in the system. So auditing should be done through the computer in the ERP environment. Auditors and managers should be aware of being involved in an ERP system risks. Today, with the practice of integrated ERP systems, internal controls are to evolve to support automated operations. As a result, finance officers change their approach and implementing automated internal controls that allows managers to effectively manage through ERP systems. Internal audit is an independent, objective assurance and consulting activity designed to add value and upgrade an organization's operations. It helps an organization accomplish its objectives by evaluating a systematic and disciplined approach and improve the effectiveness of risk management, control and governance processes. Internal audit is a catalyst for improving the effectiveness and efficiency of an organization by insight and recommendations based on analysis and evaluation of data and business processes. With commitment to integrity and accountability, internal audit gives value to governing bodies and senior management as an objective source of independent advice. Professionals called internal auditors are employed by organizations for the implementation of internal audit activities.

From an internal audit perspective, ERP systems have new opportunities and new challenges [2, 4]. On the one hand, the use of an integrated system of transparency in business processes and, at the same time, unnecessary controls ensure data consistency and accuracy as data from one system to another. With a single data entry, necessary for the entry of the data in connection with a transaction separately is eliminated in various applications; and thus controls to enforce data validity, data accuracy and data privacy restrictions from an internal audit perspective, ERP systems, new opportunities and new challenges [2, 4]. On the one hand, the use of an integrated system of transparency in business processes and, at the same time, unnecessary controls ensure data consistency and accuracy as data from one system to another. With a single data entry point, necessary for the entry of the data in connection with a transaction separately is eliminated in various applications; and thus controls to enforce data validity, data accuracy and data privacy restrictions.

Retrieval Number: E1634115516©BEIESP
Journal Website: www.ijrte.org

12

Published By:
Blue Eyes Intelligence Engineering
and Sciences Publication (BEIESP)
© Copyright: All rights reserved.

Role of the Internal Audit in ERP Implementation

The aim of this study is to explore the role of Internal Auditors (IAS) and the contribution of Enterprise Resource Planning (ERP) and also risks in ERP and challenges in the adoption of Internal Auditing.

II. RISKS IN ERP

ERP systems are implemented to support the activities of an enterprise and to be successful, must be fully integrated into all key processes and procedures which together enable the company to operate effectively. Given the integrated nature of ERP systems, they can further add to the risks and challenges of the company with regard to:
• Industry and business ambience
• User or management behavior
• Business processes and procedures
• System functionality
• Security Application
• The underlying infrastructure
• Conversion and data integrity
• Ongoing maintenance / business continuity

In an ERP project, the loss of control over the project is one of the major risk factors. Loss of control can take place in at least two ways: the lack of control over the project and the lack of control over employees once the system is operational. Risks associated with the management of major projects existed prior to the development of ERP software, and there is much on the project escalation written. The first risk is the lack of control over the project. This lack of control results from the decentralization of decision making and the subsequent ratification of ineffective decisions. Within the setting of an ERP project, to ensure the purpose of the collocation of knowledge with the decision of the rights, it is common for an organization to an ERP system implementation project that persons relevant specialist knowledge in a number of with regard to the implementation of an ERP system forms (such as information technology knowledge and change management skills). Decision rights are then assigned to the team. However, when the project team has full control over the ratification of its own decisions creates a potential business risk that the project would act in their own interests rather than acting in the best interests of the organization. The second risk is that an operational ERP system most always results in the transfer of responsibility and empowerment of employee's lower level. A lack of adequate controls on this responsibility, either within the ERP system itself or in the processes followed by the organization, is a potential business risk.

Another major risk is complexity of the project. An implementation ERP system includes a relatively large expenditure for the purchase of hardware, software, implementation costs, consulting fees and training costs [9], and can last for a longer period of time. An ERP system implementation project has a wider scope compared to most other information system implementations, and can cause a considerable number of changes within an organization. The size and complexity of the project are a source of significant business risks.

III. AUDITING OBJECTIVES

Internal control includes following objectives [3]:
- Access roles which are currently assigned are appropriate.

- Compliance with plans, policies, procedures, rules and regulations.
- Ancillary systems in use are access controlled, and that any inherent access-related risks to the ERP system are mitigated.
- The economical and efficient use of resources.
- The realization of the set objectives and goals for operations and programs.

These objectives internal controls are established to maintain effective control over the activities and operations. Traditionally, the internal auditors are engaged in accounting and financial issues, and some expertise is generally regarded in these areas considered essential. The coverage of these areas served to the possibility of extending the scope of internal audit services in the wider operational areas. Since accounting directly or indirectly, to display all operations, financially oriented by internal auditors the door open for other activities.

Auditors have been involved with computers and data processing controls and manual punch card accounting applications were first installed in the early computer systems. Those early uses were not particularly sophisticated, and controlled internal auditors around the computer. By the 1970s, the Institute of Internal Auditors (IIA) had started to emphasize the importance of the revision of the data-processing and application controls. Since then, internal auditors familiar with information systems and controls to be "audit by the computer" makes an integral contribution to the internal audit organization. [5] The trend towards continued this emphasis on information system controls the release of ERP solutions.

IV. INTERNAL AUDITING CHALLENGES

The challenges, if not managed properly, can thwart the security and compliance efforts of even the most ambitious organizations. That is why finding a solution to these challenges common audit is an essential aspect of life as in ERP implementation.

1. Internal Policy:

IT administrators are at the mercy of a severe and often strange set of internal policies handed down from HR executive management, supervisors, and so on. More often than not, that manage such policies have little knowledge of the influence they might have on the specific IT efforts. Yet IT departments expect these terms to work with efficiency and effectiveness around. The missing link between government policy and the needs of an IT department can be a big challenge when it comes to auditing.

2. Internal audit should have a broad view of risks:

Risks should be considered broadly, not in "silos," and so did the internal audit needs. This requires a team approach to defining and assessing risk and providing certainty about them.

3. Data Security audit:

Computers and network technology allows a wide range of accounting information is shared between the information users, but that is based on common access to data security.

As computer technology and human impact on increasing the risk of network information, especially in ERP environment, data is used in electronic mode in which no traces of attack and forgery. So the reliability of audit evidence that is now available and its authenticity threatens. Therefore auditor actively performs data security audits as an important factor of internal audit in response to the ERP environment.

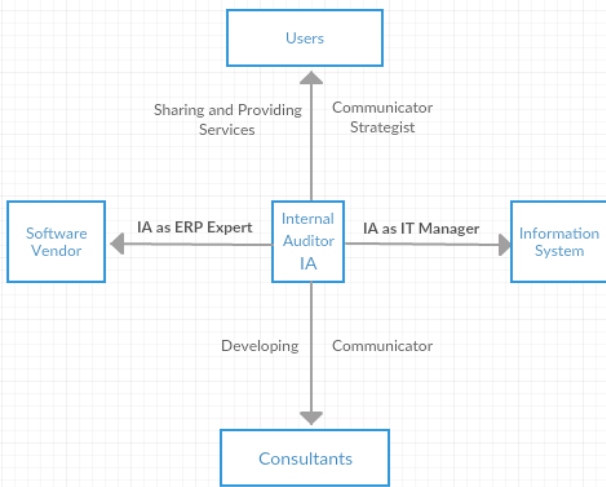## V. INTERAL AUDITOR"S ROLE DURING ERP IMPLEMENTATION

Despite significant organizational risks associated with change management, which often results from an ERP implementation, the involvement of internal auditors in ERP implementation was not as heavy as we expected; only in one third of cases, internal auditors were extremely involved in change management. Despite their lack of involvement in the implementation process, majority of respondents felt that their companies followed structured processes for change management associated with the ERP implementation.

The internal audit function may help identify, assess and make recommendations for key controls relating to the project and can assurance that support the ERP system business processes and enforce business tactics to provide on an ongoing basis. The use of collaborative internal auditors at all critical phases of an ERP project is the best approach for increasing the probability of successful ERP implementation.

Figure 1: the Relationship between Internal Auditor and various associated groups in ERP Implementation

During an ERP implementation, internal audit can help identify and communicate risks by having them focused throughout the project rather than as an afterthought. By understanding the key stages and objectives of an ERP implementation, internal audit can objectively problems which, if overlooked, can increase endanger the success of a project endangered. Internal auditors can also coherent the risks from a management perspective. During an ERP implementation, internal audit can help identify and communicate risks because they are throughout the project rather than as an afterthought. By understanding the key stages and objectives of an ERP implementation, internal audit can objectively problems which, if overlooked, can increase endanger the success of a project endangered. Internal auditors can also coherent the risks from a

management perspective. It was surprised to find that the internal auditors were not actively involved in the formulation and implementation of internal controls, implemented as new modules and existing modules have been improved or maintained. Only one-third of respondents were closely involved in the development of internal controls and only one fifth of the respondents were involved in business process reengineering efforts. These issues might reflect a broad perception that ERP implementation often led and managed by information systems groups and treated as organization-wide efforts.
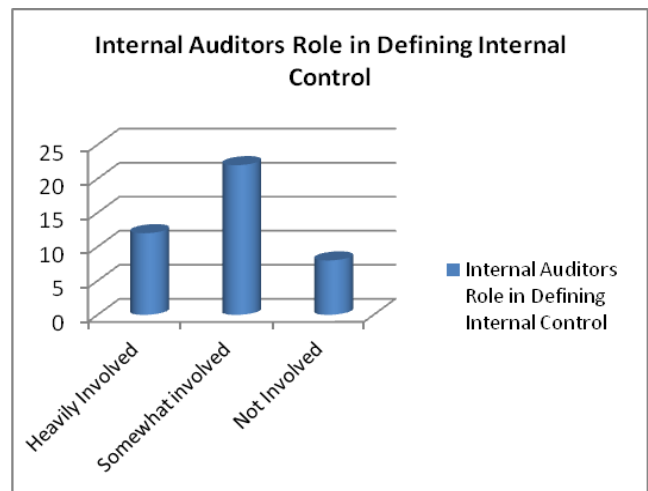
ERP systems affect the entire organization and usually relate to changes in business processes across the organization. Although the CSF well documented, the results of the issue of the review of the literature that there is no general agreement on which factors are the key to success in ERP implementations author of their importance varies author appreciated. This reflects the different operational requirements between organizations. This lack of uniformity puts more emphasis on the ability of management to deliver their agreed requirements and to ensure that governance structures are appropriate and that the project risks are identified and mitigated in a timely manner.

Although some projects, structures, problems arise in the literature by a lack of support from management and overuse of external actors with self-efficacy 'misplaced' project not protrude errors would recognize and were convinced that they could 'around rotate. "Deficient action on identified issues led to their" migration "of a scenario that in turn leads to more serious problems such as the project progressed. The lack of independence, the timely monitoring of the progress of the project in relation to expected results shows negative impact on the project. These shortcomings can be addressed in a timely manner and could have been avoided if the CSF projects in question in the literature. the main CSF with regard to the support of top management, the competence of the project team, clear goals and objectives, project management (including monitoring and evaluation of the performance), effective communication, change management and vendor support / partnership.

Figure 2: Role of Internal Auditors in defining Internal Controls during ERP System Implementations

VI.   AUDIT SOFTWARE

The implementation of the internal audit should be the simultaneous development of information systems, accounting and auditing techniques as manual auditing practices are difficult to adapt to the needs of the electronic accounting data.. Therefore, the current need is to synchronize the information technology with the monitoring requirements by developing an audit soft ware which intelligent, integrated network versatility and usability features. The ideal audit software needs financial analysis capabilities, testing functions, calculation processing functions, auditing functions, statements and notes merge function, automatic generation of audit papers feature, instant help function, and network access capabilities. In addition, the audit software audit should also audit plans, audit summary, information such as the list of the most used tools, templates and rules. Following are some Audit software's that can be used ERP system.

1. SAP, the Audit Information System (AIS):

It is Audit software that can be used to analyze the safety aspects of your SAP system in detail. AIS present its information in the Audit Info structure, so we can easily determine which activities we need to perform and have achieved. The functions available are: documentation and control, evaluation, auditing and auditing data downloads. AIS is designed for business audits and systems audits. Audit info structure has been designed with such kind of control in mind and they provide predefined views based on these types of auditing.

2. Infor / Lawson. Infor affiliate Lawson Software Approva's CCM:

This software helps customers "stay clean and clean" for regulatory compliance. Approva's CCM software is designed to help users find the areas of their enterprise applications where they do not comply with specific parts of the legislation. The software does this by analyzing the actual ERP transactions downloaded from the production system in the SQL Server database Approva's, and then running a series of questions and algorithms her eradicating problems. The system installed on top of many of the leading ERP systems, including IBM i-based systems such as JD Edwards.

There's also a third component of Kinsey & Kinsey, which may be included with Lawson, offers a full risk management suite that simplifies control requirements for ERP by capturing all additions, changes and asks about the actions based on user ID, IP addresses, function codes and product lines. Lawson multiple user interfaces such as "Portal LSO and Addins" control can be difficult, but this solution can handle all types of transactions processed through one of these interfaces.

VII.   EXECUTIVE SUMMARY

ERP projects are complicated technical implementation process laced with Business Process Reengineering / business transformation results in a significant change in the way the company operates. ERP projects are well documented for the high dropout rate and the negative impact on the beneficiaries. The aim of this study is to investigate how internal audit can contribute to the successful implementation of projects (ERP Enterprise Resource Planning).

The study propaganda consisted of a literature review related articles ERP focused on identifying critical success factors (CSFs) and the documented risks and challenges and their impact, both positive and negative, performed on the project. The results of this study are used as input for semi-structured interviews with experienced auditors who audited or ERP implementations or were part of a team implementing ERP and currently working in an internal audit unit. The goal is to provide opportunities where the internal control concerned and can, in fact, that the internal auditors have been working on identifying the project teams through their organizations. Another result of this process was the identification of success factors, risks and preventive controls should be in place based on the experiences of the study population.

ERP systems affect the entire organization and usually involve changes to business processes throughout the organization. Although the CSF is well documented, the results of the issue of review of the literature that there is no general agreement on which of factors are the key to success in ERP implementations that their importance varies rated from author to author. This reflects the different operational requirements between organizations. This lack of uniformity puts more emphasis on the ability of management to deliver their agreed requirements and to ensure that governance structures are appropriate and that the project risks are identified and mitigated in a timely manner.

Although some projects identified in the literature have structures in place, problems arose through a lack of support from management and excessive use of external agents associated with self-efficacy 'misplaced' project leaders who would not recognize project failures and were convinced they could "turn around." Deficient actions on identified issues led to their "migration" of a scenario which in turn caused more serious problems as the project progressed. The lack of independence, the timely monitoring of project progress against the results expected negative impact on the project. These weaknesses could be addressed in a timely and could have been avoided if the projects in question implemented CSF identified in the literature. The main CSF related to top management support, the competence of the project team, set clear goals and objectives, project management (including monitoring and performance evaluation), effective communication, change management and vendor support / partnership.

VIII.   CONCLUSION

The aim of this study was to identify the risks in ERP, challenges facing in Internal Audit and Internal Auditing role in the implementation of ERP systems in organizations. Although ERP system are complex and quite expensive, when properly implemented, they are worthwhile. An ERP solution leads to changes in business processes, changes in hardware engineering, and changes in the ERP software version, which affect the internal audit function. Internal controls have been established to achieve the objectives of management and effective control to maintain operations and activities.

The internal audit function is now redefined in terms of focus, scope and range of services in the light of strategic management, alliance with other evaluation functions, and the need to ensure "technical" applications. ERP implementations re-engineer business processes and the internal audit function be redesigned accordingly.

In today's world, most of the ERP vendors integrate auditing tools in their solution, including procedures, documentation and best practices. ERP audit ability should be standard concept that involves auditing in the implementation of ERP not only during operations.

REFERENCES

1. Haider H. Madani, "Re-engineering the Role of the Internal Auditor in ERP Solutions".
2. Bae, B. & Ashcroft, P. (2004).Implementation of ERP Systems: Accounting and auditing implications http://www.cwu.edu/~baeb/ERP%20Implementation%20&%20Implications.doc.pd
3. Ratliff, Richard L.; Wanda A. Wallace; Glenn E. Sumners; William. McFarland; and James K. Loebbecke (1996), "Internal Auditing: Principles and Techniques," 2nd Ed., The Institute of Internal Auditors.
4. Debreceny, R. S., Gray, G. L., Ng, J. J., Lee, K. S., & Yau., W. (2005). "Embedded audit modules in enterprise resource planning systems: implementation and functionality. Journal of Information Systems", 19 (2), 7-27.
5. Ratliff, Richard L.; Wanda A. Wallace; Glenn E. Sumners; William G. McFarland; and James K. Loebbecke (1996), "Internal Auditing: Principles and Techniques," 2nd Ed, The Institute of Internal Auditors.
6. Musaji, Y.F. (2002), "Integrated Auditing of ERP Systems", New York, NY: Wiley.
7. Glover, Steven M.; Douglas F. Prawitt; and Marshall B. Romney (1999), "Implementing ERP," Internal Auditor, Aug., 47-53.
8. Altinkemer, A., Chaturvedi, A. and Kondareddy, S., 1998, Business process reengineering and organizational performance: an exploration of issues. International Journal of Information Management, 18(6), 381-392.
9. Davenport, T.H. (July/August 1998): "Putting the Enterprise into the Enterprise System", Harvard Business Review, vol.76, n.4: 121-133.

AUTHORS PRIFLE

Vikram Phulari Computer Science & Engineering, Jawaharlal Nehru Engineering College. His research interest includes Internal Audit in ERP, Formal Languages, Artificial Intelligence (AI), Machine Learning and Security.