

Applications of Accounting Information System (AIS) under Enterprise Resource Planning (ERP): A Comprehensive Review

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Abstract:

A review article or review paper is based on other published articles. It does not report actual research. Review articles that often summarize existing books or articles on the topic in an attempt to explain the current state of understanding of the topic. The purpose of this study is have a careful look on different previously published books and articles on Accounting Information System (AIS) and Enterprise Resource Planning (ERP) and make a summery on it. The objectives of this review paper are to collect useful inform from various published articles and state the criticisms of their research deficiencies .Accounting information plays a crucial role in enterprise resource planning (ERP) enabled environment. For ERP system adopters, the system is responsible for generating the accounting information such as financial statements which are used to measure ERP system implementation success, provide external users with financial information, and determine operational performance. ERP system adoptions may affect firm performance that is described by financial statements, whether these systems affect the decision usefulness of the accounting information or not is unknown (Most. Tahura Pervin, 2019). Here the researcher studied fourteen published articles and found the research gaps of previous articles. Basing on the research gaps the researcher also recommended the possible solutions and outcomes of Applications of Accounting Information System (AIS) under Enterprise Resource Planning (ERP).

1. Introduction

Accounting information systems (AISs), the core module of any enterprise resource planning (ERP) system, are generally designed as intermediate systems. It is a new variable in Bangladesh that has gained research interest. One of the most important aspects of Accounting Information Systems is that it concerns the relation to Enterprise Resource Planning.

An enterprise resource planning (ERP) project is a sizable enterprise application either in the business and engineering perspective. It creates huge alterations and frequently entails calling into question several traditional roles within the business, for which individuals are rarely well ready (Md Shahnur Azad Chowdhury, 2021).

ERP software is comprised of powerful and strategic business process management tools that can be used to manage information within an organization. While every company and organization operating today is different, they all face a common challenge: in order to stay competitive in today's business environment, they need a dependable and efficient way to store and access information. That's where ERP systems come into play (Md Shahnur Azad Chowdhury, 2021).

ERP is packaged software which supports the businesses to manage, coordinate and use resources in an efficient and effective way. Organizations always strive to sustain in competitive environment through adoption of up to date technologies so that they can better manage their functions and work activities through various departments (Maryam Shahzadi, 2016).

In the accounting information system implementation, the users should consider the benefits and advantages of the system. This paper examines the effect of the Enterprise Resources Planning based (ERP-based) accounting information system implementation on user impact and organizational impact (NUR D.P., 2020).

Enterprise Resource Planning is providing the solution in this regard where organizations run smoothly through integrated system and data can be retrieved and used at any time through central data base system. Businesses are facing many problems before, during and after the implementation of this type of systems and many of them facing losses because of the poor execution irrespective of their size and budgets. There are many ERP service

providers who are giving their full support for the better utilization of all the functionalities of the system. These include SAP, ORACLE, JD Edward, BAAN, People Soft, etc. Organizations use traditional legacy systems or the customized packages in order to satisfy the needs of different kinds of the organizations including both manufacturing and service providing organizations (Maryam Shahzadi, 2016).

Accounting aims, as an information system, to provide various users with different forms of useful information to meet their various needs. Therefore, accounting seeks to take advantage of the surrounding circumstances in order to improve the quality and quantity of information and the delivery mechanism to users. The relationship between accounting and the computer began in the sixties of the last century. This relationship continued to evolve, and expanded in the eighties of the last century due to the development of the network and decision-support systems when it took a broader dimension and more flexible known as the computerization of accounting. Recently, as a result, several accounting software developed to be popular on the shelves (off the shelf) shops to become accessible to most interested in them at reasonable cost (Alzoubi, 2011).

As many software companies produce Enterprise Resource Planning systems (ERP), such systems have spread globally and locally here in Jordan. Following to the transformation of the companies to the use of accounting computerized systems which become a part of Enterprise Resources Planning system, it became inevitable to recognize such systems and their performance (Alzoubi, 2011).

ERP software is comprised of powerful and strategic business process management tools that can be used to manage information within an organization. While every company and organization operating today is different, they all face a common challenge: in order to stay competitive in today's business environment, they need a dependable and efficient way to store and access information. That's where ERP systems come into play. ERP systems integrate all facets of an enterprise into one comprehensive information system that can be accessed by individuals across an entire organization. Enterprise Resource Planning (ERP) systems are company computer automation aids that enable businesses to digitize business activities and discuss information and practices throughout the business and create and access real-time information. The most important aim of ERP systems would be to incorporate all units on a single computer system that serves each of the organization's requirements. ERP structures are frequently employed by businesses of many scopes and functions since their prospective gains are too important to dismiss. To be a leader in the contemporary commercial arena, companies need to establish decent business practices and efficiently share data internally through their providers, partners, and clients (Md Shahnur Azad Chowdhury, 2021).

2. Discussion

Accounting Information Systems (AIS) is an integral part of modern corporations as it supports managers in planning and managing business operations, improving decision-making and supporting accounting and reporting. The role of AIS is changing. The Enterprise Resource Planning (ERP) program builds on AIS and provides the benefits of information sharing across all business areas leading to the improvement of business processes. Many internal controls are handled by the ERP system. Students will be introduced to this combination of performance-enhancing internal controls 'hands over' the Systems Applications and Products (SAP) experience. Skills will be developed in strategic writing programs so that we can inform important business processes and associated controls. ERP knowledge and skills are employed by employers, and graduates have high employment. Computer-based accounting (AIS) systems are designed to support accounting functions and functions that include research, administration and accounting, as well as simplifying and automating financial reporting. Cloud-based accounting systems often incorporate enterprise resource planning (ERP) programs, although even small to medium sized organizations can benefit from the use of AIS.

2.1. Application of Accounting Information Systems (AIS)

An accounting information system (AIS) plays a key role in providing the financial information for decision making within an organization. The degree of usability and value of the information provided by an AIS largely depends on its timeliness and quality. Both can be improved by the participation of the non-financial stakeholders in its preparation, and by its reuse across multiple business processes (Butkevicius, 2009). Accounting Information System in ERP environment is mainly built on the basis of a computer to manage accounting as the core information system. In addition to the process-based accounting business, but also the production and operation activities which are related to the human, material, financial and other information together to manage customer needs and will also enterprises combine production and business activities, and to carry out the production plan, cash flow, cost control and other aspects, effectively reduce the corporate resources, waste of funds, and effectively improve the economic efficiency of enterprises (Zheng, 2015). AIS is responsible for the collection, storage and processing of financial and accounting data that is used for internal

management decision making, including nonfinancial transactions that directly affect the processing of financial transactions. Typically AIS is composed of three major subsystems: (1) Transaction Processing System (TPS) that supports daily business operations; (2) General Ledger System and Financial Reporting System (GLS/FRS) and (3) the Management Reporting System (MRS). For almost all professionals from the accounting domain, the main idea about the information system of an organization and particularly AIS is embraced by the Enterprise Resource Planning (ERP), which encompasses all the essential functions to support an organization and is implemented in almost all large organizations. Current literature is moving away from this established view about AIS domain, considering now a more modular approach to AIS where new technologies like Business Intelligence (BI) or Balanced Scorecard (BSC) systems play an increasingly important role [3, 8]. The work presented in this paper surged from this idea that there is a huge set of new technologies that can complement or integrate current AIS and its present available facilities (Fernando Belfo, 2013). The benefits of accounting information systems implementation under ERP can be evaluated by its impacts on the improvement of the decision-making process, the quality of accounting information, performance evaluation, internal controls, and facilitating the firm's transactions (Kocsis, 2019). The usefulness of accounting information systems depends upon the quality of the output of the information system that can satisfy the users' needs. Generally, accounting information systems 1) provide financial reports on a daily and weekly basis and 2) provide useful information for monitoring the decision-making process and performance of the organization. The design of good accounting information systems implementation under ERP will help the operational success (Hazar Daoud, 2013).

2.2. Enterprise Resource Planning (ERP Implementation)

ERP systems, in contrast to operating areas, comprise a number of distinct units that provide support. Incorporated within the database are modules for such areas as customer affiliation management, fiscal accounting, SCM (Supply Chain Management), and individual assets. These modules access the database to obtain precise information about their respective areas. Businesses using ERP solutions may choose which modules they want to install based on their requirements, and the modularity of these systems allows them to begin utilizing certain portions of the ERP system in conjunction with other systems in order to save money. A typical ERP process is expensive and time-consuming to implement in its entirety; nevertheless, the benefits of comprehensive integration of information throughout the company's different operating areas outweigh the costs and time commitment (Md Shahnur Azad Chowdhury, 2021). ERP software is comprised of powerful and strategic business process management tools that can be used to manage information within an organization. While every company and organization operating today is different, they all face a common challenge: in order to stay competitive in today's business environment, they need a dependable and efficient way to store and access information. That's where ERP systems come into play. ERP systems integrate all facets of an enterprise into one comprehensive information system that can be accessed by individuals across an entire organization. Enterprise Resource Planning (ERP) systems are company computer automation aids that enable businesses to digitize business activities and discuss information and practices throughout the business and create and access real-time information. The most important aim of ERP systems would be to incorporate all units on a single computer system that serves each of the organization's requirements. ERP structures are frequently employed by businesses of many scopes and functions since their prospective gains are too important to dismiss. To be a leader in the contemporary commercial arena, companies need to establish decent business practices and efficiently share data internally through their providers, partners, and clients (Md Shahnur Azad Chowdhury, 2021). ERP systems automate business model, effectively reducing the workload of the accounting staff, but this automatic mode, cannot completely replace the work of the accounting staff, accounting staff still need to manually enter the relevant information and data. In practice, ERP information management systems and accounting personnel manage and control the accounting information, accounting information management to improve efficiency (Zheng, 2015). Software vendors promote ERP systems based on their ability to improve productivity by reducing redundant processes, streamlining operations, breaking down silos of information, and providing fast and accurate information throughout the organization so that management can make faster, better decisions. To the extent that these factors lead to improved productivity and firm performance, they should manifest themselves in the form of increased profitability. This increased profitability should lead to higher dividends and/or re-investment of retained earnings, which should in turn lead to increased shareholder value (Morris, 2011). ERP system implementation is not just a software project but an institutional change project. The projects call for co-operation, teamwork, and planning for organizational change are difficult to do when top management is too busy to give the project satisfactory attention (Bogonko Ben Mariga, 2017). As a consequence, ERP, as a semi-finished product, tends to embody the institutional properties of vendor organizations, which might be from a different country with different meanings, norms and powers. However, ERP can be configured during implementation to match the wishes of the customer organizations. This adaptation process encodes the institutional properties of the customer organizations into the software. After the configuration process, if there is still a gap between the business processes embedded in the software and the

existing organizational processes, a decision could be made to change the organizational processes to handle certain processes outside the software or to change the base code of the software (Ahmed O. R. Kholeif, 2007).

2.3. AIS beneath ERP

Accounting information systems implementation under enterprise resource planning (ERP) is defined as a computer-based system that is responsible for collecting transactions, files, databases, and processing both financial information and non-financial information from various ERP subsystems, while there is sharing and communicating collectible financial information to all users of the organization. Large firms have adopted ERP systems to coordinate and store information, business processes, and resources. Integration of AIS with ERP leads to coordination in the organization which, in turn, increases the quality of the decisions. The effectiveness of accounting information systems implementation under ERP depends upon the quality of the output of useful information that can satisfy the users' needs. Normally, AIS under ERP offers financial reports on a daily and weekly basis and 2) provide useful information for monitoring the user's decision-making process. It helps the top manager to see the operational perspective from all segments, including control of production processes, products, and services to be responsive. But ERP systems have their disadvantages, which is their high cost. The accounting information systems implementation under ERP provides the necessary accounting and financial information, both internal and external organizations to users. Particularly, in a decision-making process, a well-designed accounting system provides useful information to managers in time. It helps the decision-making of managers to be effective, timely, and accurate, plays critical roles in fulfilling managers' obligations of accountability, and provides the information to explain the usage of resources and operations (Pannarai Lata, 2021). ERP as an advanced internal control tool plays an important role in the enterprise internal management. However, it should be noted that, ERP is just a tool of internal control as internal control systems; it cannot completely replace the entire system for enterprise management. As the ERP with a high degree of information-intensive, fast transfer, handling a wide range of other advantages, the ability to incorporate finance, production, marketing and other aspects of information for effective control, and then provide the necessary basis for corporate decision-making, ERP information management system in the enterprise the internal control plays an important role (Zheng, 2015). The provision of an holistic view of the enterprise is the most important characteristic of the enterprise architecture. This higher systems integration brings together information from formerly unrelated domains. Among others aspects, an enterprise architecture should provide an integration framework that sits above the individual architectures and the guidelines to define and establish interoperability requirements. Usually, the design of an enterprise architecture strongly depends on the integration of various applications so that they may share information and processes freely. This is usually called by the buzzword Enterprise Application Integration (EAI). Interoperability characteristics, that is to say, "the ability to share information and services", allows accounting information systems be more integrated or embedded with other systems, and consequently, be more effective (Fernando Belfo, 2013). Significant thematic initiatives, like Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), Six Sigma, and more recently Business Process Management (BPM) refer process has an important and central concept. Research about ERP critical factors of success and benefits, evidence that, from a business perspective, the system deployment stage 'includes the definition of the documentation, analysis, improvement, control and redesign / reengineering opportunities of all the most critical processes and core activities. Processes are a common factor along all organizations. Processes are 'the way things get done' (Fernando Belfo, 2013). The high costs associated with the transformation of business organizations to implement the Enterprise Resource Planning (ERP) system, the requirements of requalification of employees and staff, its impacts on working hours and the performance of the work and the management programs and plans, the study has focused to identify the effectiveness of the information system of accounting in light of this transformation. We know that such system has certain significance in the decision-making processes, whether internal or external, as well as its role in the competition atmosphere, protection of property and confidentiality of operations and the information security (Alzoubi, 2011). The integration of data across the distribution chain is, without a question, the most significant advantage of an ERP system, as it has the potential to enhance operational efficiency while also reducing costs and inventories. As an example, the capacity to swiftly access stock levels, product information, client credit histories, and past purchase histories through order input has increased the efficiency of inventory management. Working with data systems that do not "communicate" with one another is made easier when using a well-functioning ERP system. Information shared across various business objectives is precisely the same across the firm with ERP systems, but information shared between different departments with non-integrated systems may have varying meanings is the case with non-integrated systems. ERP (Enterprise Resource Planning) solutions are becoming increasingly prevalent. Because the ERP option requires just a single entry of information into the system, the information will be readily available to anybody who uses a computer from that point forward. This removes the need for wasteful manual operations such as repeatedly typing the same precise data into a computer. ERP systems are typically linked with high prices; however, one advantage of utilizing an ERP system is that data technology maintenance expenses as well as permit fees may be reduced when compared

to the costs associated with the use of several different systems. Different techniques must be maintained individually, which is expensive, time-consuming, and complex. The yearly permit fees might become prohibitively expensive, despite the fact that each individual system is charged just a little fee (Md Shahnur Azad Chowdhury, 2021).

3. Research Gap

As a researcher I enjoyed very well by studying the above mentioned articles because these were very informative and knowledgeable. From my point of view I found few deficient in previous studies and published articles, such as the implementation of ERP (Enterprise Resource Planning) is a very costly matter that is not possible to manage by small or single enterprise, but the possible sources of funding are not recommended in the previous articles. In my research, I wanted to establish the proper combination between Accounting Information System (AIS) and Enterprise Resource Planning (ERP) but I did not find enough discussion on it in the stated researches. Accounting Information System (AIS) as well as Enterprise Resource Planning (ERP) are the almost new idea in the south Asian region so that the company personnel have no enough knowledge about the different and effective software of using of these but I did not find enough suggested name of software in mentioned researches. For the perfect use of Enterprise Resource Planning (ERP) tools the accountants, financial experts, auditors and CFOs were to be trained up but in the above published articles or conference papers there is no adequate recommended training modules.

4. Recommendations and Conclusion

Actually ERP is an integrated accounting system that makes the process of financial data very easy. It reduces the work load of officials, working hours and provides financial results accurately and systematic manner. It also reduces the obstacles of places because it can be operated from everywhere by using internet and network. To get the proper facilities of using AIS and ERP, technological know how and training is obligatory for users of these. The demand and use of ERP software are increase day by day in the all over the world so it should be available in the market and the price should be reasonable. ERP modules may be in the risk of hacking that may lose the confidential data of a company, so highly secure protection system and SSL must be used by the user of it. In order to fully demonstrate how accounting software and ERP systems differ, it is necessary to consider the effectiveness of ERP vs Accounting software in terms of range of services and magnitude of impact. Accounting software, as its name implies, identifies the business in terms of accounting activities. This includes business features such as payroll, accounts receivable, accounts payable, and trial balances. Other common modules integrated with accounting software include billing, ordering, purchase order, standard ledger, timetable, cost, and electronic payment. On the other hand, while there are some differences between the basic functionality of accounting software and ERP, both are still different. ERP software is a resource management system, which tracks tangible and intangible assets, building materials, human resources, and financial services. Even if funds are directed by accounting software, ERP accounting software will link funds to the concept of causality. i.e. usually looking at intangibles that affect financial performance such as working hours, product life cycle, working units, and customer relationships.

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