

THE IMPACT OF ENTERPRISE RESOURCE PLANNING SYSTEM (ERPS) IN THE ACCOUNTING DOMAIN

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ABSTRACT

This paper assessed the impact of Enterprise Resource Planning System (ERPS) in relation to the accounting field. ERPS is seen as database business management software that supports all business activities such as financial, marketing, manufacturing, human resources and costing activities. It elucidated the importance of ERPS as one which gives a company an incorporated real-time view of its major business processes, which are linked together by ERP applications software and a common database maintained by a database management system. It also revealed that ERPS enhances information flow between all business activities carried out within an enterprise. It considered the effect of ERPS which, if incorporated into courses taught in tertiary institutions, will help educate students on its importance in corporate organizations. This paper is basically a theoretical discourse. Relevant literatures were reviewed on the meaning, characteristics, functions, relevance and effect of ERPS in accounting. The study examined some accounting theories in relation to ERPS such as agency theory and green accounting theory. It gave the benefits to be derived in the implementation of ERPS. ERPS software modules were also discussed. It concluded by stating that the aptitude science and education has in making tertiary institutions meet the challenges, particularly in accounting, cannot be overestimated. The paper recommended, among others, that the Nigerian tertiary institutions incorporate ERPS into their curricula as this is not yet a common practice. This study contributes to the academic research in accounting; particularly in the areas of financial accounting, cost accounting, auditing and accounting information system.

Introduction

Enterprise Resource Planning (ERP) System is database business management software that supports all business activities such as financial, marketing, manufacturing, human resources and costing activities. ERP system gives a company an incorporated real-time view of its major business processes such as production, inventory and order processing management, which are linked together by ERP applications software and a common database maintained by a database management system. ERP system came into view in the 1990s as one of the fastest growing and possibly, one of the most important developments in information technology. Morris, J. J., (2009) stated that ‘these systems, which consolidate all of the back office processing needs of a typical business into one common system, affect all functional areas, especially the accounting function.’

ERP system has undergone certain evolutionary changes. Gartner Group first made use of the acronym ERP which served as an expansion of Material Requirements Planning (MatRP) which later metamorphosed into Material Requirements Planning and then Computer Intergrated Manufacturing. Despite these changes, ERP system is still seen as one which links up and breaks the barrier affecting the flow of information between various activities performed within an organization. O’Leary (2002) observed that ‘this common system design allows firm to capture information once and then share it cross functional areas enabling *information congruence*.’

On the other hand, accounting can be defined as the process of recording, measuring, summarizing, interpreting and communicating financial information to users of financial statements to enable them make wise or rational decision. The art of accounting in its sphere of influence makes it paramount to put in place necessary systems that can help weave together organizational activities to enable the dissemination of

right and appropriate information to corporate stakeholders to enable them make rational decisions. It therefore becomes important to examine how ERP system, a sub-set of Management Information Systems assists in achieving the goals of an entity, particularly, in relation to accounting.

Objectives of the Study

This paper generally assesses the impact of ERP system in relation to the accounting field. Specifically, it addresses the following issues:

- i. Elucidating on the meaning of Enterprise Resource Planning System
- ii. Assessing the characteristics, benefits and relevance of ERP system in an organization.
- iii. Examining ERP software modules that are employed in linking up organization activities.
- iv. Evaluating challenges faced in the implementation of ERP system
- v. Assessing the effect of ERP system particularly in the accounting field.

Definition of Enterprise Resource Planning System

Various authors have examined the meaning of ERP system; some of which are:

- Enterprise Resource Planning (ERP) is business management software that allows an organization to use a system of integrated applications to manage the business. (www.netcoach.eu.com)
- ERP could be described as a database software package that supports all of a business's processes and operations including manufacturing, marketing, financial, human resources. (Harold A., n.d)
- Enterprise Resource Planning (ERP) is a cross-functional enterprise system driven by an integrated suite of software modules that supports the basic internal business processes of a company. (www.techrulez.info)
- ERP is an industry term for the broad set of activities that helps an enterprise manage the important aspects of its business. (Margaret R., 2012)

Hence, it can be deduced that the main focus of ERP system is to have a built-in system which serves the whole organization.

Characteristics of Enterprise Resource Planning Systems

The characteristics of ERP System include the following:

- i. It is an integrated system that works in real time, without depending on periodic changes.
- ii. It has a consistent sense throughout each module.
- iii. Installation of the system and data incorporation is without complex application, given that the adoption is not done little by little.
- iv. It has a common database which supports all applications.

Major financial accounting processes in ERPS are in the areas of General ledger, Bank ledger, Accounts payable, Account receivable, Vendor invoice and Customer invoice processing. Other accounting ERP functions comprise of asset accounting, fiscal year change, depreciation and automatic clearing (Accounting with Enterprise Resource Planning Systems).

However, it's important to note that the development of ERP system is still budding. This is because it is not yet made so popular in the country. This can be deduced from the statement made by Dr Evans E. W., Executive Director, First Bank of Nigeria Plc (2004) in his write-up on *The Nigerian Software Industry and National Economic Development* stated that 'the market for ERP is still nascent'. He accentuates on the need to place emphasis on training IT professionals both at the tertiary and non-tertiary levels.

Emphasis on training to produce an army of highly trained and skilled IT professionals in terms of tertiary and non-tertiary IT training at various levels. Need to encourage some new areas of IT that are either forgotten or glossed over in our country namely: proper IT project management skill, software assessment, certification skills, software quality assurance and metrication and modern software engineering practices.

Agbo Joel C. O. also noted that

Information and communication technologies (ICTs) are potentially powerful enabling tools for educational change and reform processes through improving both access to education and the quality of that education. ICTs help expand access to education, strengthen the relevance of education to the increasingly digital workplace and raise educational quality by helping make teaching and learning into an engaging, active process connected to real life when used appropriately.

Importance of Enterprise Resource Planning System

ERP system cuts across all business activities, thus giving room for information congruence in all areas. Some of its values are given below:

- ✓ ERP Systems are highly integrated system that not only involves the accounting transactions, but transactions made in all areas of the company. [With Enterprise Resource Planning Systems (ERP) Theory and Practice FASTER Module 7]
- ✓ Information and Communication Technologies (ICTs) are potentially powerful enabling tools for educational change and reform processes through improving both access to education and the quality of that education. ICTs help expand access to education, strengthen the relevance of education to the increasingly digital workplace and raise educational quality by helping to make teaching and learning into an engaging, active process connected to real life when used appropriately. (Agbo Joel C. O.)
- ✓ ERP system makes clear key performance indicators needed to achieve organisational goals. Margaret R., (2012) stated that ‘ERP software applications can be used to manage product planning, purchase parts, maintain and keep track of inventories, interact with suppliers, provide customer service, and track orders’.



Source: Perky Global Limited (2012)

Challenges facing the Implementation of Enterprise Resource Planning System

In order to assess the challenges facing the implementation of ERP system, studies carried out by certain researchers are examined below:

- ❖ Chapman & Chua (2000, p. 207) stated that ‘... there is virtually no published material that studies accounting and this [ERP] technology. The need for research into these issues is great since ERP-type technologies are rapidly spreading and at the same time evolving.’

Duplaga & Astani (2003) interviewed representatives of 30 manufacturing companies in the upper Midwest region of the United States and was able to obtain the following results:

- ❖ Lack of ERP training and education for affected employees
 - ❖ Lack of clear goals for ERP effort.
 - ❖ Lack of companywide support and involvement
 - ❖ Lack of in-house expertise in ERP
 - ❖ Lack of data accuracy
 - ❖ Lack of project management strategy to manage processes
 - ❖ Lack of software vendor support
 - ❖ Lack of top management commitment and support
 - ❖ Unsuitability of hardware and/or software
 - ❖ Lack of communications to users.
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- ❖ Joffrey S. W. (Dr.), (2012) also noted that ‘the major impediment to successful implementation of ERP systems is usability and under utilization.’
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- ❖ Umble et al. (2003) in his study discovered certain factors that led to the failure in implementing ERP. They include the following:
 - ✚ Top management not been committed to the system
 - ✚ Organization is not committed to change
 - ✚ Strategic goals are not clearly defined
 - ✚ Inadequate education and training
 - ✚ Multi-site issues are not properly resolved
 - ✚ Performance measures are not adapted to ensure that the organisation changes
 - ✚ Technical difficulties can lead to implementation failures.
 - ✚ Data accuracy is not ensured.

Hence, it becomes necessary to promote the adoption of ERP system as this will boost the overall effectiveness of business entities. One major way to achieve this is impacting the knowledge to students in tertiary institutions.

Accounting Theories in Relation to Enterprise Resource Planning System

Some of these theories are examined below:

Agency theory:

Agency theory assumes that the interests of owners and managers or board members (principals and agents, respectively) are not, ex ante aligned (Jensen, M.C., & Meckling, W.H., 1976). An agency relationship is said to exist between the principal (the owner or shareholder) and the agent (Moldoveanu, M., & Martin, R., 2001). However, there is the problem of information asymmetry because the agent has access to information which the principal does not have, therefore the principal is unable to keep an eye on the actions of the agent. There are two methods used in practice to address the problem. (Morris J.J., n.d) However, the second method which is to provide information systems that allow the principal to better monitor the actions of the agent has been seen to be viable. Thus, one major software application which helps to bring about information congruence is Enterprise Resource Planning System.

Structuration theory:

This deals with the concept of duality of structure for insights into the processes by which new accountants’ practices and positions come into view. Ariela C., (2002) gave three levels and dimensions of structuration. The levels include: action, structure and modalities while the dimensions consist of signification, domination and legitimation. These are perceived to be fundamental analytical devices that enable proper comprehension of such transformation. He also provided a framework which conceptualise change in



accountants' expertise as a structuration process and ERP systems as modalities of structuration that offers new interpretive schemes, norms, co-ordination and control facilities.

ERP Systems Software Modules

ERP software is usually made up of an entity's software modules which are designed to meet organizational specific requirements. Each ERP module is focused on one area of business processes, such as product development or marketing. Some of the more common ERP modules include those for product planning, material purchasing, inventory control, distribution, accounting, marketing, finance and HR. (Spar Associates, Inc.)

Some of these modules are examined below:

Finance Modules

An ERP (enterprise resource planning) finance module is a software program that gathers financial data and generates reports such as ledgers, trail balance data, overall balance sheets and quarterly financial statements. (Margaret Rouse, 2012)

In ERP, a system such as accounting information system is built as a module integrated into a suite of applications that can include manufacturing, supply chain, human resources. These modules are integrated together and are able to access the same data and execute complex business processes. With the ubiquity of ERP for businesses, the term 'accounting information system' has become much less about pure accounting (financial or managerial) and more about tracking processes across all domains of businesses.

ERP Finance Module covers the following areas: general ledger, cash management, fixed assets, receivables and payables, costing, cost management, activity-based costing, budgeting.

Customer Relationship Management (CRM) Module:

CRM is both a business strategy and a set of discrete software tools and technologies, with the goal of reducing costs, increasing revenue, identifying new opportunities and channels for expansion, and improving customer value, satisfaction, profitability, and retention (Gary B. G. & Greg A, 2002). ERP system covers certain areas such as sales and marketing, customer contact, recruitment, service, commissions, training of employee, employee benefits, payroll and retirement.

Inventory Module:

ERP inventory module entails all stock related functions of an enterprise. Thus, it takes into consideration all activities such as identifying inventory requirements, inventory processing, setting goals, providing replenishment techniques and monitoring consumption of stock items.

Features of Inventory module include the following:

- Stock valuation such as First-In-First-Out, Last-In-First-Out and Weighted Average Price.
- Quality Control based on Quality Control parameters
- Transfer of stock
- Consolidation of all warehouses
- On-line status of stock item such as quantities of stock in hand, available stock, stock ordered and reserved.

Sales Module

Sales is a core aspect of the activities embarked upon in an organisation. Hence, businesses are now focusing on a closer relationship with their customers across the supply chain. Sales module involves activities such as price control, order control, handling of sales enquiry and sales contract. When all these are effectively handled, a company will be able to compete well with other companies.

Purchases Module



Purchases Module is a very important constituent in a business entity. It is fully integrated with other modules in ERP. It communicates with other modules to ensure a constant flow of information. (eresource) It also offers complete purchasing control to generate and track purchase orders (Seradex). Some business functions supported by this module are: On-line requisition, purchase performance, purchase orders, supplier quote appraisal, supplier scheduling, supply chain planning, vendor and contract management.

Production Module

ERP Production module gives an entity all it needs to carry out its manufacturing processes efficiently and effectively. This include setting up machines for the fixed asset section, bringing the planning process to production orders, storing the total planned duration of the specific assembly and the actual time taken. Production module helps to perform the following functions: quality control, bill of materials, engineering, product life cycle, assembly management, minimum and maximum production quantities and standard labour.

It must be noted however, that each of these module are closely connected to each other. This is to ensure free flow of information between various functions within an organisation.



Source: Perky Global Limited (2012)

Impact of Enterprise Resource Planning System in the Accounting Field

- It enables accountants to spend less time on data collection and computation, but rather influences rational decisions from the results obtained.
- With successful implementation of ERP system, accountants tend to focus more on the role of internal reporting.
- ERP system also changes accountants focus on external reporting.
- ERP system helps to generate virtually any desired historical based report, therefore enhancing the process of business planning.
- ERP system generates data for cross-functional analysis, thereby enabling accountants to be involved in cross-functional analysis.

SUMMARY AND CONCLUSION

The aptitude science and education has in making tertiary institutions meet the challenges cannot be overemphasized. This is because organizations are now looking for better and effective ways by which business activities can be carried out. This, of course does not leave out our higher institutions of learning as this is a platform for which students are being impacted with necessary skills to enable them be at their best in whichever field they find themselves. ERP system, which is seen as database business management



software, supports all business activities within an organization and thus enhances information flow between all business activities carried out within an enterprise. This paper therefore examined the meaning, characteristics, importance and challenges facing the successful implementation of ERP system. ERP software modules and their areas of application are also considered. The impact of ERP system in the accounting field was also dealt with.

RECOMMENDATIONS

The following recommendations are proffered:

- ✓ Communication skills should be improved upon. For instance, management should be able to understand technical reports provided from the results obtained.
- ✓ Nigerian tertiary institutions should incorporate ERPS into their curricula as this will help prepare the minds of students in their formative period.
- ✓ Training of employees on the use of ERP software as this is necessary for the successful implementation of the system in corporate organizations.
- ✓ Management should be committed to the adoption and implementation of ERP system.

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