

# Enterprise Resource Planning (ERP) Has an Impact on the Management Control System and the Work of Accountants

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**Abstract – Information and communication technologies (ICTs) are transforming not just people's lives but also corporate operations. One example of how technology transforms company from a labor-intensive to a machine-intensive process while improving organisational control is enterprise resource planning (ERP). The goals of this study are to assess the impact of ERP system deployment on the management control system and to identify changes in accountants' functions as a result of ERP system implementation. Two enterprises in Malaysia were chosen, one in construction and the other in property development, and triangulated data-collection approaches of observation, document analysis, and interviews were used. The ERP system, according to this study, is a good instrument for a formal management control system since it helps organisations uncover waste as soon as feasible. In terms of accountants' roles, the ERP has substantially enhanced their job because they can now devote more time to financial analysis and decision-making rather than data input.**

**Keywords – Enterprise Resource Planning (ERP), Accountants, Management Control System.**

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## 1. INTRODUCTION

In recent decades, the fast growth of information technology has happened in the dynamic and changing corporate environment. Since the introduction of ERP systems in the 1990s, many firms in a variety of industries have begun to employ ERP systems to improve their competitiveness in the corporate world, organisational efficiency and effectiveness, and ultimately performance. A software programme that combines corporate operations and transmits data into a centralised database is known as an enterprise resource planning (ERP) system. The information is then made available to all employees of the company at all times. Many organisations have utilised these systems for decades, and they are no longer limited to giant corporations; they are becoming increasingly popular among mid-sized and smaller businesses. The enterprise resource planning (ERP) system is an essential instrument in the accounting sector since it has a considerable influence on the job of management accountants in today's complicated company environment. Enterprise resource planning (ERP), for example, enables quick access to key real-time operational data management requires for decision-making and management control. Thus, without contacting the accountant first, management

may acquire the information needed for quick decision-making using the enterprise resource planning (ERP) system.

This inadvertently altered traditional management control systems, but it also posed a problem for accountants to remain competitive in the market, as analytical and interpretive duties are not always performed by accountants. Many analyses may be done without the aid of an accountant using a more advanced version of enterprise resource planning (ERP), improving the quality of management control and decision-making. However, implementing an enterprise resource planning (ERP) system is not always straightforward. As a result, some factors may have an impact on how the project management team decides to use their limited resources and invest in the best goods.<sup>[1]</sup>

These variables may have a positive or negative influence on the end result or the installation of an enterprise resource planning (ERP) system. Implementation is often a large undertaking that involves significant changes in organisational structure and work methods. The enterprise resource planning (ERP) system will be impossible to "go live" without strong leadership from senior management and adequate supervision. The

disparate outcomes of enterprise resource planning (ERP) system adoption in the two firms chosen as comparative studies for this study inspired us to better understand the process and implications of ERP system implementation for the benefit of both academic research and practitioners. Furthermore, the scarcity of this technique and the concerns under inquiry in the literature, particularly in developing countries like Malaysia, was a major reason for doing this study. The objectives of this study are twofold: to assess the impact of enterprise resource planning (ERP) system deployment on management control systems and to identify changes in accountants' duties as a result of ERP system implementation. The study's focus is on the time from the day the enterprise resource planning (ERP) system is established until three years following the ERP deployment process in two selected enterprises in Malaysia, one from construction and the other from property development. The factors and obstacles of implementing an enterprise resource planning (ERP) system in the two selected firms are the focus of this study. In addition, the influence of management control systems on the evolution of accountant positions will be a focus of this study. For a variety of reasons, this study concentrates on enterprises involved in building and property development. To begin with, the building and real estate development business is very fragmented. The company must communicate with other associated organisations on a broad scale, including material and equipment suppliers, vendors, subcontractors, and clients. Second, construction and property development firms are classified as specialised industries, which means they must follow more detailed and complicated management accounting practises like construction cost management systems, job cost calculation and reporting, work-in-progress (WIP), construction accounting processes, and contractors' financial statements. As a result, it would be fascinating to examine how an enterprise resource planning (ERP) system may combine and automate many of a company's business activities, such as financial management, procurement, project management, and maintenance, and thus the company's management control system.<sup>[2]</sup>

This research adds to the field in a number of ways. The findings of this study may be utilised by business owners or managers, as well as ERP system providers, to analyse system needs and evaluate the obstacles and success of ERP system deployment. Additionally, suppliers can utilise it to develop and rectify the enterprise resource planning (ERP) system for widespread usage by managers and companies.

The deployment of an enterprise resource planning (ERP) system would offer not just advantages but also obstacles to a firm. As a result, at the end of the study, a better knowledge of the elements and obstacles associated with establishing an enterprise resource planning (ERP) system in a construction and property development firm would have been

gained. In addition, the effects of implementing an enterprise resource planning (ERP) system on the management control system and the changes in accountants' functions are validated. This research is supposed to help management, suppliers, academic researchers, and developers improve the system's needs, features, and efficiency.

## **2. ENTERPRISE RESOURCE PLANNING**

ERP stands for enterprise resource planning, which is the integrated administration of critical company activities in real time, mediated by software and technology. Enterprise resource planning (ERP) is a form of business management software that consists of a series of linked applications that enable a firm to collect, store, manage, and interpret data from various business activities. On-premises or cloud-based ERP solutions are available. Cloud-based apps have grown in popularity in recent years as information can be accessed from any location with an internet connection.

Using shared databases managed by a database management system, enterprise resource planning (ERP) gives an integrated and continually updated picture of fundamental business activities. ERP systems track business resources such as cash, raw materials, manufacturing capacity, and the status of business obligations such as orders, purchase orders, and payroll. The system's applications distribute data among the many departments that provide it (manufacturing, purchasing, sales, accounting, and so on). Enterprise resource planning (ERP) handles links with external stakeholders and enables information flow across all corporate units.<sup>[3]</sup>

Enterprise system software is a multibillion-dollar sector that creates components that help businesses do a range of tasks. Despite the fact that early enterprise resource planning (ERP) systems were mostly utilised by large corporations, smaller businesses are increasingly adopting ERP systems.

The enterprise resource planning (ERP) system connects several organisational systems and allows for error-free transactions and production, increasing the productivity of the company. Designing an enterprise resource planning (ERP) system, on the other hand, is not the same as developing a conventional system. ERP systems run on a range of computer hardware and network topologies, with a database serving as the information repository in most cases.

### **2.1 Characteristics of enterprise resource planning (ERP)**

The following qualities are common in ERP systems::

- An integrated system
- Operates in (or near) real time
- A common database that supports all the applications
- A consistent look and feel across modules
- Installation of the system by the Information Technology (IT) department, with complex application/data integration, assuming that the installation is not done in stages.
- Deployment options include: on-premises, cloud hosted, or SaaS

## **2.2 Benefits of enterprise resource planning (ERP)**

- Enterprise resource planning (ERP) makes an organisation more nimble and adaptable to change. It also makes a corporation more flexible and less rigidly organised, allowing organisation components to work together more effectively, improving the company's internal and external performance.
- In a controlled environment, enterprise resource planning (ERP) can increase data security. A common control system, such as those provided by enterprise resource planning (ERP) systems, enables firms to more easily verify that sensitive company information is not compromised. With a more open environment, however, this changes, necessitating a closer examination of enterprise resource planning (ERP) security features and internal firm security standards.
- Enterprise resource planning (ERP) increases collaborative opportunities. Documents, files, forms, audio and video, and emails are all examples of data in the modern workplace. Each data media frequently has its own method for facilitating collaboration. Employees may spend more time working on material rather than conquering the learning curve of communicating in diverse forms across remote systems with enterprise resource planning (ERP).
- Standardization of common processes, one integrated system, standardised reporting, enhanced key performance indicators (KPI), and access to common data are just a few of the advantages of enterprise resource planning (ERP). The notion of integrated system, which is one of the primary benefits of enterprise resource planning (ERP), is frequently misunderstood by businesses.

ERP is a centralised system that integrates all primary corporate processes, such as human resources, planning, procurement, sales, customer service, finance, and analytics, as well as other associated application functions. In that sense, "Centralized Integrated Enterprise System (CIES)" might be used to define enterprise resource planning (ERP).

## **2.3 Disadvantages of enterprise resource planning (ERP)**

- Customization might be difficult. Enterprise resource planning (ERP) can be viewed as satisfying a company's lowest common denominator needs, forcing the organisation to develop workarounds to meet specific demands, as opposed to the best-of-breed approach.
- Reengineering corporate processes to meet the enterprise resource planning (ERP) system might hurt competitiveness or take attention away from more important tasks.
- Enterprise resource planning (ERP) systems might be more expensive than less integrated or complete alternatives.
- High enterprise resource planning (ERP) switching costs might strengthen the negotiation leverage of the ERP provider, resulting in higher support, maintenance, and upgrade prices.
- Overcoming reluctance to cross-departmental exchange of sensitive information might divert management's focus.
- Combining really separate enterprises can lead to undue reliance.
- Extensive training demands divert resources away from day-to-day operations..
- Integrating enterprise resource planning (ERP) systems may be a huge undertaking (particularly for large corporations) that takes a lot of time, planning, and money.
- Major obstacles include swiftly disbanding the project team after implementation, interface issues, a lack of thorough testing, time zone constraints, stress, outsourcing, people's unwillingness to change, a brief hyper-care phase, and data cleansing.

### 3. MANAGEMENT CONTROL SYSTEM

A management control system (MCS) is a system that collects and analyses data to assess the performance of various organisational resources such as human, physical, and financial resources, as well as the organisation as a whole, in light of the company's goals. The behaviour of organisational resources to implement organisational strategies is influenced by the management control system. It is possible that the management control system is formal or informal.<sup>[4]</sup>

#### 3.1 Management control system techniques

A management control system is an integrated method for gathering and analysing data in order to encourage and assess employee performance. Many strategies are used in management control systems, including as<sup>[5]</sup>

- Activity-based costing
- Balanced scorecard
- Benchmarking and Bench trending
- Budgeting
- Capital budgeting
- JIT
- Kaizen (Continuous Improvement)
- Program management techniques
- Target costing
- Total quality management (TQM)
- Incentive system

### 4. IMPACT OF THE ERP SYSTEM ON MANAGEMENT CONTROL SYSTEMS

A management control system is a technique in which a manager supervises and directs other employees to guarantee that choices are made consistently throughout the firm, increasing the chance of achieving the organization's goals, strategies, and performance. It's a tool that helps managers acquire and utilise data to assess the performance of various organisational resources, such as human and financial resources, while also taking organisational plans into account. Managers in the company employ its information-based routines and processes to ensure efficient and successful organisational operations. On the other hand, Anthony's (1965)<sup>[6]</sup> study defined a management control system as formal information processes in which management accounting the most significant operations is centrally positioned to control the

organization's total activities. A management control system may aid in decision-making and can be established and applied in both formal and informal methods. The formal mechanisms of control are often related with performance evaluation and consist of contractual responsibilities of behaviour and outcome. Rules, laws, regulations, manuals, policies, operational procedures, and financial guidelines are examples of formal control methods. Informal control is a type of social control that relies on human resource or people tactics like group or peer control and self-regulation. The informal control mechanisms allow for the establishment of self-regulation and influence over other organisation members. Informal control, unlike formal control, is not adequately conceived and implemented with specified goals in mind. It is, nonetheless, still critical to the attainment of corporate goals. Informal controls are usually connected with group control and self-control, and they are based on social and interpersonal tactics.

The informal control mechanisms enable the introduction of some sort of self-regulation, which includes non-specific and quantitative informal feedback. It may sometimes be done based on everyday social contacts and talks during free time, such as over lunch among coworkers. A group of individuals will have common values, beliefs, and ambitions, according to London (2003)<sup>[7]</sup>. Individuals in the group will exchange informal comments obtained via ordinary encounters, even after office hours and beyond the company. The relationship between an ERP system and a management control system appears to be crucial since the advantages of an integrated system include easy and quick access to information as well as information that is relevant and useable. Prior empirical research has revealed that enterprise resource planning (ERP) deployment has a formal and informal impact on management control systems. For example, Kallunki et al. (2011)<sup>[8]</sup> discovered a substantial association between an ERP system and formal and informal control mechanisms that mediate to increase operational efficiency and ultimately improve the firm's performance. When enterprise resource planning (ERP) systems were installed, Spathis and Constantinides (2004)<sup>[9]</sup> discovered that non-financial performance indicators and profitability analyses were used more frequently. According to Dechow and Mouritsen (2005), a management control system in an enterprise resource planning (ERP) system environment is essentially a collective perfection in which formal and informal controls are built in many sectors of the firm.

Mr. X stated in this study that "enterprise resource planning (ERP) is a terrific instrument for management control system" when it comes to the employment of control systems in the two organisations analysed. He went on to say that the ERP system has increased transparency and made it easier to manage all company divisions and

operations. The variance report in the company's enterprise resource planning (ERP) system aids in budgeting and planning to ensure that expenditures do not exceed expectations. Managers will be notified if the cost is approaching the projected cost, and immediate action will be made to resolve the issues. The monitoring of items on site is another example mentioned by responders, such as accountants. The buying department will be notified if supplies on site, such as ready-mixed cement and steel bar, are running low, and a fresh order will be placed to guarantee that activity on site does not come to a halt, according to this research. However, various difficulties must be addressed before its influence may be realised. The most difficult difficulty is data transfer from the old system to the new business resource planning (ERP) system, because any loss of data or duplication of information would tarnish the new enterprise resource planning (ERP) system's reliability, resulting in poor control and decision-making. The organisation was able to satisfactorily handle this issue. Mr X claims that this problem "arose during the early stages of enterprise resource planning (ERP) deployment by IFCA (the vendor), which migrated old data from Excel spreadsheets and handwritten records into a new system." The data was then verified to confirm that it was correctly transferred, complete, and capable of supporting new systems. Additionally, data cleaning was performed to improve data quality, decrease redundancy, and remove old data.

#### **4.1 Change in Accountants' Roles after the Implementation of the ERP System**

The use of an enterprise resource planning (ERP) system alters a company's operations and processes, including the nature of the accountant's work and position. The influence of an enterprise resource planning (ERP) system on an accountant's job has been identified in the accounting literature as one of the most critical variables defining future need for accountants' experience, knowledge, abilities, and responsibilities. Accounting programmes and courses in schools and universities that provide accounting degrees place a strong emphasis on computerised knowledge and abilities, such as an accounting information system (AIS), which are heavily stressed by ERP. For example, Sánchez-Rodríguez and Spraakman (2012)<sup>[10]</sup> investigated the effects of enterprise resource planning (ERP) systems on firms. They discovered that enterprise resource planning (ERP) extended organisations' charts of accounts, allowing for more detailed, consistent, and thorough performance evaluation. Furthermore, non-financial measurements that were overhauled using both financial and non-financial data were equally essential and incorporated in a company's transactions. Newman and Westrup's (2005)<sup>[11]</sup> results on changes in accounting processes and activities, on the other hand, were comparable to those of prior research. Aside from the increased chart of accounts, the ERP system

adoption had no substantial impact on accounting processes. Sánchez-Rodríguez and Spraakman (2012) discovered that management accountants participated less in documenting and processing transactions as a result of the shift in activity. Because more accurate and fast information from the enterprise resource planning (ERP) system allowed for more dependable, precise, and useful decision making, their work became more about analysis. Based on Chen et al. (2012)<sup>[12]</sup>, who discovered that after an enterprise resource planning (ERP) implementation, the differences in the roles of financial accountant and management accountant became wider and more obvious, the roles of accountants as transaction handlers and financial report providers have been further expanded. The job of financial accountants, like that of management accountants, did not alter much. Management accountants were forced to take on additional management responsibilities, such as education, training, and financial analysis.<sup>[13]</sup>

#### **5. CONCLUSION**

When it comes to the usage of a management control system, formal and informal techniques might be used. A formal management control system can benefit from an enterprise resource planning (ERP) system. It aids managers in detecting any possible cost overruns by alerting them promptly if costs are approaching planned expenditures. However, because the culture of respecting others exists whether or not the enterprise resource planning (ERP) system is deployed, such a system has had no effect on the informal control system. In terms of the influence of an enterprise resource planning (ERP) system on an accountant's job, it has unquestionably enhanced it, particularly in terms of time, since accountants now spend substantially less time on data input and much more time on data analysis following deployment. This allows them to focus on analysing crucial financial and non-financial data while also being more active in management decision-making. The duties of accountants may change as a result of the enterprise resource planning (ERP) system, but accounting processes do not. The quality of data produced from the system improves significantly since more detailed and precise data may be gathered more quickly without altering approaches. This is due to the fact that financial account preparation must adhere to the criteria established by professional accounting organisations. However, because of the experience gained, the adoption of an enterprise resource planning (ERP) system has enhanced accountants' functions while also raising their market worth in the business. According to this study, the enterprise resource planning (ERP) system might increase the risk of fraud and illegal transactions by allowing information to be easily accessed. This investigation discovered that none of the two organisations studied has a good security or

internal control system. Several components of the process can be controlled by a single employee. For example, an accounts assistant may be granted the permission to change the data of suppliers' master files while still being in charge of payments, implying that he may make fraudulent payments to himself by creating false suppliers. Management must guarantee that no single employee has authority over two or more sections of a process to decrease the risk of fraud and illegal transactions.

## REFERENCES

- [1] Ramaswamy, V.K. (September 27, 2007). "Data Migration Strategy in ERP". Information Technology Toolbox, Inc. Archived from the original on October 30, 2007. Retrieved May 9, 2018.
- [2] Monk, Ellen and Wagner, Brett (2009). "Concepts in Enterprise Resource Planning" 3rd.ed.Course Technology Cengage Learning. Boston, Massachusetts.
- [3] Sankar, C.; Rau, K.-H. (2006). Implementation Strategies for SAP R/3 in a Multinational Organization: Lessons from a Real-World Case Study. Cybertech Publishing. p. 8.
- [4] "Postmodern ERP Strategy Is Not a Best-of-Breed Approach". Gartner Group. Retrieved October 31, 2016
- [5] Radovitsky, Zinovy (2004). Bidgoli, Hossein (ed.). The Internet Encyclopedia, Volume 1. John Wiley & Sons, Inc. p. 707.
- [6] Anthony, R. N., Govindarajan, V. and Dearden, J. (1998), Management Control Systems, Irwin McGrawHill: Boston, MA.
- [7] London, M. (2003), Job Feedback: Giving, Seeking, and Using Feedback for Performance Improvement (2nd ed.), Lawrence Erlbaum Associates: New Jersey.
- [8] Kallunki, J. P., Laitinen, E. K. and Silvola, H. (2011), "Impact of Enterprise Resource Planning Systems on Management Control Systems and Firm Performance", International Journal of Accounting Information Systems, Vol. 12 No. 1, pp. 20-39.
- [9] Spathis, C. and Constantinides, S. (2004), "Enterprise Resource Planning Systems' Impact on Accounting Processes", Business Process Management Journal, Vol. 10 No. 2, pp. 234-247.
- [10] Sánchez-Rodríguez, C. and Spraakman, G. (2012), "ERP Systems and Management Accounting: A Multiple Case Study", Qualitative Research in Accounting & Management, Vol. 9 No. 4, pp. 398-414.
- [11] Newman, M. and Westrup, C. (2005), "Making ERPs Work: Accountants and the Introduction of ERP Systems", European Journal of Information Systems, Vol. 14 No. 3, 258-272
- [12] Chen, H. J., Yan Huang, S., Chiu, A. A. and Pai, F. C. (2012), "The ERP System Impact on the Role of Accountants", Industrial Management & Data Systems, Vol. 112 No. 1, pp. 83-101.
- [13] Sheilds, Murell G. (2001). E-Business and ERP: Rapid Implementation and Project Planning. ohn Wiley and Sons, Inc. p. 9-10.

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