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by Dehan Azzahrah Nurmahfudi

Submission date: 01-Jul-2024 03:26PM (UTC+0700)
Submission ID: 2411130274
File name: GREEN_INFLATION_-_VOLUME._1_NO._AUGUST_3,_2024_Pages_13-22..pdf (1.1M)
Word count: 3350
Character count: 20194

Green Inflation: International Journal of Management and Strategic Business Leadership
Vol.1, No.3 August 2024
e-ISSN: 3048-0612; p-ISSN: 3048-0620, Pages 13-22
DOI:https://doi.org/10.61132/greeninflation.v1i3.28

*Key Factors of Success in the Utilization of Enterprise Resource Planning*as System Integration in the "Manufacturing Company of PT. XYZ"

Dehan Azzahrah Nurmahfudi [1] Wiwik Handayani [2]*
[1,2]East Java "Veteran" National Development University
Email:dehan.azzahra123@gmail.com1 wiwik.em@upnjatim.ac.id 2

Abstract.*Manufacturing companies are working hard to maximize the use of their information technology, especially on Enterprise Resource Planning (ERP) systems, in today's sophisticated, competitive, and technology-driven environment. By leveraging a central database and operating in a consistent system environment, ERP systems unite all company activities. This integrated system can combine information from multiple departments to make decision making easier and better suited to the internal and external needs of the business. The choice of an ERP system is an important investment intended to improve the financial, strategic and profitable performance of a company. This study clarifies the key factors of success faced by manufacturing companies while using ERP software.*

Keywords:*Enterprise Resource Planning (ERP); Manufacturing Company; Key Factors of Success; Integrated Systems*

BACKGROUND

According to Spathis and Constantinides (2003) due to the intense domestic and international competition that exists today, businesses are looking for reliable technological systems that will help them better manage operations and cut costs. To help businesses compete in domestic and international markets, it is also necessary to raise quality standards and improve client service. To maintain a competitive edge in the global economy, businesses are also working hard to cut costs and reaction times, increase revenue, and expand their market share. These serious obstacles also include controlling inventory, distributors, services, clients, sales, workflow and materials(Saleh Shatat & Mohamed Udin, 2012). In the business sector, the collection of various data is required to support the success of a business, including details about all operations related to the revenue cycle, expenditure cycle and human resources cycle. Enterprise Resource Planning (ERP) is a business system that unites and streamlines data and information from across an organization into one system that supports and meets the demands of the entire company. By taking into account functions and processes that were previously fragmented and supported by various legacy systems, or separate legacy business systems, and seamlessly integrating and coordinating them, ERP systems improve all aspects of key operations, such as purchasing, accounting, manufacturing, and sales . Large, complex software packages known as enterprise resource planning (ERP) systems offer integrated real-time environments built on an organization-wide data model. Basic transactional data for the entire company can be processed thanks to this collection of software programs.

Received: June 15,2024; Accepted: July 01, 2024; Published: August31, 2024
Wiwik Handayaniwiwik.em@upnjatim.ac.id

Many manufacturing companies are interested in implementing new ERP because it covers a variety of activities that may be profitable for the company(Asif, 2018).Car manufacturers and sub-assemblies in Europe are optimistic about the future, according to Ernst & Young's European Automotive Survey (2013), which includes 300 companies operating in Europe (15% of which are car manufacturers and 85% are spare parts suppliers(Lorenc & Szkoda, 2017). What is now of major relevance from an industrial perspective is the reduction of manufacturing, warehousing and transportation costs, with the concomitant maintenance of business process efficiency, due to ever-increasing market demand and expanding competition (Sophisticated ERP), research shows that the absence of using the software is considered unfeasible.

ERP installations require significant financial, material, and human resources to be invested, along with time, information, and other resources, to be successful. Not only managers and other professionals, but also scholars and consultants are interested in this topic(Zouaghi & Laghouag, 2012). According to Keller and Teufel (1998), ERP implementation requires configuring the ERP software and then implementing a number of organizational and technological modifications, such as defining new roles or creating new interfaces. ERP systems have the potential to help businesses significantly. But if the implementation process goes wrong, it might also spell doom for the company.

Many studies in the literature have demonstrated the value of ERP systems for businesses, and this is because these systems have become one of the key requirements, barriers to entry, and a strong and integrated IT infrastructure for many businesses, giving them the ability to compete in both local and global markets and ensuring they gain a competitive advantage in the global economy, especially in today's e-business era (Al-Mashari et al., 2003;(Rashid et al., 2002). The introduction of ERP systems caused significant changes in businesses, impacting the way they run businesses, and restructuring their supply chains In(Maditinos et al., 2011), to avoid technological obsolescence and build durable competitive advantages, companies of all sizes and types are progressively implementing ERP systems today (Al-Mashari et al. , 2003; Willis and Willis-Brown, 2002).

According to(Dillard & Yuthas, 2006), the majority of large companies use ERP software, and more small and medium businesses are following suit. The acquisition and installation of an ERP system typically increases productivity and work quality because the system standardizes and simplifies many complex operational operations across the enterprise(Fui-Hoon Nah et al., 2001). Additionally, users working in different company

divisions can easily move, share, and exchange information(Amoako-Gyampah, 2007); Kemp and Low, 2008):

- Improved communication between functional departments;
- Increased productivity;
- Reduced operating costs (lower production, marketing and helpdesk support costs);
- Facilitate day-to-day management;
- Quick access to data for managerial control and decision making;
- Support for long-term planning.

Quick access to information can be very beneficial for business operations, customer service, improving quality standards, and market forecasting. ERP systems are critical to generating competitive advantage under all these assumptions. A successful ERP implementation project benefits a company in various ways. In addition, it can shorten production cycles, improve customer support, increase the accuracy of demand projections, and save operational costs. Although some authors argue that ERP systems are only suitable for very large businesses and business systems, several studies and real-world examples suggest otherwise(Denic et al., 2016). The aim of this research is to find out the main keys to success that take into account the elements that contribute to the successful utilization of the ERP system. The proposed conceptual framework consists of variables that, to the best of our knowledge, have never been discussed collectively before.

THEORETICAL STUDY

Enterprise Resource Planning Technology

Technology refers to the tools used by individuals to complete their tasks. According to the Big Indonesian Dictionary, technology includes all the means necessary to produce goods that ensure the continuity and comfort of human life. In the field of information systems research, technology concerns hardware, software and data. In this research, special software refers to the ERP (Enterprise Resource Planning) system (Jogiyanto, 2007).

The abbreviation ERP comes from three key elements, namely Enterprise, Resource, and Planning. The term “Enterprise” refers to a company or organization, “Resources” denotes the various assets and capabilities available, and “Planning” refers to the strategic coordination of those resources. The ERP concept emphasizes the

planning aspect, which shows that the main focus is on preparation and strategic management(Dityawarman, 2016).

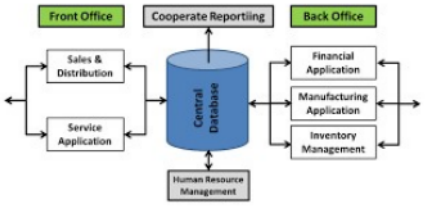
Enterprise Resource Planning (ERP) is an advanced and integrated information system technology designed to facilitate the coordination and management of a company's business information. By integrating various departmental systems, ERP enables seamless information exchange and collaboration across various sectors within the organization. This integration not only simplifies operations but also increases the company's ability to carry out its business activities efficiently, thereby increasing overall productivity and effectiveness(Dityawarman, 2016).

Defining Enterprise Resource Planning (ERP) simply by translating its abbreviation does not fully reflect its essence. While "Resources" and "Planning" are important components, the real heart of ERP lies in the word "Enterprise". This term signifies the main goal of ERP: to unite all departments and functions within a company into a cohesive, integrated computer system. Systems like these are designed to meet the specific needs of each department, thereby reducing reliance on manual processes. ERP functions to consolidate previously isolated computer systems, especially in key areas such as finance and marketing, ensuring that all departmental needs are met within an integrated framework(Fauzan, 2012).

Basic Concepts of ERP Systems

The term "ERP system" refers to a comprehensive information system designed to support and streamline the daily transactions and operational activities involved in managing corporate resources. These resources include various elements, including financial assets, human resources, machines, spare parts, time management, raw materials, and production capacity. The functionality and structure of this system is depicted in Figure 1 below, which provides a visual representation of how an ERP system integrates and coordinates diverse resources to increase efficiency and productivity in an organization.

Figure 1. Basic ERP Concepts



ERP System Architecture

Many contemporary ERP systems use a 3-tier client/server architecture, designed to increase the efficiency and scalability of business processes. According to Kale (2011), this architecture distributes the overall application logic into three different components: Presentation Logic, Processing Logic, and Storage Logic.

- Presentation Logic is responsible for the interaction between the end user and the system. It formats data, renders the user interface, presents data, and accepts input from users, ensuring a smooth user experience.
- Processing Logic acts as an intermediary, receiving user input from the presentation layer, validating data, and applying business rules. These components also communicate with the storage logic to retrieve the necessary data and process business transactions, then write the results back to the storage layer.
- Storage Logic handles data retrieval and storage, managing requests from processing logic components. This function is usually equated with a Database Management System (DBMS), which stores data in physical storage devices and ensures efficient data management and accessibility.

RESEARCH METHODS

The methodology used is a case study based on a quail-metric approach, a method that is between qualitative and quantitative methodologies (Savall and Zardet, 2004). First, an open but focused exploratory interview was conducted in the marketing department of one of the "PT. Enterprise Resource Planning (ERP) "PT. XYZ Manufacturing Company" is currently determining the type and scope of potential problems that may arise during the ERP system implementation process.

RESULTS AND DISCUSSION

Analysis of stakeholder responses to identify risk factors with the aim of minimizing their impact is a research finding. The organization has a rather pervasive technological culture, fitting with existing systems. In the marketing department, it was discovered that the data for a new project that was input into the ERP did not have markers or notifications, so the marketing department had to send a memo first to other departments to know that there was a project that had to be processed in the ERP. Apart from that, data that has a certain expiration time will be automatically closed if it does not have a separate addendum when there is an order that has not been completed so that the

marketing department needs to re-enter it either manually or integrated through ERP . Each ERP menu display will be different for each department and person according to their respective interests. The following is table 1 of the ERP menu display from marketing department staff

Table 1. Marketing Department Staff ERP Menu Display

0101-General • 010101-Document Approval • 010102-Country • 010103-Province • 010104-City • 010105-Sub District • 010106-Village
0102-Financial and Cost Management • 010202-Finance Management - 01020203-Term of Payment - 01020230-Account Receivable-AR ▪ 0102023009-Sales Invoice Based on DO to Customer
0104-Inventory Material Management • 010401-Master Data - 01040101-Mater Item • 010404-Materials Management - 01040404-DO To Customer - 01040405-DO To Customer based on Request Delivery - 01040413-Receiving Items From Customer - 01040425-DO To Customer (Repalced Item) - 01040499-Customization
0108-Sales Distribution • 010801-Sales Management - 01080101-Customer's Category - 01080102-Customer Data - 01080105-Sales Person - 01080116-Customer's Group - 01080117-Phase - 01080118-List Of Projects - 01080819-Updating List Of Projects

0111-Project System

- 011101-Master
  - 01110106-Master Project Group
- 011102-Pipeline Project
  - 01110201-Bill of Quantities
  - 01110202-SO Contract
  - 011102023-SO Contract Revision
- 011106-Notice To Proceed
- 011108-Delivery Request (for Project)
- 011108-DO To Product (mutations)

0199-Customization

- 019904-IMM
  - 01990403- DO To Customer Based On Request Delievery Verification

The menu display from table 1 is the result of an exploratory interview with marketing department staff at "Manufacturing Company PT. in the company The use of ERP in every line of the company has found its own conveniences and obstacles faced including the absence of notification for each ERP user when there is an order from the marketing department, so a prior notification memo is needed. to each department to process the order. The use of ERP also produces benefits for the company(US, n.d.) some of the benefits of ERP are:

- The speed and level of accuracy of information required by managers is faster than the previous system to obtain order status information, order recapitulation by business unit.
- Increase customer satisfaction. With the availability of various information between business units that is carried out online and up to date, each business unit can collaborate on information online,
- Improve Inventory Control. By implementing the ERP program application with an order processing module, the inventory control function can be easily carried out, where relevant department officers can find out real-time and up to date information regarding inventory stock position, inventory status, outstanding purchase orders. In addition, according to research (Sentra et al., nd) organizations involved in retail, manufacturing, or companies will integrate systems using an ERP system which leads to:

1. If the updated information is related to a specific module, other modules will be updated automatically. As soon as the user enters data into the system, the data is immediately updated. The term “real-time processing” refers to this.

2. System integration is possible provided all businesses use the same data sources for vendor, customer, and product information.
3. Data transparency, whoever enters information, all users who have access to the system will always be able to see the latest data.

To maximize the benefits obtained from ERP implementation, research shows that there are several main keys that influence the success of ERP utilization in a company. Build a strong relationship between efficient ERP system implementation and the ability to resolve conflicts through dialogue. These two factors do not seem to have the power to directly influence how the ERP implementation process occurs, especially since they do not have the same weight as knowledge transfer and consultant support. They may be required to maintain a positive work environment while the implementation process is ongoing, but they have no real impact on how well the process runs in the long term.

In addition, conflict resolution is significantly influenced by communication effectiveness. This makes sense considering that increased communication between corporate entities increases the likelihood that problems encountered during ERP system implementation will be resolved(Maditinos et al., 2011). The only element of the "human input" dimension that influences the success of communication is user support. This research shows that users are motivated to talk about their needs and requirements during the implementation process when they are willing to support the project and accept the associated organizational changes. Additionally, the ability to resolve conflict is positively correlated with the assistance of consultants and senior management. By assisting with dispute resolution, consultants can improve the ERP installation process and reduce the likelihood of recurring conflicts. Support from top management is also important for resolving disputes between units because top managers are responsible for coordinating various business departments and are required to issue directives and instructions.

CONCLUSIONS AND RECOMMENDATIONS

Utilization of Enterprise Resource Planning (ERP) in "Manufacturing Company PT. XYZ" brings various benefits, especially in integrating real-time data across all lines of the company. However, this also creates several obstacles, such as there being no notification when an order comes through the marketing department, so the marketing department needs to manually send a memo containing notification that

there is an order that needs to be processed to all departments. To minimize these obstacles, companies need to implement the main key to success in implementing ERP, namely user support for using ERP. This is necessary to improve the effectiveness of communication on various lines through ERP.

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