



A Study on the Adoption of Systems Applications and Products (SAP) Financial Accounting and Controlling (FICO) Module by a Large Corporation

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ABSTRACT

Today, information technology plays a vital role in every aspect of human lives. It leads to a high level of corporate competition and growth seems equal to innovation. It is the brain of the modern economy and the brain of corporate organization. Information technology is all about storing, manipulating, distributing, and processing information using computer-based tools. Business sector is one of the beneficiaries of modern technology, it allows organizations to work efficiently and maximize productivity, thus making computer and information systems very essential in running business operations.

This is because technology gave a new and better approach on how to go about with business. It provided a faster, more convenient, and more efficient way of performing business transactions. One of the high end contributions of advanced technology is the birth of Enterprise Resource Planning or ERP. And since businesses faced new challenges in increasing competition, market expansion and meeting and exceeding customer expectation the Enterprise Resource Planning (ERP) systems have been developed to provide a total business solution. It is a business software solution that seeks to streamline and integrate operations, processes and information that flows within the enterprise. Enterprise Resource Planning (ERP) is software suited for business applications such as accounting, supply chain management, human resources (HR), and sales and so on.

This study focuses on how SAP and its financial planning module FICO were adopted at a government level project by a large corporation called KEPCO in the Philippines.

The key characteristics of the Enterprise Resource Planning (ERP) system is integration, once an Enterprise Resource Planning (ERP) system is implemented, each department or business unit in a company will use the same database, share the same data that immediately improve the communication among different department or business units that will enhance the business operations, operate the enterprise in effective and efficient manner. Enterprise Resource Planning (ERP) system improves productivity, which is the main reason why many large-sized scale enterprises are keen to study and adopt the Enterprise Resource Planning (ERP) system in running and managing their business operations.

Keywords: ERP, Enterprise Resource Planning, Competitive, Technology, Survival, SAP, FICO, Globalization, Implementation, Configuration

1. Introduction

This study found that fully web enabled ERP services have helped to remove many drawbacks of the earlier applications. This has gained momentum as it has made ERP function more meaningful and dynamic with the latest inclusions. Web enabled ERP services help companies keep track of what is going on. Since the entire system comes under the purview of the internet it is not possible for the employees to engage in any sort of misappropriation of funds or otherwise. In addition, the errors could be easily deduced and corrected.

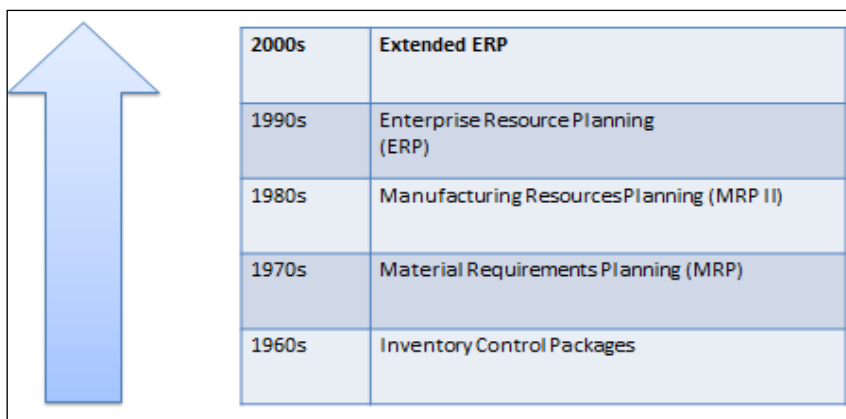


Figure 1 Evolution of Enterprise Resource Planning (ERP) System

In the Philippines, the use of the Enterprise Resource Planning (ERP) system was governed by Republic Act No. 8792 or also known as “Electronic Commerce Act of 2000”. In Section 2, Declaration of the Policy, vividly states:

“The State recognizes the vital role of information and communications technology (ICT) in nation-building; the need to create an information-friendly environment which supports and ensures the availability, diversity and affordability of ICT products and services; the primary responsibility of the private sector in contributing investments and services in telecommunications and information technology; the need to develop, with appropriate training programs and institutional policy changes, human resources for the information technology age, a labor force skilled in the use of ICT and a population capable of operating and utilizing electronic appliances and computers...”

There are over 150 vendors of Enterprise Resource Planning (ERP) systems, and one of the well-known providers is the Systems, Applications and Products or best known as SAP. As of 2010, SAP has more than 140,000 installations worldwide, over 25 industry-specific business solutions and more than 75,000 customers in 120 countries, thus in current market of Enterprise Resource Planning (ERP) system, the latter make it on the top one. Systems, Applications and Products (SAP) system comprises a number of fully integrated modules, which covers virtually every aspect of the business management. All these separate parts of ERP systems must work together to accomplish a company's business operation.

Moreover, Systems, Applications and Products (SAP), started in 1972 by five former [IBM](#) employees in Mannheim, Germany, they are [Dietmar Hopp](#), [Klaus Tschira](#), Hans-Werner Hector, [Hasso Plattner](#), and [Claus Wellenreuther](#), the original name for SAP was German: Systeme, Anwendungen, Produkte, meaning "Systems Applications and Products." The original SAP idea was to provide customers with the ability to interact with a common corporate database for a comprehensive range of applications. Gradually, the applications have been assembled and today many corporations, including IBM and [Microsoft](#), are using Systems, Applications and Products (SAP) products to run their own businesses. This applications is currently built around their latest [R/3](#) system, provide the capability to manage financial, asset, and cost accounting, production operations and materials, personnel, plants, and archived document.

In recent data, there are more than 20 modules in Systems, Applications and Products (SAP) system, but in this study the focus would be the Financial Accounting and the Controlling Modules. The Finance Module is designed to record financial transactions in a manner consistent with external reporting. The Controlling (CO) module in SAP is to provide organizations with a method of slicing and dicing data to view costs from an internal management perspective and provide a view of profitability beyond that of basic financial reporting.

2. Background of the Study

“Today, we are witnessing the most profound and rapid changes in history- the digital transition. If you look at the number of devices connected to the Internet, about two years ago, it surpassed the number of human beings on the planet. Now it's at 15 billion devices connected and the biggest challenge is Big Data” (Lancon, 2013)

During the recently held SAP Forum Manila wherein Francois Lancon, President and Managing Director of SAP Southeast Asia, discusses on how System Application and Products (SAP) make the world run better, on how it delivers a breakthrough technology innovations that enable companies to redefine the customer experience, empower employees, optimize resources, and unlock the power of business networks. (Tricia V. Morente, 2013).

Financial data is very complex and highly confidential, that a certain enterprise needs an application or system that will process and store such data that will be used in sound financial decision making. Nowadays these challenges are being faced by multinational companies, large companies and even those in small or medium scale enterprises. Thus, in order to adapt quickly to changing industry requirements, KEPCO Philippines decided to adapt and implement a SAP ERP system that will improve alignment of business strategies and operations, and enhance productivity and insights of the enterprise. Likewise, it could be a wise move for the whole KEPCO Group since most companies and subsidiaries owned by KEPCO Group used the Systems, Applications and Products (SAP) as their Enterprise Resource Planning (ERP) system, the consolidation report would be just one click away. KEPCO is a globally competitive and leading electric utility provider that started its operation in 1995 in adhering to the Government's calls to develop and utilize the country's indigenous resources and augment its power supply.

In August 2012, KEPCO Philippines launched and implemented a GO Live of Systems, Applications and Products (SAP) system. This study focused on two major modules presented in Systems, Applications, and Products (SAP), the Financial Accounting (FI) and Controlling (CO) module. These modules are used for information technology through Systems, Applications, and Products (SAP), which is a package mainly employed for financial accounting. Many companies use Systems, Applications, and Products (SAP) to integrate, diversify and streamline work. It is a program package offering two main sub-modules: Financial Accounting (FI) and Controlling (CO). These are used for managing financial information and for analyzing the information.

The major challenge for the companies is how they will implement such a system. Systems, Applications and Products (SAP) implementation is the whole of processes that defines a complete [method](#) to implement the [SAP ERP enterprise resource planning](#) software in an [organization](#). The Systems, Applications and Products (SAP) implementation method described in this entry is a generic method and not a specific [implementation](#) method as such. It is based on [best practices](#) and [case studies](#) from various literature sources and presents a collection of processes and products that make up a complete implementation method to allow any organization to plan and execute the implementation of [SAP software](#).

This study focused on the impact of the system implementation with regards to the financial and control process of the company, likewise the effectiveness of the system in processing financial information to arrive at sound financial decision making.

3. Scope and Limitation of the Study

The study focused on one of the modules of Systems, Applications and Products (SAP) implemented by KEPCO Philippines, the Financial Accounting (FI) and Controlling (CO) module. It studied the implication of integrating SAP in processing business data of KEPCO Philippines. It will determine whether the processing is more effective and efficient compared with computer-aided method of recording and reporting, which is beneficial for companies in processing data in less time and less error. Furthermore, this study will attest the effectiveness of real-time updates as effective means of recording relevant data into a sound financial decision making.

The impact of the integration of Systems, Applications and Products (SAP) of KEPCO Philippines were measured in terms of ability of the system to validate the completeness of the transactions, ease of recording and posting of the financial transactions, simple recording of adjustments and easy closing of month-end and year-end books and pace generation and availability of financial reports under the Financial Accounting module and clear separation of cost center and generation of internal reports under Controlling module.

The respondents of the study are the whole Finance Department of KEPCO Philippines and one for every other department that does the Parking of Accounting Documents. The researcher used the descriptive method of research and utilized a questionnaire checklist to gather necessary information.

Due to the highly technicality of the study, it is limited to the Financial Accounting and Controlling Module and other available modules of the system will not be discussed and likewise the version of the platform of the system.

4. Statement of the Problem

This study aims to determine the impact of integrating the whole financial process with Systems, Applications and Products (SAP) as a medium in recording, processing, and translating financial data into reports.

Specifically, it sought to answer the following questions:

What is the profile of the respondents in terms of Age, Sex, Educational Attainment, Position, Nature of work and User Classification.

How do the respondents perceive the integration of Systems, Applications and Products (SAP) of KEPCO Philippines with respect to:

Financial Accounting (FI) Module, Validate the completeness of the transactions, Record and post the transactions, Record adjustments and month-end and year-end closing of books; and External reports generation, Controlling (CO) Module, Cost Center and Internal reports generation.

What is the level of effectiveness of integrating Systems, Applications and Products (SAP) of KEPCO Philippines in their Financial and Control Process as perceived by respondents with respect to:

Accuracy, Relevance, Efficiency, Economy and Productivity

The studies test the following null hypothesis:

Is there a significant difference in the perception of the respondents on the integration of Systems, Applications and Products (SAP) of KEPCO Philippines when grouped according to their profile?

Is there significant difference in the perception of the respondents on the level of the effectiveness of Financial Accounting and Control Module of Systems, Applications and Products (SAP) with respect to their grouped profile?

5. Evaluation Design And Framework

Let's discuss the expected output and justification, theoretical framework, conceptual framework, and the variables and their definitions and importance to the study.

Discussion of Expected Output and Justification

The expected output of this study is to ascertain the impact of Systems, Applications, and Products (SAP) in processing of financial information of KEPCO Philippines Finance Department.

Furthermore, this study's expected output is to establish the level of effectiveness perceived by the employees in terms of accuracy, relevance efficiency, economy and productivity of Systems, Applications and Products (SAP) in handling out the financial data into comprehensible reports.

The objective will be attained through the use of survey questions that will determine the impact of the system, compared to the old system and process of the Finance Department in processing the financial data into reports.

Theoretical Framework:

Implementation of an ERP system in the organization is the most complex and crucial part of the whole ERP integration. Thus, many researchers have proposed stage models of ERP implementation to provide successful implementation.

Collins and Hussey (2000) stated that the theoretical framework is a collection of theories and models from the literature. It is a logically developed, described, and elaborated network of associations between the variables deemed relevant to the problem situation, and which have been identified through such a process.

Market competition is basically based on how the core players play their cards and how well they can perform. This study is based on the theory on competitive advantage by Michael Porter, this theory is about taking offensive or defensive action to create a defensible position in the industry, in order to cope successfully with competitive forces and generate a superior return on investment.

To maintain competitive advantage and to augment performance, companies need a solid resource management capability and dynamic capabilities, that is, the companies should be able to effectively control, integrate, and utilize the internal and external resources, and adapt to environmental changes and competition. ERP system by nature is one resource management system, since ERP system itself is invented for material resource planning (MRP). ERP system is one model to manage, integrate, and control enterprise resources. This model links with a company's management culture, management processes and management objectives, and each enterprise application of ERP systems can be seen as the unique ability to manage resources. Therefore, it is to believe that the implementation of ERP systems can enhance the company's resource management capabilities and help the company gain a competitive advantage.

Furthermore, the use of the Enterprise Resource Planning (ERP) system, is based on the Business Process Reengineering method defined by Hammer and Champy as the fundamental reconsideration and radical redesign of organizational processes, in order to achieve drastic improvement of current performance in cost, service and speed. Value creation is the leading factor in BPR and information technology plays a vital enabling role. Since the Enterprise Resource Planning (ERP) system is a technology driven tool for an organization that will enable the companies to maintain or reach an optimum spot in their own industry, likewise it is considered by some as a major support for new forms of working and collaborating within an organization and across organizational borders.

Conceptual Framework

The purpose of this section is to explain and rationalize the conceptual framework proposed by the researcher. A successful Enterprise Resource Planning (ERP) technology implementation, any enterprises can augment their performance. Such implementation is a challenging project and involves a high level of investment that places tremendous demands on corporate time and resources. Likewise, proper implementation of this technology does not occur in hours or days, but it usually takes a couple of years prior to going live.

Enterprise Resource Planning (ERP) benefits cannot be fully realized unless a strong alignment and reconciliation mechanism was established between technical and organizational imperatives based on the principles of process orientation. It is suggested in the taxonomy that measurement takes place in a balanced perspective, and for the purpose of providing useful information that can enable the decision making process and, which can help deliver the corporate objectives and therefore lead the business competitively forward.

The information and experiences gathered by the researcher help the latter in forming the conceptual framework for this study. Team effort in Enterprise Resource Planning (ERP) implementation is very important, people drive the technology, its success depends on those hands that will execute its capacity and capability. Prior to implementation of the Enterprise Resource Planning (ERP) system, it must be approved by the top management, for they are the one who will support the project. Likewise the people in the operation, whether support group or the field members, for they are the key users of the system. Moreover, before the implementation, the need to study the whole business process must be considered. Since effective users of the system have a positive relationship with effective design of business processes. Enterprise Resource Planning (ERP) package software suitability has a good impact on the company for it will reduce the cost of the system itself since it may avoid too much customization. Further, one of the benefits of the Enterprise

Resource Planning (ERP) project is proper data management, since integration of multiple information systems within one organization brings about enhanced clarity, understanding and standardization within the company. When the organization works in unison, it would automatically result in better manufacturing and marketing practices, standardization of processes, free flow of information, clarity of roles and easy and wide-spread identification of the corporate goal. Below is the outline of the proposed conceptual framework.

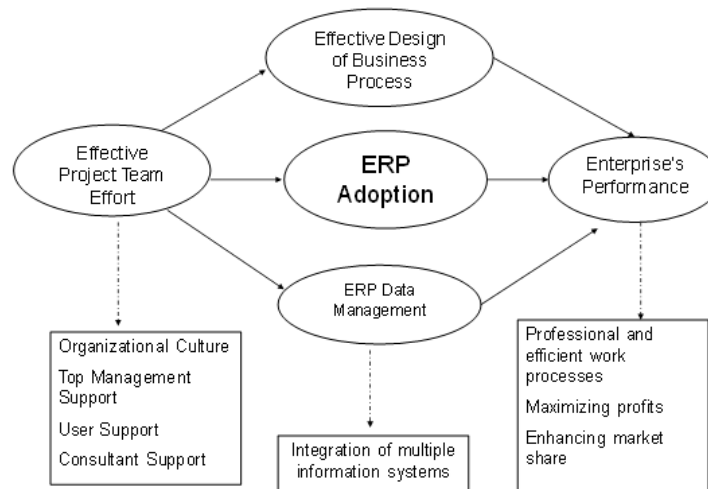


Figure 2. Conceptual Framework: Integration of Enterprise Resource System

The Variables, their Definitions and Importance to the Study

Research papers will mention a variety of different variables, and, at first, these technical terms might seem difficult and confusing. But with a little practice, identifying these variables becomes second nature. In research, the most heard kinds of variables are the independent and the dependent variables. If the variables are said to be manipulated by the researchers it is the independent variables that are presumed as the cause. While, dependent variables is the response that is being measured and it is presumed as the effect.

In this study, the independent variables are the integration of Systems, Applications and Products (SAP) of KEPCO Philippines replacing the old computer-aided system in processing financial information, while the response of the respondents that is grouped according to their profile is the dependent variables. Likewise, to measure the level of effectiveness, which the dependent variables in this study, the independent variables are the following:

Accuracy

Accuracy is the precision of financial data, it is said that a financial statement is accurate if it is free from bias, it is recorded in its true value and data should be existing. In this study, accuracy will basically be measured against manual data and manual lapsing schedules to test that systems are run accurately against raw data.

Relevance

In accounting, relevance means it will make a difference to a decision maker. It is the relationship or the relatedness of financial data and reports itself in making a certain financial decision. In relevance, great timing is needed and in accounting accuracy is sometimes sacrificed. For this study, relevance is to be tested in the ease of generating reports and schedules that might be needed for a certain decision that needs immediate action.

Efficiency

Efficiency in accounting generally refers to the use of certain ratios and measurements designed to assess the effectiveness of a specific company or firm. Efficiency ratios are used to assess the financial condition of a company based on the way it manages its assets. This paper intends to measure efficiency of the accounting application through resources management and likewise the impact of the system with regards to overall efficiency in the organization and consequently their profitability and sustainability.

Economy

Economic cost is defined as the sacrifice involved in performing activity or following a decision or course of action. It may be expressed as the total opportunity cost and the explicit cost. This paper will identify some points whether the benefits of using and implementing Systems, Applications and

Products (SAP) is much higher than the cost of the implementation. Likewise, to test the ability of the system in implementing a paperless transaction that could be a savings for the company in terms of supplies.

Productivity

Productivity measures efficiency in producing goods or services. It is a degree to which a real income is being measured. Thus, in processing and communicating financial information, a certain group is to be said productive when the resources are being fully utilized, that the system does not require too much time in running and processing data that might caused some delays and became a hindrance in immediate translation of numerical data that is needed in preparation of financial reports of the enterprise.

6. Research Methodology

Here we discuss the research design, setting and the subject of the study, sources of data, procedure of the study and the statistical treatment.

Research Design

This study used the descriptive qualitative research design utilizing a questionnaires checklist as a medium in gathering information that is needed in the conducting this study. Descriptive Research studies are those studies which are concerned with describing the characteristics of a particular individual, or if a group (Kothari, 1985). As stated by Calmorin (1999), the principal aim of a descriptive method is to describe the nature of the situation as it exists at the time of research and explore the cause of the particular event. Data gathering is the primary means of collecting information to conclude and answer the questions concerning the current status of the study.

It aims to determine the impact of integrating Systems, Applications, and Products (SAP) in processing financial data by the Finance Department of KEPCO Philippines Group. Likewise, it will assess the level of effectiveness of the system as to relevance, efficiency, economy and productivity of the system and the user of such accounting applications.

Setting of the Study

KEPCO Philippines was established when Korea Electric Power Corporation won a bid for Operate, Maintain, Service Contract (OMSC) with the Philippine Government, National Power Corporation (NAPOCOR) specifically, in response to the call of the government to develop and utilize the country's indigenous resources and augment its power supply. Currently, KEPCO has three power plants. Last September 12, 1997 a natural gas power plant was built in Ilijan, Batangas under Build-Operate-Transfer (BOT) contract, it is the largest natural gas facility in the country comprising 1200MW combined-cycle, dual-fuel electricity generation facilities with a design life of 25 years. Another two power plants are located in Naga, Cebu with Built-Operate-Own scheme. The two units of coal-fired that cater the Visayan Grids composed of two units 185.8MW and one 100MW Thermal Power Plant. This project is conceptualized under the scheme of a merchant power plant, characterized by executions of power sale contracts (PSCs) with distribution utilities and electric cooperatives, instead of power purchase agreements with the government.

KEPCO Head Office has been using Systems, Applications and Products (SAP) as their medium in operating the business and for a stress-free consolidating the reports of all their subsidiaries and overseas projects, the Management ordered all KEPCO Group to use same system with server at Korea and user ID provided by the Head Office. Prior to the implementation, all employees had undergone a rigid and tremendous Systems, Applications, and Products (SAP) training for a couple of months, training including theoretical classroom style introduction and a complete hands-on training using client test server. However, there are some encountered transactions that have never been considered, some complex and complicated that failed to ruminant that's why it makes it hard for the team to complete the processing of the transaction and became a backlog that to be raised to the Head Office and consultant.

Subject of the Study

The respondents of this study were the personnel of KEPCO Group Finance Department. The chosen respondents are the one who underwent training and the one with Systems, Applications, and Products (SAP) access. The researchers decided to make the 100 percent population of the subject to be the respondents.

They were chosen purposely to determine the impact of the Systems, Applications, and Products (SAP) being implemented. They were described according to age, sex, educational attainment, position, nature of work and user classification.

The research used the selective methods of sampling techniques, specifically the purposive sampling technique. This method is to be used when studying a certain or particular group.

Procedure of the Study

The researcher prepared and presented three (3) proposed theses to the research professor for selection and approval. The title of the study at hand has been chosen and approved by the four (4) members of the panel during the title defense. The researcher used different mediums in gathering necessary information to construct and have ideas for the chosen topic. Those mediums are the different thesis writing available in libraries, leaflets and journals, IT practitioners' point of views and knowledge, browse the internet and the Systems, Applications, and Products (SAP) portal for various ideas and techniques in the world of Enterprise Resource Planning (ERP).

After completing the three (3) chapters, it is needed to present and defend during proposal defense so to continue with the remaining chapters and improve the write-up as well. Once approved, the researcher needs to develop the questionnaire checklist which is subject to test for reliability and validity with the assistance of the adviser and with the expertise of the statistician. As soon as the reliability and validity was determined the researcher can proceed with the dissemination of the questionnaire checklist among respondents. Moreover, the researcher needs to secure a permit to conduct study from the University to conduct study and interviews to the respondents and institution that could feed information and body of knowledge to the researcher.

Finally, after the distribution of the research instruments, the researcher has to collate all the data. The information must be encoded and with the aid of the statistician, the data gathered was tallied, tabulated, analyzed and incorporated. This procedure was the key that answered the hypothesis of the study.

Statistical Treatment

In this study following statistical tools were used:

To determine the profile of the respondents, the frequency, percentage, and rank distribution was used.

To determine the impact of Systems, Applications, and Products (SAP) integration of KEPCO Philippines, the weighted mean was applied.

To find out the significant difference in the extent of impact of the Systems, Applications, and Products (SAP) integration of KEPCO Philippines, the one-way ANOVA was employed.

To find out the significant difference of the extent of impact of Systems, Applications, and Products (SAP) integration of KEPCO Philippines in terms of profile of respondents, two-way ANOVA was utilized. the personnel in the company but also its stakeholders and well-wishers or anyone who would like to obtain information on the company. They can access the details anytime online.

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