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Evaluation of Information Technology Implementation for Business Goal Improvement under Process Functionality in Economic Development

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Abstract

Improving organizational performance can be achieved through business process redesign (BPR). When it comes to modern work practices, organizations must often redesign their processes to keep up. This is where enterprise software comes in, offering a common data infrastructure that enables different parts of the organization to access all necessary financial data. The architecture of network accounting business process is divided into three layers. The core layer lies in the enterprise LAN that it can integrate six business processes information into one unity of financial information and non-financial information, including purchasing, inventory, production, sales, finance and customer service, and it can generate flexibly a variety of accounting statements to meet fully the information users' demands by providing more complete and more valuable related information. The second layer lies in Intranet among enterprises based on the core layer that it can support the link of business processes and the inter-sharing of information among node enterprises of SCM and other external enterprises. The third layer lies in Internet based on the second layer that it can fit society, enterprise and individual together, the specific lays the solid foundation of business collaboration, remote management, online management and centralized management. The operating mechanisms of the network accounting business processes are as follows. When the business event occurs, the probe can get the event information in real-time and the result is stored in the database. Meanwhile, the drive controller can control the business events in real-time by gaining control criteria and standards from database. In case the standard is exceeded, the event is not allowed to occur. Enterprise' business staff or external personnel can output automatically the required results through report tools if they had the reading author-

ity. Supported the information system and optimizing processes, the managers can directly use the business event information, criteria and standards to control, guide, regulate and restrict management and operation in real-time, improving operation efficiency and effect. The enterprise can share the accounting information with node enterprises of SCM to bring about JIT that improve the core competitiveness of enterprise. This helps them to function more efficiently, cut costs, enhance customer service, and minimize the risk of human errors. Justifying projects has become increasingly crucial as information systems become more expensive and vital to organizations. IT can pursue two distinct goals: lowering operating costs or improving productivity, based on the difference between operational effectiveness and strategic positioning.

Keywords

ISMS, OKC, EA, EAF, EAP

1. Introduction

To streamline their operations, numerous businesses today are adopting automation. It plays a vital role in Business Process Reengineering (BPR) and is occasionally presented as a primary driver for the transformation. As IT continues to evolve and advance, its significance in the redesign of processes is likely to remain significant. Many organizations leverage case-based research to showcase the challenges that hamper successful process change and provide guidance on how to overcome them. However, it is still uncertain whether investing in IT-enabled process change across several organizations is a sensible decision for firms. There is a lack of understanding about how the redesign of business processes, implementation of information technology, and organizational performance interact at the program level. After conducting some empirical analysis, several key findings have been uncovered. Firstly, the combination of information technology and process redesign is synergistic. When a firm's information technology and BPR portfolios interact, it has a positive and significant impact on both the value-added during production and the firm's market value. Upon further examination of the relationship between IT and BPR, it becomes clear that the impact on performance varies depending on the particular focus of process redesign. Please help me rephrase the following sentence: "When analyzing the impact of combining IT and BPR on work limitations"? Evidence of positive performance association concerning production and market values can be found. On the other hand, when analyzing IT and cost-rationalized BPR, evidence of a positive and significant relationship with production value but not market is likely to be achieved. Please rephrase the following sentence: It has been observed that the use of IT-BPR (Business Process Reengineering) combination, whether it involves high levels of cost rationalization or work restructuring, has a negative impact on a firm's market value. However, it has been

found that there is no significant difference in the production value when comparing different usage levels of either type of BPR. The investment in technology has become an important complement to organizational change work practices, thanks to the information capabilities that IT offers. Studies have indicated that businesses that invest more in IT generally exhibit higher levels of decentralized decision-making, greater utilization of self-managing teams, and other work methods that take advantage of technology's ability to inform and automate. This, in turn, enables new forms and types of organizational structure, decision authority, human resource management, and teamwork. Three key contexts recognize the technology organization environment (TOE) framework: the technology context, organization context, and environment context. The context of the organization relates to its size and range. The context of the environment is the arena where the company conducts its business. The TOE framework describes innovation adaptation and provides a helpful analytical framework for studying the acceptance and assimilation of different technologies [1]. The TOE framework is compatible with the concept of innovation theory in organizations. There are several reasons why the TOE framework is chosen as a theoretical framework to support this research. Firstly, the TOE framework is suitable for studying adaption in the context of MSMEs. Secondly, the TOE framework has a clear theoretical basis and consistent analytical support. Thirdly, the TOE is consistent with the theories of IT innovation at other organizational levels, which reinforce and enhance the explanatory power of the framework. Fourthly, TOE is sent as a comprehensive framework so that it can be used to study the adoption of information technology. Fifthly, the above three contexts offer advantages over other adaption models because the TOE framework provides comprehensive information on the factors that affect IT adoption decisions. Theory in IT adoption is applied to investigate social media acceptance in many countries nowadays. Information technology provides a greater contribution to all important sectors of the country. By boosting the implementation of a unified digital market, this measure can greatly support the growth of the national economy. Different innovation transfer scenarios exist in the modern world, and the innovation developer initiates the commercialization process. To advance our economy and society, striving for better product quality and working environments is essential. Based on our experience in software engineering and combination with CMM and ISO, this approach allows us to assess research results and get the process capability profile [2]. The main idea is to take a prototype to decompose process-oriented activity into processes and their performance levels. Each process has a goal, task (process-oriented activities), and outcomes. Task performance measuring allows the evaluator to get a capability process profile. The profile detects weak parts of the evaluated prototype early before the commercialization process starts. The capability process profile is based on process measurement, allowing for improved technology development quality before it goes to the market. It is important to know about the demand for such innova-

tion, and communication with potential end users is an important part of the research. After reviewing previous research on technology innovation media, then research on the capabilities of nontechnical aspects of business processes can be examined. The capabilities of nontechnical processes in business process management can support social market media as digital innovation is depicted in the TOE framework. The organizational context in the TOE relates to nontechnical process capabilities in terms of process-oriented culture and structure. Furthermore, support from top management is critical in building a supportive environment and provides sufficient resources for implementing new technology. Process management capabilities play a significant role in digital innovation by defining communication and collaboration between customers, process owners, and external market holders. Technology can create new business processes and improve and redesign existing ones. One new technology that can be used to support business processes is social media technology. Social media usage in an organization requires support to increase the support of business processes. Regardless of tangible or intangible benefits, measuring managerial, organizational, and strategic benefits is progressively more difficult than infrastructure or operational benefits. By implementing this approach, organizations can develop an efficient and effective design that improves their ability to process information. When implementing large-scale systems, it becomes crucial to justify the project through financial valuation. This requires estimating the benefits and costs that the project will involve. Justifying projects has become increasingly important as information systems become more expensive and vital to organizations. It has been shown that conventional cost-benefit analysis can be utilized for extensive information systems projects, including infrastructure and ERP. The technology-organizational-environment (TOE) model has become a standard approach to examining various dimensions of development. Micro, small, and medium-sized enterprises significantly impact economic development as they identify the factors that precede the development of information systems. The technology-organizational-environment (TOE) model has become a micro, small, and medium-sized enterprise that significantly impacts economic development as it identifies the factors that precede the development of information systems. Prices play a crucial role in economic development by identifying antecedent factors in the information system domain. Many companies try to increase their productivity by adopting automation in their processes. This helps them to function more efficiently, cut costs, enhance customer service, and minimize the risk of human errors. Justifying projects has become increasingly crucial as information systems become more expensive and vital to organizations. Economic performance can be interpreted in various ways at each level of analysis. The term usually pertains to the progress in the economy, efficiency in labor, and the benefit of consumers. The progress in the economy is determined by the alteration in the actual output or GDP, and it is evaluated on a countrywide basis. Labor productivity growth or production per worker measures the efficient use of re-

sources to create value. It allows the economy to provide lower-cost goods and services related to domestic consumers' income and compete for customers in the international market. Corresponding measures focusing on the output of an industry sector are utilized at the industry level. To better understand IT productivity, it is helpful, to begin with a discussion of the production process for which inputs are transformed into outputs in firms and economies and the specific role of IT as a factor of production. The primary approach used is to model the production process inherent in an economy. Output growth in firms, industries, and the economy may result in an increase in input levels, improvement in the quality of inputs, and development in the productivity of inputs. The literature review has focused on understanding how increased investment in IT impacts labor productivity. One key Difference between IT capital and other forms of capital is the dual roles IT can play in a firm. IT, similar to other forms of capital, can serve as a production technology that enhances labor productivity. For instance, a bank's transaction processing system is a direct use of IT to improve productivity. It has the most significant impact in its second role as a technology for coordination. A comprehensive review of the payoffs from IT investment must examine the returns to this investment at the disaggregate level of the firm as well as the aggregate level of industries and the economy since the nature of the payoffs at these levels may differ. Investments in IT not only enhance productivity at the firm level but also have the potential to boost the productivity of entire industries and countries. Gains may show up at one level and not the other, depending on whether individual firms capture the returns on their investment or whether some or all of the gains are competed away and flow to consumers, creating social benefits but not providing a measurable return to the firms investing. Furthermore, in addition to firm-specific factors, industry characteristics also affect the payoffs firms within an industry receive from their IT investment and how these payoffs are shared. It is, therefore, important to examine the results at both disaggregate and aggregate levels. To understand whether IT investment results in greater productivity, it is necessary to systematically look at the research on the returns from IT investments for each level of analysis, firms, industry, and country in that order. Companies differ in their returns on IT investment despite the fact that the average returns have been considerable [3]. Firms that implement complementary management practices such as decentralization of decision-making, business process redesign, and total quality management tend to achieve higher returns on their investment in IT. If IT investments have higher gross marginal products than non-IT investments, there are reasons to be skeptical of claims that firms are systematically underinvesting in IT. Once factors such as incomplete accounting of complementary investments, high rates of obsolescence, and risk adjustments are considered, the returns to IT investments are likely to look more normal. It is worth mentioning that the majority of research conducted at the firm level has used data on large corporations. This is primarily because obtaining reliable financial

data on smaller companies, which are generally privately owned, can be more challenging. It is important to note that the findings of studies conducted at the level of individual firms may not be applicable to all businesses across the board. A more representative sample may show higher or lower IT investment returns. The availability and use of information systems and technologies have grown almost to the point of being commodity-like, becoming nearly as ubiquitous. Companies spend more on information technology than any other form of investment; total spending on computers, related services, and information systems includes many different software platforms and databases. To better understand how organizations function, it can be useful to consider the role of IT as a moderator in the relationship between organizational characteristics and key outcomes, such as efficiency and innovation. The approach for belief in both places of IT as a more theoretically plausible position offers a useful framework that allows for a larger array of strategic organizational issues. Improving information efficiency refers to the reduction in costs and time that arise from the use of IT to enable employees to perform their tasks more effectively. This can lead to them taking on additional responsibilities and expanding their roles within the organization, thanks to the increased ability to collect and analyze data. On the other hand, information synergies are the performance gains that result when IT allows two or more individuals or subunits to pool their resources and cooperate and collaborate across role or subunit boundaries, a between-person or between-group effect. Information synergies occur when IT allows the different individuals or subunits to continuously. In essence, information synergies arise when IT allows different individuals or subunits on an ongoing basis. In essence, information synergies arise when IT helps to promote the multiplicative and non-separable gains that can be obtained from team-based cooperation. The benefit of linking employees and creating information efficiencies has not been lost. In order to effectively plan and conduct future research, it is important to create a conceptual framework that can map and evaluate the findings of previous research, thereby identifying areas that require further investigation. The framework helps define the key variables and relationships addressed in the studies reviewed herein. Most studies found that IT investments were associated with higher marginal product than other capital investments. These are translated into excess returns of all investments to pay the same risk-adjusted return at the margin. These returns need to be adjusted to account for the high rate of obsolescence of IT capital so that the net returns are much lower. The results of the firm-level studies have sometimes been taken to imply that firms are systematically underinvesting in IT, giving high marginal returns to such investments. It is still possible that IT investment does show higher than normal returns. There are several reasons why IT investment might be riskier than other investments. Firms invest when the net return is sufficient to cover the risk-adjusted cost of capital. The returns need to be higher enough to compensate for the additional risk. It is difficult and costly for firms to introduce new IT

innovations. With decreasing prices for IT, the optimal level of IT investments and capital stock increases steadily. Firms face real costs and delays due to the duration of software development, retirement of older systems, and changes in practices, which suggest that firms might not achieve these optimal levels in the short run. The effects of IT investments on productivity can differ significantly depending on the company. Some firms use IT much more productively than others. These firm effects may account for as much as half of the productivity benefits attributed to IT investment in their early work. Even after taking into account the effects of individual firms, the elasticity of IT investment remains substantial and favorable. There are two primary factors that contribute to this phenomenon. The first is the unique characteristics of each firm, including their market position, cost structures, brand recognition, and the leadership abilities of their key executives. The ability of a company to derive value from IT investments and explore strategic options can be significantly influenced by various factors. These can change over time but are not easily manipulated by the management in the short run. It is possible to make systematic comparisons of specific aspects of organizational structures, strategy, and management practices across different companies. These features can be directly influenced by a company's management through restructuring, implementing new management control systems, redesigning processes, or improving employee training. Another influencing factor attributable to the process of IT adaption itself is IS/IT planning.

2. Methodology

The development of e-business breaks traditional business management model. It has a huge impact on the existing financial accounting and brings about some new problems in the field of accounting. Under the circumstances of great change in business and technology, accounting insists the constant innovation and change to adapt to environmental changes in the impact of theory and practice can it provide comprehensive accounting information for the enterprise decision in today's rapid development of electronic information technology. The financial management strategy should be based on international idea and the content of financial management as to be expanded includes not only traditional fund circulation but also international monetary affairs, economic risk management and human resources etc. These aspects have a close relationship with network account. The powerful data storage capacity and computing algorithms can relieve the account personnel working pressure to some extent and simplify the account business process. In the time network economy, the traditional accounting business process cannot satisfy with the user's information demand [4]. The core process of accounting is that accounting personnel confirm the accounting vouchers. The voucher information is stored in different files such as journal entries, subsidiary ledger, general ledger, financial statement for different purposes. The difference is that the collection of data is n different degree. The collecting data can only meet the needs of some information users. The ac-

counting information cannot meet the needs of user's decision. There is always non reaching account item between enterprise and bank in which the enterprise's accounting balance is not the real balance of the current date in the traditional accounting process. The development of E-commerce provides a broad space and probability for more efficient finance and management models and it brings a comprehensive and fundamental reform to enterprise accounting system. With advent of e-commerce, the business activities have been expanded all over the world by the internet and the business process is conducted online. The focus of finance are fully involved in the products and market using e-custom system electronic data interchange system, online tax declaration system, and business transactions are handled online. The single monetary policy of traditional accounting is replaced by e-money, e-cash, e-check, electronic credit card. The operation of e-commerce model and the procedure of production, supplying and marketing is linked closely under the effect of network accounting.

"Figure 1" depicts the dashboard under admin panel through the metadata database as the objects are related to quality operation in data warehouse. Before the source data is loaded into the data warehouse, the first thing to do is to access the corresponding control and the transfer module according to the source data to be processed. In the process of extraction and conversion, detection of the quality problems in accordance with the business and the above technical metadata

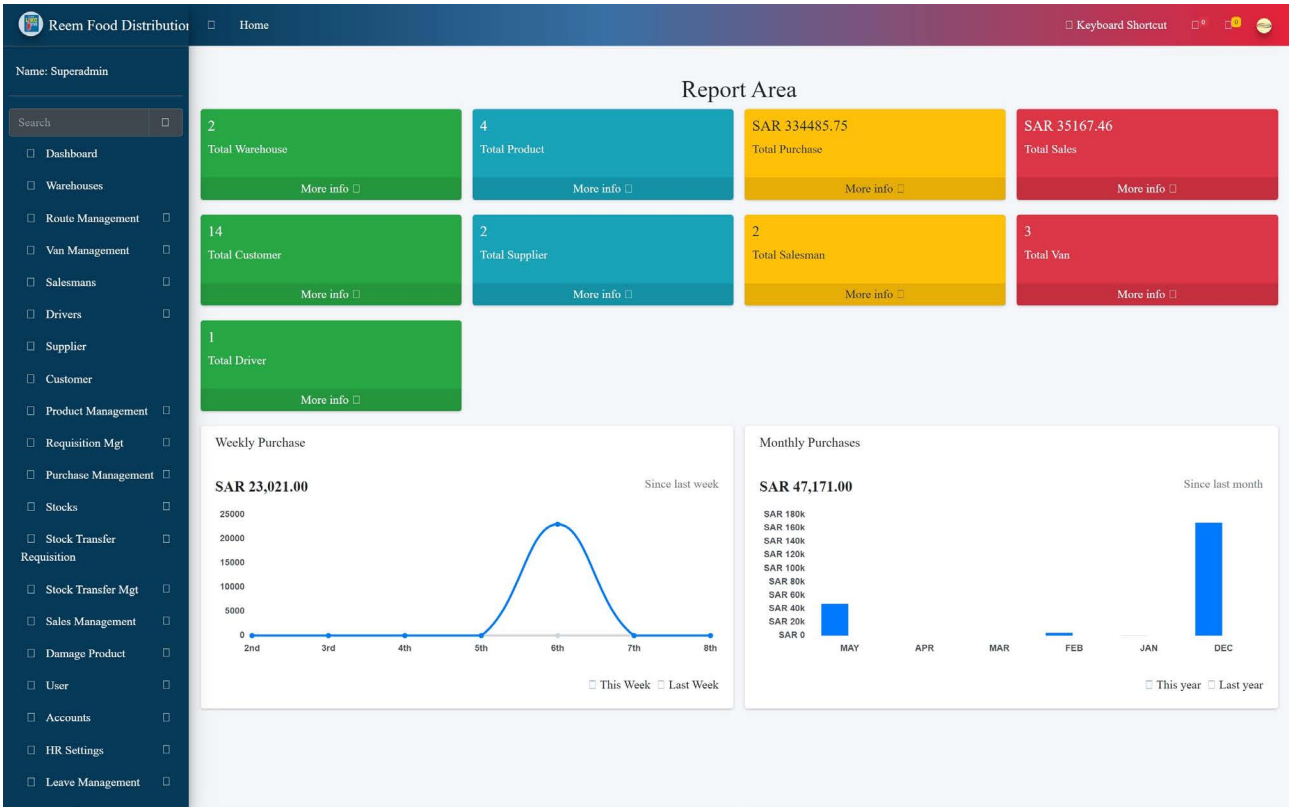
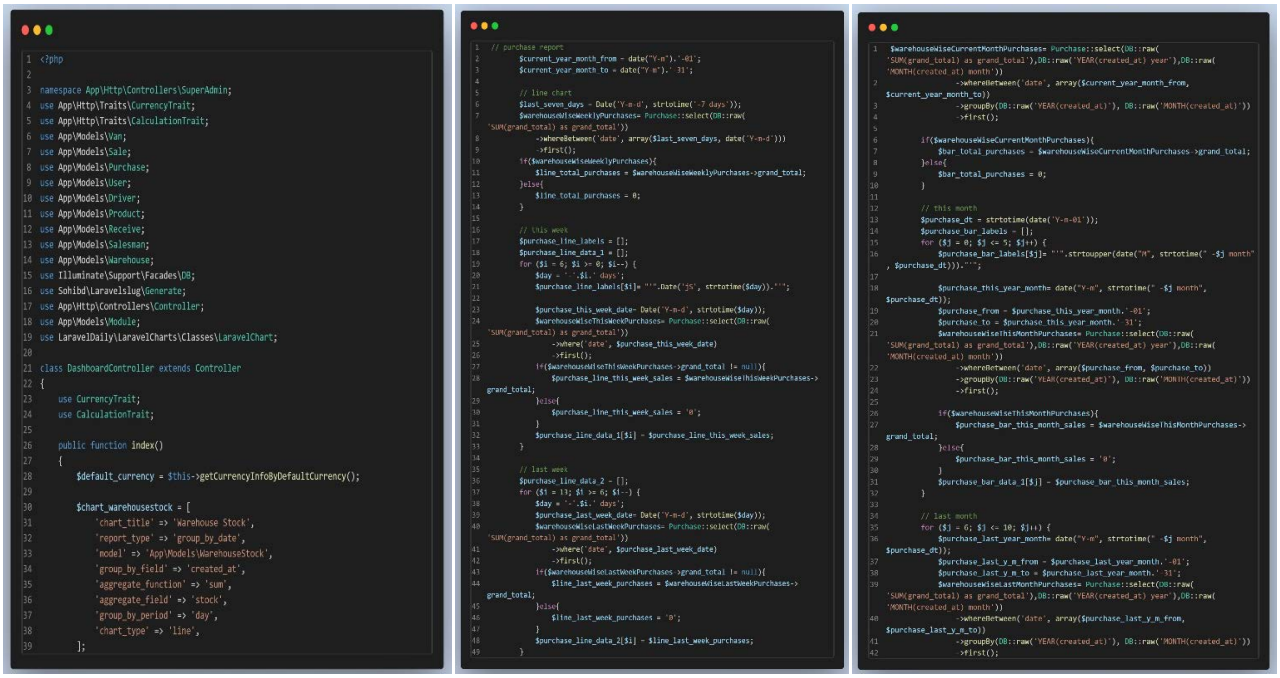


Figure 1. Mode of quality objectives cooperative measurement and results.

quality standards, source data is to input the temporary database firstly, and after quality detecting and processing, it will be loaded into the data storage area of data warehouse. The process of data quality check is to take into account for the excessive banking data. To use sample data to complete cover all data and to perform quality assessment initialization of data quality detecting system, it is necessary to import the basic data from the metadata knowledge base into the data dictionary. Once the audit was approved, then quality manager will develop and test the task detecting script. Configuration of the data quality detecting tasks put forward the requests to increase the task of quality detecting & checking the data files through calling the file. Data is the basis of information. The key point of information quality improvement is the improvement of data quality. In this paper, we proposed a kind of data warehouse design based on quality-driven. By setting quality goals, quality inquiry and measurement agent, we integrated the customer's subjective needs and objective computer program data together, and to achieve the goal of information quality through metadata. In this way, it can reflect the system changes and data quality real-timely, and to answer whether these changes improve some quality indicators or not. In addition, special reasoning mechanism is connected to the framework of quality management to complete the quality assessment by the way of workflow scheduling. Setting the appropriate quality objectives for each object in the metadata database, is to make up the difference among quality dimensions, quality measurement table and reasoning results by quality query. Quality query is the entity view defined in the data warehouse, and these views are defined by basic query of quality data. Administrator will obtain the quality report by issuing some quality query to metadata database, and metadata database will access the measurement agents to measure the quality according to the dimensions selected by users. If measurement results reach the set objectives, then it will feedback to user and deposit into the data warehouse, Mode of quality objectives cooperative measurement is shown in above output. Source data warehouse is relatively independent of which cannot transfer data and the data cannot be used interchangeably. The system structure of network accounting can concentrate logically many databases supporting different level and comprehensive information needs. Having collected and stored business data and financial data, based on business event rule, network accounting system should be built a sharing comprehensive business database. Each process of traditional accounting is segmented and thus the processes of network accounting can facilitate mutual cooperation among business processes, financial accounting processes and management processes, and the information can be operated according to the decision-making need of information user. The synchronization between extracting information of accounting information user and enterprise processing information is necessary for the real time financial report system of network accounting owns the following characteristics. Firstly, the submitting mode of financial report lets the accounting information really become mass information, that can not only solve the timelines issue of information but also allow the potential in-

formation users and existing investors equally access the relevant information. Secondly, it can combine the comprehensive accounting information. Thirdly the information can be composed multi-variably to break the time and space limitation of financial report [5], the business staffs in all departments or external personnel can get needed results by the reporting tools outputting them automatically as long as these have reading information. The architecture of network accounting business process is divided into three layers. The core layer lies in enterprise LAN where it can integrate six business processes information into one unit of financial information and non-financial information including purchasing, inventory, production, sales finance and customer service and it can generate flexibly a variety of accounting statements to meet fully the information uses' demand by providing more complete and more reliable related information. The second layer lies in internet among enterprises based on the core layer where it can support the link of business processes and the inter-sharing of information among node enterprises and other external enterprises. The third layer lies in internet based on the second layer where it can fit society, enterprise and the individual together, which laid the solid foundation of business collaboration, remote management, online management and centralized management. Currently there still have no accepted standards on data quality and information quality. Data quality is a comprehensive concept that has a rich connotation and with multi-dimensional factors, not only refers to the performance of product or service, but also includes the degree to meet user needs. Pattern information of data warehouse is mainly used to describe the various database, table, corresponding field as well as special mapping rules between fields in the data warehouse. Comparison table of equivalence entity set between the data source is to be checked and maintained. In order to obtain quality, the real time control, appropriate role of use can submit a new quality detecting task or access to the detailed statements through the way of checking task tree and task list. Business process modelling consists of the role model, the process events, the decision model and the process monitoring. The business role model is used to capture the business organizational value. Events in the process are the things in the business that affects the sequence of the process, including activities. The decision model is a unique logical representation for business logic showing how and where it is executed. Business logic is the logic proposed by the business rules, represents how the business intends to make significant decision. The decision model is used to perceive, manage and organize the business rules and logic. Business process monitoring is a method used to identify how business people can provide real time information on the significant indicators of the business performance in order to improve the speed and effectiveness of the business operation. In the process monitoring, each individual activity is tracked and thus information on the state of the process can easily be seen and statistics on the performance of the process can be presented. This stage collects data to support the assessment of the evaluation process. At this stage, UPT gives a presentation related to the organizational structure, roles and responsibilities, the manager of

ICT activities and other supporting activities. In this phase, researcher conducts a discussion on the leadership of the UPT services and security conditions that exist in the organization. The purpose of assessing the condition of service and security system today is to get the real current condition of the organization. The data collection is done by direct observation of the researcher to related documents and review of the literature related to this study. In this section, researcher assesses and fills the assessment instruments that have been create, then ask the IT service provider to validate or review the results of the assessment instrument. If there is an error in the process assessment, researcher will conduct verification and correction of the assessment that has been done. Besides the aspect of information security risks, the development of an organization in business scale led to demands for increased role of IT services in supporting the business objectives of the organization. As a result, the IT function within an organization or part of it increasingly demanded to provide the quality of service while maintaining the efficiency and effectiveness of the IT function According to Wedemeyer in 2008 argued that the concept of services provided by IT had to have the ability to give a value to the customer and aimed to further improve the effectiveness and efficiency in service delivery to customers mentioned the concept of management is all processes that work together to ensure quality of service, in accordance with agreed service levels with customers such as initiation, design, organization, control, procurement, support and enhancement of IT services. The level of service itself needed to be customized to the needs of the customer organization and referred to as ITSM EFPS. This layer controls and monitors the flow and communications between different modules. **Figure 2** also demonstrates the typical flow of *financial plan request* process. The EFPS performs validation on some of the incoming message before passing it to the Web Service Agent module, which forms the SOAP messages. Also, it communicates with the Database Connection Module to obtain the existing financial products' information. The Application Layer also controls the Decision-making module to process the returned financial product. System behavior refers to how system behaves when the customer places a query. The business process is a set of internal organizational procedures or activities that work together to achieve an organization's goals and objectives to meet the customer's expectation. It is the key element of the business where other business components such as goals, strategies etc. are based. System behavior analysis is used to identify errors in the system's behavior. A financial solution consists of a single financial product or a bundle of financial products. It is called a feasible solution and then it can just satisfy all formulated constraints. Once the data of customer is gathered for a financial planning service, the real challenge is come to real recommendations with respect to the customer's situation. Based on these data, interpreting the desired cash flow as restrictions, such as a constant minimal income to cover life expenditures, an optimization process is triggered. Information security management system (ISMS) is a set of policies relating to underwrite a confidentiality, the integrity of information and accessibility. The main principle of ISMS is to



```php
<?php

namespace App\Http\Controllers\SuperAdmin;
use App\Http\Traits\CurrencyTrait;
use App\Http\Traits\CalculationTrait;
use App\Models\Van;
use App\Models\Sale;
use App\Models\Purchase;
use App\Models\User;
use App\Models\Driver;
use App\Models\Product;
use App\Models\Receive;
use App\Models\Salesman;
use App\Models\Warehouse;
use Illuminate\Support\Facades\DB;
use Sohibd\Laravelslug\Generate;
use App\Http\Controllers\Controller;
use App\Models\Module;
use LaravelDaily\LaravelCharts\Classes\LaravelChart;

class DashboardController extends Controller
{
    use CurrencyTrait;
    use CalculationTrait;

    public function index()
    {
        $default_currency = $this->getCurrencyInfoByDefaultCurrency();

        $chart_warehousestock = [
            'chart_title' => 'Warehouse Stock',
            'report_type' => 'group_by_date',
            'model' => 'App\Models\WarehouseStock',
            'group_by_field' => 'created_at',
            'aggregate_function' => 'sum',
            'aggregate_field' => 'stock',
            'group_by_period' => 'day',
            'chart_type' => 'line',
        ];
```

```php
// purchase report
        $current_year_month_from = date("Y-m").'-01';
        $current_year_month_to = date("Y m").'-31';

        // line chart
        $last_seven_days = Date('Y-m-d', strtotime('-7 days'));
        $warehouseWiseWeeklyPurchases= Purchase::select(DB::raw(
'SUM(grand_total) as grand_total'))
            ->whereBetween('date', array($last_seven_days, date('Y-m-d')))
            ->first();
        if($warehouseWiseWeeklyPurchases){
            $line_total_purchases = $warehouseWiseWeeklyPurchases->grand_total;
        }else{
            $line_total_purchases = 0;
        }

        // this week
        $purchase_line_labels = [];
        $purchase_line_data_1 = [];
        for ($i = 6; $i >= 0; $i--) {
            $day = ' -'.$i.' days';
            $purchase_line_labels[$i]= "'".date('jS', strtotime($day))."'";

            $purchase_this_week_date= Date('Y-m-d', strtotime($day));
            $warehouseWiseThisWeekPurchases= Purchase::select(DB::raw(
'SUM(grand_total) as grand_total'))
                ->where('date', $purchase_this_week_date)
                ->first();
            if($warehouseWiseThisWeekPurchases->grand_total != null){
                $purchase_line_this_week_sales = $warehouseWiseThisWeekPurchases->
grand_total;
            }else{
                $purchase_line_this_week_sales = '0';
            }
            $purchase_line_data_1[$i] = $purchase_line_this_week_sales;
        }

        // last week
        $purchase_line_data_2 = [];
        for ($i = 13; $i >= 6; $i--) {
            $day = '-'.$i.' days';
            $purchase_last_week_date= Date('Y-m-d', strtotime($day));
            $warehouseWiseLastWeekPurchases= Purchase::select(DB::raw(
'SUM(grand_total) as grand_total'))
                ->where('date', $purchase_last_week_date)
                ->first();
            if($warehouseWiseLastWeekPurchases->grand_total != null){
                $line_last_week_purchases = $warehouseWiseLastWeekPurchases->
grand_total;
            }else{
                $line_last_week_purchases = '0';
            }
            $purchase_line_data_2[$i] = $line_last_week_purchases;
        }
```

```php
 $warehouseWiseCurrentMonthPurchases= Purchase::select(DB::raw(
'SUM(grand_total) as grand_total'),DB::raw('YEAR(created_at) year'),DB::raw(
'MONTH(created_at) month'))
            ->whereBetween('date', array($current_year_month_from,
$current_year_month_to))
            ->groupBy(DB::raw('YEAR(created_at)'), DB::raw('MONTH(created_at)'))
            ->first();

        if($warehouseWiseCurrentMonthPurchases){
            $bar_total_purchases = $warehouseWiseCurrentMonthPurchases->grand_total;
        }else{
            $bar_total_purchases = 0;
        }

        // this month
        $purchase_dt = strtotime(date('Y-m-01'));
        $purchase_bar_labels = [];
        for ($j = 0; $j <= 5; $j++) {
            $purchase_bar_labels[$j]= "'".strtoupper(date("M", strtotime(" -$j month"
, $purchase_dt)))."'";

            $purchase_this_year_month= date("Y-m", strtotime(" -$j month",
$purchase_dt));
            $purchase_from = $purchase_this_year_month.'-01';
            $purchase_to = $purchase_this_year_month.'-31';
            $warehouseWiseThisMonthPurchases= Purchase::select(DB::raw(
'SUM(grand_total) as grand_total'),DB::raw('YEAR(created_at) year'),DB::raw(
'MONTH(created_at) month'))
            ->whereBetween('date', array($purchase_from, $purchase_to))
            ->groupBy(DB::raw('YEAR(created_at)'), DB::raw('MONTH(created_at)'))
            ->first();

            if($warehouseWiseThisMonthPurchases){
                $purchase_bar_this_month_sales = $warehouseWiseThisMonthPurchases->
grand_total;
            }else{
                $purchase_bar_this_month_sales = '0';
            }
            $purchase_bar_data_1[$j] = $purchase_bar_this_month_sales;
        }

        // last month
        for ($j = 6; $j <= 10; $j++) {
            $purchase_last_year_month= date("Y-m", strtotime(" -$j month",
$purchase_dt));
            $purchase_last_y_m_from = $purchase_last_year_month.'-01';
            $purchase_last_y_m_to = $purchase_last_year_month.'-31';
            $warehouseWiseLastMonthPurchases= Purchase::select(DB::raw(
'SUM(grand_total) as grand_total'),DB::raw('YEAR(created_at) year'),DB::raw(
'MONTH(created_at) month'))
            ->whereBetween('date', array($purchase_last_y_m_from,
$purchase_last_y_m_to))
            ->groupBy(DB::raw('YEAR(created_at)'), DB::raw('MONTH(created_at)'))
            ->first();
```

Figure 2. Core source code for system architecture and request process of EFPS.

suggest organizations to design, implement and maintain a set of policies, processes and systems to manage the risk if an organization information asset [6]. IT governance is a process associated with decision making in the field of development and construction of IT in order to produce strategic benefits for the organization. The concept of creating organizational knowledge (OKC) involves melding the cognitive structures used by stakeholders to process and understand information that represents a given reality and to the integration of that information into and with accumulated organizational knowledge. OKC justifies exploring the truthfulness of stakeholder beliefs, value systems and the influence cognitive live experience that is not easily replicated or predictable as it consists the capture of both explicit and tacit knowledge in pursuit of OKC. In technology-oriented programs such as Enterprise Architecture (EA) design pervades and premises IT implementation is driven by a fundamental desire and initiative to align business strategy with a strategic plan for IT. Users of technology have accepted new technology into the workplace as routine without any form of resistance and or controversy. The consequence of these factors frequently result in change in societal hierarchy, status of stakeholder and an alteration in the political and power structure within the enterprise and in which stakeholders might object and resist. Recognizing the behavioral aspects of this process becomes apparent in the way stakeholders react and contribute to the creativeness, innovativeness, design, development and appropriation needed to progress EA. These actions highlight the unpredictable and indeterminate nature of human behavior revealing and postulating that meaningful IT results as a direct by-product of EA which represents from the intersection of technology, human (stakeholder) attitude, actions and behavior. EA design and implementation

embodies a framework, called an EA framework (EAF) which focuses on organizational knowledge creation (OKC) collated into an EA plan (EAP) that contains the artifacts that will guide the design and implementation parameters for deployment of IT. However, the complexities associated with the EA process are coupled with the large number of IT [7]. In current EA practices, a strong architecture, the EA plan (EAP) consolidates the various technological layers into an overall strategic plan for IT operations predicated on an EA framework that does not take into account the protentional organizational and stakeholder behavioral struggles and difficulties associated with EA. Systems of coordinated and controlled activities result from work embedded in complex networks of technology centric relations and boundary spanning exchanges. Existing EAFs do not address the implications of new technology entering the workplace and the impact it has on both organizational and stakeholder behavior caused by the resultant organizational transformation that takes place. The possibility and prospect of a successful EA becomes realizable if an enhanced participative working environment is encouraged and made a part of the IT design and implementation process that welcomes new EA technology and avoids it being perceived as a risk or threat to stakeholder well-being. At the same time [8], it provides the mechanism for EA governance documenting the EA from inception throughout its life-cycle.

3. Conclusion

With the application and development of modern information technologies in the field of accounting, the traditional accounting will be inevitably affected. This leads to the revolution of accounting system, including recognizing the traditional accounting concepts, further researching the accounting information demands reengineering the accounting business processes which will bring tremendous vitalities and opportunities. It could be possible to test our framework with more than one business process in different business sectors by using different modeling techniques such as BPMN or ARIS, etc.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] Rahm, E. and Do, H.H. (2003) Data Cleaning Problems and Current Approaches. *IEEE Bulletin on Data Engineering*, **7**, 182-185.

[2] Pipino, L.L., Lee, Y.W. and Wang, R.Y. (2002) Data Quality Assessment. *Communications of the ACM*, **45**, 211-218. https://doi.org/10.1145/505248.506010

[3] Aguilarsaven, R. (2004) Business Process Modeling: Review and Framework. *International Journal of Production Economics*, **90**, 129-149. https://doi.org/10.1016/S0925-5273(03)00102-6

[4] Lindsay, A. (2003) Business Processes-Attempts to Find a Definition. *Information*

and Software Technology, **45**, 1015-1019.
https://doi.org/10.1016/S0950-5849(03)00129-0

[5] Al-Mashari, M. (2003) A Process Change-Oriented Model for ERP Application. *International Journal of Human-Computer Interaction*, **16**, 39-55.
https://doi.org/10.1207/S15327590IJHC1601_4

[6] Lee, J., Park, J. and Lee, S. (2015) Raising Team Social Capital with Knowledge and Communication in Information Systems Development Projects. *International Journal of Project Management*, **33**, 797-807. https://doi.org/10.1016/j.ijproman.2014.12.001

[7] Hummel, M. and Epp, A. (2015) Success Factors of Agile Information Systems Development: A Quotative Study. 2015 48*th Hawaii International Conference on System Sciences*, Kauai, HI, 5-8 January 2015, 5045-5054.
https://doi.org/10.1109/HICSS.2015.598

[8] Mohamad Stambul, M.A. and Razali, R. (2011) An Assessment Model of Information Security Implementation Levels. *Proceedings of the* 2011 *International Conference on Electrical Engineering and Informatics*, Bandung, 17-19 July 2011, 1-6.
https://doi.org/10.1109/ICEEI.2011.6021561