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EFFECTIVENESS OF INFORMATION TECHNOLOGY SERVICE MANAGEMENT ON ACCOUNTING INFORMATION SYSTEM VALUE

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Effectiveness of Information Technology Service Management
On Accounting Information System Value:
An Empirical Study of SMEs in Thailand

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Mahasarakham University, Thailand

ABSTRACT

The objective of this research is to examine the relations between Effectiveness of Information Technology Service Management on Accounting Information System Value via Quality of Accounting Information System Service; Continual AIS Service Improvement; Accounting Information System Operational Cost Reduction and Planning Budgeting and Accounting for AIS Efficiency. Data collection is done by sending the questionnaires to CEO’s Firms in Thailand; measurements of constructs both the validity and reliability use the Ordinary Least Squares (OLS) regression analysis to test the hypotheses relationship and estimate factors affecting the Audit Quality. The results show the Effectiveness of Information Technology Service Management has positive relationships with Quality of Accounting Information System Service; Continual AIS Service Improvement; Accounting Information System Operational cost reduction, Planning Budgeting and Accounting for AIS Efficiency and Accounting Information System Value. Theoretical, managerial and research implications are also discussed.

Keywords: Effectiveness of Information Technology Service Management; Quality of Accounting Information System Service; Continual AIS Service Improvement; Accounting Information System Operational Cost Reduction ; Planning Budgeting and Accounting for AIS Efficiency; Accounting Information System Value

1. INTRODUCTION

The emergence and increasing adoption of IT infrastructure library (ITIL) principles enable companies to gravitate from costly bespoke solutions to industrial, modular solutions consisting of reusable components that minimize complexity, drive down cost, and provide customers with the services they really want (Seniger, R., 2008). By bringing together networking and IT capabilities into a single service delivery capability, companies can offer customers a standard, end-to-end integrated service that will allow them to thrive in the digital networked economy. The nature of business communications has, in recent years, been going through a period of disruptive change. The emergence of an always-on, globally connected business environment, facilitated by increasingly available broadband connections, has fundamentally altered the way companies approach how they do business. Many now routinely locate operations across disparate geographies and time zones and, as a consequence, demand secure, affordable networks that provide the capacity to connect offices, facilities, employees, customers, suppliers, and business partners in a commercial ecosystem (Protiviti, 2008). The end result of such changes means that the importance of IT in the everyday operation of companies has greatly increased and has fed a burgeoning demand for integrated services. Companies are no longer satisfied with receiving IT services with network services as an afterthought, or vice versa; they now require a holistic approach that harnesses the opportunities provided by a fully integrated global IT infrastructure. As more and more companies become networked into the extended enterprise of large corporations, ITIL and ISO27000 registration is becoming a prerequisite for involvement in major IT contracts. In Europe, for instance and the United Kingdom in particular companies aiming to fulfill government contracts are also finding that ITSM and ITIL adoption is becoming an essential element of a successful bid. And as ITSM and ITIL adoption increases, it is expected that IT service providers will be required to adopt best practice as a prerequisite for entry into today’s commercial ecosystem (OGC, 2007). ITSM and ITIL can act as a powerful enabler by providing the platform upon which business to business interaction can be facilitated using open systems connections as a generic business model. They provide companies with the capacity to
implement and benefit from a network and applications infrastructure that is designed around their specific requirements. ITSM helps companies ensure that the requirements of the business drive the needs of IT implementation through defining a set of key metrics to actively manage the performance of IT and guarantee that services are delivered as specified (Ernst & Young, 2008). Most companies and organizations seeking to thrive in the digital networked economy, the emergence of fully integrated network and IT service solutions represent a significant opportunity to reduce cost, improve business performance, and minimize the complexity of managing multiple forms of communication. In a rapidly evolving business environment that is increasingly encompassing dynamic horizontal working relationships, the capacity to speak in a common business language is becoming a prerequisite for success. Providing ITSM services complemented by robust ITIL solutions and supported by integrated service architecture will help companies respond effectively to the demands of the 21st-century customer (Seaniger, R., 2006).

In the next section, the conceptual framework is presented, and a set of testable hypotheses is proposed. Methods of the study are then introduced, which include information about the sample, study measures, data analysis, and test results. Following a discussion of the results, implications and limitations are offered.

2. RELEVANT LITERATURE ON INFORMATION TECHNOLOGY GOVERNANCE AND ACCOUNTING PERFORMANCE

The conceptual model shown in Figure 1 was drawn based on the literature review and uses the responsibilities checklist is intended to assist directors focus is on accounting information system (AIS) outcome. Information Technology Service Management the achievement of accounting system objectives, and Information Technology Service Management are expressed as the impact they can have on the achievement of AIS objectives or strategy.

**FIGURE 1 CONCEPTUAL MODEL**

**EFFECTIVENESS OF INFORMATION TECHNOLOGY SERVICE MANAGEMENT ON ACCOUNTING INFORMATION SYSTEM VALUE:**

*AN EMPIRICAL STUDY OF SMEs IN THAILAND*

![Conceptual Model Diagram]

- **H1:** Effectiveness of Information Technology Service Management
  - **H2:** Quality of Accounting Information System Service
  - **H3:** Continual AIS Service Improvement
  - **H4:** Accounting Information System Operational cost reduction
  - **H5:** Planning Budgeting and Accounting for AIS Efficiency
  - **H6:** Accounting Information System Value
  - **H7:**
  - **H8:**
  - **H9:**
According to ITIL, “IT Service Management is concerned with delivering and supporting IT services that are appropriate to the business requirements of the organization. ITIL provides a comprehensive, consistent, and coherent set of best practices for IT Service Management processes, promoting a quality approach to achieving business effectiveness and efficiency in the use of information systems.”

Implementing ITSM provides an IT organization with service delivery capabilities that are stable and cost-effective, yet agile. In addition, IT service quality is measured and improved, providing greater value to the business. These types of impacts make ITSM a crucial factor in achieving sustained business success. There is extensive literature reporting studies that investigate success in IT implementation, especially in the Accounting Information System (AIS) area, but little in the ITSM field. The benefits from ITIL alignment are improved client/service orientation and the quality of IT services; greater efficiency due to standardization, optimizing of processes and process automation; and transparency and comparability through process documentation and process monitoring (Hochstein et al., 2005)

1. Effectiveness of Information technology Service Management; Quality of Accounting Information System Service; Continual AIS Service Improvement; Accounting Information System Operational cost reduction; Planning Budgeting and Accounting for AIS Efficiency; Accounting Information System Value

IT service management (ITSM) is the process of aligning enterprise IT services with business and a primary focus on the delivery of best services to end user. IT service management deals with how IT resources and business practices in together, are delivered in such a way that the end-user experience the most desired result from the accessed IT resource, application, business process or an entire solution stack. IT service management is built around processes and practices that gauges the end-to-end delivery of IT solutions rather than their development. ITSM measures the operational efficiency of a solution in meeting the service level expectations of the end-user and how technical IT manages these systems to deliver the desired service level. ITIL (Information Technology Infrastructure Library) is one such comprehensive suite of best practices, procedures, standards and an authoritative framework for ITSM which helps organization and individuals to govern IT services in a structured format and ensure meeting service standards both within the organization and across third party service providers (Seaniger, R., 2006).

Effective IT processes, whether they support service development, delivery, or support teams, must be clearly identified, well-defined, documented, and communicated to all affected personnel. In addition, IT processes must be measurable in order to facilitate improvements. Measuring a well-defined process provides an IT organization with the ability to predict performance over time. This capability is basic to any continuous process improvement effort. With proper metrics, IT can gauge performance and proactively make adjustments, often before service failure occurs. ITSM helps IT organizations evolve as true strategic business partners, enabling new business opportunities. As efforts produce measurable results, ITSM-based technologies track and report resource utilization and monitor user satisfaction. Out-of-the-box, customizable reports allow line-of-business managers to see that they are receiving positive returns on IT investments. And over time, IT develops a reputation for delivering as promised and supporting cost-reduction initiatives and business goals (Shang, S., 2002).

ITIL (IT Infrastructure Library) provides a framework of Best Practice guidance for IT Service Management and since its creation, ITIL has grown to become the most widely accepted approach to IT Service Management in the world. This guide describes the key principles of IT Service Management and provides a high-level overview of each of the core publications within
ITIL: Service Strategy, Service Design, Service Transition, Service Operation and Continual Service Improvement. Service Management as a Strategic Asset: the use of ITIL to transform service management capabilities into strategic assets, by using Service Management to provide the basis for core competency, distinctive performance and durable advantage, and increase the service provider’s potential from their capabilities: the provider’s ability (in terms of management, organization, processes, knowledge and people) to coordinate, control and deploy resources: the direct inputs for the production of services, e.g. financial capital, infrastructure, applications, information and people (Potgieter, B.C et al., 2005).

Service Oriented Accounting: using financial management to understand services in terms of consumption and provisioning, and achieve translation between corporate financial systems and service management. Service Analytics: using technology to help achieve an understanding of the performance of a service through analysis. Service Interfaces: the mechanisms by which users and other processes interact with each service. Risk Management: mapping and managing the portfolio of risks underlying a service portfolio. ERP applications affect everything a firm does. These integrated software packages provide real-time links across all of a firm’s activities from order capture to accounting to procurement to material resource planning to production scheduling to human resource management to after-sales service. The functionality is so broad that a company typically replaces all of its legacy systems (autonomous software designed for specific functional areas) with a consolidated, integrated software system. A crucial question, then, is what can be done to ensure that ERP (or any widespread IT solution) enhances a firm’s long-term competitive position, rather than improves operations at the expense of long-term strategic distinctiveness (Cottulier, M, 1998). Financial Management covers the function and processes responsible for managing an IT service provider’s budgeting, accounting and charging requirements. It provides the business and IT with the quantification, in financial terms, of the value of IT services, the value of the assets underlying the provisioning of those services, and the qualification of operational forecasting. IT Financial Management responsibilities and activities do not exist solely within the IT finance and accounting domain (Shang, S., 2002). Many parts of the organization interact to generate and use IT financial information; aggregating, sharing and maintaining the financial data they need, enabling the dissemination of information to feed critical decisions and activities.

Information technology Service Management

The importance of information technology (IT) and the communications solutions it provides to the everyday operations of companies has increased dramatically. Customers now require a world-class service providing seamless interactions between IT services and network infrastructure. In recent years the focus has shifted toward providing IT service management (ITSM) that ensures that business requirements drive IT implementation and help deliver the customer experience needed to succeed in today’s competitive global marketplace. The provision of managed IT and network services as an integrated entity enables companies to define services, first and foremost, in terms of business imperatives, rather than network or IT requirements. By leveraging replicable and standards-based service products, greater clarity is achieved between the customer and provider, leading to improved customer satisfaction and enhanced business efficiency (Potgieter, B.C et al, 2005). It is the product and service orientation with an emphasis on development and innovation in technology, including new product development, product improvements, and new production methods to new ideas and encourage individual innovative attitudes or creative ideas (Hurley and Hult, 1998). Innovative cultures in an organization emphasize learning, participative decision making, support and collaboration, and power sharing. Also, innovativeness is defined as the capacity to introduce new products and services, new production processes, new structures, and new administrative systems in the organization (Holland, C., 2003). SMEs firm’s ability to adapt and develop core strategies is a major factor in its operations. However, the characteristics of ERP do offer a platform for enhancing a firm’s social and intellectual capital in ways that can lead to effective and sustained advantages in the knowledge economy (Davenport, T.H, 1998). We end with a series of propositions linking Information technology Service Management with AIS Efficiency, Accounting Information System Value.
Information technology Service Management and Quality of Accounting Information System Service

ITSM helps SMEs Firms to evaluate the adequacy of management's monitoring function. Auditing also identifies and assesses areas of risk, and provides information to SMEs Firms that can be communicated to management to support its efforts to mitigate the risk. Additionally, it can be used when developing the annual audit plan by focusing audit attention and resources on areas of higher risk. This improves the organization's management and control frameworks and provides mechanisms that auditors can use to support their own independent review and assessment activities. Increased ability to mitigate risks; reductions in the cost of assessing internal controls; increased confidence in financial results; improvements to financial operations and Reductions in financial errors and the potential for fraud. Improve customer service; Improve the level of responsiveness to customer/user requests; Improve user satisfaction; Deliver improved access to IT products and services and Enable the IT function to demonstrate its value.

Information technology Service Management and Continual AIS Service Improvement

SMEs Firms can to the effectiveness of the control environment and the accuracy of the information contained in financial reports are enacted, chief executive officers and chief financial officers are turning to the internal audit activity to assist in complying with these regulations. The use of technologies that support continuous control assessment can assist in examining detailed transactions, as well as summarized data, to identify anomalies and other indicators of fraud, waste, and abuse (Markus, M, 2000). For example, leveraging data analysis technologies auditors can easily identify instances where contracting authority was exceeded. Firms should consider incorporating into the standard auditor report a clear statement of responsibilities for reviewing and/or reporting on companies' risk management and corporate governance arrangements. Information technology Service Management could be argued that organizations implementing request management processes are adding an additional unnecessary layer of support personnel between the end users/customers and the service delivery teams. However, in organizations with highly specialized back office functions it is impractical to expect end users to have sufficient knowledge or understanding of the underlying organizational structure and functional roles responsibilities for assistance can significantly improve the overall efficiency of the business such as increase availability (service, hardware etc); Increase the dynamics of the IT function/infrastructure; Provide a solid foundation for prevention based initiatives and Improve the visibility of business processes.

Information technology Service Management and Accounting Information System Operational cost reduction

Information technology Service Management helps reduce costs of accounting information system such as Promote the reassignment of underutilized resources (equipment and personnel); Preventing unnecessary expenditure; Making the optimum purchasing decision; Avoiding penalties (Service Level related); Avoiding penalties (Lease related) and Leveraging warranties. SMES can clearly allocate IT costs to the users of the services improved accountability. Information technology Service Management can reduce resolution time/change implementation times; Improve the effectiveness of the IT function; Eliminate unnecessary/inefficient process steps; Stop wasted effort; Leverage unused capability (equipment and personnel) and Enable IT employees to manage their workloads more effectively (Cater-Steel, et al, 2006).

Information technology Service Management and Planning Budgeting and Accounting for AIS Efficiency

Information technology Service Management helps SMEs management of IT costs (including hardware, services and infrastructure charges) and planning AIS budgeting are allocated as a
flat rate overhead to departmental functions rather than being distributed according to the level and value of usage consumed. SMEs improving the visibility of IT costs, avoiding lease penalty Payments for equipment non-return and the reclamation of software licenses can all contribute to dramatically reducing the level of IT expenditure required for an organization to function such as Reduce software maintenance costs; improved purchasing control; Leverage existing software license investments more effectively; Reduce software purchase costs and improved internal cost allocation based upon actual usage for understanding the future committed spend for data center-based costs is critical when evaluating the ROI of moving to cloud based services (Potgieter, B.C, 2005). Therefore, posit the hypotheses as below:

H1: Effectiveness of Information technology Service Management is positively associated with the Accounting Information System Value

H2: Effectiveness of Information technology Service Management is positively associated with the Quality of Accounting Information System Service

H3: Effectiveness of Information technology Service Management is positively associated with the Continual AIS Service Improvement

H4: Effectiveness of Information technology Service Management is positively associated with the Accounting Information System Operational cost reduction

H5: Effectiveness of Information technology Service Management is positively associated with the Planning Budgeting and Accounting for AIS Efficiency

2. Quality of Accounting Information System Service; Continual AIS Service Improvement; Accounting Information System Operational cost reduction; Planning Budgeting and Accounting for AIS Efficiency; Accounting Information System Value

Accounting Information System such as Enterprise resource planning (ERP) software comprehensively manages the needs of a major enterprise resource area: money, productive capital, people, stock of goods, or information. Most ERP systems particularly when used for finance and accounting, record the spending for servers, storage. These process areas are usually underserved in terms of IT automation; often they are run using Excel spreadsheets or at best Access databases. The complexity of Global IT environments and the desire for their greater efficiency is forcing a painful rationalization of such practices, and one might argue this major area is the primary driver for ERP for IT (Escalle, C., 1999). The industry is moving towards a consensus that this general area (plus operations/help desk) should be called IT Service Management, and the pre-eminent standard in this area is the UK's Information Technology Infrastructure Library (ITIL). The major trade association is the IT Service Management Forum. IT SMEs business management solution provides the granularity and context to meet the financial planning and budgeting requirements for managing IT resources. At its core, IT cost transparency refers to the growing need for IT leaders to accurately plan, track, manage, and explain the costs of IT. Thai SMEs implemented a centralized IT service management model based on the ITIL framework. The IT service management (ITSM) model represents a paradigm shift for IT functions as it deemphasizes the management of IT assets and focuses on the provision of quality end-to-end IT services (Cater-Stee, A., et al, 2005). SMEs used AIS such as Enterprise Resource Planning software systems (ERP) encompass a wide range of software products supporting day-to-day business operations and decision-making. ERP serves many industries and numerous functional areas in an integrated fashion, attempting to automate operations from supply chain management, inventory control, manufacturing scheduling and production, sales support, customer relationship management, financial and cost accounting, human resources and almost any other data oriented management process. ITSM to help SMES manage accounting information system to disseminate timely and accurate information also enables improved managerial and worker decision-making. Managers can make decisions based on current data,
while individual workers can have greater access to information, enabling increasing delegation of authority for production decisions as well as improved communications to customers (O’Leary, 2000). Therefore, posit the hypotheses as below:

H6: Quality of Accounting Information System Service is positively associated with the Accounting Information System Value

H7: Continual AIS Service Improvement is positively associated with the Audit Accounting Information System Value

H8: Accounting Information System Operational cost reduction is positively associated with the Audit Accounting Information System Value

H9: Accounting Information System Operational cost reduction is positively associated with the Audit Planning Budgeting and Accounting for AIS Efficiency

3. Antecedent of Effectiveness of Information technology Service Management

Employee Involvement refers to the use of education and training program for ITSM and AIS implementation is to make the user comfortable with the system and increase the expertise and knowledge level of the people. ITSM and AIS related concept, features of ITSM and AIS system, and hands on training are all important dimensions of training program for ITSM and AIS implementation. Training is not only using the new system, but also in new processes and in understanding the integration within the system how the work of one employee influences the work of others (Finch, P, 2003).

Top management support has been consistently identified as the most important and crucial success factor in ITSM and AIS system implementation projects. Top management to provide the necessary resources and authority or power for project success. Top management support in ITSM and AIS implementation has two main facets: (1) providing leadership; and (2) providing the necessary resources. To implement ITSM and AIS system successfully, management should monitor the implementation progress and provide clear direction of the project. They must be willing to allow for a mindset change by accepting that a lot of learning has to be done at all levels, including themselves (Sarkis, J, 2001).

Monitoring and Assessment refers to and knowledge in coordinating the scheduling and monitoring of defined activities to ensure that the stated objectives of implementation projects are achieved. The formal project implementation plan defines project activities, commits personnel to those activities, and promotes organizational support by organizing the implementation process (Westerman, G, 1999).

Therefore, posit the hypotheses as below:

H10: Employee Involvement is positively associated with the Effectiveness of Information technology Service Management

H11: Top Management Support is positively associated with the Effectiveness of Information technology Service Management

H12: Monitoring and Assessment is positively associated with the Effectiveness of Information technology Service Management
3. RESEARCH METHODS

3.1 Sample Selection
The sample data for this study comprise CEO of Thai’s Firms registered at Department of Business in Thailand were selected as the population. A mail survey was used for data collection. Deducting the undeliverable from the original 1,800 mailed, the valid mailing was 41 surveys from which 398 responses were received. Of the surveys completed and returned, only 371 were usable. The effective response rate was approximately 22.65%. According to Aaker, Kumar and Day (2001), the response rate for a mail survey, without an appropriate follow-up procedure, is less than 20%. Thus, the response rate of this study is considered acceptable. Following Armstrong and Overton (1977) tested for differences between early and late respondents and found no significant differences, indicating that non response bias was not a major problem in this study.

3.2 Questionnaire Design and Measurements
3.2.1 Questionnaire Design
The design of the questionnaire of this study is adopted several from sources of data, including previous instruments developed by other researchers and the research framework developed from the relevant literature. Most of the questions were in closed form using a Likert-type scale, all scored on five-point numerical scale from 1=strongly disagree to 5=strongly agree. A half page empty space at the end of the questionnaire is provided to give respondents an opportunity to express anything else that they would like to add. Before using the data collected, the pre-testing was undertaken (Hunt et al., 1982, Presser & Blair, 1994, Babbie, 2005). Pre testing was intended to identify whether there were any ambiguous or unanswerable questions, to identify whether the wording or layout could be adjusted, whether the meaning the researcher believed was associated with a question, and how others perceived it. A draft of the questionnaire was sent to academics at University of Mahasarakham to examine and approve the construct validity. Academics are served as respondents and assist in testing the instrument; comments and suggestions were use to revise the instrument in terms of readability, validity.

3.2.2 Measurements
The design of the questionnaire of this study is newly developed from several sources of data, including previous instruments developed by other researchers and the research framework developed from the relevant literature.

All of the questions are in closed form using a Likert-type scale. All are scored on five-point numerical scale from 1=strongly disagree to 5=strongly agree. The measurement analysis emphasizes explanation of the reliability and validity of new instruments for measuring these constructs.

3.2.2.1 Dependent Variables
Accounting Information System Value measured via 6 items that AIS used for finance and accounting, record the spending for servers, storage; timely and accurate information also enables improved managerial and worker decision-making. Managers can make decisions based on current data, while individual workers can have greater access to information, enabling increasing delegation of authority for production decisions as well as improved communications to customers.

3.2.2.2 Independent Variables
Effectiveness of Information technology Service Management was measured using 6 items to test the ability to adjust and develop core strategies is a major factor in its operations; capacity to introduce new products and services, new production processes, new structures, and new administrative systems in the organization.
Quality of Accounting Information System Service measured via 6 items include the increased ability to mitigate risks; reductions in the cost of assessing internal controls; increased confidence in financial results; improvements to financial operations and Reductions in financial errors and the potential for fraud. Improve customer service; improve the level of responsiveness to customer/user requests; Improve user satisfaction;

Continual AIS Service Improvement was measured using 6 items to test the improve the overall efficiency of the business such as Increase availability (service, hardware etc); Increase the dynamics of the IT function/infrastructure; Provide a solid foundation for prevention based initiatives and improve the visibility of business processes.

Accounting Information System Operational cost reduction was measured using 6 items to test the reduce resolution time/change implementation times; Improve the effectiveness of the IT function; Eliminate unnecessary/inefficient process steps; Stop wasted effort; Leverage unused capability (equipment and personnel) and Enable IT employees to manage their workloads more effectively.

Planning Budgeting and Accounting for AIS Efficiency was measured using 6 items to test the Reduce software maintenance costs; improved purchasing control; Leverage existing software license investments more effectively; Reduce software purchase costs and improved internal cost allocation based upon actual usage for understanding the future committed spend for data center-based costs is critical when evaluating the ROI of moving to cloud based services.

Employee Involvement measured via 3 items include the education and training program for ITSM and AIS implementation is to make the user comfortable with the system and increase the expertise and knowledge level of the people. ITSM and AIS related concept, features of ITSM and AIS system

Top management support measured via 3 items include the: (1) providing leadership; and (2) providing the necessary resources. To implement ITSM and AIS system successfully, management should monitor the implementation progress and provide clear direction of the project.

Monitoring and Assessment measured via 3 items include the coordinating the scheduling and monitoring of defined activities to ensure that the stated objectives of implementation projects are achieved.

3.3 Validity and Reliability
An assessment of the reliability of the constructs and the validity of the instrument were conducted to establish the reliability and validity of the instrument.

Reliability; the most common measure of scale reliability is Cronbach’s Alpha. Prior to conducting factor analysis on the data, it was considered useful to check the reliability of the scale used to confirm that the scale used consistently reflects the scale they are measuring (Field, 2005).

Validity: to identify any remaining issues the test instruments pre-testing was undertaken (Hunt et al., 1982, Presser & Blair, 1994, Babbie, 2005). Pre testing was intended to identify whether there were any ambiguous or unanswerable questions, to identify whether the wording or layout could be improved, whether the meaning the researcher believed was associated with a question was how others perceived it.

Factor analysis was firstly utilized to investigate the underlying relationships of a large number of items and to determine whether they can be reduced to a smaller set of factors. The factor analyses conducted were done separately on each set of the items representing a particular scale due to limited observations. With respect to the confirmatory factor analysis, this analysis has a high potential to inflate the component loadings. Thus, a higher rule-of-thumb, a cut-off value of 0.40 was adopted (Nunnally and Bernstein, 1994). All factor loadings are greater than the
0.40 cut-off and are statistically significant. The reliability of the measurements was evaluated by Cronbach alpha coefficients. In the scale reliability, Cronbach alpha coefficients are greater than 0.70 (Nunnally and Berstein, 1994). The scales of all measures appear to produce internally consistent results; thus, these measures are deemed appropriate for further analysis because they express an accepted validity and reliability in this study. Table 1 shows the results for both factor loadings and Cronbach alpha for multiple-item scales used in this study.

**TABLE 1**

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor Loadings</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effectiveness of Information Technology Service Management</td>
<td>0.75 – 0.81</td>
<td>0.85</td>
</tr>
<tr>
<td>Quality of Accounting Information System Service</td>
<td>0.78 – 0.85</td>
<td>0.83</td>
</tr>
<tr>
<td>Continual AIS Service Improvement</td>
<td>0.80 – 0.84</td>
<td>0.82</td>
</tr>
<tr>
<td>Accounting Information System Operational Cost Reduction</td>
<td>0.76 – 0.83</td>
<td>0.84</td>
</tr>
<tr>
<td>Planning Budgeting and Accounting for AIS Efficiency</td>
<td>0.76 – 0.82</td>
<td>0.83</td>
</tr>
<tr>
<td>Accounting Information System Value</td>
<td>0.80 – 0.84</td>
<td>0.86</td>
</tr>
<tr>
<td>Employee Involvement</td>
<td>0.81 – 0.80</td>
<td>0.84</td>
</tr>
<tr>
<td>Top Management Support</td>
<td>0.77 – 0.82</td>
<td>0.86</td>
</tr>
<tr>
<td>Monitoring and Assessment</td>
<td>0.79 – 0.84</td>
<td>0.82</td>
</tr>
</tbody>
</table>

3.4 Statistic Test

This research uses the Ordinary Least Squares (OLS) regression analysis to test the hypotheses and estimate factors affecting audit performance. Because both dependent and independent variables in this study were neither nominal data nor categorical data, OLS is an appropriate method for examining the hypotheses relationships (Aulakh, Kotabe and Teegen, 2000). In this research, the model of aforementioned relationships is as follows:

Equation 1: EITSM = β₀₁ + β₂AISV + e  
Equation 2: EITSM = β₀₂ + β₃QAISS + β₄CASI + β₅AOCS + β₆PBAE + e  
Equation 3: QAISS = β₀₃ + β₄ AISV + e  
Equation 4: CASI = β₀₄ + β₅ AISV + e  
Equation 5: AOCS = β₀₅ + β₆ AISV + e  
Equation 6: PBAE = β₀₆ + β₇ AISV + e  
Equation 7: EI = β₀₇ + β₈ EITSM + e  
Equation 8: TMS = β₀₈ + β₉ EI + e  
Equation 9: MAA = β₀₉ + β₁₀ EITSM + e

Where as:

EITSM = Effectiveness of Information technology Service Management; QAISS = Quality of Accounting Information System Service; CASI = Continual AIS Service Improvement; AOCS = Accounting Information System Operational Cost Reduction; PBAE = Planning Budgeting and Accounting for AIS Efficiency; AISV = Accounting Information System Value; EI = Employee Involvement; TMS = Top Management Support; MAA = Monitoring and Assessment

4. RESULTS AND DISCUSSION

The descriptive statistics and correlation matrix for all variables are shown in Table 2. The results of OLS regression according to hypotheses are estimated as shown in Tables 3.

Table 2 shows the descriptive statistics and correlation matrix for all variables. With respect to potential problems relating to multicollinearity, variance inflation factors (VIF) were used to provide information on the extent to which non-orthogonality among independent variables inflates standard errors. The VIFs range from 1.01 to 2.15, well below the cut-off value of 10 recommended by Neter, Wasserman and Kutner (1985), meaning that the independent variables
are not correlated with each other. Therefore, there are no substantial multicollinearity problems encountered in this study.

**TABLE 2**

**DESCRIPTIVE STATISTICS AND CORRELATION MATRIX**

<table>
<thead>
<tr>
<th>Variables</th>
<th>AISV</th>
<th>EITSM</th>
<th>QAISS</th>
<th>CASI</th>
<th>AOCS</th>
<th>PBAE</th>
<th>EI</th>
<th>TMS</th>
<th>MAA</th>
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<tr>
<td>EITSM</td>
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<tr>
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<td>0.68**</td>
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<tr>
<td>PBAE</td>
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<tr>
<td>TMS</td>
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<td>0.72**</td>
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<tr>
<td>MAA</td>
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<td>0.71**</td>
<td>0.65**</td>
<td>0.70**</td>
<td>0.68**</td>
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*p<0.05, **p<0.01

EITSM = Effectiveness of Information Technology Service Management; QAISS = Quality of Accounting Information System Service; CASI = Continual AIS Service Improvement; AOCS = Accounting Information System Operational Cost Reduction; PBAE = Planning Budgeting and Accounting for AIS Efficiency; AISV = Accounting Information System Value; EI = Employee Involvement; TMS = Top Management Support; MAA = Monitoring and Assessment

Table 3 presents the results of OLS regression of the relationship between Effectiveness of Information Technology Service Management on Accounting Information System Value via Quality of Accounting Information System Service; Continual AIS Service Improvement; Accounting Information System Operational cost reduction and Planning Budgeting and Accounting for AIS Efficiency.

The first set of research hypothesis focused on the relationships between the Effectiveness of Information Technology Service Management and Accounting Information System Value; Quality of Accounting Information System Service; Continual AIS Service Improvement; Accounting Information System Operational cost reduction and Planning Budgeting and Accounting for AIS Efficiency (Hypotheses 1 - 5) are shown in Table 3. The evidence indicates that the Effectiveness of Information Technology Service Management (H1: b1 = 0.62, p < 0.01) has a positive and significant effect on the Accounting Information System Value. Therefore, Hypothesis 1 is supported.

Effectiveness of Information Technology Service Management (H2: b2 = 0.66, p < 0.01) has a positive and significant effect on the Quality of Accounting Information System Service. Therefore, Hypothesis 2 is supported.

Effectiveness of Information Technology Service Management (H3: b3 = 0.64, p < 0.01) has a positive and significant effect on the Continual AIS Service Improvement. Therefore, Hypothesis 3 is supported.

Effectiveness of Information Technology Service Management (H4: b4 = 0.62, p < 0.01) has a positive and significant effect on the Accounting Information System Operational cost reduction. Therefore, Hypothesis 4 is supported.

Effectiveness of Information Technology Service Management (H5: b5 = 0.66, p < 0.01) has a positive and significant effect on the Planning Budgeting and Accounting for AIS Efficiency. Therefore, Hypothesis 5 is supported.
The second set of the hypotheses concentrated on the relationships between the Accounting Information System Value; Quality of Accounting Information System Service; Continual AIS Service Improvement; Accounting Information System Operational Cost Reduction and Planning Budgeting and Accounting for AIS Efficiency (Hypotheses 8-9) in Table 3. The evidence indicates that the Quality of Accounting Information System Service (H6: b2= 0.65, p < 0.01) has a positive and significant effect on the Accounting Information System Value. Therefore, Hypothesis 6 is supported. Continual AIS Service Improvement (H7: b2= 0.67, p < 0.01) has a positive and significant effect on the Accounting Information System Value. Therefore, Hypothesis 8 is supported. Accounting Information System Operational Cost Reduction (H8: b2= 0.62, p < 0.01) has a positive and significant effect on the Accounting Information System Value. Therefore, Hypothesis 9 is supported. Planning Budgeting and Accounting for AIS Efficiency (H9: b3= 0.64, p < 0.01) has a positive and significant effect on the Accounting Information System Value. Therefore, Hypothesis 9 is supported.

The third set of research hypotheses states that the Employee Involvement; Top Management Support and Monitoring and Assessment is expected to positively drive the Effectiveness of Information technology Service Management (Hypotheses 10 - 12) in Table 3. Employee Involvement has a strong influence on Effectiveness of Information technology Service Management (H10: b10= 0.61, p < 0.01); Therefore, Hypothesis 10 is supported.

Top Management Support has a strong influence on Effectiveness of Information technology Service Management (H11: b11= 0.65, p < 0.01); Therefore, Hypothesis 11 is supported.

Monitoring and Assessment has a strong influence on Effectiveness of Information technology Service Management (H12: b12= 0.63, p < 0.01); Therefore, Hypothesis 12 is supported.

### TABLE 3

**RESULTS OF OLS REGRESSION ANALYSIS**

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>AISV</th>
<th>QAIS</th>
<th>CAS</th>
<th>AOCS</th>
<th>PBAE</th>
<th>EITSM</th>
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<tbody>
<tr>
<td>EITSM</td>
<td>0.62***</td>
<td>0.66***</td>
<td>0.64***</td>
<td>0.62***</td>
<td>0.66***</td>
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</tr>
<tr>
<td>(0.04)</td>
<td>(0.08)</td>
<td>(0.06)</td>
<td>(0.02)</td>
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<tr>
<td>(0.06)</td>
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<tr>
<td>CAS</td>
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<td>(0.05)</td>
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<td>PBAE</td>
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*** p<.01, a Beta coefficients with standard errors in parenthesis.
5. CONTRIBUTIONS
5.1 Theoretical Contributions
The research contributes to the extension of the direct effects of IT service management; The IT service management (ITSM) model represents a paradigm shift for IT functions as deemphasizes the management of IT assets and focuses on the provision of quality end-to-end Accounting Information System services. ITSM and ITIL can act as a powerful enabler by providing the platform upon which business to business interaction can be facilitated using open systems connections as a generic business model. ITSM helps companies ensure that the requirements of the business drive the needs of IT implementation through defining a set of key metrics to actively manage the performance of IT and guarantee that services are delivered as specified.

5.2 Practical Implications
ITSM processes enable IT teams to use the resources more effectively, eliminating unnecessary manual processes through automation and allows them to focus upon business critical problems that directly impact the operation of the business so that they can add real value to their organization. IT organizations are continually under pressure to reduce costs and deliver more and more services. These diverging and contradictory requirements mean that in order to continue to deliver to the business the IT function has to learn to work smarter as well as harder. Having stabilized the delivery process, service managers can divert their attentions to refining and improving the underlying business processes to improve efficiency and responsiveness.

6. CONCLUSION
In this study, to investigate the direct effects of Effectiveness of Information Technology Service Management on Accounting Information System Value via Quality of Accounting Information System Service; Continual AIS Service Improvement; Accounting Information System Operational cost reduction in SMEs Firms in Thailand. The results can used to describe Information Technology Service Management functions trying to improvements in the workflow, efficiencies, and effectiveness of the accounting information technology processes.

7. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH
This study emphasizes the importance of the Effectiveness of Information Technology Service Management and links accounting information system value, but it does not address the issue of how the Information Technology Service Management should be carried out. This research has some limitations. Next study should be used detailed field-based studies, longitudinal case studies, and case surveys and to test different audit environmental influences to each of the factors identified in the model in these difference contexts.

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