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Performance Audit of IT Investment: Government Accounting Software Development Program

Outcomes and experience learned

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Introduction

Thailand, as many other developing countries, is well aware of the importance of information technology (IT) as a development tool. The Royal Thai Government has been allocating a large sum of national budget in IT investments. During the fiscal year 1995 to 2000, the total of approximately Baht 20,334 millions (approx. US $ 508 millions) has been invested in IT projects and programs requested by public agencies. Despite the large sum of investments, it seems that the government has not yet satisfactorily achieve the objective of using IT to increase operational efficiency and effectiveness and the ultimate goal of using IT to serve citizens better. Continually, the stories of IT project and program delay and failure have still been heard. One of the effective means to help improve this situation, aside from self-assessment, is independent assessment of IT investments in the form of performance audit.

As set forth in the previous State Audit Act of 1979 and the current State Audit Act of 1999, the State Audit Office of Thailand (SAO) has an important mandate of conducting performance audit of all public agencies which include government departments and state-owned enterprises. Up to 1999, a good number of performance audits of various types of government programs and projects has been conducted but not specifically IT related. However, a good change to respond to the demand of IT age occurs when performance audit of government IT investment program has been imposed as a part of the year 2000 SAO annual audit policy. The performance audit of the Government Accounting Software Development Program discussed in the following section of this paper is one of the performance audits conducted under this SAO policy. As part of outcomes and experience learned, program success factors as well as main causes of obstruction are discussed.

Performance Audit of IT Investment
Government Accounting Software Development Program

Background/Rationale

As an effort to computerize the Thai government functions, the Government Accounting Software Development Program was initiated for internal use in 1991 by the Office of the Comptroller General (OCG), a government department under the Ministry of Finance (MOF) responsible for supervising, controlling, recording, and reporting public income and spending. Since the first development the software has been tested and improved continually. After some experience with the software, the OCG has seen an

opportunity to use the software as a technological tool to help increase operational efficiency and effectiveness of other government departments undertaking similar tasks of government accounting. This is also viewed as a way to maximize the benefits of the investments in the software. Thus, in February 1998, the Ministry of Finance decided to make the software available for other interested agencies. However, up to the year 2000 there has seemed to be little progress on software usage and the number of software users is still trivial.

In light of program benefits and potential, the State Audit Office of Thailand (SAO) choose to conduct a performance audit of the program. The rationale is that the Thai government accounting system applies to all government departments. Having a well-designed national government accounting software to be used by government units nationwide will create economies of scale and help standardize and streamline the accounting functions of the public sector. Besides increased operational efficiency and effectiveness in public departments, the benefits of single government accounting software include the opportunity for the SAO to streamline its audit function using Audit Software Package to automate the audits of computerized data. These together are hoped to induce great amount of budget savings on IT investments and better financial control, management, and audits of public funds.

Audit Objectives

1) **To follow up on software usage:**
    1.1) whether the existing software meets the objective of increasing efficiency and effectiveness in the government accounting function
    1.2) What are the main causes of success and failure of software usage
2) **To find out the reasons for not using the software**
3) **To propose to all involving agencies** their roles in helping eliminating the existing obstructions and in promoting a widespread use of standard government accounting software so that the country can benefit from economies of scales arising from IT resource sharing and maximizing.

Audit Scope/ Methodology/ Period

The audit includes the total of 221 government agencies, 51 in the central administration (44 with usage experience, 7 with no usage experience) and 170 in the regional administration (34 with usage experience, 136 with no usage experience). The methods used comprise the study and analysis of program documentation, the inquiry and interview of management and relevant officers, and the observation of the work

performed by the government accounting clerks. The audit commenced in October 1999 to be ended in January 2000.

Audit Findings

To follow the audit objectives specified in the earlier section, we will discuss our findings based on the two groups of agencies under audit: those with software usage experience and those without.

Government agencies with experience of OCG software usage

These agencies represent 29.33 percent of the target group. The user groups find that the software is useful especially for simple, regular government-type of accounting tasks. Moreover, the software facilitates easy, accurate, and up-to-date transaction recordings and thus helps reduce time required for recording and posting accounts. Further, accounting transactions and reports can be printed out conveniently for verification. Overlooking a few flaws such as weak security control and inability to display certain types of transactions on screen, the majority of the accounting clerks under interviews think that the software leading to automated accounting system is more efficient than the manual system in that it reduces man-hours, increases accuracy, and creates backup system.

We find that the key success factors for the agencies that have successful experience in using the OCG software (have cancelled the manual system to rely only on the software) are as follow:

- Explicit policy of computerizing government accounting tasks
- Good support from the supervising agency and top management
- Availability of computer hardware and accessories
- Availability of qualified personnel with computer literacy and good knowledge of government accounting.
- Good working environment

We find that the key success factors for the agencies that have partly successful in using the OCG software (conduct parallel running of software and manual procedures) are as follow:

- Availability of computer hardware and accessories
- Sufficient operating budget
- Availability of personnel who has been trained by the OCG on software usage

However, these agencies lack confidence to switch to the computerized accounting system due to the following factors:

- Lack of personnel with computer technical competency to solve hardware problems
- Lack of personnel with adequate knowledge of the software to solve operating problems
- Reliance on the OCG staff to solve problems resulting in operating delay

We also find that the following factors combined with the aforementioned factors have caused some agencies quit after trying to use the software for a period of time:

- Inability to record certain types of accounts and reports using the software
- Some users preference to perform their work using Generalized Accounting Software Package

Government agencies without experience of OCG software usage

Up to January 2000, the progress towards achieving the OCG's goal of sharing its IT resources-the government accounting software has still been unsatisfactory. The group of agencies with no experience of OCG software usage represents 70.67 percent of the target group. Based on the audit, we found that the main causes of agencies not using the software can be summarized as follow:

1) Most government agencies, even those with qualified resources to use the software, are unaware of the existence of OCG government accounting software.
2) Most government agencies lack computer resources such as hardware and accessories, budget, qualified personnel to support software usage.
3) The OCG did not set a clear policy and issue regulations for all agencies receive and disburse government funds from the OCG to use the OCG standard accounting software.
4) The OCG management did not support the software development and usage seriously and continually, evidencing from many program constraints such as inadequate number of OCG program personnel to perform necessary functions important for promoting widespread and successful use of the software.

Meanwhile, many agencies with pressing demand of automating their government accounting tasks have chosen to develop their own software, many of which have failed, resulting in high amount of budget waste each year.

Outcomes and experience learned

Based upon the audit findings, we conclude that the government accounting software development program is a feasible way of IT resource sharing to create

economies of scales of IT investment in the public sector. Most government agencies agree with the concept of having a standard government accounting software to be used by all agencies undertaking the same task of recording receipt and disbursement of national budget funds from the OCG, providing that the software is compatible and integratable with sub-systems developed by each agency to accommodate their individual needs. The cost-benefit of having single software to perform common tasks for all rather than letting each agency develops its own, many proved to fail, is quite clear cut. Moreover, the experienced users accept that although minor flaws exist, the software has high potential to help increase operational efficiency and effectiveness in terms of ease of work; less time consuming; and availability of accurate, complete, and timely financial data and information. We view that the flaws can be easily corrected along the way using feedback from usage until the software is well seasoned and become most comprehensive. With good scheme to ensure software quality, we go further to the idea that the OCG should set a clear policy and regulations for all departments undertaking government accounting tasks to use the OCG standard software seriously and continually.

However, to reach such stage, the OCG and involving agencies need to improve their operation in many ways. The recommendations followed in the next section are based upon the experience learned from the findings of the main causes of success and failure of software usage and the reasons for agencies not to use the software. Taking actions on these recommendations should help eliminate the existing obstructions and promote a widespread use of standard government accounting software. This concept of IT resource sharing to create economies of scales should also be applied to other areas of IT investment so that the country can get maximum benefits.

Recommendations

I. The Office of the Comptroller General (OCG)

Software Development

1) Improve software features to be as user friendly as possible to accommodate a larger group of innocent users.
2) Incorporate necessary built-in security and accounting controls, which comprise error message to facilitate quick error correction, into the software.
3) Design the software to be compatible and integratable with sub-systems developed by each agency to accommodate their individual needs.
4) Prepare a thorough and easy- to- follow user-manual feasible for self study and include a section on how to shoot common problems.

Program Administration

1) Establish a national project to takeover the current task of government accounting software development program which is a part of the day-to-day operation. The project should have a specific policy, objectives, targets, duration, budget, and personnel to assure accomplishments. Proposal may be made to incorporate the project in the National IT Master Plan to get benefits of personnel and budget allocation.
2) Set a policy and promotion campaign for all government agencies to computerize their accounting function using OCG software.
3) Coordinate closely with the Bureau of the Budget to ensure that all government agencies have resources sufficient to implement the policy.
4) Conduct training as well as provide continual and adequate supports for software users.
5) Appoint a committee to monitor and evaluate software usage as well as to improve project performance using feedback obtained.

II. The Bureau of the Budget (BOB)

The BOB has a key role to play that can contribute greatly to the success of the OCG program and the national IT investment as a whole. Up to now, the decentralized approach to IT procurement taken by the government have led to the situation where government departments and other public bodies have incompatible systems that resources could not be shared and thus the benefits of IT investments are not maximized. In order to make the most out of limited budget funds and prevent unnecessary duplication of efforts, we recommend that the BOB set a policy to centralize IT investments in certain feasible areas. The government accounting software should be one of these. Under this policy, the OCG, which is the central agency supervising financial and accounting management of the public sector, should be the only key agency obtains budget to develop government accounting software. Other agencies should obtain budget for accounting software development only in cases with adequate proof that the software is to be a necessary supplement of or is to serve unique tasks unable to be performed by the OCG software. Meanwhile, the OCG must recognize its duty in making as most complete and comprehensive software as possible, available for all government agencies.

III. The National Information Technology Committee (NITC)

The National Information Technology Committee (NITC) by the subcommittee of IT Policy Planning which is responsible for supporting and promoting national science and technology development should consider putting the OCG government accounting software development project in the national IT master plan to concretely ensure sustainability.

Conclusion

In a similar fashion to the UK and many other countries' modernizing government proposals, the Royal Thai Government has been putting emphasis on making the most of IT and using IT as the main means to make life easier for the citizens. Many efforts have been made to automate the Thai public service functions, including the computerization of government financial and accounting functions, which we had chosen for audit. Based on the audit, we conclude that key factors which influence project success or failure are common among countries. These factors include policy setting, support from top management, availability of complement resources, quality of project management team, communication to gain cooperation, feedback mechanism to improve project performance and ensure better value for money from IT development.