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Government budget and accounting information policy and practice in Taiwan

Tain Sue Jan^{a,*}, Fu Longe Tsai^b

^a*Management Science Department, National Chiao-Tung University, Taiwan 30050, ROC*

^b*Institute of Business and Management, National Chiao-Tung University, Taiwan 30050, ROC*

Abstract

The principal government budget and accounting information policies in Taiwan are founded on the ability to provide integrated, consistent, and timely information for government managers to make more rational decisions concerning national resource allocation and evaluation. A specific accounting organization system has been designed for this purpose. This paper analyzes information policies and practices according to the relevant laws and regulations, identifies issues regarding the policies, and presents strategies to resolve the issues. © 2002 Elsevier Science Inc. All rights reserved.

1. Introduction

In addition to the Generally Accepted Accounting Principles (GAAP), government accounting information processing should also comply with established government rules and regulations. National government budget and accounting information policies are distinct because they depend on the relevant laws and regulations for each country. Those laws are determined by political, social, historical and cultural factors, and the factors will contribute to the differences in the budget and accounting information policies among nations.

Government budget and accounting information serves as the primary basis for national resource allocation, utilization, and evaluation. In Taiwan, such information is so important for central government that the system designed for generating the information is more particular in nature. The principal objective of this article is to analyze the government budget and accounting information policies, practices and their problems, as well as delve

* Corresponding author.

E-mail address: jts@cc.nctu.edu.tw (T.S. Jan).

Table 1
Key laws and statute of BAS

Laws/Statute	Description
Budget Law	Guides the budget planning
Accounting Law	Regulates budget execution
Budget Settlement Law	Directs the budget evaluation
Establishment and Management of Accounting and Statistics Organizations Statute	The foundations for the establishment of government accounting organizations

into the development of the government budget and accounting information system to resolve the financial issues in Taiwanese government.

2. Government budget and accounting information policy

Government budget and accounting information policies can be analyzed through the relevant laws and government regulations. In Taiwan, the principal laws governing budget and accounting policies include three laws and one statute: the Budget Law, the Accounting Law, the Budget Settlement Law, and the Establishment and Management of Accounting and Statistics Organizations Statute.

The Budget Law guides budget planning, the Accounting Law regulates budget execution activity, and the Budget Settlement Law directs the budget evaluation. The Statute is the main foundation for the establishment of government accounting organizations. Table 1 shows the key laws and statute of budget and accounting systems (BAS). The major government organizations about BAS include (see Table 2): the Executive Yuan (EY) which

Table 2
Major organizations about the BAS

Organizations	Description
Executive Yuan (EY)	EY is the highest administrative organization of the State. It has a Premier, a Vice Premier, a number of Ministers and Chairmen of Commissions.
Directorate General of Budget, Accounting and Statistics (DGBAS) of the EY	DGBAS is the nation's highest budgetary, accounting, and statistics office of the State. It is the agency responsible for budget, accounting, and statistical affairs with the central and local governments.
Legislative Yuan (LY)	LY is the supreme legislative organization of the State. It is equivalent to the Parliament or the Congress in terms of its power and function. In BAS, it has the power to decide by resolution upon such matters as budgeting bills and auditing reports.
Ministry of Audit (MA)	MA is responsible for auditing and verifying the budget settlement reports.

is the highest administrative organization of the State <<http://www.ey.gov.tw>>, the Directorate General of Budget, Accounting and Statistics (DGBAS) of the EY which is the nation's highest budgetary and accounting organization <<http://www.dgbas.gov.tw>>, the Congress which is called Legislative Yuan in Taiwan <<http://www.ly.gov.tw>>, and the Ministry of Audit <<http://www.audit.gov.tw>> which is responsible for the budget settlement auditing and verification.

In addition to the laws, there are four significant regulations that govern the detailed government budget and accounting activities: the Regulation for Government Accounting System, the Regulation for Government Organization Accounting System, the Guidelines for Government Accounting System Design Standards, and the Guidelines for Internal Audit Standards (DGBAS, 2001a). This article analyzes the principal information policies according to these laws and regulations.

2.1. To provide integrated, consistent and timely information

The principal government budget and accounting information policies in Taiwan are founded on the ability of the DGBAS to provide integrated, consistent, and timely information for government agencies and managers. These policies exist especially for the Premier so as to facilitate their making more rational decisions about national resource allocation and evaluation. All government organizations should provide regular draft budget reports by their accounting departments or offices during the budget preparation process according to the Budget Law. These reports are integrated by the DGBAS into a comprehensive government budget document and then evaluated and modified by the Executive Yuan based on the budget scale and the government's priorities. The total budget scale depends on the national economic forecasting model, the financial policy and status, and the needs of the government.

The Executive Yuan is obliged to submit a comprehensive government budget report to the Congress for review and resolution between September and November. Similarly, all government organizations should provide annual reports, which are then aggregated, also by DGBAS, into a comprehensive government budget settlement report that is submitted to the Ministry of Audit for auditing and verification and the Congress for review. The process is based on the Budget Settlement Law. All government organizations should also provide regular status and periodical accounting reports and daily, weekly, monthly, quarterly, semiannual and annual statements according to the Accounting Law. These reports are also integrated into a comprehensive government accounting report to provide integrated accounting information for the evaluation of government and its organizations' resource utilization.

To collect and process effectively budget information from each government organizations to generate integrated budget and accounting reports, the structure and process of all governmental accounting systems are all standardized according to three regulations: the Regulation for Government Accounting System, the Regulation for Government Organization Accounting System, and the Guidelines for Government Accounting System Design Standards. All budgetary accounting items of each government organizations are consistent and the coding scheme for these items has the same structure. Therefore, government

authorities can easily acquire consistent budget and accounting information by harmonizing all the accounting items according to these three regulations. The regulations also stipulate types of accounting documents. These regulations allowed the government organizations to process budget and accounting information under consistent standards, thereby enable the standardization of national government accounting transaction processing, and then facilitate the process for the periodic and irregular acquisition of consistent information.

In addition to providing government budget and accounting information for government itself and congress, the information is also provided for the general public, media, and financial experts (GASB, 1985). For instance, it is possible to access the government final report of last year via the Internet (DGBAS, 2001b). This information is disseminated through the Internet and CDROMs to the general public, experts, and organizations (DGBAS, 2001c).

2.2. To reflect government policy

The government budget and accounting information serves as significant references for a government's policies. Members of congress generally argue a policy and discuss problems of resource allocation when they review and evaluate the annual budget statement and reports. For instance, there was a time when the government put special emphasis on education. The government set 15% of the total budget as the minimum budget allocation for educational purposes before 1998. If the total education budget did not reach this proportion, then the education budget should be increased to meet the regulations. However, this regulation was abolished as education became more universal and private schools became more prevalent in Taiwan. At present, focus has turned to health care and social welfare. To that end, the social welfare budget grew from 8.4% in 1993 to 18.9% in 2001. Thus, the budget allocation information is a reflection of government policies and priorities, and it will be brought into the open when the budget information is disclosed.

2.3. To provide information for planning and control

In Taiwan, the Planning Programming Budgeting System (PPBS) is used to process budget information. The budget of each governmental organization is allocated according to its programs. Each organization should provide regular draft budget reports in terms of the given programs during the budget preparation stage. According to the government policy, a program can be added or canceled. All newly proposed programs must be evaluated and approved before the coming budget year. No budget is allocated whenever a program is terminated, delayed, or deemed unnecessary.

Each government agency should submit a monthly accounting report of budget utilization for evaluation purposes. When the organizations lag significantly behind their budget utilization, they will be requested to provide an exception report to explain why the difference exists. The Taiwan government uses these reports to discover something wrong or difficulties and may take some actions in time to correct problems.

2.4. To provide reliable budget and accounting information

The DGBAS system is a special accounting organization system designed to assure the reliability of the budget and accounting information in Taiwan. All government budget and accounting operations are conducted by an independent accounting organization and departments for more reliable information according to the Establishment and Management of Accounting and Statistical Organizations Statute. The internal audit is also conducted by the accounting organization system according to the Guidelines for Internal Audit Standards.

The internal audit procedure is divided into the preaccounting auditing and the account book review. The preaccounting auditing focuses on revenue and appropriations control, while the account book review focuses on documents, account statements, and work performance evaluation. The internal audit procedures are based on the “Internal Auditing Standards” and range of audit procedures include: accounting audit, cash audit, property audit, financial audit, work audit, budget audit, and coordinated audit. According to the regulations, when accounting documents used in procedures are incomplete or show discrepancies, then the accounting personnel should refuse to sign to ensure quality of accounting information and maintain reliability of accounting information.

3. Government budget and accounting practice in Taiwan

The budget, accounting, and statistic functions of the government are integrated under a single government authority in Taiwan – the DGBAS according to the Establishment and Management of Accounting and Statistics Organizations Statute. The DGBAS is under the direct jurisdiction of the Executive Yuan and is also responsible for internal audits in addition to budget and accounting matters. This government authority is equipped with the features described below.

3.1. Independence of accounting organization system

The DGBAS manages all budget and accounting matters for government and all government organizations. The accounting department or office of each government organization processes budget and accounting information and reports to the accounting organization system. In the education system for instance, the Ministry of Education is equipped with an accounting department and each national university has an accounting office. These offices handle the budget and accounting matters of their respective establishments. The accounting offices of universities report directly to the Ministry of Education accounting department, which in turn reports directly to the DGBAS. Each accounting department or office in local government also belongs to the accounting organization system, thereby forming an independent accounting system network.

The employment, retirement, and dismissal of government accounting personnel are under the jurisdiction of the DGBAS. For instance, the DGBAS appoints the Ministry of Education accounting head and staff is decided by the DGBAS and not by the Education Minister. Moreover the accounting staff of various government departments are appointed directly

from the accounting organization system under the supervision of the higher accounting department, with the DGBAS acting as the highest authority in the system. In short, the DGBAS holds the personnel appointment authority of the national and local government accounting personnel instead of the government department head.

Aside from its authority over the government accounting personnel matters, the DGBAS also determines, approves, and interprets budget and accounting related laws such as the Budget Law, Accounting Law, Budget Settlement Law, and other regulations. The legislation and personnel administration authority of the DGBAS allows it to control the comprehensive government budget allocation and utilization information.

The accounting organization system is highly centralized system so it can meet the control and balancing principle. Since the accounting personnel appointment, retirement, promotion, training and dismissal authority rests on the higher accounting departments, therefore accounting offices are out of the control of their respective departments. This allows them to carry out their duties independently, monitor budget utilization, performance of departments, and provide more objective and reliable budget and accounting information under the internal control and balancing process.

3.2. The Budget Control and Accounting Operation Task Force

The DGBAS established a Budget Control and Accounting Operation Task Force in 1996 to enhance the overall performance of the accounting organization system. The task force is responsible for budget control, accounting operation examination, and all relevant regulations. When government organizations submit a monthly accounting report of budget utilization for evaluation, the task force traces and monitors the reports to understand the progress and delay factors, as well as provide improvement suggestions. It also conducts field investigations on departments that are seriously behind their budget schedule or suffering execution troubles, thereby determining the budget utilization efficiency, analyze the problems of departments, as well as reinforce the monitoring and evaluation procedures of each government authority concerned.

A final report of a government organization is a measurement of the organization's performance and an evaluation of the adequacy of the organization's programs. Each government accounting department is obliged to submit a final report and an annual treasury disbursement report to the DGBAS within four months after the end of each fiscal year. The task force compiles and studies these reports, note interpretations, and submit the comprehensive final report (budget settlement report) to the Ministry of Audit for auditing and verification and the Congress for review.

Once a new government organization is established, the creation of an accounting department within new organization follows. The accounting department proposes the accounting system of the organization to the DGBAS for approval. The proposed system is reviewed and evaluated by the task force according to the relevant regulations and standards. Moreover, any proposal of the modification of accounting system of any government organization is also reviewed and evaluated by the task force. The proposal is forwarded to the DGBAS for approval once the task force review is completed.

The task force is also responsible for the review and evaluation of relevant laws and

Table 3
The coding scheme for expenditure accounting items and examples

Code	Length	Examples
General ledger code	4 digits	1031 : anticipated revenue 1032 : anticipated revenue allotment
Government affairs code	2 digits	51 : education 60 : transportation
Organization code	4 digits	2001 : ministry of education 2901 : ministry of transportation
Program code	4 digits	0203 : teaching and research program of national university
Detailed accounting code	4 digits	0100 : personnel expense 0200 : operating expense 0202 : general consumption expense

regulations. The task force suggests amendments whenever it discovers that some rules and regulations that have become inappropriate due to political, economic, or environmental changes. For instance, the task force proposed “Simplified Accounting Procedure Guidelines for Major Natural Disaster Rescue and Reconstruction Appropriations” to cope with the urgent rescue requirements after the catastrophic earthquake in 1999.

The task force is also responsible for the improvement of the quality of the budget and accounting system. A research project will be set up and commissioned to academic community or scholars to ensure the consolidation of government accounting practices and theories, as well as to upgrade government accounting quality. Several research studies are commissioned each year to delve into the theoretical foundation of government accounting practices and comprehend the accounting conditions of other nations.

3.3. *The coding scheme for accounting items*

In Taiwan, budgetary accounting items are the base for the accounting items. These items are unified and have a consistent coding scheme to ensure the budget and accounting information is consistent across all government organizations. The accounting items are classified into five categories: asset and liability, property, revenue and expenditure, function, and others. Under each category, a four-digit code is used to represent a general ledger accounting items, a two-digit code for government affairs, a four-digit code for government organizations, a four-digit code for program, and a four-digit code for detailed accounting items. Table 3 shows the coding scheme for expenditure accounting items and examples.

The budget and accounting items are unified nationally, hence the DGBAS may consolidate the budget and accounting information and easily access information by general ledger accounting items, government affairs, organizations, organization’s programs, and detailed accounting items. For instance, the total national education system personnel costs may be queried by summation function from the account table (of the given database) group by given general ledger code and affairs code through normal Structure Query Language (SQL).

The standardized accounting information structure accelerates the budget and accounting information flow vertically from each accounting office or department of government

agencies to the DGBAS. This is one of the reasons why the DGBAS may build an efficient budget control mechanism to detect something wrong or difficulties of each government agencies and suggest them to take some actions in time to correct the problems.

3.4. Policy issues and implications

This section identifies a number of issues and implications that the financial policies generate for government managers.

3.4.1. Problem of information requirements for government organizations

Since the government budget and accounting system has a centralized design, accounting information that satisfies the general government administration requirements is given the higher priority. This policy reflects fully the fact that accounting items used in each government organization are quite consistent in terms of their unified coding scheme. But for individual organization, the accounting items are so general that many accounting information requirements cannot be met from the system. For instance, a president of the NCTU (National Chiao-Tung University) could not obtain public utilities consumption information in terms of water, electricity and gas expenses each year, since the NCTU accounting system cannot provide the information because the detailed accounting items only has general consumption expense. This implies that a detailed breakdown of the general consumption expense is needed. Also, many researchers in NCTU want to access accounting information for their research projects quickly, but the system cannot fulfill various research requirements because the accounting personnel are busy processing budget and accounting information for the accounting organization system. Although NCTU regards the accounting information for research projects as significant information, the comprehensive government accounting information remains a higher priority.

From the example, we can see that the government accounting items are so general in nature for most organization that it cannot provide some important accounting information for management purposes of individual government organizations. The integrated and consistent information policy and practice of government budget and accounting system imply that all accounting departments tend to belong to the government accounting organization system rather than specific government organization. As a result, each organization has an incomplete accounting department, so the accounting information systems of organization cannot provide sufficient information requirements for itself.

3.4.2. Difficult of integration of information systems for government organization

Each functional information system is not a separate system, and it should be integrated into organizational information systems. Interaction between functional information systems exists among different departments. Many integrated information requirements can only be satisfied by this interaction. For instance, a close relationship exists between budget information and existing faculties, students, equipment and research projects when a university plans its budget. The interrelated information must be considered to evaluate the resource allocation and utilization. Accounting information is closely linked to the library, equipment and material procurement procedures in

logistic systems development. It is important for the integration of the systems to provide integrated purchase order and accounting information. But for integrating the accounting information system to organizational information systems, each government organization should devote additional resources.

3.4.3. The problem of local accounting information systems

Although the DGBAS promulgates the government accounting system and its regulations, slight differences exist between national and local government budget and accounting systems. The contents of the accounting systems (e.g., accounting items, accounting documents, account books and final reports) and its coding scheme are not totally the same. The integration problem of national and local government accounting systems may take two possible future directions: 1) the formulation of an accounting system suitable for both national and local governments, or 2) maintenance of the current two accounting systems for national and local governments. An accounting system that is suitable for both levels of government would be more complicated, demand an overhaul of the entire system, and create broader after-effects. Maintenance of the current two accounting systems is in need of national government to require the local accounting departments to submit information requirements and reports. Changes effected are minor and the flexibility of the two systems is maintained.

4. Development of budget and accounting information systems

To resolve the issues identified above, development of the computerized budget and accounting information systems for both accounting organization system and government organization is the most plausible strategy. Accounting departments can establish simultaneously two diverse types of computerized accounting information systems since each department's accounting information requirements may vary from those of the general government. One system is for the general government while the other is for the government organization itself. The development of budget and accounting system software for each government organization may be divided into the following three types: 1) package software provided by the DGBAS; 2) self-development of accounting systems that can simultaneously satisfy the DGBAS and organization requirements; or 3) dual accounting information systems.

4.1. Using package software provided by the DGBAS

The DGBAS established a development team in 1984 to develop accounting system software in order to enhance both the accounting system performance and the government's control over the budget. The team started with the DGBAS internal general budget and accounting operations. Later, the computerization demands of the accounting departments from many organizations forced the team to develop a general government accounting software package in 1990. Approximately 85% (351) of the accounting departments were

using the software as of 1993, and then 97.5% (390) were using the software as of 1998 according to two surveys by the team (EDP Center, DGBAS, 1998).

The DGBAS software development task force selected the most popular platform of the PC LAN (Local Area Network). Software was distributed to accounting department or office of each government organization and the DGBAS also provided the necessary education, training, and consulting services.

The DGBAS software was limited to accounting operations and failed to include budget preparation, property accounting and control, and other accounting department operations since it was designed originally to generate regular government budget and accounting reports. The task force started to revise the software package in 1998, changing software orientation from accounting reports generation to the accounting departments, in response to complaints filed by the various accounting departments. The goal of the software is to help the DGBAS implement a new centralized budget and accounting information systems to facilitate budget preparation, execution and evaluation activities. Therefore, the revised software package will be an integrated information system that will include budget preparation, accounting transaction processing, disbursement operations and property control accounting for the accounting departments and offices for all government organizations. This software is currently in the designing stage.

4.2. Self-development by the organizations

A few organizations attempted to develop their own budget and accounting system for itself and general government accounting system. However, to development such a system, the project teams have generally found that the government accounting information system is so complex and cumbersome that the professionals should devote many efforts to study the special accounting system with various laws and regulations. The government budget, accounting regulations and operating procedures served as a major challenge to the development project team for the software development. The given accounting items and their coding scheme were also problematic for the software design teams. As a result, only a few organizations adopted the approach.

As an example, we will review the NCTU. A president of the NCTU found that the accounting office could not provide sufficient accounting information for him to make more rational decisions. As such, he decided to set up a team to develop the accounting information systems. The project team members included a project leader, who is one of the authors and has served in the DGBAS for three years, and members from accounting office (users) and management science department (developers) of the NCTU. The team adopted the conventional systems development life cycle (SDLC) methods to develop the systems, and had a weekly meeting to discuss the progress. The team used the accounting items defined by the DGBAS as the base to identify the required low-level accounts. For instance, items of water, electricity and gas expense were identified under the original accounting item of general consumer expense. The team also simplified the coding scheme and created a conversion mechanism that would transform the simplified codes into the DGBAS long codes to produce required reports for the DGBAS. The most time-consuming task during the development stage was designing programs to generate the regular reports for the DGBAS.

The system was implemented a year later, satisfying both the information requirements of the president of the NCTU and the DBGAS.

4.3. Using dual accounting information systems

Several organizations developed their own accounting systems before the DGBAS provided a software package. However, these systems only provided limited government accounting reports and most regular government reports had to be generated manually by the accounting department. Therefore, numerous organizations attempted to use their original accounting system in addition to the DGBAS software package to simultaneously satisfying the distinct information requirements. The rationale of the dual accounting information systems is that they may provide required accounting information for itself by original system and provide general government reports through the DGBAS accounting package.

The accounting systems developed by such organizations have considered the accounting items and transaction processing of the general government accounting systems. If they can develop a conversion mechanism to transform their accounting items and transactions to those of general government, then they can convert their accounting tables (files) from their databases to tables (files) of the package and then all the reports will be generated from the package.

The dual accounting system approach may be the most feasible for government organizations. Using package software provided by DGBAS has a limited capacity to provide accounting information for individual organizations. Self-developed accounting systems that can satisfy simultaneously the requirements of the DGBAS and organization are costly. Therefore, the organization can designing an accounting system that include an interface between their system and the package, then the accounting requirements from their organization and general government will be simultaneously satisfied.

5. Conclusion

The central government of Taiwan depends on comprehensive budget and accounting information provided by the DGBAS for policy making process, and the Premier along with the DBGAS Director-General have to report the central government budget proposals to the Congress. DGBAS has developed the centralized budget and accounting system to support the national resource allocation, execution and control process. There were some impacts of the DGBAS on national budget reallocation process in recent years (DGBAS, 2001d). The Taiwanese government has set up a six-year national development plan to maintain economic growth in the early 1990s. This contributed to radical increase in expenditures and public debt. The budget preparation process has been reviewed by DBGAS and then transferred to the Executive Yuan to reevaluate. As a result, the plan was revised and the pace of public debt has slowed, and then the central government could raise funds required to carry out other important policies and programs in the later 1990s, such as the national health insurance system and now to social welfare.

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