CHAPTER 3
LINKING POLICY, PLANNING AND BUDGETING IN A MEDIUM-TERM FRAMEWORK

I have so often maintained it in this House that I am almost ashamed to repeat it, but unfortunately it is not a principle which has yet entered into public opinion - expenditure depends on policy.

Disraeli to UK House of Commons in 1862, Quoted in Heclo, 1981

This chapter deals with linking policy, planning and budgeting across the whole of government and at a sectoral level. The chapter provides guidance on institutional mechanisms that facilitate the allocation of resources to achieve strategic objectives. Affordability must influence policy making and planning at the point when the decision is made. Where adjustment is required to deal with changing macroeconomic conditions and, even more particularly, changing priorities, that adjustment needs to take place through policy change to be sustainable. A medium-term approach that encompasses all expenditure provides a linking framework and facilitates the management of policies and budget realities to reduce pressure throughout the whole budget cycle. The result is better control of expenditure and greater efficiency and effectiveness in implementing policies, programs and projects. This chapter provides guidance on approaches to some of these issues and improving these linkages throughout the full cycle of policy, planning and budgeting (Figure 3.1).

WEAKNESSES THAT PRODUCE POOR BUDGETING OUTCOMES

Failure to link policy, planning and budgeting may be the single most important factor contributing to poor budgeting outcomes at the macro, strategic and operational levels in developing countries. In many countries, the systems are fragmented. Policy making, planning and budgeting take place independently of each other. Planning is often confined to investment activities, which in many developing countries refers to a series of donor-funded projects. Capital expenditures are already largely accounted for through the planning process, and a large portion of recurrent expenditures are pre-committed to the wage bill. For this reason, annual budgeting is reduced to allocating resources thinly across donor and domestically funded “investment” projects and to the nonwage portion of the recurrent budget. In addition, line agencies tend to budget and spend on an ad hoc basis because even small discretionray allocations are rarely predictable.

Unpredictability of funding, from one year to the next and within the budget year, is one of many factors that contribute to the poor operational (level 3) performance of public sectors. Others that are related to the budget are the failure to direct resources to policy priorities - in significant part because budgeting is treated as an annual funding exercise, not a policy-based exercise - and the lack of authority and responsibility given to line managers to manage resources at their disposal. Other weaknesses lie largely outside the budget. Box 5.8 in chapter 5 elaborates on the range of disincentives for sound operational performance.
In the absence of effective decision-making processes, policy making and planning are disconnected from each other and from budgeting, and they are not constrained by resource availability or by strategic priorities. Overall, this leads to a massive mismatch between what is promised through government policies and what is affordable. The annual budgeting process therefore becomes more about scrambling to keep things afloat, rather than allocating resources on the basis of clear policy choices to achieve strategic objectives.

**LINKING POLICY, PLANNING AND BUDGETING IN THE PLANNING AND RESOURCE MANAGEMENT CYCLE**

Integrated policy, planning and budgeting is fundamentally about having expenditure programs that are driven by policy priorities and disciplined by budget realities. The challenge is to manage the tension between "needs" and "availabilities" more effectively (Box 3.1). A medium-term approach provides such a linking framework and facilitates the management of the tension between policy and budget realities to reduce pressure throughout the whole budget cycle.
In many countries, budgeting has been undermined by the “needs” rather than "availability" psychology of the budget actors. While finance ministries stress "availability" (the revenues it expects to be forthcoming from domestic and external sources), line ministries persist in basing budget proposals on "needs." The result is a negative-sum budget process that undermines macroeconomic stability and program and project effectiveness.

These conflicting perspectives are understandable. The Finance Ministry is constantly battling weak domestic revenues, the debt servicing burden and mounting claims on budget resources. Since it has responsibility for the macroeconomic consequences of fiscal deficits, the MOF has no alternative but to preach the “availability” message through tight budget ceilings. If a satisfactory budget cannot be prepared, it remakes the budget during implementation through the release of funds mechanism, at a high cost to project and program efficiency. Line ministries build/inherit commitments they lack the resources to meet, yet must daily confront the consequences of inadequate allocations. Population growth, the running costs of newly completed projects, and unforeseen crises further pressure slender budgets. Budget bids are submitted two to three times over finance ministry ceilings. When requested to concentrate resources on priority programs, departments answer they have no mandate to cut service. Privately, they fear that to submit a lower bid within the ceiling would make them vulnerable to further cuts. The debate about "needs" makes no connection with using existing program allocations more efficiently.

In countries where the gap between commitments and resources is so large, a satisfactory reduction is unlikely to come within the tight perspective of the annual budget. A more fundamental restructuring of public expenditure has to take place engaging finance, planning, line ministries and Cabinet (because intersectoral trade-offs have to be faced) in a process that has a medium-term perspective. Donors, too, need to be involved because of their heavy contribution to budget financing. “Availability,” both domestic and aid, must be projected beyond a single year, and indicative shares communicated to departments. “Needs” must be prioritized and made consistent with the resource framework. All this must happen in a manner that encourages departments to re-examine commitments and their resourcing with central ministries in a more cooperative framework.

Future resource allocations based on a specific policy mix will be more predictable where a medium-term framework enforces discipline. Predictability allows line departments to plan and manage resources more efficiently within the time frame of the annual budget cycle and over the longer term. The result is better control of public expenditures and better value for money within a hard constraint.

Increasing predictability of resource flows and the criteria by which funding decisions are made are the objective of the medium-term approach. In many developing countries, the resource allocation process is plagued by uncertainty, much of which is self-inflicted. The common tendency to make overly optimistic revenue projections is one example of how governments themselves increase the uncertainty of resource flows (Box 2.1 in Chapter 2). The complete mismatch between policy decisions and available resources is another source of uncertainty, again self-inflicted because it could be avoided by implementing a rigorous process that links policy making, planning and budgeting (Box 3.2).
BOX 3.2
MISMATCH BETWEEN POLICY GOALS AND EXPENDITURE
ALLOCATIONS IN GUINEA

A 1996 public expenditure review in Guinea revealed a complete mismatch between the stated policy priorities of the government and actual priorities based on expenditure allocation. Although the government has designated primary education, public health and road maintenance as priorities, funds often end up being allocated to other areas instead. There is no system for costing out policy proposals or subjecting them to rigorous scrutiny. An exercise to cost out the policy mix needed to meet the government’s stated priorities revealed that the share of priority programs in total spending would need to triple over the succeeding four years implying drastic cuts in other expenditures in order to remain within the budget constraint. Related to this finding, the report also showed that actual allocations to meet the recurrent costs of investment projects fell far short of what would be required for adequate operation and maintenance.

Based on the findings and recommendations of the PER, the Government of Guinea has recently launched an initiative to define affordable policies. Four line ministries are already revising their medium-term policies and costing out their implementation. Government is also working on preparing an MTEF for the four ministries (initially) in the context of its economic reform program, and central ministries are preparing a macroeconomic policy document to assist cabinet in intersectoral allocation decisions. Finally, the Ministry of Plan has taken steps to improve the predictability of the macroeconomic framework.


Key to increasing predictability and strengthening the links between policy, planning and budgeting is an effective forum at the center of government and associated institutional mechanisms that facilitate the making and enforcement of strategic resource allocation decisions. These central features of the MTEF were captured by the South African Minister for Finance in his 1998 budget speech (Box 3.3).

BOX 3.3
SOUTH AFRICA’S MTEF

In his 1998 Budget Speech, the South African Finance Minister emphasized that the reasons for adopting a MTEF were numerous:

1. To facilitate political decision making,
2. To develop cooperative governance,
3. To improve the efficiency of the public sector,
4. To create a more predictable environment within which public sector organizations could raise the quality of their services to citizens.

Institutional Mechanisms to Facilitate Strategic Decision Making
Strategic resource allocation moves policy, planning and budgeting into the nexus of politics and administration. An important factor in ensuring that policy, planning and budgeting are linked is an effective forum at the center of government to make strategic decisions on the basis of budget realities. An effective decision making forum is not only more likely to produce fiscally sound resource allocation decisions, but also ensures that those decisions have legitimacy and are therefore more likely to be properly implemented. An effective decision making forum demands information to facilitate the decision-making process, which improves the quality of the decision and increases accountability for results and transparency. In most countries, this strategic decision making forum is the Cabinet or the Council of Ministers. Since decisions at this top level of government are made on the basis of political and administrative imperatives, it becomes a difficult level to constrain. Nevertheless, rigorous institutional mechanisms at the center of government can help to restrain policy making within the realm of the affordable by providing technical support and information, and establishing and enforcing a set of procedures that enhance the rigor of decision making. Similar institutional arrangements are needed at the sector level as well to restrain strategic decision making and to promote effective implementation at the operational level.

Key mechanisms that promote strategic decision making by core decision making bodies are those that:

- promote consultation and debate on policy issues;
- promote transparency and accountability;
- promote decision making that is underpinned by resource availability;
- help manage and sequence the process for policy considerations by Cabinet.

Box 3.4 describes how Australia has adopted some of these mechanisms to enhance the quality of policy making.

The key lessons from the Australian experience in the 1980s are: policy change is the key to adjustment (not funding change as had been the practice in the past and continues to be the practice in most countries); a hard, top-down aggregate budget constraint plays an essential role; estimates are needed on the cost of government policies and programs beyond the budget year; institutional mechanisms are needed at the center of government to enable and demand that government reprioritize and reallocate resources based on priorities; and greater predictability of funding does contribute to improved operational performance.

**Mechanisms to promote consultation and debate.** These mechanisms enhance strategic decision making by ensuring that all policy options are considered before choosing the most cost-effective option. They also ensure that policies are predictable and also contestable - an important principle of effective resource management. Furthermore, they help to improve quality at the policy design stage as well as effectiveness at the implementation stage. To develop such consultation mechanisms, technical consultation procedures need to be institutionalized (i.e., rules have to be established and enforced) to ensure that policy proposals have been adequately debated among all stakeholders prior to submission to the Cabinet.

Procedures must also be in place to ensure that all affected line ministries sign off on policy proposals and are fully aware of the implications of the decisions they are supporting. The administrative unit supporting the central decision making forum (e.g., a Cabinet
secretariat supporting the Cabinet) can promote horizontal consultations by developing strong formal and informal linkages with line ministries and other central agencies through formal liaison officer
BOX 3.4
AUSTRALIA’S MECHANISMS FOR TRANSPARENT, COMPETITIVE, AND RESULTS-ORIENTED POLICY MAKING

One of the main objectives of Australia’s public sector reforms has been to institute a process for disciplining and coordinating policies and exposing them to vigorous debate. Some of the challenges the Labor government faced when it came to power in the early 1980s were similar to those confronting many developing countries today. The new government had to manage both an immediate fiscal crisis and the unsustainable, long-term fiscal commitments of previous policies.

To discipline policy formulation and win political support for a resetting of national strategic priorities, the new administration decided to publish estimates of future spending under existing policies. These projections painted a bleak picture of unsustainable real growth in spending requirements, underscoring the need to scale back. Once the government had published these estimates, however, it became incumbent upon the government to continue to do so, and to illustrate continuous declines in future commitments that it had promised.

The reforms also required the government to publish reconciliation tables, showing how projections for existing policies differed from those for the new policies. These measures helped to make apparent the changes in the government’s strategic priorities as well as in the medium-term costs of new commitments. In addition, the projections made resource flows to the line ministries more predictable, since the projected figures were automatically rolled over into the actual budget if no changes in policy intervened. This helped improve decision making and the operational efficiency of line agencies.

The reforms also required that line ministries proposing a new policy, or changes in existing policy that would increase spending, also proposed offsetting savings. This ensured that spending stayed within the resource envelope agreed to in the Cabinet. The Cabinet focused on changes in strategic priorities - which new policies to adopt and which existing ones to cut - to stay within macroeconomic constraints. Policy proposals were debated vigorously within the Cabinet, and all affected ministries and agencies were required to submit written comments on the sources of their agencies’ proposals. This helped legitimize and build consensus on policy priorities. Finally, the reforms focused attention on results, through mandated periodic evaluation of new and existing policies and through reporting on performance and outcomes.

The results? Australia’s deficit of four percent of GDP in 1983 became a surplus by the end of the decade. Accompanying this achievement were significant changes in the composition of public expenditures, reflecting both broad strategic shifts identified by the Cabinet and changes in priorities within ministries, often identified by the line agencies themselves.


roles, establishment of intersectoral policy groups and informal networks. Box 3.5 shows how a Bank-supported initiative can grow into an institutionalized process for transparent consultation and consensus building with the wider civil society.

All parties need to understand the need for: (a) persistence through successive annual cycles; (b) a strengthening of the financial administration and information systems; and for parallel efforts to strengthen macro and sector analysis.
BOX 3.5
FROM JOURNEES DE REFLEXION TO AN INSTITUTIONALIZED CONSULTATION PROCESS

In February 1993, the World Bank’s Sahel team undertook a four-day-long workshop, Journees de Reflexion, in Mali. It involved 75 participants on the Malian side (consisting of almost every minister, some deputies and assistants, union representatives and journalists) and 16 from the Bank side. Free discussion took place on a range of issues touching upon virtually every aspect of Mali’s development. The basic idea of the workshop was to develop the building blocks of an agenda for reform, which was to be undertaken by the then newly elected government. The Prime Minister presided over the meeting, which was conducted in an atmosphere of openness on both sides. For the first time, a number of issues fundamental to the development agenda were, if not reconciled, at least brought to the knowledge of all participants. It became clear that Cabinet Ministers themselves were not in agreement either about the role of the state, or the best direction to take for reform. Nor, surprisingly, were most of them aware of the exact nature of the crisis facing their country. One important benefit of this first dialogue was that it improved communications (a first step towards building consensus) not only between the Bank and the government but equally within the government itself.

That first step has now turned into an institutionalized system of broad-based consultation conducted on an annual basis. The New York Times reported in a January 1998 article that Mali has instituted a public forum, held once a year, in which citizens from all walks of life are allowed to question the country’s leadership on any subject. The proceedings are broadcast live (an important element of transparency) and listenership is reported to be nearly universal.


While the discussion so far has focused on policy making during the budget process, it is equally important (and often more important given the tendency to focus budgeting on funding not policy) to ensure that policy proposals that come up outside the budget context be subject to the same rigorous scrutiny discussed in this and the preceding two subsections. A characteristic of developing countries, particularly those heavily dependent on project aid, is that it is far easier to get new policies on the books than to remove old ones. As a minimum, how the policy will be funded within the aggregate resource constraint must be addressed. (Will offsetting savings be required, will funding be deferred until the next budget round, will it be an add-on, with the reallocations to be dealt with in the next budget round?) The Ministry of Finance (Budget Office) must be required to endorse the costing estimates over the medium term; and the proposal must indicate the expected impact and what success will look like.

Mechanisms to promote transparency and accountability. Availability of information is fundamental to promoting transparency and accountability. The institutional mechanisms surrounding core decisions should be set up so that the decision making forum demands timely and detailed information be brought to bear in decision making. For example, Cabinets can require submission of performance reviews of individual programs as key pieces of information to be considered in the resource allocation process for the next year. Improvements in accounting and auditing systems, specification and utilization of performance
measures at the program and activity level, and enforcement of rules that require timely publication of information need to be in place for transparency and therefore to enhance accountability. Some rules emphasizing timely publication of information also help to enhance the accountability and credibility of the Cabinet. For example, Australia’s rules mandating publication of reconciliation tables of forward estimates and actual appropriations provides information to hold government accountable for its decisions and, when divergence between the two is minimal, increases the credibility of Cabinet-approved forward estimates.

**Mechanisms to restrain decision making by resource availability.** This involves introducing mechanisms that help translate political vision into strategic policy choices within an affordable financial envelope. Countries such as New Zealand have legislation in place to ensure that this happens (Box 3.6). However, this involves introducing institutional mechanisms that make the costs and benefits of competing policies transparent. Much of this (e.g., costing out policies, etc.) involves the mechanics of developing MTEFs. With decision making, however, it is particularly important to ensure that Cabinet submissions are formally aligned with the budget and expenditure planning time frame and that financial consideration issues (cost of policy options, estimated cost of each option over the medium term and at maturity, already budgeted expenditure and additional requirements, possible savings, etc.) are explicitly addressed in the submission to Cabinet. Simultaneously, there must be capacity at the center to evaluate the policy options that come up from sector ministries to ensure that they fall within aggregate fiscal constraints.

**BOX 3.6 NEW ZEALAND’S FISCAL RESPONSIBILITY ACT**

The Fiscal Responsibility Act, enacted into law in 1994, offers a comprehensive legal framework for the formulation and conduct of fiscal policy, in general, and for incorporating a long-term orientation to the budget process, in particular. Many countries have similar practices, but New Zealand represents one of the few examples where these practices have been formalized into law.

The primary objective of the Act is to entrench sound fiscal policies and make it difficult for future governments to deviate from them. This is done through the two main provisions of the act.

The first main provision involves setting fiscal objectives in a two-step process by requiring adherence to “Principles of Responsible Fiscal Management” and mandating preparation of an annual Budget Policy Statement by government. The "Principles of Responsible Fiscal Management” mandate that debt, spending and taxation be maintained at “prudent” levels. Any deviation from the principles requires explanation by the Minister of Finance as well as an explanation as to how and when government will return to the principles. The Budget Policy Statement requirement, obligates government to make an annual statement of fiscal intentions for the next three years and their long-term fiscal objectives, as well as the consistency of fiscal intentions and objectives with the "Principles of Responsible Fiscal Management."


**Mechanisms to manage and sequence the process for policy consideration by the Cabinet.** The sequence in which the Cabinet considers policies/expenditures is important and requires significant inputs from line ministers and several core agencies (e.g., finance,
planning, cabinet secretariat) as well as effective coordination among them. Generally, there has to be a process to plan submissions to Cabinet to prevent overload and log-jams, to enforce use of an agreed format for Cabinet submissions and to monitor implementation of Cabinet decisions.

In addition, there must be a system in place to ensure that decisions on aggregate expenditure and revenue targets, and on broad principles of government policy precede the consideration of detailed expenditure proposals. Forward projections should be prepared at the policy and program level and should be reviewed by the Cabinet before the next annual budget is considered in detail. Once high levels agree upon broad allocations, lower levels can be entrusted with the details. Appropriate intervals must separate the stages.

Line agencies should receive broad guidelines in time to reflect them in their proposals. Otherwise, strategic issues are set aside in the rush to complete the detailed annual budget before the fiscal year ends. This situation arose recently in Malawi when, during the 1997-98 budget round, there were delays in communicating budget ceilings to sector ministries. This led ministries and agencies to revert to line-item-focused budget estimates.

The central agencies need to prepare the initial framework paper, which would review the economic and fiscal situation and prospects, propose aggregate fiscal targets for the planning/budget period, identify key strategic and policy issues, and propose sector allocations for line agencies to use in framing their own proposals. Coordination is needed where responsibilities are divided between finance and planning ministries to generate joint submission to Cabinet at the beginning of the cycle and to collaborate in the review of line agency proposals.

Developing and Implementing a Medium-Term Framework

Developing and implementing a medium-term framework for linking policy, planning and budgeting can be accomplished progressively at a pace that fits a country’s capacities. Some countries (e.g., South Africa, Uganda) began by developing an overall medium-term framework for allocating resources between sectors through a top-down approach carried out by the Ministry of Finance. Others (e.g., Malawi) began with a more bottom-up approach, focusing first on developing MTEFs at the sector level to govern resource allocation within individual sectors.

Countries often choose to begin at the sector level because this represents a manageable change from the status quo. However, this approach should only be viewed as a building block to achieving a comprehensive medium-term approach. In the case of Pakistan, the sector approach has proven an important catalyst for focusing attention on government-wide systems and processes.

Many of the potential gains at the sector level, however, cannot be realized until the sector approach is combined with a central overall planning, resource allocation and budgeting system that supports a better balance between policies and resources at the intersectoral level. Furthermore, too much dependence on a sector focus can limit opportunities for responses that go beyond the sector. For example, the most effective health sector response might lie in the water sector, yet consideration of this could be excluded through a sector approach confined to health.
Similarly, a framework to allocate resources between sectors can only be fully effective when it is complemented by a similar system for resource allocation within sectors and by information generated by sector ministries themselves. The ideal, therefore, is to develop a medium-term approach to decision making and resource allocation across the whole of government that combines top-down and bottom-up decision making for expenditure allocation. Clearly, medium-term expenditure planning at the sector and government-wide level are linked. Necessary components of government-wide planning include sector (and program) information, a sense of what is affordable, and a mechanism to resolve the tension between the two and to set priorities inter- and intrasectorally. For either form of MTEF, development will take a number of years because the MTEF needs to encompass all expenditure.

The next two sections discuss sector and whole of government approaches to linking policy making, planning and budgeting in a medium-term framework.

**LINKING SECTOR LEVEL POLICY, PLANNING AND BUDGETING**

Years of short-term planning for annual budgets and hand-to-mouth adjustments during the budget year have led to accumulated overcommitments and inefficiencies at the operational level. The separation of policy making, planning and budgeting so often in evidence at the center of government is replicated at the sector level. The requirement, therefore, is to create enough certainty so that line ministries and agencies can plan ahead, have the incentives to do so, and have better information on which to base strategic and operational decisions. In other words, it requires, at its core, the development and effective implementation of a comprehensive MTEF. However, integrating planning, policy and budgeting at the sectoral level through sectoral MTEF’s could result in significant gains and could be the foundation of a comprehensive MTEF. The example of Malawi (Box 3.7) is a case in point, where the reform process began with the implementation of MTEF’s in selected pilot sectors and was then progressively expanded to become comprehensive. Defining and implementing a sectoral MTEF involves preparing estimates of overall resource availability, reviewing financing mechanisms, and preparing prioritized government spending plans. This is clearly not a one-off process. Rather it is iterative and must take into account, on a periodic basis, changes in sectoral needs and priorities and changes in the overall resource envelope.

**Important Steps in Sector Level MTEFs**

**Conduct sector review and agree on sector objectives and policies.** This is the first stage of developing a sectoral MTEF. At the outset, a clear vision for the sector has to be agreed. Ideally, this should be derived through a combined bottom-up/top-down process so that there is buy-in at the political level as well as across all technical levels. With the sector vision in hand, sectoral priorities need to be identified and/or revised. Sector reviews are helpful in this regard. They assess which activities are pertinent to the achievement of sector goals. The starting point of the sector review is to question whether government has a policy responsibility at all or whether a specific policy and associated activities should be left to the private sector and/or civil society. If government does have a policy responsibility, an important follow-up question is whether the appropriate instrument for implementing the policy is the budget. Next is the definition of the goal and objectives of the sectoral ministries and agencies,
including the outputs to be produced and the specific activities to achieve the outputs and thus the objectives. Getting final agreement on sectoral priorities can, however, be a difficult task and needs to be handled carefully. Inevitably, each subsectoral grouping within the sector is likely to view its own activities as being as important as, if not more important than, others. Mechanisms therefore need to be in place to debate and resolve disagreements that arise among different sector players regarding relative priorities among sectoral activities. Fundamental questions about whether government has any particular role in a sector will almost certainly require a decision at the center of government. Figure 3.2 identifies the full range of decisions that government should consider on intervention and delivery mechanisms.

---

**BOX 3.7**

**THE FIRST MTEF EXPERIENCE IN MALAWI**

In 1995, the Government of Malawi decided to adopt a medium-term expenditure framework (MTEF) in response to increasing fiscal imbalances. The four largest spending ministries, education, health, works and agriculture, together with the police, piloted implementation of the MTEF in the 1996/97 budget year. The pilot was confined to the recurrent budget, and within that to nonwage and salary recurrent expenditure. The rationale for this was that the real test of the government’s priorities was to be found in spending in this latter category. For the 1997/98 budget, the exercise was extended to 12 ministries and, at the sector level, there was an effort to integrate recurrent and development expenditure. For the 1998/99 budget, the MTEF will be extended to all remaining sectors. Recurrent and development expenditure will be integrated and estimates will be prepared for the budget year plus the three outer years.

The objectives of the Malawi MTEF are to link medium-term, or strategic, planning and the annual budget process in such a way as to restructure recurrent and development expenditures in line with clearly established priorities and available resources. Restructuring will be achieved through a top-down process of allocating resources between sectors based on relative priorities, and a bottom-up process of identifying the actual costs of policies and strategies in each sector.

So far, the participating ministries have taken an integrated sector approach to planning involving:

- reviewing and defining sectoral objectives and policies;
- identifying activities needed to implement sectoral policies (For some ministries, this involved a radical restructuring of budget classification. For example, the Ministry of Health and Population divided hospital services into several programs according to type of services or activities such as preventive and curative services.);
- estimating the actual costs of providing these services;
- identifying activities that can be scaled back or stopped to fit within expenditure ceilings.

Progress at the sector level is already evident. Linking policy objectives and costings is underway although progress have been uneven across the pilot sectors. There is a clear understanding, particularly among the four initial pilot ministries, of the objectives of the MTEF and unanimous agreement that this is the way to move forward. The most obvious improvements are in the much clearer articulation of programs and their costs and in the start on re-prioritization and removal of unnecessary duplication.

Building on the initial progress, subsequent rounds of MTEF implementation will need to focus on issues:

- maintaining ownership of the MTEF process and building upon the involvement of budget managers to develop their sense of responsibility for budget implementation and management;
• developing a reliable medium-term resource framework so as to plan for macroeconomic stability;
• strengthening the links between the MTEF exercise and the annual budget process and embedding the MTEF in the work of the Ministry of Finance;
• incorporating aid into the MTEF exercise;
• addressing the need for institutional mechanisms at the center of government to discipline policy making by affordability and enhancing predictability of resource flows by preparing and abiding by forward estimates (This will help convince sector ministries of the usefulness of the MTEF.).
Figure 3.2
PUBLIC MANAGEMENT: INTERVENTION AND GOVERNANCE
Define sector resource envelope. Defining the total quantum of resources available to the sector should be as comprehensive as possible. Ideally, it should include resources available to the sector from tax revenue, donors, fee income, voluntary organizations, and private companies.\(^1\) While there is uncertainty associated with making medium-term resource projections, efforts have to be made to eliminate self-inflicted uncertainties. This is where the sector approach is weakest. Without a whole-of-government MTEF that facilitates determination of intersectoral allocations, the uncertainties of the sector resource envelope are magnified.

Assess costs and expenditure implications of policies and develop a MTEF. Decision makers need to assess the possible expenditure implications of policies, using the sectoral policy priorities developed through the sector review process. In carrying out a cost assessment, a good starting point is to work out what existing policies would cost if fully funded, i.e., if facilities were adequately maintained, if staff were paid a reasonable minimum salary, and if essential complementary inputs were provided. This costing, aggregated across the sector, yields an estimate of the total requirements within each sector, based on actual costs rather than a percentage increase on the previous years’ estimate. This cost analysis is then reviewed in relation to the policy priorities developed in the sector review and the overall resource envelope that was defined for the sector. Further adjustments may need to be made to ensure that the medium-term expenditure plan that results falls within the constraints of the resource framework.

Medium-term spending projections are useful for these reasons. First of all, they are necessary to demonstrate the desired direction of change. In the absence of a medium-term plan, rapid spending adjustments to reflect changing circumstances will tend to be across-the-board and ad hoc, focused on inputs and that which can be cut in the short term. If they are not policy based, they will not be sustained. By illuminating the expenditure implications of current policy decisions on future years’ budgets, medium-term spending projections also enable governments to evaluate cost-effectiveness and to determine whether they are attempting more than they can afford. An MTEF also forces government to confront key organizational questions, e.g., should a service be contracted out to the private sector or civil society? devolved to a lower level of government? provided by central government?

Focus on overall expenditures for the whole sector. Sectoral MTEFs should cover all activities and organizations in the sector and focus should be on overall expenditures (not capital and recurrent expenditures separately). A coherent set of policies, programs and activities for the entire sector needs to be looked at together. In the education sector, for example, all three subsectors of primary, secondary and tertiary should have to compete for priority and, hence, resources. Emphasizing unity of the budget increases discipline in resource allocation decisions and injects greater realism and predictability into the budget process. In doing so, it helps to achieve greater conjunction between what is promised by government policies and what is affordable in the short run and over the medium term. The Government of Malawi developed an education simulation model in the first year of its MTEF to project the

\(^1\) Other sources of resources should also be considered depending on the sector. For example, the health sector should attempt to assess the resource flow from different forms of health insurance.
financial resources (capital and recurrent) required to pursue objectives by implementing various education policies and programs.

Experience shows that tensions often arise when defining what constitutes the sector and drawing sector boundaries. Mechanisms must be introduced to resolve the issue early on and quickly because the sector approach requires focusing on the whole sector. Even where, for practical purposes, reviews are focused more narrowly, the wider sectoral policy issues must be addressed.

**The role of foreign aid.** In many aid-dependent countries, there is a high degree of separation between aid and domestic policy, and management and budgeting. Sector MTEF’s seek to eliminate that separation by emphasizing all activities (regardless of source of financing) and overall expenditures. In heavily aid dependent countries, failure to include donor-financed activities under the sector MTEF will render the framework completely meaningless. Because of this, MTEFs are particularly relevant in the context of Sector Investment Programs (SIPs) or Sector Wide Approaches (SWAPs). SIPs/SWAPs are gaining increasing support from donors in part because of the mounting evidence of the fragmentation caused by multiple donor projects. Box 3.8 provides a general characterization of SIPs. SIPs have become particularly popular in Africa (Box 3.9) as a mechanism through which all government and donor funding for a given sector are brought together under one strategic resource allocation process.

**BOX 3.8**
**SECTOR INVESTMENT PROGRAMS (SIPs)**

Linking planning, policy and budgeting at the sector level is taking place across most regions of the world. In Africa, this approach is the basis upon which sector investment programs (SIP) are formulated. A SIP is the sum total of a country’s medium-term public sector development activities in a given sector. It has the following main features:

- It must be sector wide.
- It must be based on a clear sector strategy and policy framework.
- Government must be fully in charge.
- All main donors must agree to and participate in financing.
- Implementation arrangements must if possible be common to all Financiers.
- Local capacity, not long-term technical assistance, must be relied on as much as possible.
- A SIP must move away from the distinction between recurrent and capital expenditure and focus on overall expenditures.

Donor acceptance of the discipline of a sector-wide approach will be crucial for success.

**Develop mechanisms to facilitate resource shifts when priorities change.** Mechanisms must also be in place to facilitate a shift in resources when policies change from lower to higher priorities or vice versa. Such mechanisms include decision making fora where strategic decisions are made as well as rules that ensure that full information is brought to bear on decision making. Sectoral decisions are made at a number of levels (the whole sector, individual ministries and agencies, etc.). Each is
constrained by the decisions made at the higher level but should, at the same time, have the flexibility to make strategic choices within the limits of the imposed constraints.

At the highest level, to repeat the earlier point about the centrality of the whole-of-government MTEF, broad sector priorities have to be determined and then reflected in resource allocation decisions within a sector ceiling that is imposed at the government-wide level (usually by the Cabinet or the Council of Ministers). Sector leaders making intrasectoral decisions have flexibility in the decisions they make, but they are also restrained by a hard budget constraint as well as by the need to ensure that sector spending priorities are consistent with the fiscal objectives of the government. Each subsequent level operates similarly to maximize strategic priorities within limits.

**BOX 3.9
AN AGRICULTURAL SIP IN ZAMBIA**

The 1995 Budget Brief of the Minister for Agriculture noted that, in the past, the government of Zambia was faced with a fragmented project approach to development in agriculture. There were over 180 ongoing projects and a large number of donors. Each of the projects had different objectives, often different from Zambia's overall sectoral objectives. Government has now moved to a more integrated program approach that provides a much more realistic link between policies and resources. All donor assistance will be coordinated with this program approach.

Government has developed a set of subprograms that encompass all subsectors of agriculture. The approach is called the Agricultural Sector Invest Program (ASIP). The ASIP reduces the fragmentation of donor-supported projects, thereby improving the effectiveness of development assistance. The reform aims to increase efficiency, ownership, capacity building and sustainability. The ASIP differs from the traditional project in several ways. The ASIP:

- covers the entire country's agricultural sector;
- has been prepared by a Zambian Task Force representing the public and private sectors;
- is being implemented within the ministry's existing institutional framework at the subprogram unit level;
- standardizes donor implementation procedures for procurement, reporting, accounting and auditing;
- uses long-term expatriate technical assistance only when requested by ASIP implementors;
- is embedded in individual public sector agricultural reforms aimed at decentralization and beneficiary participation.

Particular attention is being paid to building capacity and sustainability through a strong Zambian management team. What will need to be watched are the risks associated with complex project design and over reliance on long-term technical assistance.

The program emphasis is on high priority investment in the public and private sectors as well as on key policy and institutional reforms. Among government's long-term objectives is to significantly expand the sector's contribution to the national balance of payments by expanding agricultural exports.

When priorities change, decisions relating to associated resource shifts are made in such fora. For example, alternative service delivery arrangements, elimination of whole programs and activities as well as making "policy" adjustments such as higher pupil: teacher
ratios could be considered. Annex E in Part II provides an example of an approach to education in Malawi where “policy” variables were manipulated.

**LINKING POLICY, PLANNING AND BUDGETING AT THE GOVERNMENT-WIDE LEVEL:
A COMPREHENSIVE MEDIUM-TERM EXPENDITURE FRAMEWORK**

An MTEF is a whole-of-government strategic policy and expenditure framework within which ministers and line ministries are provided with greater responsibility for resource allocation decisions and resource use. The key to a successful MTEF is that institutional mechanisms assist and require relevant decision makers to balance what is affordable in aggregate against the policy priorities of the country. The MTEF consists of a top-down resource envelope, a bottom-up estimation of the current and medium-term costs of existing policy and, ultimately, the matching of these costs with available resources. The matching of costs should normally occur in the context of the annual budget process, which should focus on the need for policy change to reflect changing macroeconomic conditions as well as changes in strategic priorities of the government. Conservatively defining the medium-term aggregate resource envelope should help change the psychology of budgeting from a “needs” to an “availability” mentality as well as enhance the predictability of resource flows and policy over the medium and short term. The components of the Australian system are outlined in Annex F, Part II.

The objectives of an MTEF are to:

- improve macroeconomic balance by developing a consistent and realistic resource framework;
- improve the allocation of resources to strategic priorities between and within sectors;
- increase commitment to predictability of both policy and funding so that ministries can plan ahead and programs can be sustained;
- provide line agencies with a hard budget constraint and increased autonomy, thereby increasing incentives for efficient and effective use of funds.

The approach to building an MTEF will depend on the conditions in the particular country. The more unstable fiscal policy is, the more out of balance are available resources and policy, program and project demands. The less integrated policy making, planning, and budgeting are, the more budget making is focused on funding. The more unsustainable particular categories of expenditure are (e.g., wages and salaries, pension, interest payments) the longer it will take to put in place a credible MTEF. In fact, where these conditions exist, it is likely that a significant one-off adjustment of expenditures may be required before an MTEF can be expected to deliver.

Where significant imbalances exist, there is a case for aggressively employing top-down expenditure ceilings and providing such ceilings for the period covered by the MTEF. However, the very nature of the uncertainties confronting countries with such imbalances means that forward year ceilings will be, at best, indicative. Sector level managers must understand that the ceilings will be reset during each annual budget cycle to reflect changing
macroeconomic conditions and policy priorities (and, more simply, better information). The contribution of an MTEF to improving budgetary outcomes will depend on the ceilings delivering greater predictability than the current arrangements. Therefore, ceilings should be set conservatively. Budget decision making must shift as quickly as possible to being policy driven and away from being funding driven. For the annual budget, sectoral ceilings should be set after key strategic policy decisions are made at the center of government (Cabinet, Council of Ministers, President). These ceilings, in turn, must be provided to sectors in sufficient time for the minister and officials to be able to reprioritize on a programmatic basis.

Serious and sustainable reprioritization and reallocation will not occur so long as the focus is on inputs by economic type (wages and salary bill, operations and maintenance, "development" investment, interest). To engage policy makers, the reconciliation of what is demanded with what is affordable must be increasingly policy and program based.

Where these imbalances are not so great or have been reduced, use of top-down ceilings should be confined to the budget year. Most importantly, there must be a medium-term aggregate expenditure constraint, medium-term costs of existing policy, and institutional mechanisms that facilitate reprioritization and reallocation of resources.

**Stages of a Comprehensive MTEF**

Preparation and implementation of an MTEF takes place through an integrated, bottom-up/top-down strategic planning process consisting of seven main steps, each of which feeds into the next. Figure 3.3 provides a schematic representation of the stages, drawing in particular on the Malawian experience.

**Stage 1.** This stage involves developing the macroeconomic framework, which will be used to make projections of revenues and expenditures for three years. The key activity here is macroanalysis and modeling, a necessary step in achieving aggregate fiscal discipline. Information on what is fiscally affordable and sound is required for restrained decision making. In this exercise, the importance of linking economic projections to fiscal targets and the requirements for constructing and using models must be kept in mind.

**Linking economic projections to fiscal targets.** The transition from planning to budgeting often suffers from inconsistencies such as overcommitment. This occurs when decisions do not take into consideration the aggregate resource constraint or their ongoing costs. Models can assist in identifying problems by checking the internal consistency of proposals and by generating accurate forecasts. Models can also illustrate trade-offs between alternative uses of resources and can make explicit the underlying assumptions about relationships and priorities. Constructing a model can expose differences in assumptions about what drives decisions or relationships and reveals deficiencies in data. Personal computers and software have increased the scope for using models for analysis and explanation.

**Constructing and using models.** The value of model building stems from involving the interested parties in reviewing data, discussing different perceptions about the relevant relationships, and identifying data requirements. A working group on a macroeconomic model may be the first occasion that technical staff of finance, planning and statistics agencies,
together with the central bank, have collaborated directly. This coming together can be used as a basis for more systematic coordination in the future.
Figure 3.3
STAGES OF THE MTEF

TOP-DOWN

STAGE 1
Macroeconomic framework
availability of resources

STAGE 2
Step 1
Sector review of ministry objectives, outputs & activities

Step 2
Agreement on sectoral/ministry programs & sub-programs

Step 3
Costing (recurrent & capital) of agreed programs/subprograms for 3 years

STAGE 3
Hearings to agree on objectives & priority programs

STAGE 4
Detailed expenditure framework and sector/ministry ceilings for 3 years

STAGE 5
Approval of ceilings by Cabinet

STAGE 6
Review of estimates in Treasury and presentation to Cabinet and parliament

STAGE 7
Preparation of 3-year estimates by ministries within Cabinet approved ceilings
Stage 2. This stage can proceed in parallel with stage one and involves a sector review process through which sector/ministry objectives and activities are agreed and then costed. The sector review process consists of three stages (Stage 2 is discussed in more detail at the beginning of this chapter):

- agreeing on objectives, outputs and activities;
- reviewing/developing agreed programs and subprograms; and
- costing agreed programs.

Once ministries have reviewed and costed programs and subprograms, they also need to go through a process of prioritization to make program costs fit within available resources. This involves agreeing on which activities are to be scaled back, postponed until the following year or dropped altogether. The impact of these reductions on targets such as pupil-teacher ratios or kilometers of roads rehabilitated will also need to be identified. This information is provided to the Ministry of Finance and used to develop the expenditure framework and ceilings. During this stage, ministries can also develop performance indicators for agreed programs and subprograms so that, over time, there can be greater emphasis on what ministries are achieving with the resources they are given.

Stage 3. This stage involves a series of hearings between the Ministry of Finance and sector ministries to go over the outputs of the sector review (Stage 2).

Stage 4. With the macroeconomic framework and the sector review output in hand, the Ministry of Finance now develops a strategic expenditure framework. This framework enables the analysis of the trade-offs between and within sectors of certain funding decisions and is the basis for the establishment of sector expenditure ceilings for the upcoming budget year as well as the two outer years.

This framework should be used to guide the deliberations of the decision making body (usually Cabinet or the Council of Ministers) that makes strategic resource allocation decisions. The policy framework must enforce aggregate fiscal discipline, which demands a high-level of consensus among the key players. This consensus is essential to ensure that there is discipline in adhering to expenditure targets and to the procedures that have been agreed for adjusting them. The framework needs to cover a medium-term time frame (three to five years) and must include clear statements on the following:

- the broad objectives of policy and the role of government in the economy;
- the need for discipline in macroeconomic management;
- targets for broad aggregates of public revenue and expenditure;
- procedures for setting and revising the expenditure framework;
- the responsibilities of key agencies.

The consensus that emerges must include political and technical levels and, where aid is significant, major donors as well. However, leadership must come from within the government if improvements in planning and budgeting are to be durable.

Stage 5. This is a crucial stage of the MTEF process and requires the main decision-making body in government (Cabinet or Council of Ministers) to make medium-term sectoral resources allocations on the basis of affordability and intersectoral priorities. This is done by
defining sector resource envelopes (budget ceilings) for the next three years. The more out of balance are policies and resources, the more likely indicative resource envelopes beyond the budget year will be valuable. However, the poorer the balance, the more difficult it will be to deliver on these ceilings when the forward year becomes the budget year. The test of these envelopes is their credibility, i.e., they do not change so much during the cycle as to become meaningless. It would be expected that they would become tighter through the cycle, i.e., from indicative in the outer years, to reasonably firm for formulation of the annual budget, to very tight during budget execution.

Top-down sector resource envelopes with a medium-term horizon are a basis for predictability so that appropriate strategic and efficient operational decisions can be made and implemented. Restraint and discipline in defining the sector resource envelope increases predictability of resource flows, thereby increasing operational efficiency, and permits greater flexibility in the management of the resources that are defined by the sector envelope (e.g., by devolving authority for lower level resource allocation decisions within the tight aggregate constraint). Sector resource envelopes can be derived by establishing a sustainable macro ceiling for government expenditures over the medium term, then breaking it down. A division between discretionary and nondiscretionary expenditures should be made. A medium-term perspective increases the scope of effective discretion, e.g., over staffing levels and salary obligations. An unallocated contingency can be withheld to cope with uncertainties and to allow for adjustments for unanticipated expenditures, but this should be kept to a minimum as it can easily become a "slush" fund.

The political aspect of resource allocation makes it wise to reach agreement on the criteria to be applied to allocations. Agreement on criteria provides guidance on how to adjust to new or altered circumstances and can increase discipline and predictability. Box 3.10 identifies some criteria that can be applied in deriving broad expenditure allocations. The list is neither exhaustive nor prioritized, but merely provides examples of criteria that have been applied in different experiences with expenditure allocation. Sector envelopes reflect the inertia associated with existing policy and the dynamic of the changing priorities of government - political, economic and social. The envelopes should be defined in a way that provides incentives for trade-offs between policies and programs at the sector level. Aid and local domestic funding, and capital and recurrent expenditures should be incorporated within a single guideline. This comprehensive approach should result in pressure to unify the budget and to reduce bias in the choice between development and recurrent expenditure. This comprehensive approach will take time to implement especially at the government-wide level, as illustrated in the case of Malawi (Box 3.7).
BOX 3.10
EXAMPLES OF CRITERIA TO APPLY IN SETTING BROAD EXPENDITURE ALLOCATIONS

- Identify whole categories of public expenditure that should be phased out based on previously agreed policy priorities or role of government.
- Analyze the functional classification of expenditures to ascertain inconsistencies between actual resource allocations and agreed roles for the public sector.
- Check international comparisons for expenditure ratios for each sector.
- Analyze underfunding/overcommitment, including composition of expenditures, e.g., the balance between personnel and operating expenditures, trends in real levels of salaries and of aggregate funding, and the extent to which the development budget and aid projects have become disguised vehicles for recurrent expenditure.
- Consider cost recovery.
- Review recurrent cost implication of capital expenditures.
- Look for explicit or implied expenditure commitment not already factored into projections.

Stage 6. At this stage, ministries make revisions to the budget estimates to make them fit within the approved ceilings.

Stage 7. The revised ministerial budget estimates are reviewed again by the Ministry of Finance and presented to the Cabinet and the Parliament for final approval.

As illustrated above, implementing an MTEF is a complex task requiring a radical shift in perspective and the way in which business is done. Success hinges on a variety of factors, which include:

- political commitment and endorsement at the highest level to make and abide by the difficult decisions involved in the restructuring of expenditures (Some ministries may need to scale back their activities so that more resources can be directed to higher priority sectors.);
- strong management of donors to ensure that they operate within the framework of the MTEF;
- willingness to subject policy decisions with financial implications, made outside the budget process, to the discipline of the MTEF;
- understanding of, and commitment to, the difficult decisions at the sector ministry level;
- commitment at all levels to abide by the budget decision so that new expenditure decisions are not introduced during budget implementation that would require reallocation of resources (These new decisions mean that the priorities set when the budget is approved by Parliament are often overturned).;
improvements in expenditure control so that the decisions are not undermined by overexpenditures and reallocation of funds during budget implementation;

improved macroeconomic management and revenue collection so that revenue shortfalls do not necessitate adjustments to the budget estimates;

briefings of politicians and senior management during implementation;

improvements to expenditure reporting on results;

development of a computerized accounting system.

PUBLIC INVESTMENT PROGRAMS (PIPS)

Public Investment Programs (PIPs) have long been a staple of developing countries. They attempt to provide a mechanism to manage investment projects more effectively both strategically and operationally. They have a parallel in capital works programs in developed countries. In developing countries, they have also played a role in managing external donor financing.

Despite these good intentions, PIPs have, in practice, been associated with many of the dysfunctional budgeting, resource allocation, and financial management practices around the world. In particular, PIPs are associated with dual budgeting - the separation of the capital budget from the regular recurrent budget (Box 3.11). Of even greater concern is that PIPs usually encourage countries to focus on projects, with policy and program often an afterthought. The result is an expansionary thrust to spending, leading to unsustainable overcommitment of government funds and instability in all three levels of budgeting - macro, strategic and operational (Box 3.12).

In a well-performing system, policy would be constrained by budget realities, but it would be the driver of projects. There would be a fully integrated approach to the planning of capital and recurrent expenditures, and to aid and domestically financed activities. Consequently, linking planning, policy and budgeting within sectors and across government is likely, over time, to reduce the rationale for traditional government-wide PIPs.

The following are some good practice approaches to improve PIPs in contexts where they are deemed necessary and a shift to a medium-term framework is considered premature:

- Recognize that preparation of a PIP is a political as well as a technical process.

- Develop plans that are realistically cost constrained, by proceeding sequentially from the macro framework to sector resource envelopes and then to selection of priority policies and programs within sector constraints.
BOX 3.11
DUAL BUDGETING

The dual budget may well be the single most important culprit in the failure to link planning, policy and budgeting, and poor budgetary outcomes. The dual budget is misconceived because it is based on a false premise - that capital expenditure by government is more productive than current expenditure. Separating development and recurrent budgets usually leads to the development budget having a lower hurdle for entry. The result is that everyone seeks to redefine their expenditure as capital so it can be included in the development budget. Budget realities are left to the recurrent budget to deal with, and there is no pretension that expenditure proposals relate to policy priorities.

Many countries operate a dual budget system, comprising: (a) a recurrent or regular budget (RB); and (b) a capital, investment or development budget (DB). In Africa, DB’s were convenient mechanisms in the first two decades of independence when governments were expanding beyond law and order. DB’s were largely about public capital investment such as power supplies, public housing, roads and bridges, schools and universities, and hospitals and clinics, although even then they contained activities that were recurrent rather than capital projects, e.g., malaria eradication and crop research. Donors were willing to finance this expansion, and separate budgets facilitated the coordination of aid.

The DB was usually derived from the first year of the Public Investment Program (PIP), a phased five-year program of sectoral or organizational projects. A well-prepared PIP enabled government to: (a) prioritize future projects; and (b) track the outer year capital costs of development projects. In this way, they avoided the bunching of expenditures and programmed domestic resources for local costs. The total size of the PIP was limited by aid flows and by government’s ability to finance recurrent costs. A project with high operating costs might be postponed or redesigned or cost recovery features introduced. PIPs and DB’s were planned to stay in step with construction and management capacity.

Unlike the recurrent budget, development budgets covered individual projects. Donors could closely monitor the projects being financed and could identify future projects. Donors preferred the dual budget system. The recurrent budget, which was financed by domestic revenues, had tight ceilings; the development budget was open ended. The size of the development budget was determined by the availability of aid, at the margin an add-on exercise.

In recent years, the composition of the DB has gradually changed due to the growing inability of domestic budgets to shoulder recurrent costs and by the increasing “ring-fencing” of donor-aided projects. Expenditures go into the DB because they are aid-financed, not because they are capital investments. This blurs the capital/recurrent distinction. Nowadays, projects frequently contain three types of expenditure: (a) new investment; (b) rehabilitation of poorly maintained past investments (often aid-financed); and (c) pure recurrent funding.

The international contradictions in the dual budget have come home to roost. The collapse is traceable to: (a) domestic governance failure that weakened budget discipline and financial management; (b) poor economic policies resulting in the collapse of domestic revenues; and (c) an overexpansion of the public sector, financed largely by aid in the case of Africa, but equally in evidence in Latin America. Recurrent budgets have become debt service and salary budgets, with limited ability to meet operation and maintenance costs of completed projects and ongoing programs.

In theory, the PIP/DB mechanism was not supposed to affect fiscal discipline. In practice, the large volumes of aid and donor preference for projects undermine fiscal discipline in most poor countries.
BOX 3.12
CONCERNS ABOUT PIPs

Over the years, PIPs have raised concerns. One frequent concern is that projects included in the PIP cannot be ranked by economic rates of return. When a project idea is first considered, there is insufficient data. But by the time the latter has been assembled, it is too late in the project cycle to deny the project a place in the PIP. A momentum has already built up. Even if rate of return ranking were possible, Internal Rates of Returns (IRR) are not comparable across sectors, and for many projects they cannot be calculated. Where they can be calculated and data are available, few developing countries could deploy enough economists to cover all project proposals. And if the gatepost for the PIP is a threshold IRR, line ministries will cook the figures. Furthermore, PIP planners never start with a clean sheet of paper. Up to 90 percent of the available space in the PIP may be preempted by ongoing projects.

Another concern is that the growth model underpinning the PIP is inappropriate. The essence of structural adjustment is change through policies that improve efficiency in use of resources. The PIP process does not necessarily support this approach.

Related to this is the concern that in the traditional PIP model, the capital side of the government budget leads the recurrent, giving an expansionary bias to government expenditure. Insufficient attention is paid to the financial costs the government will have to bear once external support has ended and to calculations of recurrent costs. This is particularly troubling since the role of government has changed substantially in many countries and an important task now is to create an “enabling environment” for the private sector. This means a mix of investment, recurrent spending and suitable policies.

Concerns have also been raised about the PIP being too much an instrument of central planning and control. This results in project decisions being made at the central government level rather than in the line ministries and agencies responsible for sectoral programs. A related point is that state enterprise investments should only be included in the PIP if they are funded through the government budget directly or with a guarantee. Concerns have been raised because they are often included in the PIP even when this is not the case, which then has negative implications for management autonomy and accountability.

Finally, because of the heavy influence of foreign aid in many countries that use PIPs, concerns have been raised that the PIP overemphasizes projects at the expense of programs and policies. Further complicating the issue, donor-funded projects are increasingly packages of recurrent and capital inputs, making the PIP no longer a true investment program.

- Utilize a two-stage screening process: passing selection criteria, followed by review at appraisal stage plus identification of funding for project completion.
- Ensure that objectives, policies and expenditures are linked in each sector.
- Build capacity locally for PIP preparation.
- Link the PIP with regular budget procedures and coordinate the PIP with ongoing budget and accounting reforms.
- Enforce discipline in the use of aid.
• Define PIP projects more broadly along program lines.
  In developing countries, where development and recurrent budgets are separated, the
focus should be on integrating policy and expenditure management. The above good practices are
still relevant, but the problems may be more difficult to resolve. These include:

  • ensuring that the PIP is comprehensive;
  • estimating expenditure requirements for future years;
  • evaluating relevance of existing projects to achieve full funding and completion of
    priority projects;
  • developing joint analysis and planning of capital/recurrent expenditures.

A New Paradigm of the PIP

Thinking and practice on PIPs has shifted over the years as a reaction to inherent
weaknesses. For example, the limitation of IRR’s as a means of formulating the PIP is
acknowledged. The role of economic analysis is now defined more as a test of the viability of
controversial large projects and as a mechanism to facilitate choice between similar
alternatives (i.e., clarifying policy and program choices) within a sector. Consequently, it is
generally considered better practice to subject the 10 biggest projects in the PIP to economic
analysis than attempt to cover the whole field.

There is also greater recognition that projects should be selected by reference to a
range of criteria, both economic and noneconomic and, in particular, the chosen role of
government within a sector. Get the latter clarified and good project choices will be more
obvious.

This is particularly evident in the transition economies where PIPs especially emphasize
two things: (a) ruthless screening out of hang-over projects from central planning using a mix
of economic and noneconomic “role of government” criteria; and (b) where substantial capital
investments are necessary to re-tool the public sector, mechanisms are put in place to ensure
that the investments are firmly embedded in the changed role for the government. There is
also a change in the transition economies in the type of projects in the PIP. Particularly, there
is less reliance on technical parameters in determining new investments and more on
efficiency considerations - changed management processes coupled with selected re-
equipment at existing government facilities.

There is also greater emphasis now on the recurrent budget (RB) as the starting point.
Related to this, there is recognition that the PIP, the DB and the RB should be integrated in
some sort of medium-term financial framework in which the resource envelope is defined by
the central government, not donors. This would give the PIP more of a top-down flavor, to
counterbalance the bottom-up project driven nature of the traditional model. Put programs and
policies first. This approach also puts more emphasis on the importance and benefits of sound
aid management by the central government.
More emphasis tends to be placed now on clarifying what should and should not be in the PIP (e.g., decisions on whether to include: TA projects, direct donor-financed projects, entirely government-financed projects, local government projects, parastatal projects, etc.). In deciding what to include, the criteria have shifted from an economist’s view of what constitutes public investment to a more managerial interpretation of the PIP as a tool to manage public expenditures and, in particular, external financing.

There are also increased efforts to limit the adverse central planning characteristics of PIPs, by a greater use of sector envelopes within which line ministries have discretion to select projects up to a specified share of the PIP. Large projects, however, still require central appraisal and collective decision. Boxes 3.13 and 3.14 give country examples of changes that are taking place in ongoing PIPs.

**BOX 3.13**

**SHIFTING EMPHASIS IN PIPs**

The shift from the traditional model of the PIP can be seen in a number of Public Investment Reviews (PIR’s) and Public Expenditure Reviews (PER’s) undertaken by the Bank in Central and Eastern Europe. The Poland Sector Investment Review contains robust criteria that can be applied to the PIP to screen out projects carried over from the central planning era. The Estonia PER places strong emphasis on getting the role of government clear. The Bulgaria PER focuses on screening and integrating Extra Budgetary Fund (EBF) funded projects into the PIP and better linking the PIP with the annual budget. The Albania PIP embraces many of the above approaches (e.g., the effort to clarify what should and should not be in the PIP).

Concerns have been raised about PIPs, but current thinking indicates that, with modification, the PIP can still be useful, provided it follows rather than drives policy and the budget. In a sense, a PIP is a reflection of external financing of the government budget. Thus the PIP is a tool for better managing donor aid that, for the most part, comes in project form. In industrialized countries, there is no PIP, nor a formal separation (in most cases) between a recurrent and capital budget. This partly reflects the fact that government programs are domestically financed and sources of funding are wholly fungible, and partly because, in an industrialized market economy, public investment tends to be a much smaller component of total government spending (which is primarily on entitlement programs). In addition to a different budget structure, budgets themselves are more stable, with much less shifting between different sectors than is the case in developing or transition countries. Over the very long term, these countries might be able to dispense with PIPs, but for the present they remain a useful tool for managing external aid and public expenditures generally.

Contexts very enormously, especially between the transition economies and developing countries. In the transition economies, Western budgeting systems and the principles of market economics are being applied from scratch. In developing countries, dual budget systems of external aid have become entrenched.

The transition economies should avoid dual budget systems. But PIP preparation may be a necessary initial exercise if the PIP is viewed in the context of public policy and expenditures as a whole, and the exercise is internally owned and combines the top-down, bottom-up approach. Box 3.13 illustrates this point with an example from Latvia, where a 1994 PER recommended introduction of a rolling three-year PIP.
Based on the findings and recommendations of a 1994 Public Expenditure Review, the Government of Latvia decided to launch a rolling three-year Public Investment Program (PIP) as a measure to strengthen the management of public investment in the country and a first step towards developing a medium-term fiscal planning framework.

The public expenditure review indicated that as of 1994 there was no proper screening process to select projects for investment, no investment strategy or clearly defined investment priorities and, most importantly, no mechanisms to match investment decisions with long-term development objectives and available resources. To overcome these difficulties, a rolling PIP was proposed.

The PIP system proposed for Latvia focused on resolving the main issues in public investment:

1. development and adoption of a clear view of sectoral strategies and government priorities, which will drive the formulation of the PIP and the broad allocation of resources;
2. rigorous screening of all projects (including some ongoing projects) proposed for inclusion in the PIP (Specifically, it was recommended that cost-benefit and cost-efficiency analysis be applied to all projects financed from state and local projects as a means of prioritizing investments. At the time of review, this methodology was only applied to foreign financed projects.);
3. allocation of adequate resources for maintenance and depreciation of assets (The former would reduce the need for future investment to rehabilitate deteriorated assets, while the latter would be necessary to ensure adequate provision to replace obsolete assets.);
4. matching investment needs with availability of resources (Based on a preliminary ranking of high and medium priority projects and financial resource availability projections, the PER concluded that less than half of high- and medium-priority projects could be financed in the next three years. Thus, careful selection and screening mechanisms would have to be further utilized to restrict the range of priority projects and close the funding gap.);
5. improvements in the formulation and implementation of annual budgets, including linking preparation of the PIP to the annual budget cycle and requirements that the annual budget only finance investment projects included in the PIP.

CHAPTER 4
FINANCIAL MANAGEMENT INFORMATION SYSTEMS

Information is the lifeblood of budgetary, resource allocation and financial management. Financial management information systems (FMIS) provide decision makers and public sector managers with a set of tools to support:

1. controlling aggregate spending and the deficit;
2. strategic prioritization of expenditure across policies, programs and projects for allocative efficiency and equity;
3. better use of budgeted resources, i.e., to achieve outcomes and produce outputs at the lowest possible cost.

Improving systems and processes requires an understanding of how these three levels interact. Particular attention needs to be given to the capacity to link the three levels through a set of commonly shared data bases. There is a need for vertical integration—through the planning, budgeting and financial management cycle—and horizontal integration—accounting, budgeting, cash management, and audit. This chapter discusses approaches to this integration.

Traditionally, control has been the dominant, if not the single, reason for developing FMIS. This control role will always be central. However, to deliver on the three levels of performance, FMIS’s that support a results orientation at the strategic and operational level will be needed. Financial data that support informed decisions on policies and programs and that link information on costs, outputs and outcomes will be essential. The trend to decentralize within and between levels of government also underscores the importance of adequate FMIS.

This chapter is not advocating a big bang theory of FMIS. A modular approach will often be appropriate. Most of the elements of a comprehensive system exist in some form in every country. The nature and pace of integration of these elements will vary from country to country, but each step must take into account the end point - timely and reliable information for use throughout the resource allocation, budgeting, and financial management cycle. Some countries may be in a position to take advantage of developments in information technology to move relatively quickly from a currently disabled, manual system to an automated, integrated system. Automation will not, however, resolve problems associated with structure and a lack of discipline on the part of decision makers (Box 4.1).
BOX 4.1
BUDGETING AND ACCOUNTING REFORM IN TRANSITION ECONOMIES
AND DEVELOPING COUNTRIES

For economies in transition, the strategy for building the budget and accounting system should focus at the outset on the careful control of budget execution and the management of cash and public debt. Major emphasis is therefore being given to establishing a framework and building a treasury system that would control release of funds to ministries, take over full accounting functions from the banking system, and manage cash and public debt. The treasury system, once established, will provide a good basis for developing the budgeting functions. Revenue uncertainties, combined with political pressures for social spending and resistance to expenditure reductions elsewhere, mean that the approved budget is often an unrealistic guide to a sustainable level of public spending. Simultaneously, therefore, it is important to address the budget preparation process because poor preparation will impose irresistible strains that interfere with control during budget execution.

In developing countries, core government budgeting and accounting systems will play a critical role in rebuilding and developing budgeting systems. In general, developing countries have inherited manual systems, which continue to provide a reasonable basis for control. Today’s complex administrative processes have not been matched by the development of skills or the modernization of budgeting and accounting systems. Commonly, government accounts are not produced on time and are not comprehensive and reliable. The stand-alone systems that are in use often result in a further weakening of the central budgeting and accounting system. The most appropriate strategy would be to provide strong support for the central accounting system and to choose a flexible design that meets the needs that specialized stand-alone information systems now address. Alternately, the central and auxiliary systems could be integrated. For effective control, it is even more important that these countries confront the major dysfunction in their systems, which is the failure to link planning, policy and budgeting.

FMIS INADEQUACIES

Inadequacies in FMIS show up in all aspects of budgeting, resource allocation and financial management. From the perspective of the three levels, the most obvious symptoms of inadequate systems are:

1. at the macro level, assessment of the fiscal situation is derived from the books of the central bank;
2. at the strategic level, there is no costing information on policies and programs;
3. at the operational level, financial information is not available on time or in a form that facilitates effective expenditure control or management of agencies, programs or projects.

More generally, the symptoms include a lack of timely and appropriate financial information for decision making during planning and budget formulation; lack of timely and accurate financial management information during budget execution; and non-existent, or out-of-date financial reporting.
Some of the factors underlying these inadequacies include:

- gaps in the legal framework;
- lack of a standard classification coding structure;
- poorly specified reporting requirements - external and internal;
- multiple ex ante controls on expenditure;
- multiple FMIS, often computer based, across government that do not communicate with each other;
- an inability to move data from one stage in the budgetary cycle to the next.

**INSTITUTION BUILDING AND POLICY REFORMS**

Implementing and improving information systems should be seen in the context of wider institution building and policy reform efforts. FMIS influence, and are influenced by, an overall regulatory framework that consists of:

a. the control structure that governs the use of government funds and are derived from the legislative framework;

b. accounts classification, which enables consistent recording of each financial transaction for expenditure control, costing, and economic and statistical analysis;

c. reporting requirements covering: (a) external reporting - to provide information to the legislature and the public, as well as to other countries, international organizations, overseas investors, and financial markets; and, (b) internal management reporting for government policy makers and managers.

Computerization is a key issue linked to any consideration of FMIS. As a minimum, the adequacy of the regulatory framework will need to be reviewed and modified as appropriate, and the institutional capacities of the responsible government agencies analyzed - inadequacies highlighted and corrective measures identified - before computer systems can be designed to support fiscal management. The benefits realized from computer systems will depend on the degree of success in strengthening basic functional processes, the regulatory framework, and the organizational structures responsible for them. Computerization is discussed later in this chapter.
DEVELOPING A CORE SYSTEM

The central premise of this chapter is that the broad technical requirements of government budgeting and accounting are similar for all countries, and a core system can be specified to meet these requirements. Such a system would meet basic needs for most countries, but aspects would need to be tailored to suit particular needs. The rate of implementation would depend on the capacity of individual countries. Better integration of the subsystems is the ultimate objective, so it is important to build in this capacity from the outset.

Many countries could start with a core accounting system that consists of modules for accounts payable, accounts receivable and the general ledger. An automated accounting system would ensure completeness of data capture. No transaction would be processed outside the system, and rigorous financial controls would be applied to all transactions processed by the system. With the core accounting system as a foundation, government could then expand the system as capacity developed.

Developing a system involves: (a) analyzing business processes involved in fiscal management; (b) defining a general information architecture, which is derived by an analysis of the strength of information linkages among the business processes; and (c) defining a general systems architecture, based on the information architecture. The general system architecture can be used for the design and development of application software, or for the selection of existing software packages that meet requirements.

The functional processes carried out by the central government in the areas of budgeting and accounting - and linkages to the control framework - are illustrated in Figure 4.1. As indicated, the functional processes can be categorized as those carried out by the central agencies and those carried out by the spending ministries and agencies. Those of the former group are most directly linked to the control framework. Indeed, one of the main functions of the central agencies is to ensure that the control framework is properly applied throughout government.

Figure 4.2 shows the core elements of the information systems network required to support government fiscal management and the main information flows between these elements. This information architecture has been derived by analyzing data from a number of countries on FM processes and the information systems required to support these processes. The Y-axis lists the main processes in FM; the X-axis lists the organizations normally responsible for these processes. Each box lies at the intersection of the functional process and the organization(s) normally responsible for the process and is the information support system for that process. Each system could comprise a number of subsystems. Figure 4.2 also shows the main information flows between the systems modules. Annexes G, H, and I supply details on how information systems assist during the budget process.
FIGURE 4.1
FUNCTIONAL ANALYSIS, CONTROL FRAMEWORK, AND FUNCTIONAL PROCESSES
FIGURE 4.2
INFORMATION SYSTEMS ARCHITECTURE FOR GOVERNMENT FISCAL MANAGEMENT
FMIS Support at Macro, Strategic and Operational Levels

**Macroeconomic forecasting.** This group of systems is normally used by the MOF, the Planning Organization, and the Central Bank to support the setting of fiscal policy. The systems assist with macro fiscal planning and the development of the macroeconomic framework. This is, in turn, used by the MOF to set aggregate budget parameters and guidelines for budget agencies to submit estimates. These systems require data from external economic databases and the assumptions regarding GNP, inflation rates, and the deficit. Additionally, they require information on programs and projects the government intends to implement over the period of the program such as data on tax and non-tax revenues, and data on domestic and external borrowings, which are maintained by other components of the FMIS network.

**Budget preparation and approval.** These information systems support strategic priority setting by assisting with the preparation of budget estimates. The systems receive details of ongoing and planned programs and projects from line agencies, and consolidate and produce from them the documents that form the basis of the negotiations between the line agencies and the Ministry of Finance (MOF). After finalization of the budget, the systems produce the approved budget estimates.

The systems should be able to capture and maintain the budgetary proposals and income estimates of all government agencies and to capture subsequent changes during the budget preparation, approval and amendment processes. The evaluation of the budget proposals includes an examination of the manpower component, maintenance and other operating expenses, and the evaluation of the capital outlays program, using baseline data from previous periods for comparison. Examination of the capital budget requires data on the physical and financial status of government-approved projects, both locally and foreign funded. The system should be able to access and generate the baseline data from the relevant past-year data bases.

**Budget execution, core accounting and fiscal reporting.** These systems support operations and are the primary repository of financial data that serve as the basis of the government's FMIS. These systems perform basic accounting functions, processes for budget execution, monitoring and control, and provide the information required for cash management and to implement cash limits to obtain the status of actual expenditures on ongoing projects. These systems also monitor and evaluate the overall budget implementation processes and produce the necessary fiscal reports.

In addition, these systems would provide useful financial information to the line ministries and spending units to enable them to better manage their work programs. These systems need to be comprehensive in coverage and a source of reliable and timely data to become a credible source of information for users.

These systems maintain data on:

a. approved (capital and recurrent) budgeted appropriations;
b. sources of financing for programs and projects;
c. budget transfers;
d. supplementary allocations;
e. fund releases (warrants) against budgetary allocations over the course of the year;
f. data on commitments and actual expenditures against budgeted allocations.

The budget execution systems normally operate at two levels - at the line agencies and at the MOF. The line agencies’ systems, operated by their finance departments, enable managers to track the budget implementation process and implement expenditure controls at the agency level. The central systems track the budget execution process for the government as a whole.

At the start of the fiscal year, the legislature-approved budget is entered into the system. Budget transfers such as supplementary authorizations and warrants are also entered during the year they are issued. As commitment and expenditure transactions take place at the line agencies, these systems: (a) check for budget authorization and the existence of a prior commitment; (b) record information verifying receipt of goods; (c) authorize payment; and (d) update the total amounts committed and spent. They operate on the basis of commitment, verification and payment request transactions received from the line agencies, either electronically or on paper.

Subsystems

There are a number of subsidiary systems that are essential to a well-performing public sector.

Subsidiary payment systems. These systems cater to payments such as payroll and pension. The systems post summaries to and interface with the core accounting system.

Cash management system. This system maintains an up-to-date picture of the government’s liquidity position and cash requirements. This system obtains information on actual agency expenditures and cash balances in government (including agency) accounts from the general ledger, revenue inflows, borrowing, loan disbursements, treasury bills, government bonds, and cash deposit maturities. This information is obtained either from the general ledger or from the systems for these areas, e.g., the debt management system. Government can use this information to decide on: (a) budget ceilings and fund releases to line agencies; and (b) the timing of the issues and redemptions of government securities to provide short-term financing for shortfalls.

Debt management system. This system maintains information on public domestic and external borrowings. This includes information contained in loan documents and transactions and issues of government securities. In addition to accounting information, these systems also provide important information required in the formulation of fiscal policy such as forecasts of draw down and debt servicing liabilities, and debt implications of fiscal and deficit financing policies.

Civil service management systems. This system assists in aspects of civil service management that are relevant to FM. These are processes associated
with post management and payroll and pension payments. The corresponding systems modules therefore form important elements in the FMIS network.

**Revenue administration.** This group of systems assist the government in: (a) the processes for the formulation of tax and tariff policies; and (b) the collection of tax and non-tax revenue. The tax revenue administration systems provide summary information on revenue collections to the core accounting systems.

**Auditing.** These systems assist the internal and external audit functions. Auditing takes place at two levels: internal audit at the line ministries during the course of the FY, and external audit by the auditor general through random checks and on the final accounts for the FY.

---

**INTEGRATING INFORMATION SYSTEMS**

Integration of the different elements of the FMIS network will not happen without conscious effort and the involvement of all stakeholders. More often than not, information systems are implemented as components of separate projects, responding to specific needs, with little thought given to requirements in other areas and or to critical interrelationships. The resulting information systems are often disparate and segmented with little or no capacity for sharing data. These systems have overlapping and sometimes conflicting functions and provide incomplete coverage, particularly for managerial information requirements, which normally span several areas.

The failure to integrate financial management information results in:

- fragmented and unreliable data;
- duplications of data difficult to reconcile;
- failure to use actual results in planning and budgeting;
- failure to fully and publicly report financial and operational results;
- undue emphasis upon one of the component subsystems, usually budgeting, which tends to dominate, duplicate and crowd out the others.

The investments required to set up modern computer-based information systems covering the major areas of FMIS are sizable and can span several years. Investments could easily range from US$10 to 50 million over five years. Integration is a requirement, not an option, for these large investments to yield expected benefits. Incompatible or duplicative systems would be wasteful and inefficient and would not provide the information that governments require for economic management.

**Components of an Integrated Financial Management System**

An integrated financial management system (IFMS) consists of an interrelated set of subsystems that plan, process and report upon resources, quantifying them in financial terms. The basic subsystems normally are accounting, budgeting, cash management, debt management, and related internal controls. An important element of modern internal control
throughout government is a professional internal audit function that is an integral part of an IFMS.

The factor that "integrates" the system is a set of commonly shared, reliable data bases to and from which all data expressed in financial terms flows. All of the subsystems and users of financial data must participate in common data sharing. The validation, classification and recording of data in the accounting subsystem produces timely reports of classified data for users. The common data base may be manually maintained, but an electronic data base is much more flexible and accessible.

An IFMS can be developed regardless of the organizational structure, but it is likely to function better where the four basic subsystems are closely related under a common, professionally qualified financial management executive.

In integrated networks, the component elements are able to exchange information with ease and to share commonly used data. Integrated systems must be structured along functional rather than organizational lines. The system needs to support a functional area across all organizations being integrated. This enables the creation of systems and data bases in which the agency responsible for a function provides a subset of data. However, the data bases are accessible by relevant core agencies, subject to appropriate security controls. All agencies work with the same set of data, eliminating duplicative data gathering and data inconsistencies.

Framework for Integration

The first step towards achieving integration is to develop a framework that provides an overview of the systems network required to support FM. The framework is developed by analyzing: (a) basic functional processes and information requirements; (b) responsibilities of agencies in charge of the processes; (c) information flows between the processes, including the nature, volume and frequency of these flows; and (d) data characteristics of the information used and created by the processes. This framework would address questions such as:

a. which information systems modules are required to support FM;
b. what is the scope, scale and type of a particular systems component;
c. how do these systems interrelate?

The framework would consist of:

a. a systems architecture that identifies the major component modules of the network required to support FM, the type of information maintained by each module, and the information flows between modules;
b. a technology architecture that identifies the appropriate technology choices for the hardware and software to set up the modules.
The integration of systems modules can be achieved incrementally once the framework has been set up and the prerequisites and criteria for integration have been spelled out and incorporated in the implementation plan. The framework will serve as a road map for implementation.

Automation

Fiscal management processes are transaction intensive. Retrieving information from manual records and reclassifying it in an appropriate format or classification can be extremely time consuming and labor intensive. Automated systems speed up the process and provide the accurate data required for economic and fiscal management.
Three aspects of computer-based information systems are particularly important:

a. the rapid compilation of data on transactions from widespread locations and timely generation of information in formats prescribed by the legislature or for internal control;

b. ensuring that prescribed controls and procedures are adhered to at the point of origin of a transaction;

c. the integration of the posting and classification of transactions with the functional process in such a way that performance (e.g., authorizing a payment) simultaneously ensures that all transactions are classified and posted. This in turn will ensure complete and timely data.

Technological Recommendations

Three important technological improvements for a well-performing information system are: (a) multi-tiered networks; (b) systems portability and scalability; and (c) application-specific technology.

**Multi-tiered networks.** Several elements of the FMIS network require systems modules at the line agency and central levels with facilities for generating, storing, and processing data at each level and for exchanging data between levels. The data volumes encountered can vary widely across the nodes of the network. Government-wide FMIS require a multi-tiered network. This could consist of stand-alone microcomputers, local area network (LANs), or minicomputers, located at the nodes (MOF, other core agencies, the line agencies and subordinate/regional treasury offices) and connected by telecommunication lines.

The transaction processing and data base management at each node are carried out by local computers. The summary or detailed data required for the applications are transmitted to the computer in the agency responsible for that system (e.g., to the MOF’s budget division for the budget system, to the treasury for the accounting and cash management systems). This configuration is often preferred for two reasons: (a) computing power is distributed commensurate with node requirements, making this system less vulnerable to malfunctions at the central site; and (b) end users at the line agencies have more control of technological and data resources, which inculcates a sense of ownership in the systems. In the absence of good telecommunication facilities, the data transfer between the nodes and the center could be periodic (daily, weekly or monthly, depending on the application system) in an off-line/batch node. The size of each node’s computers would depend on the amount of data and number of transactions. They could be stand-alone microcomputers, microcomputers connected by a local area network (LAN), or fairly large capacity minicomputers at the center and larger line agencies.

**Systems portability and scalability.** For systems modules implemented at multiple levels, the software at each node should be able to be run on small or large computers without major changes. These properties can be achieved by choosing compatible computers that offer multiple size configurations. However, this would restrict additions
to the network to this vendor and line of computers. To avoid these restrictions, the application systems should be developed using tools and DBMS portable software that can operate on machines of different sizes offered by several vendors.

To ensure vertical and horizontal portability, and scalability, the hardware should be an open system—assembled from components that conform to generally (though not universally) accepted standards. The hardware and software would therefore be interchangeable, providing greater flexibility. It will be some time before there is a full set of products on the market that truly conforms to open systems standards; at present, the UNIX environment comes the closest. Most vendors now offer a version of UNIX. Since UNIX versions vary slightly with the vendor, some application changes may be required before it can be used on a different vendor’s machine; however, time and effort involved in making these changes would be small compared to rewriting the applications.

Certain tools such as fourth-generation languages (4GLs), RDBMs and graphic user interfaces (GUIs) make it easy to add or change application features, including changes to increases application development productivity, therefore reducing development time.

These tools also enable end users to access the data bases and to program simple reports.

Application-specific technological requirements. The technology required for the system modules would depend on the modules’ functional characteristics, including the amount of data handled, the size of the data bases, the number and rates of transactions, and the volume of the information flow between modules. The distribution of information processing, either centrally or among widely separate locations, is important. If distributed among widely separate locations, the following factors should also be taken into account: how frequently the information needs to be aggregated at the center; and the requirements for output facilities such as graphics, report writing and desktop publishing, and for analytical facilities.

Off-the-shelf commercial packages are capable of filling many of the financial management needs of government - general ledger, accounts payable and receivable. For all currently known configurations, however, such packages will require substantial additional work to meet the complex central budgeting and accounting needs. There is a great body of evidence that each country will have its own idiosyncrasies that will produce a design that is unique to that country.

MANAGING IMPLEMENTATION

Implementation of budget and accounting system reforms is a long-term process. Such programs have been evolving in the OECD economies for several decades. A similar or longer-term timetable will be necessary in countries with less developed administrative processes.
For effective resource allocation, budget and financial management, systems must be developed around the core functions described in the preceding sections. Moreover, since the underlying requirements are similar, it may be feasible to draw on the growing number of off-the-shelf software packages to develop a core government budgeting and accounting system (CGBAS) that could (a) provide the basic transaction processing and data base management functions needed for fiscal management in any country; and (b) allow the tailoring of controls, data entry and reporting functions to any country’s needs. However, off-the-shelf software packages should not be regarded as the “off-the-shelf solution.” As a minimum, they will require significant modification to accommodate the unique demands of a government system of resource allocation, budgeting and financial management. In fact, experience has shown that because of the unique set of institutional arrangements in each country, the design of the FMIS is unique to that country.

The case for developing a core system or identifying suitable software packages is strongest for the EITs. Development of the appropriate institutions to manage a market-oriented economy is of strategic importance to these economies. They are all starting from a similar administration base, so a core system should be readily applicable to all. Development of a CGBAS should greatly reduce the implementation time for all such systems.

The CGBAS should provide a sharper focus for much of the technical assistance provided by international bilateral agencies. The IMF, the World Bank, the regional development banks, and the UNDP have provided assistance to improve various aspects of budgeting and accounting. The need for continuing efforts in this area is widely recognized. If a CGBAS were available, its features could be tailored to meet specific needs, and the implementation time would be much reduced from the broader approaches now being used. General support would continue to be needed. In each country, there would need to be a comprehensive review of systems requirements, administrative constraints, and an appropriate phasing of implementation in light of these factors.

Centering the efforts on a CGBAS, however, should avoid the difficulties that arise from piecemeal development of systems. Clearly defined requirements would enable the systems to be designed to accommodate all budgeting and accounting objectives, whereas computerization of existing accounting systems would only meet the limited objectives of ensuring financial compliance. Information systems development could then play a pivotal role in improving budgeting and accounting, providing that the policy and administrative environment is supportive.

Successful implementation of an integrated network of information systems is crucially dependent on cooperation among diverse users. Project preparation and implementation in a multi agency environment is complex. Key requirements are securing sponsorship at the highest levels of government and participation by the widest range of users in all phases of the project. A necessary condition for sustainability of systems reforms is for key decision makers to see information as critical to their work (Box 4.2). A steering group with representatives from all major stakeholders should ensure that all of the needs of participating agencies are taken into account during systems design.
Agencies will then not have to resort to independent and duplicative initiatives. Cooperation among users would also establish systematic data sharing arrangements, protocols, and schedules between the various systems so that all agencies have access to financial data as needed. The organization in charge of a functional process for the component modules will be responsible for that process.

The number of technical staff and skills required to set up such systems are considerable. To ensure sustainability, an information systems organization should be established, or existing organizational units strengthened, to incorporate and retain the skills and to manage planning, development and operation. The following skills are required: (a) high-level project design and planning skills; (b) project management skills; (c) technical implementation skills - to operate and use the hardware and software; and (d) user support skills - to develop user and technical documentation and to set up training and a hot line for end users.

**BOX 4.2**

**INFORMED DECISION MAKING IN BURKINA FASO**

Recent reform efforts in Burkina Faso illustrate successful management of implementation. The success results from the efforts: (a) being part of broader institutional reform; (b) engaging stakeholders; and (c) focusing on information management rather than on computerization.

As part of a structural adjustment program, the government had three interrelated objectives for the public sector:

1. to improve financial management capacity through better control and use of information, particularly financial information, which was not used as a basis for decision making until introduction of democratic rule (This was expected to lead to: (a) better budget preparation and execution; (b) improved public accounting, in line with a new budget structure; (c) improved Treasury operation; and (d) the delegation/decentralization of management responsibilities.);

2. to introduce accountability as a major tool of management through clearly defined rules and procedures of operation of the government, involving the rewriting of the administrative laws;

3. to improve the efficiency and cost-effectiveness of the civil service through a reform based on the introduction of job descriptions, a new salary structure and new rules for promotion and training geared to administrative needs.

A particularly significant achievement was that, for the first time, line managers started thinking together about each other’s problems. Before, managers had a ready solution for their own problems, but those solutions, until then, did not take into account the problems of other people and other segments of the administration. These exchanges were kept alive all the way through the implementation of the project.

Behind all of this was the fact that the Minister of Finance had become convinced of the importance of quality information at all stages in the resource allocation, budgeting and financial management cycle. More than a year was spent on the definition of an information structure (not computerization). This is the most important element of the reform and also the most innovative. The one and only long-term technical assistant is a data administrator, not an economist or a public finance specialist. This person is in charge of managing the information system (not the computers), the data dictionary, and information flow, integrity and timeliness. The computerization plan was developed only after an evaluation of information needs of
the different entities of the MOF.

Once the data structure was selected and choices were made about what to computerize and at what pace, a data management platform was selected, administrative and computerized procedures were drawn up and the computerization plan (the network) completed. The structure and procedures were then translated into programs. The financial management system came on line early 1996, after three years’ preparation. The emphasis during this initial stage is on budget execution.

Information system support would normally be distributed among several agencies across government. Therefore, coordinating mechanisms should be created to ensure that a common set of policies, procedures, and standards are put in place for managing data and systems across government. The standards should cover: (a) the protocols for communications; (b) data entry; (c) editing and updating screen input and output formats; (d) back-up and recovery; (e) security, contingency and disaster planning; and (f) technical and user documentation.

Project planning methodologies should be used to design, implement and monitor the FMIS, and project management responsibilities should be clearly identified. Phased implementation would ensure that the system can be easily absorbed by organizations.

Hardware and software chosen must be supported locally. Vendors represented locally can provide training and technical support needed during the life of the system.

The Links of Integration

Several "links" are necessary to achieve true integration of the financial management system: training, coordination, harmonization, communication, and collaboration. Most financial management systems fail due to the absence of these links.

A comprehensive training program covering all aspects of the IFMS is essential to ensure that all individuals involved in the subsystems understand the role, need, and underlying concepts involved in each subsystem. All too frequently FM systems fail because budget personnel know nothing about cash management or debt management staff fail to consider accounting requirements. Training staff in each subsystem and other aspects of the system, e.g., internal controls and management principles, would contribute to the success of the system.

The coordination and harmonization of the IFMS component subsystems are necessary to achieve "integration." Harmonization is achieved by means of consistent provisions and standards governing application of each of the subsystems. The principles, policies, standards, manuals, and procedures must be harmonized to avoid conflicts and inconsistencies between one subsystem and the others. Internal provisions for each subsystem must be coordinated with the other subsystems before being completed and issued in final form.
Collaboration among individuals is also important. Communication among staff in the subsystems must be open. Periodic meetings, conferences or round table discussions should be held to discuss problems, areas of possible friction or duplication, and common measures to be taken to achieve more operational efficiency.

Information systems normally have a direct effect on the way people do their day-to-day work. Appropriate change management procedures and training need to be carried out to ensure that staff feel comfortable in the new work environment and, in particular, do not feel insecure about their jobs.

Information systems may also lead to redefinition of the relative authority and power relationships of individuals and groups within organizations. Change management exercises need to cater to these complex effects also.

**Partial Integration**

Full integration, like full computerization, may not be cost-beneficial in some countries. Varying degrees of partial integration are viable options. The most important element in any partially integrated approach is the integration of the budgeting and accounting systems so as to assure a commonly used data base for managerial decision making and for budget formulation. System design should allow for the remaining systems to be integrated and expanded without redesign.

Each government can decide on a system after evaluating: the success of existing systems, the need to improve the systems, and the opportunity to initiate integration as a part of improvement. The governments can then determine what degree of FMIS integration is reasonable to expect, what expertise will be required and what financing is available.
### Systems for Macro-Economic Forecasting

- **Macro-Economic Framework**
  - Data on previous and current year actuals
  - Budget Guidelines

### Systems for Budget Preparation

- **Investment**
- **Current**
- **Budget**
- **Investment**
- **Current**

### Systems for Budget Execution and Fiscal Reporting

- **Systems for Monitoring Investment Projects**
- **Systems for Monitoring Public Enterprises**
- **Budget Appr. 
  & Transfers:**
  - Expenditure
  - Status
- **Spending Agency Budget Exec. Syst.**
- **Approved Bills**
- **Notifications to Line Agencies**
- **Cash Management**
- **Cash Allocations**
- **Returns on key indicators from Public Enterprises**

### Cash Management

- **Cash Requirements**
- **Borrowing Requirements**
- **Foreign Assistance Coordination**
- **Government Debt Management Systems**
- **Foreign Assistance Utilization (on investment projects)**
- **Foreign Assistance Disbursements**

### Debt Management

- **Domestic**
- **Foreign**

### Revenue Admin.

- **Debt Service Payments/Loan receipts**
- **Tax Admins. Systems**

### Civil Service Management

- **Authorized posts**
- **Persons Actions**

### Audit

- **Input to Audit Systems from Various Areas**

---

**Legend**
- Arrows show information flows. Full lines indicate electronic flows, dotted lines, paper based flows.
- Key Information Systems Modules for GFM