

# 3

## Coordination

### **What is coordination?**

Coordination is about the state's ability to generate strategic vision and its ability to turn that vision into reality. It requires making trade-offs among multiple objectives, particularly when multiple actors are involved. Who makes those trade-offs, and how leadership and participation are balanced in that process, are of considerable importance.

### **Infrastructure is hard to do**

It's easy to build infrastructure. But building the infrastructure that delivers the right services to the right people at the right cost is difficult. So the quality of the institutions managing that delivery process is crucial.

The peculiarities of infrastructure discussed in Chapter 2 have major implications for institutional needs. The lumpiness and capital intensity, the long gestation periods, and the use- and space-specificity all imply that specialized agencies and local autonomy are needed for infrastructure. The risks, the complexity, the longevity of the assets, and infrastructure's intensely political nature all speak for centralized coordination and planning. In short, managing infrastructure is about balancing politics and economics, centralization and decentralization, leadership and participation, the big picture and the specifics.

And the East Asian experience demonstrates that the big picture is at least as important as the quality of a specific infrastructure ministry or service provider. What matters most is strategic vision. We need to look at how infrastructure fits with broader development strategy and political context, how that strategy gets formulated, and how it connects through service delivery to outcomes. This is what we call "coordination."

In this chapter, we look at the issue of coordination in three ways. We start with six examples of the region's most advanced economies, as well as the most advanced developing country case—Malaysia. We call these the “high-flying geese.” The experiences of these economies give us useful illustrations of one broadly successful East Asian model of coordination. These examples are also proving useful to a number of the developing countries in the region, as they struggle with coordination in their own contexts.

From here, we turn our attention to coordination issues proving most important for the developing countries in the region. We look at three issues. We first consider the challenge that governments face in establishing the right level of infrastructure spending. Often, in times of economic expansion, poor coordination among the agencies responsible for investment and financing leads to too much or inefficient infrastructure. Other times, especially under conditions of fiscal retrenchment, poor coordination may result in too little space for infrastructure (especially when we consider infrastructure's long-term impact on solvency). We next look at the considerable challenge of coordinating infrastructure through decentralized government structures. And, lastly, we look at the challenge of coordination infrastructure in urban areas.

In the final part of this chapter, we reflect on the quality of coordination in four of the region's developing countries—Indonesia, the Philippines, China, and Thailand. These we refer to as the “geese trying to catch up.”

## The “high-flying geese” theory of infrastructure

The “high-flying geese” explanation of economic development in East Asia essentially says that the flying geese in the lead (that is, the most successful economies) transmit their success to the geese flying just behind them, and so on down the line. The transmission can be accomplished simply through successful geese demanding the exports of other geese, or by making investments in them. Or it can be accomplished through the strategies and institutions of the successful geese inspiring the other geese.

One could argue that the infrastructure strategies of East Asia's developing countries today were inspired, to some degree, by the

approach of five of the region's developed economies in a previous era—Hong Kong (China), Japan, Korea, Singapore, and Taiwan (China)—as well as by one of the more successful developing countries, Malaysia. Of course, in each case, that approach has been heavily adapted to country circumstance, and there have been many other influences, but the original inspiration can still be discerned.

In these six economies, political leaders and senior policy makers played a major role in creating the long-term development vision and the sectoral strategies that flowed from that vision.<sup>1</sup> All of these economies had a strong emphasis on export-led growth, high savings and investment levels (sometimes with an FDI focus), and generally balanced social development. Infrastructure strategies were formulated to help achieve those objectives. These strategies usually enjoyed broad consensus amongst the policy-making elites. Policy enjoyed a high degree of predictability.

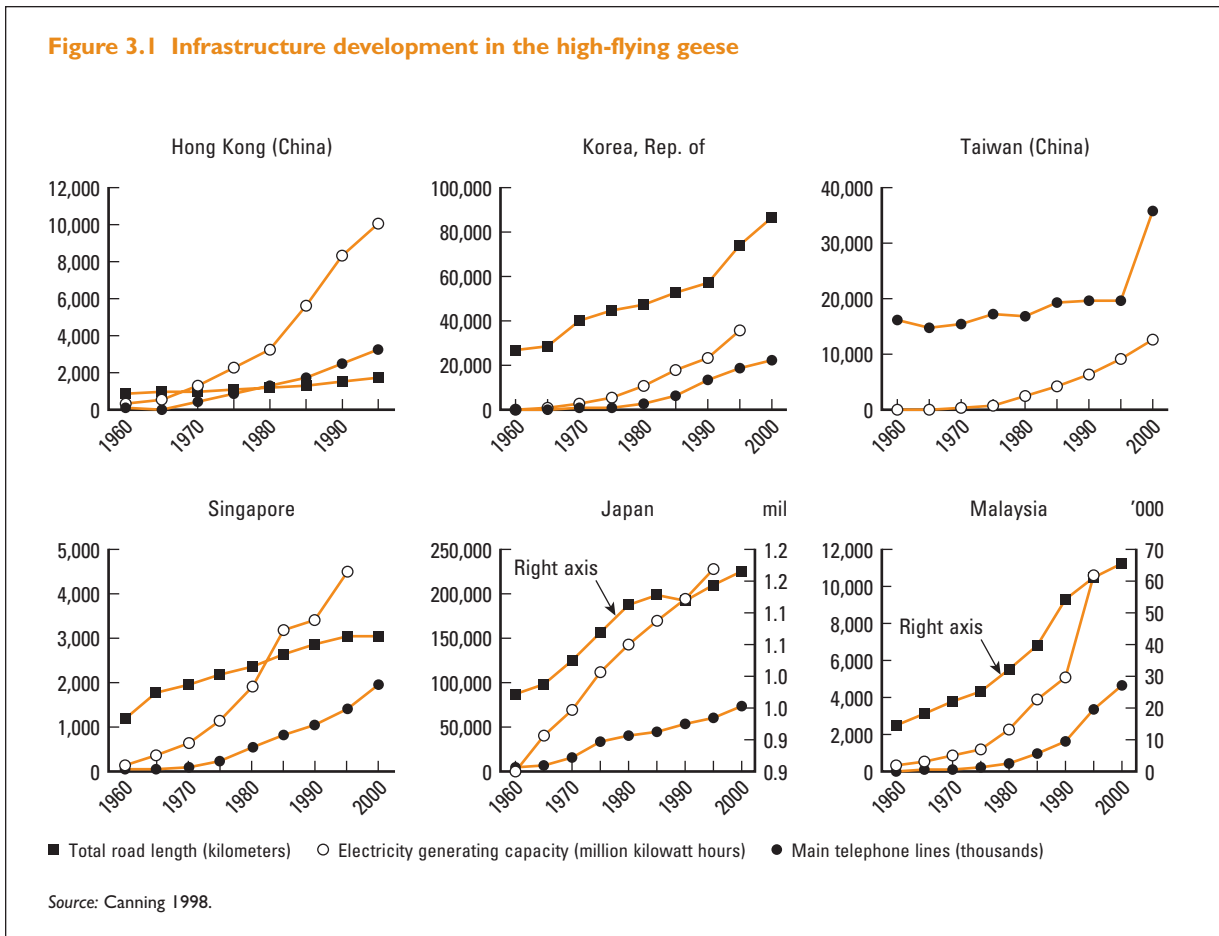
In each economy, growth was rapid over a period of decades. Sustained periods of high growth helped create the policy consensus behind the infrastructure investment which supported that growth. Infrastructure investment in these economies was high by international norms, with significant increases in infrastructure stocks across sectors (Figure 3.1). The discipline of needing to remain competitive in export markets, and to continue to attract investment, helped inject efficiency into project choice and service delivery.

Sometimes infrastructure investment anticipated demand, but in general it reacted to constraints as they began to emerge. Taiwan (China)'s large infrastructure program, known as the Ten Major Projects, for example, was a response to the transportation bottlenecks that had become apparent by the late 1960s (Reinfeld 1997).

However, the reactions were often rapid and quite strategic. Overall sector strategies tended to adapt as production structures changed, rather than responses being made only in a piecemeal manner. A number of very bold and large single projects were undertaken with success—such as the Kobe-Nagoya Highway and the Tokyo-Osaka Super Express Railway in Japan, and the Seoul-Pusan Highway in Korea—although inevitably some white elephant projects occurred also.

Each country had strong planning agencies to drive infrastructure development at the central or sectoral level—Korea's Economic Planning Bureau, Singapore's Economic Development Board, Malaysia's central planning agency and policy-making body in the Prime Minister's Office,

Figure 3.1 Infrastructure development in the high-flying geese



and Japan's strong sector ministries and advisory boards. These agencies generally enjoyed considerable political clout. Simultaneously, these agencies were vehicles for political leaders to implement their long-term development vision, major contributors to the creation of that vision, and technocratic restraints on short-term political pressures. The agencies were the focal points for interagency coordination in policy making and implementation.

But much of this did not take place in public view. Individual accountability tended to be internal to the elite, as long as the broader public were enjoying the fruits of economic growth. In many cases, political life was dominated by one party, which often remained in power for many years.

Infrastructure service delivery in these economies was predominantly the domain of public corporations, often with monopoly status. Oversight by a strong planning agency or more specialized ministries, and a clear incentives framework, appears to have induced better public enterprise performance than seen in most other economies. Cost recovery policies were generally encouraged, and reliance on operational subsidies was limited. For example, Singapore's 1961–64 Development Plan proceeded on the basis that several infrastructure sectors would be self-funding—for example, electricity, water, gas, and certain telecommunications and ports projects (Yuan 1997).

However, service providers were substantial beneficiaries of financing from state-directed domestic financial institutions, which captured high levels of domestic savings. Japan's Fiscal Investment and Loan Program—which mobilized postal savings and social security pensions into infrastructure (and other) investments, and was described as a second national budget—is one of the most prominent of such mechanisms.<sup>2</sup> But similar mechanisms were used extensively across the six economies.

Because these financial mechanisms were often used to lend in line with government sectoral policies, and savings were to some extent locked in by capital controls, infrastructure service providers were effectively in receipt of quasi-fiscal subsidies. The key criteria for success were the degree of risk assessment carried out by financial institutions before lending and the subsequent enforcement of credit discipline.

The model adopted in these six economies delivered impressive infrastructure results, particularly in the relatively early stages of laying the groundwork for sustained economic growth—beginning in the 1950s. However, by the late 1980s and the 1990s, the strains and contradictions in the model were evident. It did not deal well with financial crisis or economic slowdown. Slow growth and tighter financing conditions revealed risks and inefficiencies that were not so apparent until that point. Lending from the financial sector directed by policy makers could become a major public liability, as could a lack of transparency in corporate governance. Strategic approaches could sometimes descend into supply-driven investment, cronyism, and corruption.

The highly top-down approach had restricted the space for civil society participation or decentralized tiers of government. Old models of accountability were increasingly open to question. In the pursuit of growth, environmental considerations had not generally been given strong emphasis (with some exceptions, particularly in Japan), but the

public was now demanding a higher quality of life, including a more livable urban environment.

Infrastructure sector restructuring to allow efficiency gains through greater competition or autonomous regulation of monopolies had not been high on the agenda for most economies. Similarly, private participation had usually been confined to greenfield projects, and therefore tended to play a relatively marginal role in improving sector performance (again with some notable exceptions).

As the state's role became more complex, and its objectives more diverse, its ability to squeeze efficiency gains from the existing system of public sector monopolies began to falter. At the same time, continued efficiency gains became all the more important as economies opened up to ever fiercer global competition. In general, greater complexity meant that the state at the center needed to focus more exclusively on the big picture, and delegate more of the details to companies, regulators, local governments, civil society, and the market.

The geese flying behind these economies—particularly China, Indonesia, the Philippines, and Thailand—face the task of adapting the inspiration of the six high-flying geese to how they themselves intend to deal with the future, a future that looks more complex than the past in a number of important ways. We will now consider some of these complexities, before turning to the developing country case studies.

## Coordinating infrastructure levels

Infrastructure is important, for reasons we established in Chapters 1 and 2. But infrastructure is only one of many government priorities. And governments face budget constraints. Achieving the right emphasis on infrastructure, for the prevailing conditions, can be difficult. Sometimes, in times of high growth and free fiscal policy, governments may end up spending too much or inefficiently. Other times, in times of fiscal retrenchment, they may spend too little. The first is arguably the case in Vietnam and China. Elements of the latter appear in Thailand, the Philippines, and Indonesia.

One of the reasons that governments may spend too much, or with unacceptably high levels of inefficiency, is because of the separation of investment from financing and difficulties in coordinating policy across these functions. The separation of investment from financing is a

common feature of the planning frameworks of many of the countries of the region, with the investment assigned to a ministry of planning and investment, and finance to a finance ministry. Frequently, the institutional separation of planning and financing is given force through a dual budgeting system, with responsibility for investment vested with the planning ministry, and recurrent expenditure assigned to the finance ministry.

The separation of planning and financing functions is not without advantages. Most importantly, it creates space to establish long-term development objectives. It can allow policy makers to think beyond the constraints of a short-term fiscal horizon to consider the big picture.<sup>3</sup>

But as the scope and complexity of East Asia's development challenges have increased, the ability of governments to plan and efficiently resource infrastructure investments has not kept pace. In many countries, this has resulted in unsustainable, delayed, or incomplete projects, and ultimately financial and fiscal stress.

The separation between planning and financing in a dual budgeting system is also a frequent cause of inadequate expenditure on operations and maintenance. This arises both as a result of the bias toward new investment that the system engenders and the division of responsibilities that are better kept together.

In our discussion of China further on in this chapter, we look at how this separation, in particular the financing of local government infrastructure investment, is cause for concern. Box 3.1 takes up this story in the context of Vietnam's roads sector, in which coordination weaknesses within the public finance management system has exposed the government, and the banking and construction sectors, to liabilities that the government now must absorb.

In times of fiscal retrenchment—as is the case in a number of countries in the region following the financial crisis of the late 1990s—a different coordination challenge may arise with respect to the level of infrastructure expenditure.<sup>4</sup> This entails coordination among agencies responsible for fiscal policy and those responsible for infrastructure planning, as well as among those responsible for planning and finance, with sector ministries intent on driving through infrastructure reform.

If—in times of economic downturn—a government is preoccupied with increasing liquidity, it will tend to cut any large spending items it can. This may be justified if the government faces a looming debt crisis, or if it can only meet its expenditure commitments through an

### Box 3.1 Poorly coordinated planning and finance in the Vietnamese roads sector

Investment approval and financing often proceed on separate tracks in Vietnam. Frequently, investments are approved without provision for earmarked financing. One of the outcomes of the inefficient resourcing of approved (and sometimes unapproved) investments is that ministries are increasingly borrowing from commercial banks, with the expectation that central government will meet the liabilities they incur.

In the case of the transport sector, this practice has led to considerable government arrears and destabilization of the construction industry. Over 1999 to 2002, about 35 percent of commitments for transport had been approved by the Prime Minister's office, but had not been allocated funding. To meet the shortfall, the Ministry of Transport (MoT) contracted (state-owned) construction companies to undertake work, with the promise of reimbursement at a later time. This has imposed a significant debt burden on contractors, who were in turn forced to take loans from state banks to finance their operations. State banks have subsequently been forced to grant loan rollovers, because in many cases the interest payments due are in excess of enterprise capitalization. Arrears in the MoT to contractors, amount to VND 1,200 billion, and those of the Transport Construction Corporation amount to an additional VND 1,000 billion.

Debts incurred in this way threaten the overall stability of the fiscal framework. Taking into account borrowing for unfunded investment across all sectors, debts totaling approximately VND 11 trillion have been incurred. The government has agreed to absorb VND 5 trillion of debt incurred for projects that were implemented in fulfillment of a master plan. The existence of an additional VND 6 trillion of debt for projects implemented outside of any master plan bears testament to a nontransparent environment.

*Sources: Vietnam Development Report-Governance 2004; World Bank 2004g.*

inflationary printing of money. In such cases, establishing debt sustainability and cutting fiscal deficits are likely to be paramount.

However, what if a liquidity-constrained government cuts out a large infrastructure project with an expected economic rate of return of 30 percent (which is not particularly high for an infrastructure project in a developing country)? It is often infrastructure spending that gets cut in fiscal crisis, because infrastructure spending comes in large lumps of cost today, the benefits of which are usually several years away.

Cutting that project is equivalent to the government borrowing at an interest rate of 30 percent to overcome its liquidity problem. If that happens to be the cheapest way to stave off a crisis, it may well be justified. But if there are cheaper alternatives—such as taking a loan at less than 30 percent—then cutting the project is obviously not a good

solution. Indeed, in this case, cutting out the project reduces the government's net worth, and hence worsens its solvency. In other words, across-the-board cuts in infrastructure spending during fiscal crisis are often shortsighted. (If you need a little more convincing, read Box 3.2, which

### **Box 3.2 Infrastructure and fiscal space—arguments and counterarguments**

There are a number of arguments that are made against the view that cutting infrastructure at times of crisis may be shortsighted.

One argument is that the high returns to the infrastructure investment may not accrue directly to the government. But they are likely to accrue indirectly if infrastructure raises economic activity and that activity is taxed. And the tax system can be designed to capture the benefits more directly if that is perceived to be desirable.

A second argument is that infrastructure projects are often white elephants, that is, they don't have high rates of return. But it would be as naïve to believe that all infrastructure spending is for white elephants as it would be to believe that none of it is. The "white elephant" argument doesn't argue for indiscriminate cutting of infrastructure projects during fiscal adjustment (although it obviously does argue for tackling the process of public investment selection).

A third argument is that if the private sector can do it, why should the public sector spend scarce resources? On one level, this argument is misguided: The majority of infrastructure investment in any country is public, and it would take a very long time to make all of it private (if that is even desirable). On another level, a more subtle version of this point can be made: Ministries of Finance can pressure sector agencies toward allowing private participation, where it is indeed possible, by cutting their budgets. More generally, infrastructure reform can often improve solvency through more efficient service provision and reduced fiscal risk, but may only happen if the sector's budget constraint is hard.

In many cases, this "liquidity pressure" approach may be the best way to overcome excessive caution or vested interests on the part of sector agencies, and to hold them accountable for performance. But in other cases, such caution may be well-grounded in terms of the readiness of the sector for private participation or other reforms. And there is a risk that transparent fiscal support will be replaced by nontransparent contingent liabilities, unless the Ministry of Finance has effective control.

And last, but not least, there is a fourth argument that capital markets worry about sovereign liquidity, and therefore governments should worry about it too.

It may be hard to make convincing solvency arguments to capital markets unless the country has an established track record of liquidity. In other words, capital markets may be short term with short-term governments. In such cases, high-return infrastructure projects may well need to be postponed, but this argues for accelerating infrastructure reforms that yield alternative finance in the interim from efficiency gains and greater cost recovery. Of course, it also argues strongly that the economic costs of fiscal crisis—and of short-termism—can be extremely high.

addresses some of the arguments and the counterarguments made against this point.)

And so agencies responsible for fiscal adjustment need to coordinate long-term fiscal policy with those responsible for infrastructure development spending. In most countries, this means the relationship between the finance and planning functions needs to be designed strategically, not merely be allowed to follow the fiscal cycle. That is, infrastructure budgets should get protection where merited during fiscal crisis (but not be allowed to race ahead during fiscal booms). This may sometimes mean that other priority sectors also are protected, and that short-run fiscal deficits are therefore larger than otherwise. In short, less liquidity may be needed to help solvency.

The analysis also suggests that liquidity crises can force infrastructure reform. That means that central agencies (of finance and/or planning) should coordinate with sector agencies to ensure that reform is promoted as much as possible—but not pushed too fast to be sustainable—and ensure that liquidity pressure doesn't just shift state liabilities off-budget. Ultimately, the objective is to ensure that fiscal space—in the broadest sense—provides adequate infrastructure for inclusive development.

## **Coordinating infrastructure through subnational government**

Much of the challenge the governments face in coordinating infrastructure reflects balances that need to be struck among different functions—among planning and financing, infrastructure, and overall fiscal sustainability. When these functions are spread across separate agencies, the challenge becomes all the more difficult. And this is also the case with the challenge of coordinating infrastructure through decentralized government structures.

Decentralization in East Asia is a comparatively recent phenomenon. In the space of less than 20 years, however, previously centralized state structures have been significantly reformed. Subnational government expenditure as a percentage of total expenditure now ranges from 10 percent in Thailand to close on 70 percent in China (World Bank forthcoming a).

If well managed, and accompanied by effective accountability mechanisms, infrastructure decentralization may bring significant benefits—for example, by tailoring service provision to the needs of local constituencies. But it also brings a number of new coordination challenges. Some of these play out horizontally across government structures—managing services whose benefits span jurisdictions (the so-called spillover problem), excessive fragmentation, and destructive competition. Others play out vertically among different levels of government (see UTCE/ALMEC 2004b).

### Managing spillovers in service provision

Increased decentralization increases the chances that projects will bring benefits, and incur costs, outside of any one single jurisdiction. Decision making often needs to span municipal boundaries to ensure effective coordination. But frequently, local governments are too small or lack the capacity and incentives to perform such coordinating roles.

Voluntary cooperation among local governments is rare. One prominent exception in voluntary interjurisdictional cooperation in investment planning and project implementation is the construction of a circumferential toll road across Cabanatuan City and the adjacent municipalities of San Leonardo and Santa Rosa in the Philippines.

But more commonly, local governments lack necessary short-run political incentives to cooperate. The CALA (Cavite-Laguna Provinces) peri-urban region in the Philippines, for instance, has paid a particularly high price in terms of loss of competitiveness, arising from the inability of local jurisdictions to jointly fund a common transportation network and solid waste system (Webster 2004).

In Dak Lak, Vietnam, the absence of an intermediate tier of government responsible for integrated water resource management has led to overuse and degradation of natural resources. Local agencies have repeatedly failed to resolve the conflict between upstream and downstream water users in the Ea Tul catchment of the Upper Srepok basin, and Water Users Associations (WUAs) have emerged to take on various coordinating functions (Dupar and Badenoch 2002).

Governments have therefore had to come up with new coordination tools, and a number have done just that. In both Thailand and Vietnam, the provision of fiscal incentives—in the form of matching grants

available to projects involving governments that are part of the same extended urban region—have been successful (Webster 2004).

Other mechanisms include the formation of special districts or regions, which comprise several local governments, with the specific mandate of coordinating infrastructure service delivery in extended urban regions. This approach has been successfully implemented in Canada and the United States. The Greater Vancouver Regional District (GVRD) in Canada, for instance, comprises 13 local governments that now cooperate in the planning and provisioning of a variety of services, including regional transportation, solid waste, wastewater, and regional parks.

### Excessive fragmentation

Size matters in other ways too. Newly formed municipalities may often be too small to achieve the minimum efficient scale necessary to ensure technical efficiency in service provision—evidence suggests that this may already be the case in Thailand, Indonesia, and the Philippines (see Table 3.1 below for a comparison of average population size by local governments across East Asian countries). This is particularly the case where infrastructure services are local in nature but require large capital investments—water supply, electricity distribution, or public transport.

Where excessive fragmentation is a concern, efficiency gains may be achieved by clustering municipalities to form regional areas of service

**Table 3.1 Hierarchy and average population size by local government**

	Malaysia	Lao PDR	Cambodia	China	Vietnam	Thailand	Indonesia	Philippines
Area (000 km <sup>2</sup> )	330	237	181	9,597	330	514	1,919	300
Population (million)	23.8	5.4	12.0	1,270	78.5	61.2	211.7	78.3
State/Province	16	17	24	33	61	75	32	79
Local Governments	Municipality/ Districts					1,133 (795) <sup>a</sup>	416	1,610
	Communes/ Subdistricts	—	10,868	1,510	45,462	10,594 71,864 <sup>a</sup>	—	41,944
Average Population Size (000)	Municipality/ Districts	184	38	70	517	110	54 (77)	509
	Communes/ Subdistricts	—	0.5	7.9	27.9	7.4	0.9	56.3

Sources: CLAIR 2000, 2004; MRI 2003.

Note: — = not available.

a. Local administrative body with 795 districts; 7,255 subdistricts; 71,864 villages.

provision (albeit at the expenses of local accountability). Often, this requires the creation of an institutional interface at a higher level of government, charged with coordinating the setting of investment priorities and regulating service provision.

### **Destructive competition**

Decentralization may increase efficiency by promoting competition among local governments. But in the absence of coordination at higher tiers of government, excessive competition among municipalities may induce inefficient allocation of resources and overinvestment, with municipalities building or upgrading ports, airports, or other infrastructure facilities in their own areas for reasons of prestige rather than relying on those in adjacent regions.

In Thailand's aviation planning, for instance, the resource allocation process significantly reflected local successes in lobbying for air facilities, resulting in gross oversupply. Most of the local airports managed by the Department of Air Transportation (DAT) have essential facilities, but no commercial service; many are essentially in a state of abandonment. Nevertheless, the pressure to build more regional airports persists (Webster and Theeratham 2004).

So too, in China, amid economic transition and decentralization, municipalities tend to compete with each other to attract outside investment for businesses and for infrastructure projects. The tools of competition primarily comprise preferential policies—tax holidays, free land, and discounted land concessions. Given the absence of other coordination mechanisms, such ad hoc policies tend, in some cases, to unduly distort resource allocation among municipalities as well as among various stakeholders within a given municipality (Liu 2004).

The lesson again is that effective coordination requires effective institutions. Institution building and strengthening are essential, if the allocation of responsibilities across multitiered forms of government is to be successful.

### **Vertical coordination**

Decentralization of infrastructure service delivery to subnational governments changes, but it does not remove the role of central governments. New functional systems need to be developed that allow central

ministries to monitor, manage, and coordinate programs in line with policy and regulatory frameworks. The inadequacy of such systems is a frequent cause of suboptimal service delivery and confused authority.

Functional decentralization has frequently not been matched by fiscal decentralization, with local bodies deciding policy and regulatory matters (such as pricing, service standards, and expansion strategies), while central governments often continue to provide the bulk of investment financing and, to some degree, financing for operations and maintenance.

In the absence of adequate coordination of fiscal and regulatory policies, local bodies have little incentive to make sustained progress toward reducing unit costs, recovering those costs, and—where private participation is involved—respecting contractual obligations. This is a story that has played out across most infrastructure sectors in East Asia, as elsewhere, but especially for urban transport, water supply and sanitation, and to some degree rural electrification (see UTCE/ALMEC 2004b).

This situation has been exacerbated by shifts in the composition of central transfers. Revenue-sharing grants and other forms of unconditional transfers frequently constitute an increasing share of central transfers to local authorities, for which there is little if any reporting on uses and costs, and much less accountability in the broader sense of tracking efficiency of expenditure and service delivery performance.

## Coordinating urban infrastructure

As we saw in Chapter 1, much of East Asia's infrastructure challenge arises from growth generated by cities. Delivering urban infrastructure and infrastructure services poses arguably the most complex of infrastructure coordination problems, in part, because of the sheer pace of urbanization in East Asia, which frequently outstrips the response capacity of urban managers and, in part, because urban management requires coordination that brings together so many different functions.

Infrastructure has a major role to play in shaping urban space—determining where people work, live, and create wealth; how they travel; and how they sell their goods. Formulating and implementing practical plans with long-term vision is vital. When successful, it can set the stage for long-term growth and prosperity. The development of Thailand's Eastern Seaboard (ESB) area—a peri-urban export-orientated

zone developed around state-sponsored infrastructure investment—is among the region’s most successful examples (see Box 3.8 in our discussion of Thailand for more details).

But Thailand, as we saw in Chapter 1, is among the least urbanized, and slowest urbanizing countries in the region. In other countries, the pace of population growth has made it difficult for the authorities to keep up. And timing is of the essence. When urbanization precedes the investment necessary to make for livable cities, the costs of improving infrastructure levels tend to escalate because of the costs of land acquisition and resettlement, and infrastructure solutions tend to be suboptimal.

Ideally, land use management—the incentives and restrictions that determine which activities are located in which areas, and of which infrastructure is a large part—is key to managing urban growth. But city managers in many East Asian countries are often hampered in this role in a number of ways, including insufficient legal frameworks, deficient application of existing restrictions, and political intervention.

Coordination among the multiple agencies that are typically involved in urban management and infrastructure delivery is also vital, but is often difficult to achieve. Returning to Thailand, before Bangkok began reforming its urban management, there were at least 27 government departments and state-owned enterprises (SOEs) with responsibilities related to urban transport. Four separate agencies, under three different ministries, had powers to develop mass transit schemes. In one extreme case, two megaprojects were even planned to occupy the same physical space. When competing parties held rival agencies, the incentives for better alignment were even weaker (Carruthers, Bajpai, and Hummels 2003). A similar picture unfolds in the case of Vietnam, despite the country’s significantly different political and social context (see Box 3.3).

Coordination across urban boundaries is also a particular challenge. When urbanization spreads beyond administrative boundaries, so do urban activities and urban needs. In water supply, waste management, transport, and other network infrastructure services wider administrative cooperation mechanisms are essential. Frequently, however, they are lacking. In the Philippines, for example, the Metropolitan Manila Development Authority (MMDA) is responsible for coordinating urban development for the entire Metro Manila area, which consists of 17 cities and municipalities. However, its legal authority is not firmly established, and its power is limited to actual coordination and enforcement of land use management and infrastructure development. And with urban growth

### Box 3.3 Urban management in Vietnam

In Vietnam, urban management (*quan ly do thi*) is nominally the responsibility of the central Ministry of Construction. However, the Ministry's power is constrained by a web of independent decisions by other government entities responsible for land management, transportation, finance and budget allocation, socioeconomic planning, management of SOEs, and the environment at the national, provincial, city, and district levels.

These actors frequently compete against each other for state financial resources and FDI, with little benefit accruing to individual departments from cooperation. This is further complicated by the traditional vesting of *quan ly* authority with local officials in communes and wards, which often results in the treatment of laws, decrees, and plans as guidance, with ultimate responsibility resting with local officials.

Effective urban planning requires the achievement of objectives in spatial, as well as sectoral, terms. In Vietnam, priority setting in the socioeconomic plans and implementation of physical planning are allocated across two separate planning exercises, and have proved difficult to integrate and coordinate. The plans of the Ministry of Construction, which deal with development in spatial terms, tend to overlook the economic and social dimensions of urban master planning, while the plans of the Ministry of Planning and Investment tend to overlook the spatial and environmental dimensions of investment programs. This frequently results in disconnected and impractical physical plans, weakly related to socioeconomic plans, lacking in implementation mechanisms beyond directing the location of state investment.

Because the spatial plans are unable to produce usable guidelines for challenging urban growth, much growth takes place in unauthorized and unplanned areas, is more unlikely to be inconsistent with overall strategic objectives, and proceeds without adequate provision of required urban services.

*Source:* World Bank, forthcoming c.

expanding beyond its boundaries, to the adjoining provinces of Cavite and Laguna, its inability to provide infrastructure services is of serious concern (Webster 2001).

## The geese catching up: Four snapshots

We are not going to attempt a comprehensive account of strategic vision, planning, and policy coordination for the infrastructure of these four countries. That by itself would be worth a book. Instead, we will tell a brief story about each, illuminating some of the key challenges they face and how they tackle them.

## The Philippines<sup>5</sup>

The Philippines' story is that long-term vision and development plans are often undermined by short-term pressures within a fluid and fragmented political system. The fragmentation of the system diminishes accountability and nurtures corruption. Leadership is sporadic, clientilism is strong, and the state has been captured to some degree by special interests. Politicians frequently override technocrats, and policies can be very unpredictable. There have been boom periods of relatively high growth and fiscal stability, but they have alternated with periods of bust. This has substantially impacted Filipino institutions, and their effectiveness in delivering infrastructure services.

The Filipino planning agency is the National Economic and Development Authority (NEDA). In periods of bust, NEDA's long-term development role has tended to be secondary to the goal of fiscal retrenchment (under the leadership of the Department of Budget and Management). In periods of boom, which tend to precede elections, NEDA's role tends to be undermined by multiple pressures to give financial support to highly politicized infrastructure projects. This support is often spread thinly to keep several different constituencies happy (see Box 3.4 for a description of the Philippines' "pork-barrel" funds). Long-term development plans and actual budgets often bear little relation to each other. NEDA's policy-making role—for example on user charges—is frequently preempted by executive authority or eroded by other political influences. And so NEDA's ability to set priorities, and to coordinate policies or projects, is highly constrained. Crisis management tends to be the dominant mode of operation.

Decentralization in the Philippines is a source of further coordination weakness, and it contributes significantly to the government's inability to implement strategic plans. The ports in Manila, for instance, and the roads leading to them, have become highly congested. The government decided to upgrade Batangas port about 100 kilometers from Manila, which could serve factories in the peri-urban areas south of Manila. This required a large investment that would benefit many different local government areas. It could therefore not attract the requisite funds, because each local government preferred to try and freeride on what the others would do. Eventually the port was donor funded, but access to it is restricted by a narrow highway the expansion of which still cannot attract domestic funding.

### Box 3.4 “Pork-Barrel” interventions in infrastructure in the Philippines

One of the consequences of the personalization of the Filipino political process is the allocation of budgets to congressmen and senators from which to fund politically or personally motivated “pork-barrel projects,” through so-called “augmentation funds.”

This results in fragmentation of scarce fiscal resources, weakens accountability, and significantly undermines existing planning and coordination mechanisms.

Table 3.2 gives an indication of the prevalence of this phenomenon.

Between 1997 and 2001, 22.5 percent of the Department of Public Works and Highways’ (DPWH) budget—or close to P 50 billion—was allocated to “pork barrel” projects, under various rubrics. And this outweighed the funds allocated to local government units for infrastructure projects by more than 25 percent.

Source: World Bank forthcoming b.

**Table 3.2 Augmentation funds for local infrastructure, DPWH budget, 1997–2001 (P billion)**

	1997	1998	1999	2000	2001	Total 1997– 2001
Total Budget of which—	49.05	38.25	42.65	42.33	48.96	221.24
Augmentation Funds	14.17	3.04	6.83	8.1	17.56	49.7
Various Infrastructure Projects	13.68	2.84	0.32	8.1	17.29	42.23
Project Development Assistance Fund	0	0	0	0	0.27	0.27
Countrywide Development Fund	0.5	0.2	0	0	0	0.7
Rural/Urban Development Infrastructure Fund	0	0	5.36	0	0	5.36
Food Security Program Fund	0	0	1.14	0	0	1.14

Source: Manasan 2004.

The lack of policy coordination has led to generally inadequate fiscal space for infrastructure and low levels of private infrastructure investment. In 2002, total infrastructure investment was only 2.8 percent of GDP.

To cite just one example of weak coordination over fiscal issues: the electricity sector. There is an official policy of minimal and well-targeted subsidies in the sector. In reality, electricity tariff increases are highly politicized—a round of increases was postponed just before the May

2004 presidential election. At the same time, overcontracting by the National Power Corporation (NPC) for independent power producers has resulted in the government taking over service of much of NPC's debt. This has crowded out high-priority expenditures in other sectors (particularly given the Philippines' weak tax collection), and in the power sector itself there are insufficient funds for investment in transmission and distribution capacity. Regulatory autonomy has been undermined. Lack of predictability has deterred further private investment.

In some cases, the state's inability to deliver infrastructure services has led to an ambitious restructuring of the sector—almost in desperation. For example, in telecommunications, before the Philippine Long Distance Telephone Company (PLDT) monopoly was broken up, a typical consumer would have to wait almost a decade for a telephone to be installed, and teledensity was far below that in neighboring countries. Since the introduction of competition in 1995, teledensity has increased dramatically—threefold for fixed lines and by more than 70 percent a year for mobiles (for mobiles, technology is often ahead of the state's ability to control it). Technology and competition have succeeded in the Philippines where the state was failing—and the state facilitated that process.

But even here progress has been undermined by state coordination weaknesses. The telecommunications companies were given lucrative monopoly franchises for certain services (for example, international calls) so that they could cross-subsidize expansion of fixed-line service into unprofitable (“missionary”) areas. In essence, competition was restricted because the alternative to the government subsidizing missionary expansion directly had no credibility. Nobody believed the subsidies would flow without disruption, whatever the stated policy. However, to a considerable extent, the franchisees' monopoly power, and hence the ability to cross-subsidize, has been undermined by illegal competition from bypass operators using new technologies (for example, Voice over Internet Protocol [VoIP]), which the state is unable to regulate effectively.

The mainstreaming of poverty reduction and environmental concerns is another area where policy and reality diverge in the Philippines. The formulation of the national development plan is highly consultative, and addresses social and environmental issues as high priorities not just add-ons. However, there is a huge gap between what the plan says, and the projects that receive resources and the policies that are actually implemented. Civil society's main mechanism for affecting decisions

with environmental and social implications is not really through participation at the planning stage, but through campaigns and protest at the permitting or implementation stage. The frequency of such protests can be seen as a strength of Filipino democratic culture, reacting to the weakness of the state—it does not represent coordinated environmental and social mainstreaming. Similarly, community and nongovernmental organization (NGO) initiatives for small-scale infrastructure services are vibrant in the Philippines, filling some of the gaps in state provision (Conan 2004).

The effects of weak coordination present themselves across the Philippines' infrastructure sectors (see World Bank, forthcoming b). Investment climate assessments show that weaknesses in infrastructure provision—in particular, in electricity supply and transport—have significant adverse effects on investment and competitiveness.<sup>6</sup> The power sector is imposing a financial crisis on the government and cannot fund the needed expansion.<sup>7</sup> Transportation service quality is generally poor and costs are high; the road network is badly interconnected and many roads are in bad condition.<sup>8</sup> Access to improved water appears to be in decline<sup>9</sup> particularly in smaller urban centers across the country, and water quality and service reliability are major issues. Sanitation standards are a major health concern, with only about 4 percent of the population having acceptable on-site treatment and disposal. Telecommunications has seen progress, but performance and access remain behind regional norms.

However, there are positive signs. Filipino political culture undermines long-term strategic vision and the role of the state, but it does allow private and civil society initiative to emerge. Most hope in the Filipino context lies in the ability of technology, competition, community initiative, or small-scale infrastructure to get around the state and make a contribution. In large-scale monopolistic network subsectors, in which a significant state role is inevitable, progress can be expected to be slower.

### **Indonesia**

Indonesia's story is that the pendulum has swung from autocratic technocracy to something considerably more participatory and decentralized, but that pendulum has not yet come to rest. Leadership and the center are struggling to find their proper role and define a strategic vision. The old symbiosis between politicians and technocrats has gone, but the

new relationship has not yet fully taken shape. The autocratic period was one of generally high growth and macroeconomic stability that ended dramatically in economic crisis; the postcrisis period has seen a painful economic recovery that is now being consolidated. This has been a formative period for Indonesia's economic management institutions.

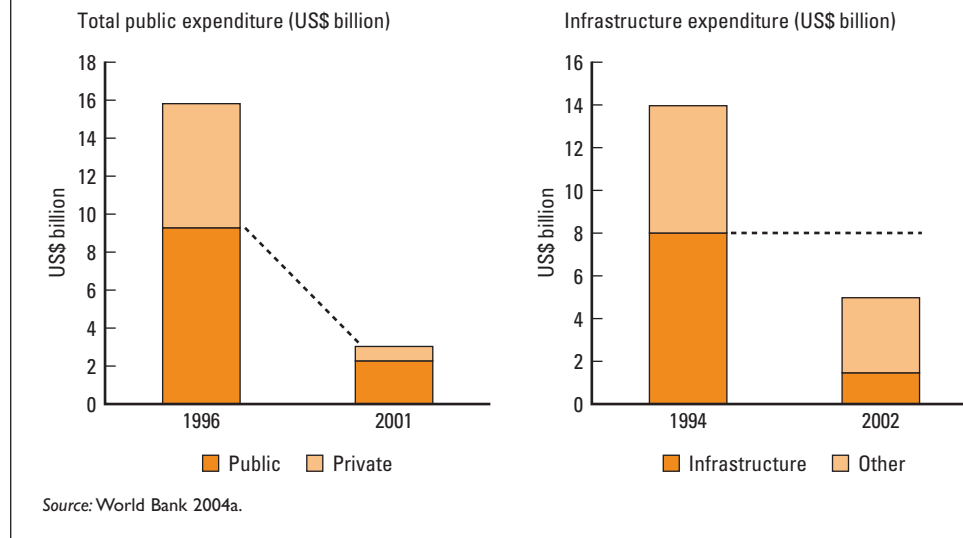
Under the Suharto regime, policy planning and coordination was centralized in two institutions: Badan Perencanaan Pembangunan Nasional (BAPPENAS), which prepared national five-year development plans and coordinated policy initiatives, and the Coordinating Ministry for the Economy and Industry (EKUIN). In effect, these two institutions operated more or less as one, and had substantial ability to plan strategically and oversee the translation of that vision into reality (see Asanuma 2005; World Bank 2004a). The regime gave considerable technocratic authority to its planning agencies, although, in the regime's declining years, corruption tended to undermine technocracy increasingly.

Under the post-Suharto *reformasi* regimes, the power of the planning agencies has been significantly diffused. The power of the executive as a whole has become circumscribed by the emerging role of the legislature and the judiciary as democratization evolves. Power has been redistributed downwards to local government, under Indonesia's "big-bang" approach to decentralization since 1999. Fiscal crisis, from which Indonesia is only now beginning to recover, shifted influence to the MoF and the central bank and placed a strong emphasis on short-term macroeconomic stability. BAPPENAS is now essentially a planning advisor, without even authority over the state's development budget. EKUIN's successor, the Coordinating Ministry of Economic Affairs, focuses mainly on short-term implementation issues. Strategic vision is in search of a home.

Fiscal space for infrastructure has been limited in the last few years, with infrastructure expenditure as a portion of total expenditure declining significantly. In parallel, private investor interest, which remains significant, has not led to much actual investment (see Figure 3.2). This is in large part because the state abrogated contracts during and after the 1997 crisis, and confidence has not yet been reestablished. Box 3.5 takes up this story in the energy sector.

Severe infrastructure backlogs have emerged. Real spending on road maintenance, for instance, dropped in 2000 to less than 40 percent of its 1985 level. This has resulted in a serious backlog of preservation and upgrading, particularly for the provincial and *kabupaten* (county) road

**Figure 3.2 Indonesia has gone through a period of fiscal contraction with important implications for infrastructure**



networks. And both quality and access have seen little progress—PDAM (Perusahaan Daerah Air Minum; Local Water Supply Enterprise) coverage and electricity access remain extremely low, at 17 and 55 percent, respectively (World Bank 2004a).

The state's ability to pursue growth and poverty reduction objectives through infrastructure provision has thus become very constrained since the crisis. However, the ongoing fiscal recovery may now allow for more public expenditure on infrastructure, although much of the funding burden will need to be born by user charges and tariffs.

Infrastructure investment is now at a crossroads: A rebound in infrastructure expenditure is vital to revamp investment and sustain economic growth. With steady macroeconomic conditions and political stability, Indonesia is well poised to address its infrastructure bottlenecks—provided that it follows through on the policy reforms initiated in a mixture of infrastructure sectors. Failure to seize this window of opportunity may jeopardize growth prospects for decades.

Based on international comparisons, as well as comparisons with levels of government spending before the crisis, it is estimated that an increase in annual total infrastructure investment of US\$5 billion above the current trend (amounting to an additional 2 percent of GDP) is

### Box 3.5 Indonesia's renegotiated power purchase agreements

Faced by escalating electricity demand, and limited public resources, many East Asian countries had little choice but to invite private, frequently foreign investment in power plants, mostly as Independent Power Producers (IPPs).

In Indonesia, 26 primarily U.S. dollar-denominated power purchase agreements were signed between IPP sponsors and PLN, the state electricity utility, for approximately \$18 billion, increasing capacity by roughly 11,000 mW.

Funds for these IPPs were secured from international sources, but were predominantly from unsolicited proposals. Although the government did not issue explicit guarantees, "letters of support" were given to the IPPs through which the MoF or the Ministry of Mines and Energy required PLN to perform its obligations.

As a result of the crisis and devaluation of the rupiah, the government—faced with large and escalating debts—postponed some IPP projects, and directed PLN to reimburse only part of its obligations to the operating IPPs.

Investor response was mixed, depending on whether each took a short- or long-term view of its involvement. In some cases the government was sued and, in one, an international arbitration panel ruled in favor of the IPPs.

The government has now settled or renegotiated all disputes with the IPPs (excluding the case mentioned above).

At the same time, however, it remains exposed to important contingent liabilities associated with its obligations to the IPPs. And future market development will be significantly affected by the set tariffs and dispatchability levels associated with the power purchase agreements.

*Source:* World Bank 2004a.

required to meet the projected medium-term growth target of 6 percent (World Bank 2004a). Sustained policy reforms would attract sizeable private investment back to Indonesia. However, for the foreseeable future, public sector funding is likely to play an important role in closing the funding gap for infrastructure.

There is little doubt that creating increased fiscal space for economically sound infrastructure projects is vital to build the fundamentals necessary for long-term growth in the country. Further compressing productive public infrastructure expenditure to achieve short-term macroeconomic stability risks engendering a vicious circle, with depressed prospects for growth, user fees, and taxes. The challenge for Indonesia now lies in building the requisite coordinating capacity and accountability mechanisms. This will be needed to strike a careful balance among fiscal prudence and fiscal space, attracting private investment, and implementing infrastructure sector reforms. A more reliable

cost-recovery policy, and greater certainty over fiscal space for subsidies, would help attract private investment.

Over the past 10 to 15 years, infrastructure service provision has been increasingly delegated by government to corporatized state enterprises or to the private sector, with some efficiency gains (albeit modest).<sup>10</sup> However, this delegation has not generally been accompanied by sector restructuring to allow competition. Nor has the rule of law yet replaced the rule of a strong leader, so the ability of the judicial system or of capital markets to bring better corporate governance or encourage further private investment is limited.

So for the time being, top-down oversight and regulation remain at a premium to ensure performance and catalyze reform (particularly as vested interests in infrastructure sectors remain strong). But as we have seen, the planning agencies' scope to provide that oversight and regulation is now severely limited, and new institutions have not emerged to fulfill these roles.

In the same way that corporatization and privatization have brought modest performance improvements, Indonesia's radical decentralization to the *kabupaten* (county) and *kota* (municipality) level (with a limited role for provinces) laid the foundation for greater government responsiveness to communities.<sup>11</sup> However, it has also created considerable uncertainty about interjurisdictional responsibilities and has limited fiscal space for central initiatives. The transport sector is a case in point: Conflicting government regulations and sector laws regarding the functions of central and provincial governments have created a coordinating vacuum. As a result, primary infrastructure networks—such as major national and provincial roads—have been neglected. More than 12 percent of the national and provincial road network remains unsealed; in Kalimantan and eastern Indonesia, the percentage rises to 27 percent (World Bank 2004a). Local governments' share of public investment in infrastructure is now almost equal to that of central government (just under 1 percent of GDP a piece in 2002). Interestingly, although this would appear to favor those sectors that are provided locally such as water supply, this does not yet appear to have shown up in enhanced performance.

Since *reformasi* began, civil society has flourished. This has brought with it a new awareness of local environmental and social issues when infrastructure projects are being planned or implemented, which was essentially suppressed under the Suharto regime. As in the Philippines, democratization has also brought forth community initiatives in

small-scale infrastructure, where the state has failed to provide. Indonesia's Kecamatan Development Project (KDP) is among the most successful examples of the region's experimentation with community-driven development (CDD) (see Box 3.6). However, the state's ability to take those local initiatives and mainstream them into policies or programs is weak. Indeed, in general, the coordination necessary to mainstream environmental and social considerations has not been strong in Indonesia.<sup>12</sup>

### **Box 3.6 Coordination from the bottom up in Indonesia: Community-driven development programs**

In an effort to provide high-quality and low-cost village infrastructure, many countries in East Asia have adopted CDD approaches, which give more power to local decision making and control mechanisms. When top-down coordination fails to reach the poor, bottom-up coordination can fill the gap.

One of the largest CDD programs in East Asia is the Kecamatan Development Project (KDP) in Indonesia. This project uses a competitive process through which intercommunity forums rank and select proposals based on their own priorities. Particular attention is paid to reducing corruption through public transparency in the allocation and tracking of funds, monitored by local NGOs and independent media. Local communities participate actively in the design, implementation, and maintenance of projects (mainly for village roads, water, and sanitation).

By 2006, KDP will cover some 28,000 villages or almost 40 percent of the villages in Indonesia, including the most impoverished rural areas. The same approach is being used to involve communities in reconstruction decisions following the tsunami in Aceh.

Initial evidence from KDP, and similar programs in Lao PDR and the Philippines, indicates that small-scale local roads using CDD methods can be 25 percent to 40 percent cheaper than similar roads built by local contractors. Some of these savings are due to lower corruption. Although lower initial savings are often evident in water supply projects (mainly because of the need for communities to purchase pipes and so on), there is a growing body of evidence suggesting that community maintenance of systems is far more likely than under the traditional "build it and leave it" approach. While the benefits of CDD projects can be captured by local elites, proper targeting to poorer rural areas, with mechanisms to encourage participation by women and other vulnerable groups, can still have a significant impact on overall poverty levels.

Despite the evident advantages, CDD programs also have their limitations. Experience to date suggests a number of significant challenges to be addressed: First, finding ways for the village-level approach to evolve into mechanisms that allow for the rural poor to affect local government decisions on larger, higher-value types of infrastructure. Second, ensuring the

(Continued on the next page)

**Box 3.6 (Continued)**

technical quality and environmental soundness of infrastructure works and thus their sustainability. And third, augmenting official financing with larger amounts of domestic resources. (The willingness of governments to fund CDD programs from their own resources, while preserving the hands-off approach to decision making will be one of the ultimate tests of this approach.)

Critics of the CDD approach point out that there is little systematic evidence of the benefits claimed by CDD proponents. For example, Mansuri and Rao (2004) concluded that “there is some evidence that such projects create effective community infrastructure, but not a single study establishes the causal relationship between any outcome and participatory elements of a community-based development project.” In response, there is a move to incorporate well-designed monitoring and evaluation systems into CDD projects. This will not only provide more evidence on the pros and cons of this approach, but also suggest ways to improve the design and implementation of future CDD programs.

*Source:* Burgess 2004.

**China<sup>13</sup>**

In China, authority has been extensively decentralized to the provincial and municipal levels. Local government projects accounted for 86 percent of fixed asset investment in 2003 (World Bank 2004d). But the center remains substantially in charge and generates the strategic vision that binds the system together.<sup>14</sup> High growth and clear objectives have been a force for institutional cohesion. Politicians and technocrats are not so easily distinguished from each other, given the leadership role of the Communist Party (although obviously the top leaders are distinguishable from the bureaucracy at large).

Accountability is essentially upwards, and civil society’s role is limited. Planning has become progressively more strategic and flexible. Market forces play an ever-increasing role in state decision making; the transition has been gradual and adaptive, within a framework of political continuity and authority.

China’s principal planning agency is the National Development and Reform Commission (NDRC, formerly the National Planning Commission). Unlike BAPPENAS or NEDA, NDRC has not seen its strategic planning role seriously undermined. China did not face a fiscal crisis after 1997 (indeed it undertook a deliberately countercyclical fiscal expansion), and it has maintained a steady high-growth path. Democratization has not

emerged to change the role of leadership or accountability as it has in many other parts of the region, and the executive branch of government remains very strong. NDRC continues to play a major strategic role, in subordination to the Communist Party and the State Council.

The central role of infrastructure in supporting national economic development has been emphasized by the Communist Party of China (CPC) since it took power in 1949. This role has been further emphasized since the CPC made the strategic choice in the 1980s to adopt an export-led economic development strategy and to promote economic growth by attracting FDI. China's infrastructure investment is the highest in the region as a percentage of GDP, and is certainly amongst the very highest in the world.

To a great extent, China benefited as a late comer, learning from its neighboring economies—Japan, Korea, Taiwan (China), Hong Kong (China), and Singapore. The special economic zones (SEZ) and coastal open cities were variants of the tax-free manufacturing zones and industrial parks in neighboring countries. Adaptation and learning have been a hallmark of Chinese planning. The early infrastructure investment was mostly associated with the SEZs. It was concentrated heavily on the port capacity and road transport links in a few selected harbor cities. The significant improvement of economic infrastructure in the coastal urban areas in the 1980s, and the policy to allow rural labor to enter the urban labor market, made these areas highly competitive in attracting manufacturing FDI, setting the precedents for the subsequent waves of infrastructure investment.

As China broadens its infrastructure strategy from a strong growth focus to a more inclusive development model, the shift is very much steered by strategic vision from the top. The Western Regional Development Strategy, for instance, which seeks to narrow income inequality between the richer coast areas and the poorer western regions, has enjoyed high-level party support from its outset. This has helped ensure implementation and, more importantly, administrative commitment in the face of unexpected implementation challenges.

However, the emphasis on strategic direction from the center is not to deny the great significance for infrastructure of decentralization in China, nor the ability of decentralized agencies to undermine some of the intentions of the center. The ability of provinces and cities to borrow from the state-owned financial sector for infrastructure investment with only limited credit assessment has challenged the government's ability to exercise macroeconomic control, as we discuss in Box 3.7. That same

### **Box 3.7 Coordinating local government infrastructure, macroeconomic stability, and urban land use**

In China, the performance of local government officials is measured by a range of criteria that include GDP growth, tax revenue, employment, levels of urbanization, and social stability. This provides strong incentives to local governments to invest in urban infrastructure, attract business, and spur investment. As a result, urban construction has boomed in recent years, increasing from 10 percent of GDP in 2000 to 13 percent in 2003 (or around one-third of total fixed asset investment).

While much of this investment supports economic growth, expenditure of this scale raises a number of concerns. The first of these is the risk of over-investment. As important, however, is the manner in which this expenditure is funded, which in turn reflects the nature of the intergovernmental financial system.

Local governments in China have little taxing powers, limited transfers from higher levels, and no access to borrowing, except from international financial institutions. At the same time, they are responsible for most public services, which account for about 70 percent of government spending. As a result, local governments access resources outside their budgets to finance urban infrastructure. Two of these mechanisms—bank loans and revenue from land transactions—are of particular concern.

A growing share of urban construction is financed by bank loans. According to a People's Bank of China survey conducted in 16 cities, there are three major financing sources for urban construction: fiscal allocations, domestic bank loans, and "self-raised funds." Additional revenues often come from the city maintenance and construction tax, loans secured by land, and land sales.

While the share of fiscal funds has been decreasing, that of bank loans has been increasing—from 28 percent in 2001 to 47 percent in the first half of 2004. Since the Budget Law prohibits borrowing or issuing bonds by local governments, local governments commonly establish urban construction and investment companies that borrow from banks or issue bonds on behalf of the local government.

Local government activity financed by bank loans, land sales, and other forms of extra-budgetary revenues remains largely outside of the central government's purview. Mechanisms to discipline these borrowers to ensure sound repayment capacity and local government fiscal sustainability are absent. The result is large and "hidden" local government liabilities, which are an increasing concern among policy makers.

Revenues raised from land transactions—which may account for between 50 percent and 70 percent of urban construction in some cities—are a second major concern. The cost to local governments of land purchased from farmers is based on its agricultural value. But cities are able to make windfall profits by leasing it out for real estate development. And this acts as an incentive for excessive conversion of peri-urban land into urban land, is a significant source of complaints from affected farmers, and threatens the sustainability of both urban growth and food security.

(Continued on the next page)

**Box 3.7 (Continued)**

More effective coordination among the needs of urban infrastructure, macroeconomic stability, and efficient land use might entail a number of steps: a revised performance evaluation system for local governments; broadening of the local revenue base; better regulated local access to borrowing; changes to the land-lease system; and appropriate compensation to farmers.

*Source:* World Bank 2005a.

overheated pace of infrastructure investment has exacerbated environmental degradation and generated social tensions, particularly in the process of land acquisition. At a more microeconomic level, central government is decreasingly able to control the infrastructure investment choices of decentralized governments.

But whatever the difficulties, it is clear that in a country the size of China, rapid infrastructure development would not have been possible without substantial decentralization of responsibilities to local governments and enterprises. And it is interesting to see how China is dealing with the issue of interjurisdictional infrastructure. The Pearl River Delta, the Yangze Delta, and the Beijing-Tianjin region are emerging as highly prosperous and integrated metropolitan areas covering a number of provinces and other jurisdictions. Leaders of localities are beginning to group together in cross-jurisdictional infrastructure initiatives, but with some clear top-down central guidance.

The most ambitious to date is perhaps the initiative for the Pan-Pearl River Delta Regional Cooperation and Development. It involves nine southern provinces, seven ministries, and Hong Kong (China) and Macau, covering almost one-fourth of China's territory. The region includes a few highly-developed coastal urban economic centers and several poor but natural resource-abundant interior provinces. The idea was initiated by the CPC leader of Guangdong Province, a member of the powerful political bureau. The initiative is based on priority investments in highways and railways pledged by the central ministries, and a \$2 billion bridge that spans 29 kilometers across the Pearl River Mouth Bay between Hong Kong (China) and Zhuhai.

But China is facing some of the stresses and strains in the system faced by the six geese in front. Complexity is increasing, and objectives are multiplying. Continuing to deliver infrastructure performance will almost

certainly require more decentralization and delegation. This will involve an even greater role for market forces (particularly through competition in service provision and increased commercialization of financing), but also will challenge the center to continue to play its crucial strategic role. Savings will need to be transformed into investment more efficiently than in the past, particularly as the population ages. Environmental and equity issues will continue to rise in importance, and will test the coordination abilities of the system.

### Thailand<sup>15</sup>

And like China's story, Thailand's is quite close to those of the geese flying in front. Strategic, long-term vision has played a major role, coordination among technocrats has been quite effective on the whole, and growth has been high (with a brief crisis interruption). Participation and decentralization have played a fairly limited role, although civil society is active. However, the relationship between politicians and technocrats has not been a fixed one. At times, technocrats have been the prime generators of vision; at other times, it has been the politicians.

The National Economic and Social Development Board (NESDB) is Thailand's principal planning agency. From late 1992 through 2000, Thailand was governed by coalitions. Different parties controlled different ministries, which substantially weakened coordination and integrated planning at the cabinet level. NESDB effectively filled the gap, through its mandate to produce national development plans and approve all infrastructure projects greater than 1 billion baht in value (about \$25 million).

The elections of 2000 brought new direction to infrastructure policy, and reconsideration of the country's coordination mechanisms. With its dominant control over government, the Thai Rak Thai Party initiated a major infrastructure investment program, which included an emphasis on logistics, affordable housing, urban mass transit, and small-settlement water supply. These areas of emphasis derive from an analysis of Thailand's evolving competitiveness needs, as well as from social concerns.<sup>16</sup> The Prime Minister's office took on the role of identifying major new directions in infrastructure. The MoF appeared to rise in importance in the coordination of the new infrastructure strategy, given the crucial role that financing would play in implementation of the new

planned megaprojects, and the mandate of the MoF to oversee state enterprises (which account for about 55 percent of infrastructure investment in Thailand).<sup>17</sup> The role of NESDB became uncertain for a while, but it now appears to again be in charge of the coordination of infrastructure planning and megaprojects.

Like many other East Asian countries, Thailand's move toward private participation in infrastructure has been fairly marginal and did not involve much sector restructuring. Competition in infrastructure service provision has been largely avoided, and regulatory institutions enjoy little autonomy. Thailand has strategically managed to preserve its investment climate by remaining broadly predictable in its behavior. Contracts in infrastructure have generally been honored, and its key state enterprises—such as the Electricity Generating Authority of Thailand (EGAT) and the Metropolitan Electricity Authority (MEA) in the electricity sector, and the Provincial Waterworks Authority (PWA) in the water sector—have maintained good creditworthiness and service delivery track records, even through the 1997 crisis and its aftermath.

Decentralization in Thailand has also been quite limited. Indeed, it has progressed little compared with many neighboring countries. After some past perceived failures with decentralization to a low level of government—the *tambon*—the Thai Ruck Thai Government has focused decentralization on the 76 provinces. However, the provincial governors—styled “CEO Governors”—are appointed by the government rather than being elected, and their role is more a deconcentration of central authority than a real decentralization. Nonetheless, there has been a marked shift in spending: In 2003, 23 percent of public expenditure was by local governments, up from 8 percent in 1997. Much of this shift has been in infrastructure. As elsewhere in the region, interjurisdictional coordination has been an issue.

Stakeholder participation in infrastructure projects has made significant progress at the local government level. Civic forums in which the expected impacts of proposed projects are debated have become the norm. However, nationally initiated large projects have shown less progress. Environmental impact assessments (EIAs) are prepared for most large projects, but transparency in the EIA process is often lacking, and the EIAs themselves often have little impact on project selection, design, or implementation. EIAs are not generally used to provide frameworks for constructive negotiations among different stakeholders.

### Box 3.8 Vision, infrastructure, and spatial planning in Thailand

Spatial development has been an important part of Thailand's infrastructure program since the 1970s—in particular, in the creation of specific economic zones (a development strategy that would be echoed later by the development of China's special economic zones in the 1980s).

The most important of Thailand's zones is the Eastern Seaboard (ESB) area, a peri-urban export-oriented manufacturing zone comprising Chonburi, Chachoengsao, and Rayong provinces. It is home to 3 million people, many of them migrants from northeast Thailand; it is the major industrial production zone in all of southeast Asia; and it is one of the most important automotive clusters in East Asia as a whole.

The ESB development was driven by public policy, co-coordinated by the Spatial Bureau of the NESDB. More than 65 percent of public investment in the ESB was for infrastructure, delivered mainly by state enterprises. The fact that NESDB is responsible for state enterprise investment programming and budgets made this task easier.

ESB achieved notable economic growth from the 1980s to the early 1990s. In the 1990s, in particular, the ESB grew faster than any other region in Thailand, at 12.1 percent per year from 1991–95. Next to the Bangkok metropolitan area, the region established its status as the second largest industrial cluster in Thailand (see Table 3.3). According to an interview survey of 113 firms in the ESB, the most important factors affecting firms' decisions to locate to the region were investment, strong transport infrastructure, and the quality of public utilities (JBIC 2000).

Significant levels of infrastructure have been concentrated in other areas in the country. In the western amenity area, for instance, a causeway has been approved to significantly reduce travel time between Bangkok and Hua Hin / Cha-Am, a prime amenity area known for tourism, spas, retirees, boutique agriculture, and postsecondary education.

Spatial programming also extends to cross-border infrastructure provision. Thailand is active in the Greater Mekong Subregion (GMS) development initiative. Regional cooperation has resulted in development of cross-border links, including bridges across the Mekong river, such as the Friendship bridge linking Nong Khai and Vientiane.

However, explicit spatial infrastructure programming has become somewhat less important in Thailand in recent years. In part, this is due to decentralization, which makes it more difficult to shape the spatial economy and settlement systems to meet strategic goals.

More significantly, as increasing globalization raises the importance of competitiveness, the government has chosen to allow market forces to play a greater role in shaping the spatial distribution of activities directly.

However, Thailand is particularly well-placed to benefit now from its increased participation in the global economy, precisely because of the existence of zones like the ESB.

Source: Webster and Theeratham 2004.

**Table 3.3 Real gross regional product per capita in areas of Thailand, 1981–95 (1988 prices)**

	Nationwide	Bangkok and vicinities	Eastern (ESB)	Central	Western	Northeastern	Northern	Southern
<b>GDP per Capita</b>								
1981	20,278	63,198	26,212 (35,564)	17,845	18,610	7,860	12,402	15,740
1995	49,514	149,592	80,232 (121,376)	48,558	37,295	16,631	23,681	31,735
<b>GDP per Capita Growth Rate (Annual Average)</b>								
1981–86	3.4%	2.2%	5.8% (7.6%)	2.5%	3.5%	3.7%	3.5%	3.0%
1986–91	9.3%	11.0%	8.4% (8.5%)	9.5%	5.5%	6.2%	5.3%	7.2%
1991–95	7.3%	6.0%	11.5% (12.1%)	11.2%	6.6%	7.0%	5.5%	5.2%
<b>Share of Manufacturing Value Added</b>								
1981	100.0%	72.2%	11.2% (10.6%)	3.3%	3.1%	3.9%	3.5%	2.7%
1995	100.0%	63.2%	15.8% (14.9%)	6.5%	3.6%	5.0%	3.8%	2.1%

Source: JBIC 2000.

Note: ESB = Eastern Seaboard.

Instead they are often just formal attachments to projects, which are already seen by their proponents as a *fait accompli* (this approach can, of course, lead to conflict and delays).

Thailand's infrastructure planning and coordination have performed fairly well, although some sectors—such as electricity—have performed much better than others—such as wastewater. There have been substantial delays in some key projects—for example, the Suvarnabhumi airport and the Bangkok subway—which are due to very slow and bureaucratic decision making and to the inadequate stakeholder participation process. But, on the whole, the system has been flexible and adaptive; it has dealt well both with crisis and with long-term strategy. In general, the system has evolved effectively as the political context has changed, and strategic vision has usually managed to play a central role.

## **From coordination to accountability and risk management**

We have seen that the strength of infrastructure service delivery in the leading geese—Hong Kong (China), Japan, Korea, Malaysia, Singapore, and Taiwan (China)—was derived from their ability to formulate high-level economic strategy and to translate that into implementation on the ground. They did this principally through top-down planning and coordination, with fairly limited public participation or delegation of service delivery beyond a small number of large monopolies. Accountability was largely vertical.

We saw that this was successful when economic growth was high, and policy makers formed a consensus around relatively simple objectives, centered on sustaining that growth through exports and investment. When those economies began to encounter economic slowdown or crisis, and objectives broadened to include more social and environmental considerations, or monolithic politics started to open to wider participation, the top-down model began to show signs of strain. But underlying those pressures was the region's increasing integration in a rapidly changing global economy, which brought with it exponentially increasing complexity and coordination challenges.

Those challenges that the leading geese began to face in the late 1980s after nearly three decades of high-income growth with the

top-down model, the geese flying behind are facing at significantly lower levels of income and economic development. China, Indonesia, the Philippines, Thailand, and other developing countries in the region are increasingly looking for inclusive development and global integration, and are therefore facing increasing complexity. They have been responding to that complexity by delegating: to decentralized tiers of government, to the private sector, to communities, to civil society organizations, to competitive markets, and to arm's length regulators or judicial systems. In general, across the region, public participation has also increased.

The degree of delegation and participation varies considerably among countries. To some extent, the variation is explained simply by the abilities of the center to retain control and continue to provide services in top-down mode. China and Thailand, for example, exhibit a greater role for the center than do Indonesia and the Philippines; this is partly a matter of political objectives and partly of administrative constraints. But, overall, there is a sense that countries throughout the region are struggling to design institutions to reconcile delegation, participation, and effective service delivery.

As we shall see in the next chapter, this will depend critically on the ability of the countries to develop new accountability mechanisms at the sectoral level, and new ways to reward good performance and manage the corresponding risks. We will talk a lot about competition, regulation, subsidies, and risk-sharing. And throughout the discussion will run the themes of change, learning, and trade-offs among increasingly complex priorities.

### **Spotlight I. Coordination and a tale of three cities: Mass Rapid Transit in Bangkok, Kuala Lumpur, and Manila**

East Asia's congested and polluted cities have often looked to urban rail systems to solve their problems. Urban Mass Rapid Transit (MRT) requires a high degree of vision and coordination of multiple actors to make it work, usually involving several jurisdictions and complex financing arrangements.<sup>18</sup> Paradoxically, when the private sector is involved, the degree of vision and coordination needed ratchets up even higher, because of the precision that private sector procurement brings to the

process. We look at the experience of private concessions in MRT in three cities: Bangkok, Kuala Lumpur, and Manila.<sup>19</sup>

## Bangkok

Bangkok, now a megacity of 10 million people, started its efforts to put an MRT system in place in 1979. By 1990, no MRT system had yet been built, and Bangkok was notorious for its chronic traffic congestion. The technocratic government that had come to power at this time after public unrest and military intervention, was determined to resolve Bangkok's transport problems. This was a key part of its strategy to restore economic credibility to Thailand after the unrest.

In 1990, the Governor of the Bangkok Metropolitan Administration instructed his officials to search for a private concessionaire to build and operate an MRT project. This initiative and parallel efforts eventually spawned two MRT projects: the BTS Skytrain and the Blue Line. Both had long gestation periods: The Skytrain opened in 1999, and the Blue Line subway opened in July 2004. Both operate under a build-operate-transfer (BOT)-type concession (although the two concession contracts differ in scope).

## Kuala Lumpur

The Government of Malaysia is intent on transforming the country into a “developed society” by 2020 (the so-called “Vision 2020”). Infrastructure and the private sector are an integral part of that vision—particularly the Malaysian private sector.

Planning studies for MRT in Kuala Lumpur began in the mid-1980s, and MRT came to be seen as essential to making the fast-growing city livable.<sup>20</sup> Those plans eventually led to three MRT projects: KL STAR, KL PUTRA, and KL Monorail. They opened in 1996, 1998, and 2003 respectively. All operated under BOT arrangements.<sup>21</sup>

## Manila

Manila is a rapidly expanding megacity of about 11 million people. Its road network consists of a few major arteries and a little-developed secondary network. Car ownership and congestion are high.

**Box 3.9 MRT in a nutshell**

“[MRT] rail projects are unique in having a high capital requirement, producing a low return on capital, having a long gestation period and providing considerable construction risk *and* commissioning risk *and* ridership risk. The only redeeming features are that once committed, they are incredibly difficult to stop, once there they are essential—they will never be closed, and once built they are (with maintenance) there for all time.”

*Source:* Quote from a financier interviewed for Halcrow Group Ltd. 2004.

Planning for MRT in Manila began in the 1970s under the Marcos regime—see Box 3.9 for a brief description of MRT rail projects. In 1984, Manila’s first MRT system opened: MRT1. This was a government-financed project. In the 1990s, the Philippines initiated a wave of private sector infrastructure projects, under the Ramos Government. In urban transport, this resulted in MRT3, a build-lease-transfer concession, which opened in 1999–2000. It also resulted in MRT2, which is government and donor funded, and opened in phases during 2003–04.

**What was the performance of MRT concessions in the three cities?**

It depends what we mean by MRT “performance.” The Bangkok Skytrain has helped to unlock severe congestion, and the Blue Line is now making a further contribution. In Kuala Lumpur, the MRT system has helped toward sustainable development for the city region. In Manila, the evolving MRT system has relieved congestion to some extent, and promises to contribute more now that MRT2 is open.

In terms of project development and implementation, the gestation periods were long: operations typically started 8–12 years from when the MRT was first proposed in each case.<sup>22</sup> There were changes in project concept, reflecting poorly on planning, and decision-making and procurement processes were time consuming. In all three cities, integration has been generally quite poor among each MRT system and the others, and with other forms of transport or with land use planning. In other words, network benefits have been lost, and the economic rates of return correspondingly reduced. The costs of delay and of coordination failures can be very high for MRT systems in congested cities.

In financial terms, most projects could be deemed a failure in some sense. The projects have not made the expected financial rate of return, some private investors and financial institutions have lost money, and the state has decided to step in to salvage some of the systems. However, this appearance of financial “failure” is rather misleading. No MRT system in the world gets by without subsidies,<sup>23</sup> yet the private concessions in these three cities were optimistically conceived without subsidies.<sup>24</sup> In short, the “failure” is only by reference to unrealistic financial expectations (albeit somewhat understandable given that the three cities were among the pioneers in private concessions for MRT).<sup>25</sup> The economic rates of return could still be high enough to justify the projects.

The case for MRT subsidies is straightforward—at least in principle. MRT systems can generate large external benefits for vehicle owners and users, and for those who benefit indirectly from reduced congestion and pollution. Users of the MRT system cannot be expected to pay for those external benefits, and the external beneficiaries can only be made to pay through some form of taxation or road pricing channeled back to the MRT network through subsidies.

Of course, that doesn’t mean that subsidized MRT will always be the best way to provide public transport, but it sometimes will be in East Asia’s wealthier, highly-congested, and polluted megacities. Choosing between subsidizing MRT or something else is essentially a strategic vision and coordination challenge.

### **What have we learned about government’s role in private MRT concessions?**

Halcrow Group Ltd. (2004) found that in these three cities the involvement of the private sector made projects happen that otherwise would not have happened, or made them happen sooner, and brought greater efficiency to operations than would otherwise have been the case. But this is perhaps not the major lesson of the tale of these three cities.

MRT systems represent a long network of expensive infrastructure cutting through densely packed urban corridors, and shaping the future geography of their cities. As such, governments need to be intimately involved. There are many tasks that the private sector cannot or should not carry out in planning and implementing an MRT project.

Principal among these government functions are defining how a particular MRT project is intended to fit within the city’s overall transport

and land use plans (which will almost inevitably be fragmented and fall under multiple jurisdictions), how to acquire the land, how the project will be designed and procured, how to integrate different transport systems, what the government's financial contribution will be, how risk-sharing will be negotiated, and how performance will be regulated. The demands placed by an MRT concession on government's strategic planning and coordination capabilities are heavy, and time is of the essence. MRT won't make its contribution without vision and a strong drive to implement that vision.