The Urban Age

A Quarterly Magazine Devoted to Cities and Sustainable Development

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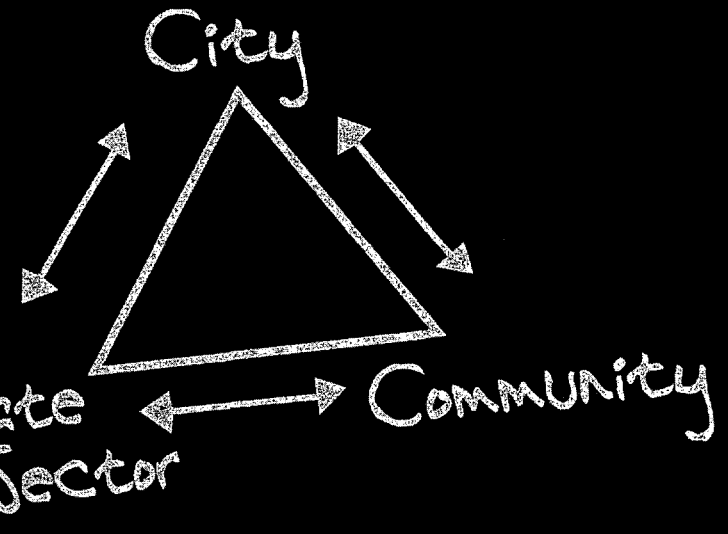
City Investment Strategies

Asia Infrastructure Needs by 2023: $US 7 Trillion



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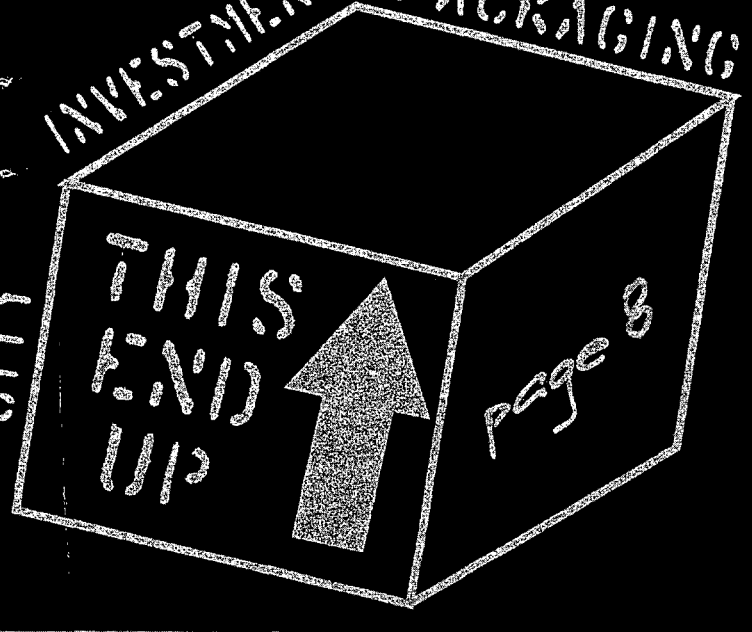

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We welcome your comments, thoughts, and suggestions about The Urban Age.

Editor:

Your recent cultural heritage issue [Vol. 4, No. 4] was very timely, as recent high-tech developments begin to threaten a very human cultural identity. Urban planners and thinkers may have a difficult time piecing together new theories for the world of tomorrow.

In her article, "The Politics of Heritage," Patralekha Chatterjee rightly exposes the unscrupulous Hindutva politicians in India for aggrandizing clumsy urban issues for their conceited political intentions. In a true historical sense, however, India was never invaded or colonized; rather, it was the tropical climate and natural resources of this vast and varied land that attracted most of the country's in-migration.

This migration has helped India become a country with a truly multicultural, multi-ethnic, multilingual and multi-religious environment.

India's unique qualities of assimilation have been exercised first with regard to the Moguls, and later the British who have been among the migrating forces attempting to govern and shape India into a united country. Previously the land had been a number of small, fragmented, quarreling multi-religous kingdoms of zealots.

While the present cultural turf wars also may pass on as a transitional phase, the multi-heritages of India may help it with yet another transformation toward becoming an economic power.

Zahyr Siddiqi
Architect/Urban Planner
Jeddah, Saudi Arabia

This has been a tricky issue to put together. The reason is this: city investment strategies require balancing the needs of many competing interests — the community, the city, the private sector and national government.

In the past, cities have used guarantees, tax breaks and exclusivity to attract private investment. In the future, performance-based management, intelligent and flexible regulatory policies and the profit motive will direct the city's policies.

Our writers pose some interesting, if contradictory, questions: Can good returns on principal also bring customer satisfaction? Without basic amenities how do cities attract investment? Are analytical tools useful in tracking industrial development patterns?

As we discovered, financing urban infrastructure is only one piece of the puzzle. The question raised in the lead by Tim Irwin is how to balance the needs of the city with those of the taxpayer. The concept of equity for the taxpayer is not a novel one — for centuries, wars have been fought over this issue. What is new is having the taxpayer — the community — be included in the negotiations between the private sector and the city over the kind, type and size of urban infrastructure being built.

Not only that. The new thinking referred to by Lyndsay Neilson in the guest editorial as strategic investment packaging calls for a holistic approach to urban investments that when planned carefully can bring about great returns — for investors and users. There is a correlation between "adequate infrastucture as a prerequisite for competitiveness and for economic growth."

Cities it seems are putting the private investor on notice. Contribute to our long-term growth — or else!

—Margaret Bergen

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DEPARTMENTS

Responsible Investing for Cities *and* Taxpayers

TIMOTHY IRWIN

In the last decade, a wave of infrastructure privatization has swept the world. This novel approach began with national and provincial governments in the United Kingdom and Chile, and quickly spread to other parts of Europe, Latin America, Asia, and Africa. Now regional governments around the world are seeking out private investors to own and operate their infrastructure. And, more recently, city governments have jumped on the bandwagon and are looking for new ways to privatize the urban infrastructure services for which they are responsible. Private investors, however, are justifiably wary of committing themselves, because they have lost money in the infrastructure business in the past. The challenge for city governments now is how best to attract the investors while ensuring that the city benefits.

Why private investment in infrastructure is hard to attract

All business investments entail risks. Investments in developing countries can be especially risky, because of their turbulent economies and volatile politics. It's hard to predict whether you are investing in a country whose economy will grow at 5 to 10 percent every year for a decade like the Asian Tigers, or one whose income will shrink year after year, as many in Africa did in the 1970s and 1980s. And it's hard to know whether a given country's courts will be fair arbiters of disputes that may arise between the private investor and the urban government.

When you invest in water supply networks, sewage treatment plants, roads, underground railways, and other infrastructure, you are constructing expensive assets whose costs can be recouped only over 10 to 20 years or more, which puts you in an especially vulnerable position regarding possible future adverse developments. Moreover, once you've made your investment, you're stuck. If things go wrong, you can't get your funds back and depart. Not all investments are like this. The investor who purchases land to open a grocery store, for instance, and discovers that no one wants his goods, can always sell the shop and recoup part of the initial investment. But if you buy water pipes and lay them in the ground only to discover that your customers won't pay what you hoped, it would be too costly to dig up the pipes and sell them to another investor who wants to supply a different city. The investment is literally and figuratively sunk.

The politics of infrastructure

Another stumbling block is the highly politicized nature of infrastructure services. Important services like electricity, transportation, piped water, and sewage collection are often provided by firms that have no competitors. As a result, their provision is usually steeped in political controversy and their prices tend to be government controlled. Unfortunately for private investors, governments don't see votes in raising the prices of infrastructure services even when the cost of supply goes up. This political aspect of infrastructure funding, combined with the sunk nature of investments, creates trouble for the investor. City politicians seeking funds may promise uncommitted private investors the leeway to charge prices that will cover all their costs (including those of the investments themselves). But once the investment is made, the city will be tempted to renege on such promises because it can later lower prices, leaving investors with little choice but to remain. Although the investor can make the precautionary move of entering into a legal contract with the city to try to protect itself from subsequent exploitation, even this step is not foolproof. A city government in a country without quick, competent, and impartial courts will find ways to harm the outside investor if it is determined to do so.

DEALS THAT INCLUDE TAX BREAKS, GUARANTEES OR EXCLUSIVITY TEND TO BENEFIT INVESTORS WITHOUT GIVING THE CITY THE BEST INFRASTRUCTURE FOR ITS MONEY.

Such was the experience of a private Japanese-led company that agreed to build a new road to relieve congestion in Bangkok, in return for the promise of charging a toll of 30 Baht. When the road was nearly finished, the government went back on its agreement and opted to permit a maximum toll of only 20 Baht. The company protested and refused to open the road, whereupon the government took the company to court — and the court ordered the company to comply. When it refused, the government took over its operations, and the company was nearly bankrupted.

Common private investment pitfalls

Cities try to make themselves attractive to private investors; in doing so, however, they should guard against going too far. In their zeal to attract infrastructure dollars, they must take into account all the ramifications of the activities investors plan to implement — not just for the immediate time period, but far into the future as well. For their part, investors don't always take into account the full impact their investments will have on the city for both the short and long term. Investors may ask for tax breaks, for example, in return for the construction and services they provide. Or they may ask for guarantees from the government that they will receive a certain level of revenue even if demand turns out to be lower than expected. Or they may seek exclusivity in providing the service.

By acceding to these demands, the city government encourages investment. Given the choice, investors would prefer not to pay taxes, take risks, or face any competitors. But

while cities must be sensitive to the interests of private investors, they should be wary of assenting to these particular requests. Private investment is not better than public per se. Just as with any good or service, it benefits the taxpayer and consumer only when it gives the city a better value for its money. And deals that include tax breaks, guarantees, or exclusivity tend to benefit investors without giving the city the best infrastructure for its money. The problem with these deals is that they help investors only at the expense of the city's residents.

Tax breaks for infrastructure investors always mean higher taxes or poorer services for someone else. If infrastructure investors pay less tax, city residents must either pay more or receive lower quality city-funded services. Or they are forced to pay more for goods and services from other businesses whose taxes are higher than they would otherwise be and who must pass this increase on to the consumer.

Guarantees have no immediate cost to the taxpayer, which make them a more tempting concession to make to private investors. However, should problems arise later (if demand turns out to be lower than originally forecast or if the exchange rate plummets), the city's residents are again forced to foot the bill. Guarantees are not always wrong. When the city guarantees something it can control, such as continuing to permit a toll to be charged on the investor's road, the guarantees help both parties because they encourage the city to keep its promises and shield the investor from anxiety over circumstances it can't influence (such as the toll on a road). But when guarantees relate to outcomes the city government *cannot* control, they weaken the private investor's incentives to perform well. When investors have guaranteed revenue, for example, they will be more willing to build roads the government wants built even if they believe the roads will be little used. If the investors are protected from shifts in the local exchange rate, they'll have more incentive to borrow in the foreign currency, ignoring the higher cost of repayment if there is a drop in the exchange rate.

Exclusivity can also hurt city residents, since a company can get away with poorer performance than if it were in danger of losing customers to competitors. Poorer performance results in higher prices or lower quality. Or

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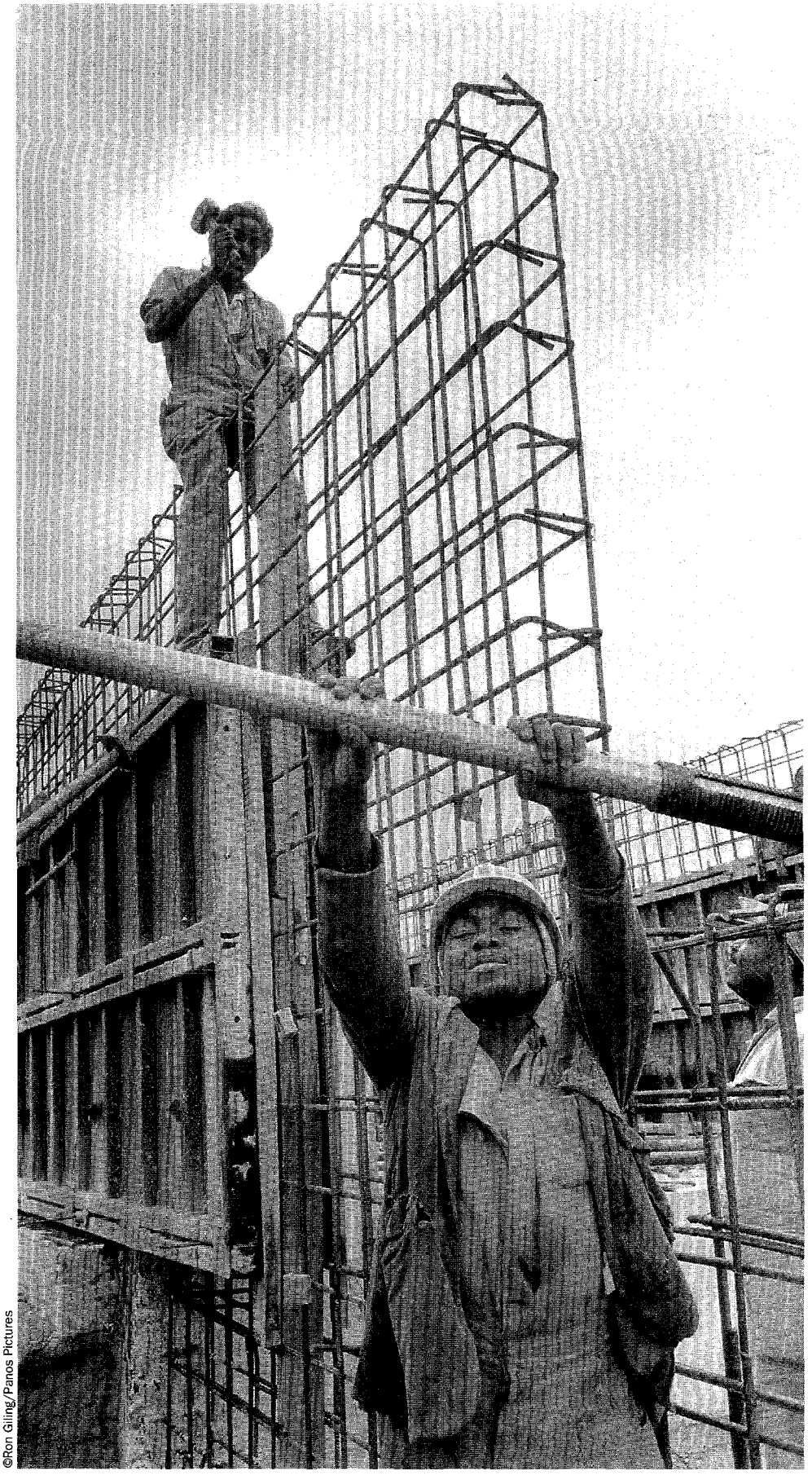

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exclusivity could lead to less investment in the expansion of the infrastructure network, since a firm with a monopoly does not have to worry about other firms signing up new customers before it does.

Good policy attracts good investment

Fortunately, there are ways of obtaining investments that don't just shift costs to consumers or taxpayers. These options create opportunities that didn't exist before. However, not all of them are within the city's domain or under its control. For example, investors want low inflation but this is up to national government to provide, not cities. Yet cities themselves can make a big difference by:

- ensuring that infrastructure prices cover the full costs of services;
- introducing policies convincing investors that they will not be exploited in the future; and
- allowing investors to make profits by lowering costs, increasing quality, and finding new customers.

Allow prices to cover costs

Historically, city and other governments have often kept the price of infrastructure services below the costs of supplying them. Water utilities in the developing world, for example, recover an average of only 30 percent of the costs of supplying water. Urban rail systems, too, often fail to earn even the day-to-day costs of operation, let alone construction costs. Often the sector that recovers the smallest proportion of its costs is urban roads, which are often completely free to the user — partly because of the logistical difficulties of collecting tolls, but also because of political reluctance to charge for them. Singapore has gotten around the problem of charging for using individual roads in the city by levying a toll on all cars entering the city. Since private companies are willing to invest only if they expect to earn more than they spend, raising prices at the outset of the agreement to the point where they cover the costs of supply is one of the single most important steps the city can take to get private investment.

Low prices often help the rich, not the poor

Raising prices is tricky, but its benefits extend beyond attracting private investment. Although the policy of keeping prices below costs is intended to help the poor, the results are often disadvantageous. When prices are lower than costs, this can put the agency providing the infrastructure in financial difficulty. Consequently, it skimps on maintenance and puts off investing in new ventures, leaving poorer customers without access to services. Many residents of developing cities, for example, would pay the full cost of piped water; because they can't get it, they end up paying more for water sold by vendors. They're unable to get the service because the agency supplying water is too cash-poor to fund investments and, since it can't charge for the full cost of the water, would only end up damaging its financial base by connecting new customers. Infrastructure services are often subsidized by cities (because prices don't cover costs), but those subsidies tend to help the rich rather than the poor.

A KEY RATIONALE FOR ENCOURAGING PRIVATE INVESTMENT IN INFRASTRUCTURE IS TO HARNESS PRIVATE OWNERS' INTEREST IN MONITORING FIRMS TO ENSURE THAT THEY OPERATE AS EFFICIENTLY AS POSSIBLE.

Low prices lead to over-consumption and unnecessary investment

Another problem when prices are too low is that those customers who *do* have access to the service tend to over use it. Households with water connections tend to use too much water. Likewise, residents with cars drive too much. This in turn puts pressure on the city to build more water treatment plants and additional roads to meet demand that results from over consumption. But the city does not avoid service costs by keeping user fees low. One way or another, the city's residents still have to pay for the water they use, the trains they catch, and the roads they drive. Ultimately, they will pay for it, either in tax hikes to subsidize the low-priced infrastructure, or in lack of goods and services, such as fewer police and parks.

Permitting cost-covering prices can solve these problems at the same time that it attracts private investors. When water companies can charge for the full cost of their service, for example, they will willingly extend their network to those customers who are unconnected but willing to pay. The city's total consumption of water will rise less quickly than might have been expected, however, since existing customers — deterred by higher prices — will cut back their consumption.

Raising current prices is one challenge. Another is to convince private investors that prices will continue to cover costs in the future. Many cities lack credibility with investors and can't win it simply by making pronouncements or promises. City managers must therefore imaginatively approach the question of how to create a reputation for

Urban Asia makes up over 30 percent of the continent's total population, or about half the city spaces in North America, Europe, Latin America, and the Caribbean combined. Moreover, Asia is witnessing the globe's most explosive growth in urbanization. Every year, Asian towns and cities add 4 percent to their population. By the year 2025, more than half of Asians will be city dwellers. Coupled with the region's current economic boom, this has led to a surging demand for infrastructure.

Asia is in desperate need of increased infrastructure in energy, roads, ports, telecommunications and environmental controls to sustain its growth rate. According to the Asia Development Bank (ADB) report, *Emerging Asia: Changes and Challenges*, total accumulated investment needs over the next 30 years for developing member countries are estimated to be between US$7-$9 trillion (1992 prices). If Asia were to increase its resources significantly in infrastructure investment (traditionally 5 percent of the gross domestic product; up to 7 percent in some countries), the range would skyrocket.

Financing this need is an ongoing concern. In most Asian countries, budgetary squeezes are forcing the government—the traditional provider of such infrastructure—to search for alternative funding sources. Progress is slow, but private sector participation in infrastructure development is giving cities and towns across Asia a facelift.

In July this year, Beijing mayor Jia Qinglin rolled out the red carpet for the Industrial Bank of Japan Ltd. His city, said Qinglin, needs large sums of capital to upgrade its water supply, electricity, and communications infrastructure; he hopes investors both at home and abroad will invest in a more beautiful Chinese capital.

In the Philippines, most of the power stations constructed in the last few years have been erected with private capital. This has gone far toward eliminating a power shortage that once crippled domes-

integrity and attract investment.

A large part of the solution is for the city to enter into a contract with the investor that sets out the rules that will govern the service for the life of the investment. But because the investment can recoup its cost only over a period of 10 or 20 years, it won't usually be possible or even desirable to determine in advance all the details of every regulation that might conceivably apply throughout the life of the investment. For example, who can say how much water should cost in a given city in 20 years' time? Who can determine what quality standards the water should be measured against in 20 years? The regulatory contract must be flexible enough to permit the rules to change with circumstances, but not so elastic that it allows the city to make changes at whim. The contract needs to permit future alterations while protecting the investor and the city from changes that take advantage of either party. To invite investment, the city must relinquish some degree of control over the future of regulation.

Changing the regulatory contract in the future

City governments can set up agencies with the autonomy to modify the regulatory contract when necessary. When Argentina's federal government privatized the distribution of water in Buenos Aires, for example, it created a special agency to review the regulated price of water every five years. Alternatively, a city can use an already existing provincial or national agency in which the investor has faith. Although such agencies are subject to political pressure, they are not beholden to city government, and so may more readily win the trust of investors. When investors are unlikely to trust any regulatory agency in the country, the city may have to rely on periodic renegotiation of the contract between the city and the investor, assisted when necessary by a completely independent third party such as an international arbiter. In all cases, the initial regulatory contract should include provisions for how subsequent changes will be made.

Allow investors to profit if they run the business better

Getting the most out of private investment requires city governments to allow investors to profit when they run their operation well. Conversely, it requires that investors also accept the risk of losing money.

A key rationale for encouraging private investment in infrastructure is to harness private owners' interest in monitoring firms to ensure that they operate efficiently. Those private owners can normally be expected to monitor the firm more closely to check that it isn't investing in projects with no prospect of success and to pressure the firm to keep costs down by not overpaying for supplies or labor. To harness this potential, however, the rules governing the business must (1) enable the investors to perform better, and (2) give them the financial motivation to do so.

Letting managers manage

The city must allow investors to change the way a business operates if need be; otherwise, no improvements can be expected. It may sometimes be necessary to regulate the quality of investor-provided services, but the city shouldn't dictate how the investor should run the business to achieve quality standards. For example, the regulatory contract between a city and a gas distribution company might reasonably specify the allowable range of gas pressure at the point of delivery to consumers and the safety standards to meet. But the contract shouldn't generally specify where the company gets its gas, how many people it employs, what materials it makes pipes from, or where exactly the pipes should be laid — although exceptions may arise. Governments that have traditionally made these choices for cities may have difficulty refraining from exercising control in these areas, but they must do so in order to get the best deal for the city.

Creating incentives to improve performance

The city must give investors a genuine stake in operating the business and not just in the financing of it. It must ensure that investors make more money if they run the business well — and less if they run it badly. It must be prepared to let the investor enjoy high returns when things go well — and resist popular pressure to take back all of what will be viewed later as unjust monopoly profits if the firm does well. Conversely, the contract must permit the investors to lose money, and even go bankrupt, if they misjudge the business or perform poorly. That is, the contract should allocate business risks to the investor. If a city privatizes its water system, for example, it should write a contract that gives the investor more money if the demand for water rises. This gives investors an incentive to connect new customers, ensure the water pressure is adequate throughout the day, and maintain water quality.

These recommended steps are not always easy to implement. It is politically difficult for cities to raise infrastructure prices and then give up a measure of freedom to alter them in the future. It also requires considerable legal and economic expertise to determine the details of an optimal regulatory framework for infrastructure services. In the short run, it can be easier to offer tax breaks, guarantees, and exclusivity, recognizing that city residents won't realize the extent of the imposed costs. In the long run, however, the city will be better off the sooner it tackles these tough issues. ■

Timothy Irwin is in the Private Sector Development Department of the World Bank.

tic industry and deterred overseas investors. The capital for some of the biggest infrastructure projects in the last five years has come through Build, Operate and Transfer (BOT) and donor country grants with funds from multilateral agencies. The new General Santos City airport was financed by The U.S. Agency for International Development. A light railway along Metro Manilais Epifanio de los Santos Avenue is under construction by a consortium of firms including local ones. An Indonesian firm is building an elevated tollway — the Skyway — leading to the financial district.

The Malaysian approach to infrastructure planning is both centralized and decentralized. The country's seventh five-year plan, released last year, dramatically increased public spending on infrastructure, especially in the transport sector. At the same time, Malaysia has made impressive strides toward attracting private investment to sectors such as road development — a catalyst for urban economic growth. Among the many roads constructed by the private sector using BOT are Jalan Kucing-Kepong Interchange, North-South Expressway, Malaysia-Singapore Second Crossing, Seremban-Port Dickson Highway, Shah Alam Expressway, North-South Expressway Central Link and Kuala Lumpur-Karak Highway.

In the rush to drum up financing for infrastructure projects, cities are trying a wide variety of techniques. A number of Asian infrastructure funds have been set up in the last year to provide equity financing for such projects. Two investment arms of the Singapore government have invested US $250 million into such a fund. Municipal bonds also hold great promise for Asia. In the past three years, Thailand, Malaysia, and Indonesia have joined India in setting up their own domestic bond rating agencies.

—Patrralekha Chatterjee

GUEST EDITORIAL

New Ways to Package Urban Investments

LYNDSAY NEILSON

Private and public investors are forming new partnerships to invest in urban infrastructure and, in so doing, are heralding a promising new approach for city governments around the world. The two sectors hope that by holding hands they will be able to introduce a broader and more holistic approach to city investing. The private and public investors on the forefront of this innovative new thinking are developing comprehensive investment "packages" for the long-term health of cities and their continued sustainable development.

Instead of promoting a scattershot approach to investing — a toll road here, a subway there, a water system elsewhere — this new approach built may ultimately stimulate additional economic returns.

The trend toward increasing private investment in infrastructure construction and services that have traditionally been provided by the public sector has had — and will continue to have — an impact in two significant ways: It frees up public resources to invest in the public realm, and it leverages private investment so that it can be funneled into the public realm.

Traditionally, the vast majority of investment in cities has come from private sources. Urban assets such as land, buildings, and even infrastructure have long been privately owned by households, businesses, community organizations, religious groups, and even political parties. Those with sufficient wealth to invest usually benefitted from city growth as asset values appreciated and new investment opportunities emerged. People without adequate income and assets were locked out of this arena of wealth creation. However, managing public and private investment in an integrated way can often achieve a beneficial transfer of the value added by urban growth between categories of assets. This can lead to improved public as well as private assets and hence benefit those who don't hold assets as well as those who do. It can also leverage the total value of investment beyond what might be achieved without positive coordination and good public-private partnerships.

Packaging investments for both private and pubic gain

Investors and city managers can work together to develop an investment plan for both public and private expenditure in key areas of the city based on infrastructure investments. The objective should be to maximize economic returns to the city, not just commercial returns to investors, and improve city development in both private and public realms.

If there is a strong need for private investment in a rail system, both city managers and investors should consider where and when the benefits will flow, to whom, and what consequential investments might be encouraged or stimulated by the primary investment. Can new housing development be stimulated along the rail route? Are there opportunities nearby for new business activities and, hence, jobs for new residents? Does the construction of the railway create attractive new public spaces and places? Will investment in a package of related developments improve the viability of the investment in the rail system?

One approach that a growing number of developing countries are embarking on is the private financing and development of complete new towns — with land value capture a major source of return on the initial investment. Public facilities are being provided in Putrajaya as part of the privately funded and managed development of this planned city which will be Malaysia's new administrative capital. Profits from property value increases as well as land, housing, office, and commercial development will finance major public assets, including the city's open spaces, a lake and surrounding parks, public housing and numerous other public facilities — in effect, privately funding a large part of what will become the public realm. Nearby Cyberjaya is being developed along similar lines.

Lippo-Karawachi is a privately funded new city near Jakarta in Indonesia, one of a number of similar developments that are accommodating the city's expansion and meeting the needs of a growing middle class. The developers are providing the necessary infrastructure and public facilities from profits gained by land value hikes and property sales. They have taken responsibility for operating municipal services, financed from these fees, and are regulating building alterations within the city.

COMPREHENSIVE CITY INVESTMENT PACKAGES WILL ULTIMATELY STIMULATE BROADER ECONOMIC RETURNS

Private and public investors are also working together to revitalize smaller and more localized districts by coordinating funding efforts in infrastructure, housing, environmental improvements, and public facilities within a local master plan and development agreements.

Australia has 26 districts, developed under a national Better Cities program whose aim is to improve new urban growth and redevelopment management. The national government provided $800 million to state governments over five years to support innovative urban investments. This, in turn, stimulated $2 billion in complementary state and local government investment and — after the first four years — $5 billion in private investing. The 1995 report of the program's evaluation team concluded that, "The program has removed significant infrastructure barriers inhibiting urban development and redevelopment. Strategic areas have been developed which otherwise would have been bypassed, redundant institutional land was redeveloped for housing, and significant opportunities for private investment in formerly neglected areas were opened."

For the private sector, the appeal of this approach is that it offers them a measure of certainty about policy, reducing their risk.

When investment is diversified, it allows investors to gain returns from more than one source. This reduces market risk. Additionally, the management process involved in packaging usually means that decisionmaking on individual projects within the package can be implemented faster and with more certainty, reducing delays.

The public realm

Governments invest in cities in order to:

- create a living environment appealing to private investors by financing infrastructure to offer needed services;
- meet the needs of citizens unable to generate adequate income, afford housing, or pay for health, education, and other basic necessities;
- manage the public realm, or spaces between the private investments.

The efficiency with which public expenditure is managed is often questioned, and alternative, market-based service delivery arrangements are often substituted for government-funded services. Although theoretically a market-based approach is limitless, practical limits as to how far market mechanisms can extend or be applied do exist.

In most cities, publicly owned urban land forms a significant share of the total developed area — more than half in cities where roads comprise a large portion of urban space. The key buildings that house institutions and reflect cultural development are generally, though not necessarily, publicly owned. The air we breathe; the rivers, lakes, and groundwater basins that provide our water; the ocean we fish in; and the biota that makes up the rest of our environment are likewise publicly owned and managed. The quality of management of the public realm is fundamental to the success of cities. Clean air, clean water, attractive public places and open spaces such as parks and recreational places all play a strong role in the social, environmental, and economic allure of cities for private investors.

Cities as investment systems

A city is created by both public and private investment, but is by nature more than the sum of those investments.

Each city has a unique geography, and markets place different values on different locations within the city. Whether on a coast, open plain, inland river, or valley surrounded by mountains, geography will affect a locale's economic activity. Further, the city's physical and social structure will prompt households and businesses to value some locations over others. Urban growth changes the structure of land values, often creating unearned wealth for asset holders, irrespective of their individual decisions and actions. Public policies, population increases, patterns of migration, and public and private investment decisions all create effects across cities from which asset holders and investors frequently benefit.

Imagine that the city's public policy mandates cleaning up and revitalizing its waterfront parks to improve the environment. This benefits private property holders in the vicinity because those properties become more attractive places in which to live and conduct business. The community at large also benefits from a more attractive public realm, and new investors view the appeal of this revitalized location with interest. New investment and, consequently, economic activity results.

Suppose, for example, a private corporation is encouraged to invest in a light rail system. Access for people and business improves. Property holders along the routes benefit from increased property values. New business opportunities may emerge around stations and shops on the system where travelers congregate. Homeowners may be attracted to live nearby for the sake of convenience. New residences may be built as demand creates new investment opportunities. In the process, land and property values change, and wealth has been generated beyond the initial rail system investment. The investor may find the investment more attractive if some of these subsequent value gains can be captured as part of a broader package.

From project to package

A city considering private sector investment in infrastructure makes a public policy error if it views that investment as an isolated short-term investment separate from its urban context. Investments provide a service and generate direct commercial returns if successful, but they also have the potential to stimulate additional investment, both public and private. The city also must manage the timing, scale, and location of infrastructure investments and coordinate public and private activities within a strategic, far-reaching framework for the city.

Geographically based development and investment plans that are focused on strategically planned urban development outcomes, rather than being limited to sectoral investment outcomes, can become a vital vehicle for managing urban improvement, especially where growth and renewal are rapid. Clear plans and bases for agreements between public and private participants can be a significant means of attracting new investment in regions where investors acting individually or in the absence of clear public policy may be reluctant to invest. Investments that might be noncommercial on a stand-alone basis can often be justified as part of a package where they add to the overall value of the bundle.

A CITY CONSIDERING PRIVATE SECTOR INVESTMENT IN INFRASTRUCTURE MAKES A PUBLIC POLICY ERROR IF IT VIEWS THAT SECTORAL INVESTMENT AS AN ISOLATED SHORT-TERM INVESTMENT SEPARATE FROM ITS URBAN CONTEXT.

City managers should scrutinize each public or private investment to leverage direct and indirect benefits from it.

A framework of mutually beneficial investment agreements can be a significant tool in the hands of city managers. Investors must change their perspective to see an urban infrastructure investment as more than just another short-term project. Instead they must take a far-reaching view of the changes it can stimulate and the additional investment responses it can generate. ■

Lyndsay Neilson is an Australian geographer, urban planner, and director of the University of Canberra Centre for Developing Cities.

India ULBs Give Lenders More Than IOUs

PATRALEKHA CHATTERJEE

New Delhi. Walk through a shopping complex in downtown Delhi on a summer afternoon and the enervating sound of a dozen kerosene generators assaults your ears. Or pass through a nice neighborhood and inhale the noxious fumes of small diesel engines. What's going on? You're in the middle of a brownout.

Unwilling to suffer silently in the dark from the erratic service of the state-owned Delhi Electric Supply Undertaking, residents have purchased their own sources of power. But being "powerless" is only part of the frustration of daily life in the Indian city. Most residents start their morning by switching on the water pump. The municipal corporation supplies water for an hour each morning and half an hour each evening, but if there's no electricity, there's no water. And when the overhead water tank is empty, Delhites must buy from private vendors.

If this is India's capital, imagine life in other cities.

According to a recent Indian census estimate, 20 percent of urban households never have access to safe drinking water, only 23.5 percent have toilet facilities, and the drainage system covers only 66 percent of the urban population.

THE APPALLING STATE OF URBAN INFRASTRUCTURE IN INDIA NOT ONLY MAKES FOR ARDUOUS LIVING BUT IS THE SINGLE BIGGEST STUMBLING BLOCK TO GREATER PRODUCTIVITY FOR ALL INDIAN CITIES.

These are the figures on paper. In reality, things are much worse. Access to safe drinking water does not necessarily mean water piped into homes. Only half of urban dwellers have household connections. About 30 percent must walk half a kilometer daily for water.

The appalling state of urban infrastructure in India not only makes for arduous living but is the single biggest stumbling block to greater productivity for all Indian cities. The country's cities make up one-quarter of the population and account for more than half of the gross national product. Between 1991 and 2001, the already over populated country will increase by 163 million people; 89 million of these will live and work in urban areas. But with poor roads, recurring brownouts, inconsistent telephone connections, and unhealthy sanitation, many of her cities will cease to be the growth centers they are in the rest of the world.

Investment Requirements for Urban Infrastructure (RS Millions)

	Water	Sanitation	Roads	Total	Per annum
Backlog up to 1995	696.70	528.60	108.50	1333.80	133.38
Add'l. Investment 1996-97	86.12	86.12	86.12	258.36	51.67
Add'l. Investment 2001-06	77.38	77.38	77.38	232.14	46.43
Operation & maintenance				489.62	97.92
TOTAL (1996-2001)					282.98
TOTAL (2001-06)					277.73

Source: The India Infrastructure Report: Policy Imperatives for Growth and Welfare (New Delhi: 1997).

Size of infrastructure investment required

Clearly, large sums of capital are required to reverse this situation. By the year 2001, urban local bodies (ULBs) in India will require more than US$9 billion to eliminate deficiencies in existing levels of service and provide the population with a modicum of core services, according to 1983 Planning Commission estimates. This figure is expected to increase to more than US$12 billion if municipal managers decide to "raise services according to high-range norms proposed by the Commission," according to *The India Infrastructure Report*, a study on commercializing infrastructure projects in India.

"All this money won't come from heaven. It is too complicated for the central or even state governments to plan for so many cities when each has a different requirement. What is really being suggested is that a clearer relationship between citizens and the elected government is possible," notes Dr. Rakesh Mohan, director general of the National Council for Applied Economic Research. Forming public-private sector partnerships to fund infrastructure projects is the key theme of the report, which was authored by Mohan's team of experts.

Traditionally, urban infrastructure financing has come from central and state governments as well as multilateral agencies such as the World Bank and Asian Development Bank, in the form of loans and grants. But ULBs haven't been in a position to make full use of these funds because they lack even basic amounts to meet ongoing operation and maintenance requirements of providing utilities — even when startup capital is provided by these outside institutions. Since most urban infrastructure services are viewed as public services, India's cities have never entertained the notion of cost recovery. When user charges are levied, the price per unit is too low to even meet the variable cost of providing the service. This is particularly evident in water and sanitation services. The total lack of cost recovery, and annual revision of tariffs indexed to inflation, deters the private sector from entering this investing realm.

Municipalities unbundling services

But change is in the air. India is unshackling its command economy and eliminating handouts to the public. Because neither central nor

state governments have enough funds to meet the requirements of urban infrastructure finance, some municipalities are starting to unbundle operation and maintenance services. Government savings from privatizing solid waste collection in New Bombay have topped 40 percent. In Rajkot, the fourth largest city in the western state of Gujarat, road sweeping and garbage collecting have been handed over to private contractors in 2 of 19 wards, with a 15 percent savings for the Rajkot Municipal Corporation. Private sector participation in these services has proved cost effective and efficient, and it obviates the need to hire additional staff.

New players and products

Lending institutions increasingly want to play a catalytic role. The World Bank recently approved a US$200 million line of credit to Infrastructure Leasing and Financial Services (IL&FS), a domestic intermediary for funding infrastructure projects. The loan seeks to create appealing business climates for private infrastructure investment. It appears to be working, because IL&FS is now considering a handful of projects, involving telecommunications, power, port, airport, surface transport, water supply, effluent treatment, and integrating regional development.

To be eligible for IL&FS loans, ULBs must demonstrate that they are watching the bottom line and come up with innovative financing methods. One such method is tapping the capital market. "This route requires development of commercially viable projects which will raise resources through municipal bonds. Increases in tax revenues, including property and service taxes, can help to access the capital markets by improving the cost recovery of urban services as well as the credit rating of urban local bodies," according to Chetan Vaidya, senior urban management advisor of the debt market/infrastructure arm of the United States Agency for International Development's India's Financial Institutions Reform and Expansion Project, FIRE(D).

To take advantage of new investment opportunities, municipalities must forge into uncharted territory. The city of Ahmedabad — a hive of commercial activity — is the first in India to issue a municipal bond. The Ahmedabad Municipal Corporation (AMC) US$28.5 million bond issue (floated in August) represents the first time a municipal corporation has tapped capital markets to upgrade its water supply, sewage, sanitation, and other infrastructure projects. The AMC bond has received an A+ rating by Credit Rating Information Services of India Ltd. (CRISIL).

"Cities have to look inwards for resources. You cannot keep running to the state or federal government for funds all the time," asserts Ahmedabed municipal commissioner Keshav Varma, who put AMC in the black in less than three years. His main strategy has been to professionalize urban government and instill public confidence by making a visible difference in the city's appearance by cleaning up roads and clearing out garbage. But appearance alone is not always a "market-friendly" signal, so he followed that up with administration reforms. Tax assessment and collection methods were revamped. Octroi and property taxes constitute the main source of revenues for AMC. "Octroi collections went way up by nearly 80 percent in just three years (1994-97). The AMC budget in 1994 was US$106 million. In 1997, it is US$224 million," Varma points out.

If AMC today enjoys an enviable financial status and impressive credit rating, it is largely due to measures preventing tax evasion by disconnecting water supply and drainage lines and issuing warrants to raid premises where taxes were delinquent. "Ahmedabad has demonstrated that you don't have to change the system completely. You can begin by optimally using the existing system," says Sujatha Srikumar, CRISIL's head of infrastructure sector rating.

"If we get the first bond right, the market opens up for other municipalities," says K. Ramchand, IL&FS assistant vice president. "We'll list the bond on the national stock exchange so it can be traded. Every day, we will put out a buyer's and a seller's quote of the AMC bond."

Ahmedabad has already triggered imitators. A host of municipal corporations want to be benchmarked in relation to others. Credit ranking has been the catalyst. City managers are waking up to the fact that being creditworthy means taking concrete steps to shore up revenues, cut losses, and solidify savings.

Like Ahmedabad, Bombay Municipal Corporation (BMC) has also stepped up administrative reforms to shore up revenues. Octroi collections have increased from US$115.88 million in 1990-91 to US$261 million in 1995-96. Last year, BMC, which has the largest Indian municipal revenue budget and population, was assigned an AA- rating on a US$7.14 million bond issue, indicating high safety of timely interest and capital payment. BMC is not planning to go in for a bond issue right now, but "a credit rating improves its standing vis-à-vis lending institutions," states Rohit Jha, senior analyst at CRISIL.

CITIES HAVE TO LOOK INWARD FOR RESOURCES. YOU CANNOT KEEP RUNNING TO THE STATE OR FEDERAL GOVERNMENT FOR FUNDS ALL THE TIME.

Alternative infrastructure financing

Bond issues are not the only financial route. Tirupur, for instance, is experimenting with the build-operate-transfer (BOT) mechanism, whereby a private party or consortium will finance, operate, and maintain a facility for a specific period, after which it is transferred to a government or public agency. Project costs decrease with BOT contracts because any financial outlay must be justified through operation and profit, preventing overspecification and procurement delays.

Tirupur is the hub of India's cotton knitwear industry. The town exports US$1 billion of fabric annually, roughly 90 percent of India's cloth exports. More than 300,000 people working in Tirupur's industry grapple with poor infrastructure daily. Water shortage is at the core of their problems, and they pay dearly to buy it from private vendors, says R.M. Subramanyam, a representative of the Tirupur Exporters Association.

IL&FS raised US$25 million by issuing floating rate notes in the United States guaranteed by USAID notes that will mature in 30 years to fund the Tirupur Area Development Program, a US$156 million integrated program covering water supply, sewage, and effluent collection. Industrial water users will have to pay a competitive price, and the project will use cash flow to recover the investment and upgrade services. The city will be responsible for billing and collecting. Equity participation comes from the state-run Tirupur Exporters Association, local agencies and IL&FS. The New Tirupur Area Development Ltd. will

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select four international consortia to undertake the project on a BOT basis.

Regulatory framework — problems and requirements

The Tirupur experiment holds promise for other industrial hubs seeking to explore financing alternatives to bonds. But amid euphoria about the new ways to finance urban infrastructure, analysts caution against forgetting the necessity of guarantees and regulatory frameworks. For private-public partnerships to succeed, the central government must play the role of facilitator and put in place incentives and a legal framework while transferring power to city governments. The next step is to expediently hand over financial power to them. Establishing a credit-based system is useless if urban governments have no way to become creditworthy.

"Development of a municipal bond system in India needs to be set within a proper regulatory system," says Dr. Meera Mehta, senior urban finance advisor to FIRE(D). She advocates nullifying the step of obtaining state government permission, advocating instead "mandatory credit ratings." She wants to see a cap on the total allowable amount based on levels of service performance. Mehta recommends making "audited five-year capital investment plans mandatory, as the Tamil Nadu Urban Development Fund has done."

Finally, there is the question: who determines what a city needs? The answer depends on how much should be invested in which infrastructure facility. "Currently, city development is driven by planners and the political process rather than the economic needs of the metropolis," says Nasser Munjee, executive director, Housing Development and Finance Corporation in Bombay. Munjee is associated with Bombay First, a citizen advocacy initiative for urban regeneration. Future calculations predicting Bombay's needs could easily go awry, Munjee points out, because "the development plan of the city has no connection with what Bombay may need in 20 years in terms of port facilities, railway links, and airports." If cities are to be engines of growth, those who live and work in them must play an integral part in planning their future. ■

Patralekha Chatterjee is a New Delhi-based journalist who specializes in development issues.

National Governments:

Alvin B. Garcia, Mayor, Cebu City, the Philippines

UA: *You have made one of the most successful partnerships in attracting the private sector to invest in your city. Seagate, with 15,000 employees, the world's largest manufacturer of computer disks has relocated to your city. What incentives did you offer to attract them to Cebu City?*

AG: The tax incentives offered to foreign companies like Seagate to invest in the Philippines are nationally defined. That is, they are determined by national law and apply equally throughout the country. The incentive for Seagate to relocate in Cebu had more to do with other factors including the availability, quality, and cost of our workforce. Cebu has a track record of being able to sustain the requirements of other similar industries (semiconductors, audio, video, and computer equipment, etc.) because of the infrastructure — an international airport, seaport — and quality of life Cebu has to offer. The attraction of high-tech industries such as Seagate is perfectly compatible with the growth objectives of Cebu. The principal benefit is to the people in the employment opportunities they receive.

UA: *Private sector investment is not necessarily incompatible with the financial goals of cities. However, do you see the immediate short-term financial needs of the private sector conflicting with the need for more comprehensive development planning for the city's long-term growth?*

AG: Balance is the key. While it is conceivable that the short-term financial needs of the private sector may conflict with the development planning required for the city's long-term growth, a balance must be struck. This realization makes it easier for both sides to get on with their agendas.

UA: *Do you plan to integrate private investors as partners in city building in the future?*

AG: Yes. We are already integrating private investors in building the city of the future. In fact, even as we speak, Cebu City has embarked on a waterfront development project which constitutes urban renewal. This massive undertaking is possible only because the city has integrated private sector investments into this project.

UA: *What concrete steps did your city take to foster a livable urban environment to entice investor relocation to Cebu City?*

AG: First of all, the city never stops planning, and this planning process involves participation of not only local residents but also foreign investors already present in Cebu. The city also takes the initiative to fund infrastructure that meets the needs of a growing metropolis.

Basic Data about Cebu City Size: 36,000 has. Population: 700,000 (1996 est.)

Located on the island of Cebu in the Central Philippines, metropolitan Cebu has the country's fastest growing economy and accounts for close to 10 percent of total exports. Approximately 80 percent of inter-island shipping in the country is owned and based in Cebu.

Mayor Alvin Garcia is affiliated with Bando Osmena, a local political party that has no national ties. Mayor Garcia was first elected in 1995 after serving seven years as Vice-Mayor. The major areas of focus of his administration are (1) economic development, (2) tourism, and (3) urban renewal.

Help or Hindrance?

Dr. Rita Joshi, Mayor, Allahabad, India

UA: *What incentives have you offered the private sector to attract them to invest in your city?*

RJ: Through a federal government scheme, Allahabad has been targeted to produce electricity from garbage as an alternative source of energy to lighten the urban load from garbage pollution. The municipal corporation of Allahabad invited investment bids, and a leading construction company, collaborating with a British partner, won the bid. The city will provide seven acres of land and will transport garbage free of charge. The project will last six months, and power generation by landfill system will take one and half years, at which time the state electricity board will buy the power. The city will save 25 percent of its present Rs6 million annual cost of picking up the garbage and will be cleaner.

UA: *Private sector investment is not necessarily incompatible with the financial goals of cities. However, do you see the immediate, short-term financial needs of the private sector conflicting with the need for more comprehensive development planning for the city's long-term growth?*

RJ: Unfortunately, we do not have any fiscal autonomy and cannot invite private investment. This falls under the domain of the state government.

UA: *What concrete steps did your city take to foster a livable urban environment to invite investor relocation to Allahabad?*

RJ: We now have a four-star hotel in Allahabad — the first in the city. When the hotel chain wanted to construct the building, it said that it needed a good approach road —the existing one was full of encroachments and filled with potholes. They told us this at the end of the budgetary year. Although we did not have the money, we somehow found the resources and the corporation built a new road.

UA: *What have been some of the major problems in partnering with the private sector?*

RJ: Good roads, water, and fewer labor problems could help make Allahabad a productive industrial city. The power supply (something not under my control) is likewise very erratic; the city is too congested to permit further building, so all future investment construction must be located beyond city limits. The city is further hampered by corrupt business practices. But by far, my biggest constraint is the lack of functional and financial powers the federal bureaucracy permits.

Basic Data about Allahabad Size: 64 square kilometers Population: Approximately 1.2 million.
Allahabad is located in Northern India, in the state of Uttar Pradesh, 800 kilometers southeast of Delhi.

Dr. Rita Joshi is not affiliated with any political party; she was elected in November 1995 through direct elections to a five-year term.
There are no major industries within Allahabad city limits although the city counts several small businesses, including flour and oil mills, cold storage, and tin box manufacturing.

Dr. Joshi has three administrative priorities:
1) Drinking water. Almost 30 percent of slum dwellers do not have adequate access to potable water. The city has 2200 hand pumps, of which one-third do not function.
2) Upgrading the 50-year-old existing sewer system burdened and malfunctioning by the rise in population.
3) Garbage collection. Only 27 garbage collecting machines are available for a city that generates 350 metric tons of garbage annually.

Selling the City

The need for finance has set mayors in a race to sell their cities to global capital markets and to sources of employment such as international banking and multinational corporations. "Cities are a brand name. Barcelona is a brand name of great prestige," said Maravillas Rojo, third deputy mayor of Barcelona, at a recent cities conference. Cooperation between the private sector and municipal government helps enhance the value of the Barcelona brand, she said, pointing out that the Catalan city is considered the sixth most attractive business site in the European Union, has doubled its tourism in six years, and boasts an expanding economy. "The GDP [gross domestic product] of Rio de Janeiro is equivalent to 4 percent of the GDP of all of Latin America," chimed in Rio's mayor, Luiz Paulo Conde.

Municipal bonds and privatizations of public utilities and services are now seen as the solution to the crushing demand for financing. (In 1996, US$725 million in sub-sovereign international bond issues were placed from Latin American cities and provinces, including one issue of US$150 million, which was asset-backed.) The competition to convince investors to buy municipal bonds is on, and the Barcelona and Rio pitches will surely be heard time and again as more cities queue up for endorsement of their paper in the world's financial capitals.

The vision of cities as "a product that must be sold to foreign direct investors" was denounced in an impassioned commentary by Riccardo Petrella, a professor at Belgium's Catholic University of Louvain and president of the Lisbon Group. "Economic forces can buy a city and buy that portion of a city that gives profit," he said, citing the sale of water companies. "We are selling our cities to the private forces . . . [but] the clients are not citizens."

The future for the world's largest cities —those ranging from 10 million to 20 million inhabitants— is fraught with dangers, Petrella said, starting with the fragmentation of cities into haves and have-nots. Between 40 and 60 percent of the world's city dwellers have no access to potable water. And, except for Tokyo, all of the cities with populations over 10 million are in emerging countries. These cities lack basic urban services for the poor who may make up a majority of each metropolitan center. "The problem is not how to be competitive, but how to build up the common wealth of the 8 billion people that will be on the globe in 25 years," Petrella noted.

Petrella launched a plea for a Barcelona consensus declaring water a global common good that cannot be privatized. His plea for a global water contract that would create cooperative links between the megacities of the world sparked controversy. Santiago Mayor Jaime Ravinet expressed sentiments reflecting the general conference opinion: "What Petrella proposes never was implemented in the First World." He then threw down the gauntlet: Santiago, he said, needs $1.5 billion to clean up the water supply to prevent cholera. How are we to finance this?

—Lucy Conger

Rebuilding Moscow: Boom or Bust?

OLGA KABANOVA

MOSCOW. If anything epitomizes the face of the new Russia, it is Moscow's current building boom. Ultramodern banks operating under the new, still-unfamiliar free enterprise system can be found behind the historic facades of old mansions. This surprising, sometimes uncomfortable, juxtaposition of new and old perfectly illustrates the essence of Moscow today as this city tries desperately to transform itself.

Moscow's embrace of modernization has resulted in unprecedented growth as well as unforeseen problems. As city officials feel their way toward democracy, they have often stumbled over their own bureaucratic feet. Although they were initially enormously successful in attracting outside investment, unpredictable changes in governmental policy seemed recently to have put a damper on the inflow of foreign capital. A second major bureaucratic snafu has turned out to be the carte blanche to oversee the city's spiraling growth accorded the newly re-elected mayor, Yuri Luzhkov. A third concern of Muscovites is the rapid rate at which old historic buildings have been razed and the dearth of architectural foresight with which new ones are being put up.

Is Moscow selling out to foreigners?

For the most part, it is Russian money that is being funneled into Moscow construction. Despite the fact that investment in Moscow real estate promises significant returns (30 to 40 percent annually for development projects), foreign investors are no longer storming the market, contradicting the oft-heard Communist Party assertion that "Moscow is selling itself to foreigners." Outside investors attribute their recent caution to the city's political and economic instability; rapidly changing tax policies; lack of insurance to cover real estate investment risks; the complexity of dealing with Moscow's bureaucracy; and an underdeveloped legislative base (including lack of land ownership rights, the contradictory nature of many legislative acts, and too-short land leasing arrangements).

Foreign investors may also sense subtle xenophobia among city administrators as well. Luzhkov has repeatedly stated that he will not allow the city to become another Manhattan. He vows that construction must adhere to authentic Moscow stylistic standards and urges banning contemporary architecture in the center city. Architects, builders, and investors must revise their plans in accordance with the new multi-stage approval system of appointed architectural councils of the Moscow Committee for Architecture and Construction as well as City Hall. Another unfamiliar phenomenon city managers are dealing with under the new free enterprise system is competitive bidding. Previously, contracts were awarded to design institutes with close ties to City Hall, eliminating opportunities for many Russian and foreign architects.

Despite its explosive growth, Moscow's building boom has been, from a geographic standpoint, highly localized and narrowly prescribed. More than 80 percent of all construction and reconstruction by municipal authorities, private investors, and the nouveau riche is concentrated in only 10 percent of the city, specifically its historic district. (The outlying areas, where the majority of Muscovites live, continue to remain unchanged from 10 years ago.) The transformation from yesterday's historic neighborhoods to tomorrow's megacity has given rise to serious concerns, not the least of which is the dilemma of how to preserve the ancient European capital and restore worthwhile architectural monuments in the midst of dramatic change. Muscovites now seem pleased that the initial rampant destruction of these districts has slowed somewhat.

Popular mayor's unpopular moves

Despite winning an overwhelming 90 percent of the vote — or perhaps because of it — Muscovites have felt free to criticize their new mayor's very free hand in the building boom. Their criticism is mainly reserved for Mayor Yuri Luzhkov's two main ventures and pet projects: restoring the Cathedral of Christ the Savior, destroyed in the 1930s; and constructing a huge underground shopping/recreation complex just beyond the Kremlin walls on Manezh Square, slated for completion by early September to celebrate Moscow's 850th anniversary.

The cathedral restoration project lacks citywide support. Many residents see it as an act of repentance for the sins of the Soviet regime, which destroyed hundreds of city churches. But the mayor was undeterred by such criticism and by arguments against restoration made by architects and historians who pointed out that architect Konstantin Ton's work had been unfavorably viewed even when the cathedral was originally erected in the last century. They further argued that, given widespread poor housing conditions and rampant transportation problems, it was unethical to spend vast sums for a show of contrition. Nevertheless, the cathedral is rising at an unprecedented rate, and although municipal authorities claim it is not costing the city a kopeck, residents are skeptical that funding for such a gigantic project can come from private donations alone. Yet despite their misgivings, most Muscovites believe the cathedral will enhance the city's beauty.

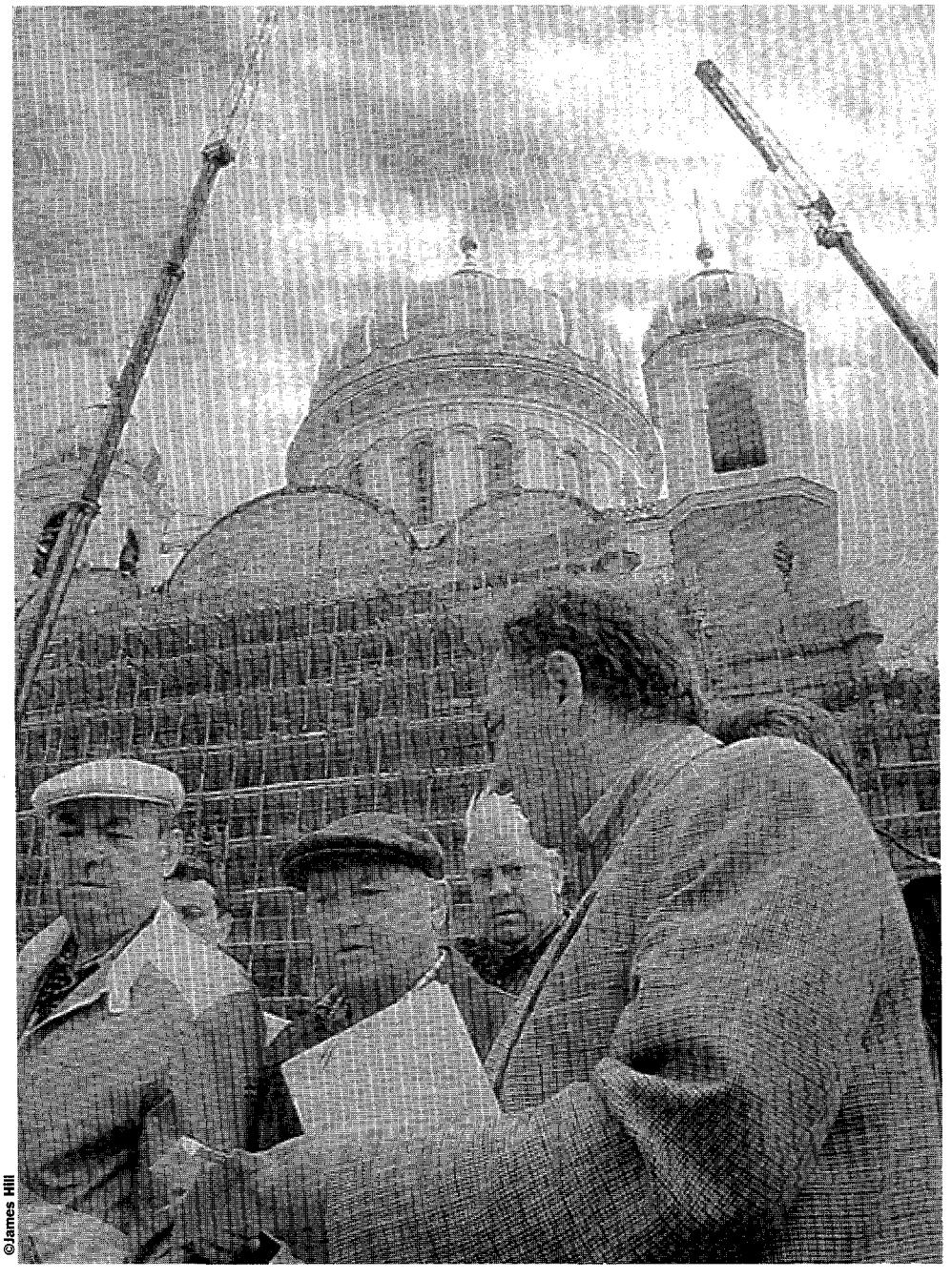
The shopping complex in the heart of the city, however, has not received the same grudging positive response. Years of construction has turned the huge square, empty for 50 years until 1990, into a four-level underground shopping and recreation complex decorated with lights, arches, balustrades, and bronze sculptures depicting characters from Russian folktales. There is unanimous agreement among residents that the mall ruins the view of the Kremlin.

Many regard it as an aesthetic and financial debacle. Construction was carried out, not *after* planning and design were completed, but simultaneously — and sometimes even

prior — to it. The original design was overly ambitious from both artistic and economic standpoints. Riddled with miscalculations and repeatedly revised by a succession of planning and design organizations, in the end, almost nothing remained of the original plan. Construction costs (still unpublished) heavily burdened the city budget, and city financiers don't expect to recoup costs in the near future. Moreover, despite Russia's new openness, the project was off-limits to outside review. In these times of political confusion in Russia, few administrative checks and balances on the mayor exist. It is not incumbent on him to convene a public forum to critique a proposed project, nor is he called upon to account for the construction projects he okays. Given the city's snowballing growth, he is free to — or forced to — make decisions unilaterally.

Such carte blanche may seem astounding, but the practice, left over from communism, is business as usual in Moscow. Muscovites grew accustomed to the fact that new buildings and monuments would suddenly appear in their midst although they weren't consulted about their facades, locations. or costs. While urban dwellers have enjoyed more of a say in how their city is shaping up, their voices have too often only been heard — as criticisms — after the fact. Things are changing, however, and a highly visible scandal surrounding an unpopular sculptural monument to Peter I demonstrated that taxpayers are less than thrilled with all the mayor's projects.

Although they may not agree with everything that earns his stamp of approval, Muscovites appear to respect Luzhkov's efforts and attribute the city's awakening from its long slumber primarily to his personal energy. He single handedly oversaw the reconstruction of Moscow's surrounding highway, which was in such deplorable condition it was dubbed "deadman's highway."



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Boom plateaus

Laws of socialist policy and economics no longer govern the rebuilding of Moscow, but projects are still not yet implemented as they are in developed countries. Administrative policies are changing too rapidly to permit serious predictions of how things will be done in the future. Some experts believe Moscow's building boom, which is not backed up by reliable financing, is peaking and will soon level off. Rental office space fell in the past year from US$1,000 to US$650 per square meter, and the demand for expensive housing of two or three years ago has dropped. But the majority of residents feel that Moscow is at the inception of what will prove to be a drastic facelift for the city.

Despite being fraught with administrative, financial, and planning problems, the remarkable changes taking place in Moscow today continue to dazzle residents of the ancient Russian capital. For decades preceding the frenzied construction that has consumed the city in the past five years, Muscovites resigned themselves to the fact that their city was only expanding outward as new neighborhoods spilled over into outlying areas. By contrast, the historic center of the city was rapidly disintegrating into disrepair and seemed doomed to fall to the wrecker's ball. Moscow was considered a hopelessly declining city beyond the reach of repair . Now Muscovites see that their city is being transformed almost overnight from a gloomy totalitarian capital to a vibrant international city, right before their amazed eyes. ■

Olga Kabanova is an art critic and architecture columnist for Commersant-Daily *and* Russian Telegraph

The New Competitive Benchmarking

STEVEN A. WALDHORN AND EDMUND A. EGAN

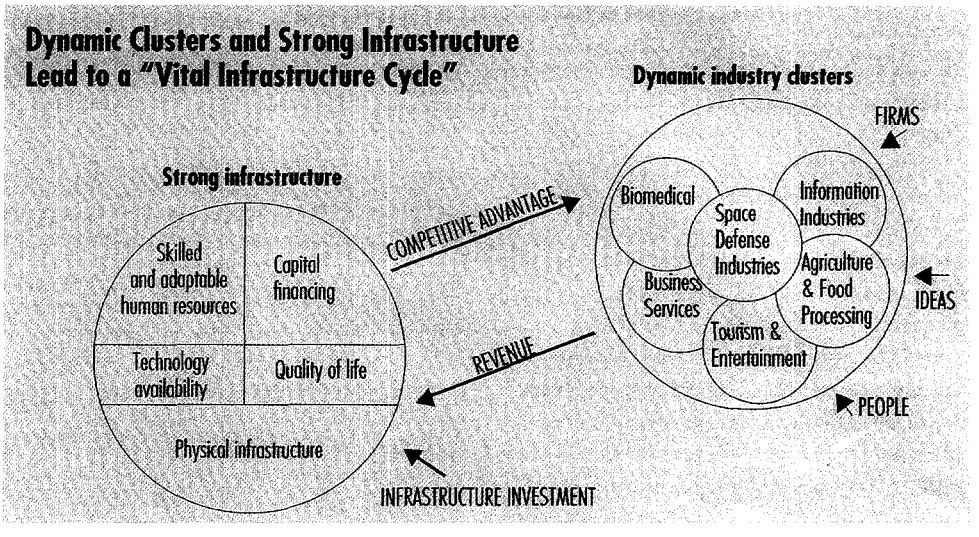
As private ways of financing public infrastructure are increasingly sought by developing cities, more attention will have to be paid to the strengths of the country's underlying economies. When tax dollars or government-guaranteed bonds are the financing source, there is less of an urgent need to consider broader economic factors in infrastructure decisions. But when municipalities seek private financing, both minimizing uncertainty and understanding their long-term ability to pay become of paramount importance. For this, domestic and foreign investors, city planners, banks, and international lending agencies all must secure — and be able to measure — the economic "fundamentals" of a city or locale.

In recent years, urban and regional economies in nearly all large countries have followed divergent paths from larger national and global patterns. Southern China has followed its own developmental course since the early 1980s, tied more closely to foreign investment than to the growth of the national market. Indian states such as Karnataka have developed technologically advanced industries far more rapidly than the rest of the nation. In Latin America, megacities such as Sao Paulo and Mexico City have faced especially acute growth challenges. The key to opening private sector infrastructure financing channels is finding better analytical tools to track development patterns in particular regions.

THE KEY TO OPENING PRIVATE SECTOR INFRASTRUCTURE FINANCING CHANNELS IS FINDING BETTER ANALYTICAL TOOLS TO TRACK DEVELOPMENT PATTERNS IN PARTICULAR REGIONS.

Clusters and infrastructure

Over the long term, the profit potential of an infrastructure project is closely tied to the competitiveness of the surrounding region constituting its market. The competitiveness of the regional economy, in turn, is driven by the fate of its leading industry clusters — the key export-oriented firms and associated suppliers bringing money into the region. Robust growth most often results from a region's highly competitive industry clusters, whose dynamism generates growth for the whole gamut of industrial, commercial, residential, and public sectors.



Several decades of development experience with failed "build it and they will come" projects has demonstrated that an unfocused approach to infrastructure development does not work. On the other hand, the experience of over a decade of cluster-based economic development policymaking suggests that specifically targeted infrastructure investment can jump-start the competitiveness of a particular group of industry clusters. Vital infrastructure may be both "hard" — e.g., physical projects such as highways or telecommunications — or "soft" — including investments in technological capacity, human capital, or quality of life. Roads and railways have helped develop resource-based industries in countries such as Indonesia and Venezuela. Multimodal transportation facilities have made distribution and logistics clusters a reality in Asian entrepots such as Singapore and Hong Kong. And telecommunications infrastructure must soon come to be the major enabling technology if developing cities are to join the international Internet-based commerce and industry in the next century.

Overall, moving to more market-based infrastructure financing mechanisms will involve both opportunities and risks for public policy. Privately financed infrastructure tends to be more profitable — and therefore more likely to be implemented — in developed parts of the world. Those regions that already have successful clusters in place will more readily attract new infrastructure investment, which will, in turn, make their clusters even more competitive and lead to a more vital infrastructure cycle.

To tap into the vital cycles that appropriate infrastructure helps to create, tomorrow's investors will increasingly seek out existing clusters. Conversely, to prevent a "vicious cycle" that could make infrastructure investment less feasible in regions with less competitive clusters, public planners will need to guard against the tendency and focus on helping smaller cluster groups grow.

Benchmarking clusters

As the demand grows for more robust measures of the fundamentals of the urban

economy, benchmarking the competitiveness of clusters, and the cost and quality of key infrastructure, will become critical to attracting infrastructure financing. Benchmarks can help identify cities with healthy long-run prospects; they can then be turned to a city's advantage by identifying possible weaknesses that strategic new infrastructure projects could remedy. In the United States, the cluster and infrastructure dimensions shown in the table at right have been used in a series of studies to pinpoint and compare regional economies.

In today's economy, industry clusters in regions around the world are in a state of evolution. The value chain associated with each cluster — the series of production steps from research and development through manufacturing to distribution — is constantly changing in response to new technology and markets. At the same time, the increasingly global character of production systems means that regions are also continually changing the pieces of the value chain in which they specialize.

For example, Singapore's strong performance between 1965 and 1990 was primarily due to the city government funneling funds into value-added infrastructure for its industry clusters, including sea and air transport facilities, education, technology, and a modern system of industry regulation. As a result of this early, ongoing investment into Singapore's areas of need — such as light manufacturing and distribution clusters — it has now become a more sophisticated economy with public, private, and international infrastructure investment supporting such new clusters as information technology. As neighboring Malaysia has in recent years sought to move its economy in similar directions, it has started shifting investment into similar infrastructure, including projects to improve the quality of life in Kuala Lumpur as well as building a new Multimedia Super-Corridor.

Infrastructure planners in the future will need to consider the ongoing feedback between a region's competitive clusters and the existing and potential provisions of hard and soft infrastructure, including:

- technology programs;
- technology parks;
- human capital improvement;
- physical infrastructure, including international sea and air ports; and
- telecommunications and other information technology capacities

Dimensions of Clusters and Infrastructure For Benchmarking Regions

Level of cluster development

- Employment and output concentration ratios
- Percentage of purchases from other firms in the regional cluster
- Percentage of sales to other firms in the regional cluster
- Percentage of technical occupations from local educational institutions
- Percentage of cluster firms less than 5 years old.
- Level of key skill overlap among cluster industries

Cluster competitiveness

- Growth in employment, output, average wages relative to regional totals
- Absolute size in employment, output, wages, productivity

Related infrastructure: technology

- Concentration in scientific and technical labor
- Research and development expenditures
- Patents

Related infrastructure: human capital

- Educational attainment
- Size of local job retraining industries

Related infrastructure: physical infrastructure

- Airport volume for passengers and cargo
- Commute time
- Truck delay
- Public transit use

Related infrastructure: business climate

- Labor Laws
- Wage Rates
- Tax Burden

Source: Waldhorn and Egan

In general, when a region's clusters move up the value chain, it often shifts emphasis from a reliance on "hard" to "soft" infrastructure. This is because high-end jobs in a given cluster tend to be the most knowledge-intensive, and require specialized skills and leading-edge technology. Such skilled workers are in great demand and want to live in locations with cultural amenities, clean environments, and social stability. This evolution can open up opportunities for many types of private infrastructure investment which only advanced regional economies are capable of supporting. Investment in each of these types of infrastructure can span the public and private sectors, but all share a common dependence on regional competitive clusters. ■

Steven A. Waldhorn is a senior vice president at ICF Kaiser International Inc. and has supervised cluster studies from Malaysia to Morocco. Edmund A. Egan is a senior associate with ICF Kaiser's Economic Strategy Group.

Fiscal Autonomy: Building it in or Building it up?

LUCY CONGER

MEXICO CITY. If newly elected Governor Cuauhtemoc Cardenas is to make good on his campaign promise of greater fiscal autonomy for Mexico City, he must first dig the city out from under a mountain of rubble — both economic and asphalt. One of his first acts when he takes office on November 1 will be to conduct a careful review of the infrastructure mega-projects instituted by his predecessors. One of these will undoubtedly be the project that cost the country the most in terms of money and image — the Mexican toll road debacle. Although not directly the fault of the former Mexico City governor, some of the financial fallout from the problem has fallen into the city's — and Cardenas' — lap.

A civil engineer, Cardenas was elected on a Democratic Revolution Party (PRD) platform of increasing the city's financial independence. As one of the largest and most populated urban areas in the world, Mexico City, currently contributes more to the federal government than the city gets back through revenue sharing. Cardenas plans to change this economic equation to permit the city to funnel more of the funds it generates into sustaining itself instead. His plan is for the city to collect taxes and retain them rather than passing the gathered taxes onto the federal government, which has traditionally taken its bite before returning reduced revenues to the city. According to Ricardo Pascoe, PRD International Affairs Secretary and a member of the transition team, "The discussion about fiscal federalism will be a major issue in Congress in the next few months."

The governor-elect's campaign promises included: (1) restoring the historic colonial area to build a long-planned hotel-cum-business center; (2) erecting tourist facilities in the south-city; (3) funneling funds into textile and apparel assembly plants; (4) strengthening the supervisory capacity and efficiency of the state in development efforts; (5) ensuring that bidding auctions are run without favoritism; and (6) stimulating employment, especially for construction and social infrastructure programs. This last includes, "expanding the subway, processing clean water, and building drainage pipes to release the torrential rains," says Pascoe.

Perhaps most significantly, Cardenas also pledged to find avenues for financing infrastructure other than raising taxes. Although he has already taken steps in that direction, he faces an uphill battle. The nearly ruinous public failure of the toll roads project, which was privately financed by Mexican and foreign investors, has made the private sector extremely wary about investing in Mexico and her capital city in the future.

©WORLD BANK PHOTO by Ray Witlin

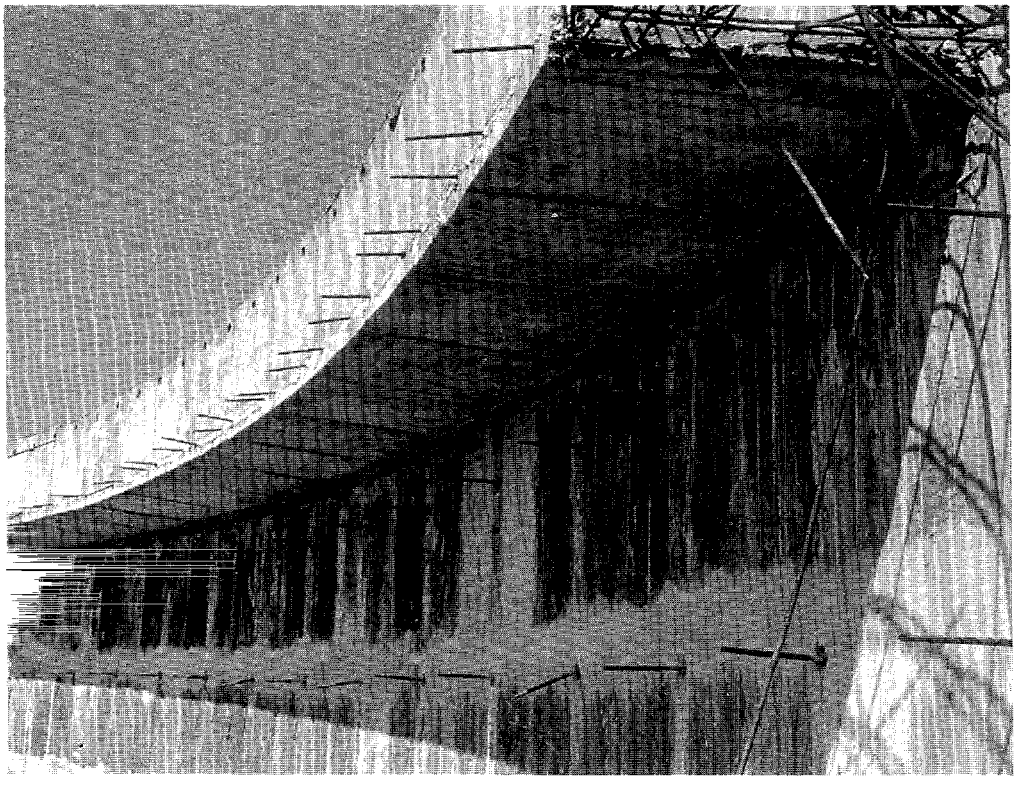
Nevertheless, Cardenas has taken his first tentative steps toward building solid partnerships with potential investors for his vision of urban independence. In the months before assuming his post as governor, he and his transition team instituted a financing search to support priority public works projects. One of his first foreign trips soon after his July 6 election was to New York City where he and his team met with bankers and investors to promote the idea of private investment in the capital. "We had a positive response," Pascoe reports.

As with other developing cities around the world, the municipal government faces severe limitations on its capacity to channel funds into public urban infrastructure. Already US$3 billion deeply in debt, the city will assume the additional burden of education and public health administration as part of the new federal government's decentralization process in 1998. Along with the added responsibility, however, comes the budget and staff for administering them, which may give Cardenas a bit of leeway in channeling funds to his pet social programs.

In addition to the low level of investor trust

engendered by his predecessors, Cardenas has his work cut out for him by his own country's governmental constraints as well. Another stumbling block for Cardenas on the route to greater financial independence will be the policy mandating that Mexico City must obtain authorization from the federal government before municipal authorities can launch bond issues and take out loans. The new governor will thus be unable to move a financial muscle without first getting a thumbs-up from a cabinet minister.

Cardenas' method of obtaining private infrastructure financing may not yet be completely ironed out, but he is at least well aware of the approach *not* to take. He has stated publicly that he has drawn a vital lesson from the toll road fiasco that disgraced former President Carlos Salinas de Gortari, under whose aegis the spectacular failure was born and died. In August, Cardenas told construction industry entrepreneurs that the private sector must be more rigorous in its analysis and that the government will provide hard data and solid, substantiated figures of cost and revenue projections prior to any bidding in the future.



As most city taxpayers are now aware, the toll road disaster, for which they are still paying, was fraught with enormous, avoidable problems at every step along the way. The 1992 project's grandiose aim was to link Mexican and North American markets in a grid of modern superhighways that would criss-cross the republic and connect Mexico's capital to the far outlying areas. In five short years, Mexico raised a whopping US$15 billion to build 3,600 miles of road, outpacing and outdoing every other highway program in the world in the last 50 years.

Today, the outer loop remains unfinished and incomplete, missing its last vital link. The interstate highways are phantoms, nearly empty stretches of asphalt abandoned by tourists and truckers alike who are unable or unwilling to pay tolls that are among the highest in the world. When the ring roads and highways went bust, they nearly took Mexico's top bank and three giant construction firms down with them. Said one source, "It was a political program without an economic underpinning."

One of the key errors was that the government's optimistic predictions of the robust traffic flows that would throng the highway were unsupported by hard data. "There were no reliable traffic studies, no detailed project plan," said another source. Traffic studies were conducted in three to five months as compared to U.S. records of road use over an 18-month period. Nevertheless, the federal government, construction firms, Wall Street investment banks, and credit rating agencies went into debt on the strength of groundless projections that the toll roads would be heavily trafficked and hugely profitable.

The government's second fatal mistake was in designing a guaranteed traffic flow, called the "Aforo," which allowed Mexico to launch the highway projects in international capital markets. This guarantee received a warm welcome on Wall Street where bankers treated it as a sovereign risk. In August 1994, Standard & Poors made the landmark decision to give the Mexico-Cuernavaca road a high investment grade of "Ar." "This is the first time in the world that a highway outside the United States received an investment grade," notes the finance minister.

Problems were compounded by a poorly structured US$207 million bond that was based not on the peso which would actually pay the tolls, but on dollar denominations. When the value of the peso dropped by half in 1994, the plunge in revenues priced the roads out of local drivers' ability to afford them. Truckers and commuters had no choice but to boycott the already overpriced tolls in favor of free routes.

The bidding process compounded a situation already mired in problems. The government-provided specifications were hastily and poorly developed. Cost estimates and details to guide the construction of each road were absent. During the construction phase, "every single risk materialized," said a financial analyst close to the project. Road specifications changed, cost overruns piled up, and projected estimates doubled. In fact, cost overruns are a classic sign of corruption in Mexican government-backed construction projects. Such a stigma may be another reason Cardenas is appealing to private investors outside the government for infrastructure assistance in the city's future.

The toll road legacy has cost Mexico not only money but some measure of its reputation as a good investment bet. Potential financiers now think twice and look closely at investment opportunities that cross their desk from the country. According to a former First Boston banker, "People say, 'That deal was like the toll roads and everyone shuns it."

Lucy Conger reports on Latin American economic and financial topics for Institutional Investor *magazine and* Emerging Markets *newspaper.*

Urban Appeal: What Investment Banks Bank On

LESLIE CARPER

Joseph Taylor is first vice president and head of Sovereign Research at Merrill Lynch. A 20-year veteran in observing sovereign and local governments, he is also a fixed-income analyst in financial markets.

UA: *What can city governments that are seeking infrastructure financing do to inspire private sector investor confidence? And, conversely, what risky conditions are off-putting to investors?*

JT: Investors in the capital markets are increasingly accepting the risks of financing infrastructure. Traditionally, such financing was almost exclusively done by bank loan syndicates and private placements. As recently as three years ago, one could state with some confidence that, outside of North America, almost no project finance was undertaken in the capital markets. Since then, bond financing has become more commonplace in developing countries and falls into several major categories: (1) energy projects primarily for electric power facilities, (2) oil and gas pipelines, and (3) transportation projects such as toll roads and railroads.

By the end of 1996, Standard & Poors had assigned 76 ratings to US$21.4 billion in outstanding "project finance" debts, double the amount from mid-1995. As large as they are, these numbers still fall far short of the staggeringly huge US$500 billion estimate required to meet infrastructure needs over the next 10 years in developing countries.

What has changed? Investors and issuers are more savvy in calculating the risks and projects arc structured to minimize risk sufficiently to achieve an investment grade rating of "Baa3/BBB-." While each project has different characteristics, there is a discrete list of principal risk factors that must be properly understood before any project will have easy market access: (1) sovereign or political risk, (2) construction risk, (3) economic viability risk, (4) off-take risk, (5) flow of funds risk, and (6) currency risk.

The rating of the country where the project is located is an indication of the degree of *sovereign risk.* Essentially, the rating attempts to define the probability of transfer risk. The sovereign rating also acts as a ceiling for the project rating. However, in rare circumstances, the rating agency may assign a higher rating. The simplest way to minimize *construction risk* is to finance that phase with a bank syndicate and refinance with the proceeds of a bond issue once the project is generating revenues. *Economic viability risk* refers to the degree of assurance of a completed project's revenue stream. For example, is it insulated from competitive price pressure or can it react nimbly? Is there technological or regulatory risk? Covenants in toll road financing usually require that the issuer make timely filings for rate increases to repay debt service. *Off-take risk* means that the entity taking the product or service is both capable and likely to continue paying debt service. Lastly, the *currency risk* is a measure of whether the project manager will be in a position to pay even if there is a devaluation.

UA: *The two latest theories in urban infrastructure investing take distinct new approaches: a more holistic one that promotes long-term investing in the community as a whole, and one that seeks to foster public-private partnerships. Do you see these two new theories as a future trend?*

JT: A more holistic approach is very attractive since capital costs are more evenly shared among an entire community. In some ways, developing countries may have learned the lesson of privatization too well: that every project must pay for itself. This approach could, in fact, hamper the development of infrastructure that cannot produce an immediate payback. One example is the state-built toll-free U.S. highways that operate from national and state taxes. General municipal obligation bonds, common in the United States, are rare in Latin America and Eastern Europe, and virtually nonexistent in Asia without sovereign support. The advantage of this type of financing is that local governments have discretionary power over the spending and can direct it to essential services that may not pay for themselves. However, debt secured by a general obligation pledge by local governments is rare because of the absence of a legal structure to permit them. From an investor's standpoint, this type of municipal financing may carry too high a risk unless local governments have a history of effective budgeting, strong financial accounting and control, and autonomy over tax rates.

UA: *Can investment banks negotiate a fine line between short-term per-project investing that has in the past inadvertently exploited city governments and citizens and the new holistic approach that has the potential to also inadvertently exploit the city by "buying" it with Western bonds?*

JT: The investor's interest is in being repaid principal and not in "buying" control of the government or directing it to finance projects. General obligation bonds have the advantage of local government flexibility since the security of general taxing power releases government from the constraint of specific purpose that generates adequate revenues. On the contrary, project finance must be linked to certain projects that have a sufficient revenue stream to repay debt.

A very successful Western model is the "bond bank," which offers greater latitude in selecting which projects are financed. Many worthwhile investments, such as education and urban transportation, lack revenue sources. Under the bond bank method, a central government agency issues debt with a sovereign guarantee. The proceeds of this debt fund a bond bank that originate loans for capital projects to local governments. Because a sovereign's ratings are higher, its market and borrowing costs are usually lower. Its loans to local government are lower than the local government could get based on its credit strength. A variation on the bond bank is a cooperative association in which local government contribute equity are shareholders and guarantors of its debt. The agency also has a higher rating than any of the individual local governments to issue debt at lower rates. ■

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Ten Steps to Sustainable Urban Infrastructure

CHARLES L. CHOGUILL

If cities are to achieve sustainability, infrastructure is essential. To provide the growing need for the basic necessities of infrastructure to low-income settlements in urban areas, city governments should adopt new ways of thinking about the problem. Among these new approaches are 1) including outside private investment, 2) designing programs with progressive rather than sweeping steps, and 3) handing over the reins to the community. The 10 steps below provide a workable, proven model for implementing progressive infrastructure improvements in a sustainable manner.

Development of infrastructure systems

Traditionally, central and local governments oversaw urban infrastructure development. This has been ineffective because cities excluded customers unable to pay, which gave rise to two parallel infrastructure systems: the municipally served "town system" for paying customers; and a self-serve "on-site system" for the less affluent that involved digging their own septic tanks, etc. A second is comprised of poverty-stricken communities forced to fend for themselves using whatever is at hand. Bushes become bathrooms and creeks become faucets with detrimental citywide health and environmental consequences.

The solution must be based on progressive improvement of facilities to meet town system standards. Progressive improvement must become a long-term proposition and, if complementary employment development policies are in force, this community's income will rise over time, allowing for eventual payment of services. The only way the system can achieve sustainability is if (1) infrastructure provides services for the rich and poor, and (2) it is eventually integrated into the town system.

The progressive improvement of infrastructure outlined below implies a complete rejection of the traditional model which involved rigid, hierarchical government control where it played the deciding role every step of the way from planning through implementation to maintenance.

There is no reason why government, alone or in conjunction with private enterprise, cannot continue to operate the town system. However, progressive improvement is absolutely critical within lower income groups. Here both upgrades to existing facilities and creation of new ones must be made by the community itself with minimal external input. Initial training and technical assistance must be available, but governments and private investors should offer nothing beyond that.

It is crucial that the entire system from conception to completion belong to the community itself. Community control is a prerequisite to success for many reasons, not the least of which is affordability. The community will, of necessity, build only what it can afford, thereby saving itself and the government money. And having built, financed, maintained, and operated this system, it must belong solely to the residents. As the community's income rises and the system's technology approaches the town system's, the community has the option to transfer or sell it to the municipality.

A 10 step community-based model

The model for progressive infrastructure improvement is laid out in 10 principles. It is important to bear in mind that financing, institutional arrangements, technology, and politics are constraining factors. Self-help, decentralization of decisionmaking, and progressive improvements are liberating forces.

Principle 1. It must be recognized that within all cities in the developing world, two interdependent circuits exist — the formal (within planned confines) and the informal (outside those confines).

The infrastructure services of water, sanitation, drainage, solid waste management, and transport facilities can be divided into formal and informal facilities. The objective is to design a way in which informal infrastructure can be upgraded, over time, to become equivalent to the formal sector.

TO ACHIEVE CITYWIDE COVERAGE OF INFRASTRUCTURE IN THE INFORMAL RESIDENTIAL SECTOR, GOVERNMENT SHOULD ADOPT THE ROLE OF FACILITATOR AND ENABLER RATHER THAN PROVIDER.

Principle 2. The town system, based on conventional technology, is best operated by either a municipal authority or a private firm sanctioned by this authority, on a full cost-plus recovery basis.

If the majority of formal sector infrastructure items are to run efficiently and be adequately maintained, they require input from a central authority, either governmental or private. It is important that more than the full cost of these services be charged to residents able to pay. A key element of any sustainability criteria is that the cost of service be recovered from users. In this case, charging an additional stipend as a subsidy from the formal sector to the informal will ensure that even the lowest income community residents are served.

Principle 3. Irregular land tenure issues should be resolved within the informal residential sectors of the city.

Many impoverished residents erect dwellings on land to which they have no legal claim, making their investment in their shelters mini-

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mal. Facing an uncertain future, they are less inclined to invest in a dwelling they may have to abandon. Much of the land belongs to government or is situated in undesirable locales. Granting titles to squatters would solidify their future and prompt them to invest in infrastructure.

Principle 4. Informal infrastructure should be designed and built using external technical assistance only as required and be planned with an eye toward future upgrades to integrate with the town system.

Utilizing external planning and technical assistance only on an as-needed basis will ensure community infrastructure ownership. It will also greatly reduce dependence on outside financial assistance. Once built, it can be technologically upgraded to town standards as funds become available.

Principle 5. Informal infrastructure built by the local community should be under its control.

The community must spearhead the planning, construction, operation, and maintenance of projects it will use; and should rightfully own what it has built. As improvements occur over time and it becomes an appreciating asset, the community should be entitled to sell it to the municipality or private utility authority, benefiting both parties.

Principle 6. The community must maintain the technology it selects for its informal sector infrastructure.

Maintenance is one of any project's biggest problems, particularly when designed to deliver a long-term investment such as infrastructure. The importance of a sound maintenance policy cannot be overemphasized. As owner, the community will develop pride in what it has built, and that sense will reasonably extend to maintaining it. Standards and regulations must be minimized in order to allow the incorporation of alternative technology the community can afford and maintain.

Principle 7. The lowest-income users must be able to afford the informal infrastructure.

Full cost recovery is essential. Urban services must be paid for if they are to continue. Therefore, all means necessary to reduce costs must be utilized. Community involvement is one way of doing this. Another involves a decentralized billing system based on community collection of what is owed.

Principle 8. Informal sector infrastructure must be socially acceptable to the community.

This goes without saying. The most obvious way of ensuring this is to put decisionmaking powers in the hands of the community.

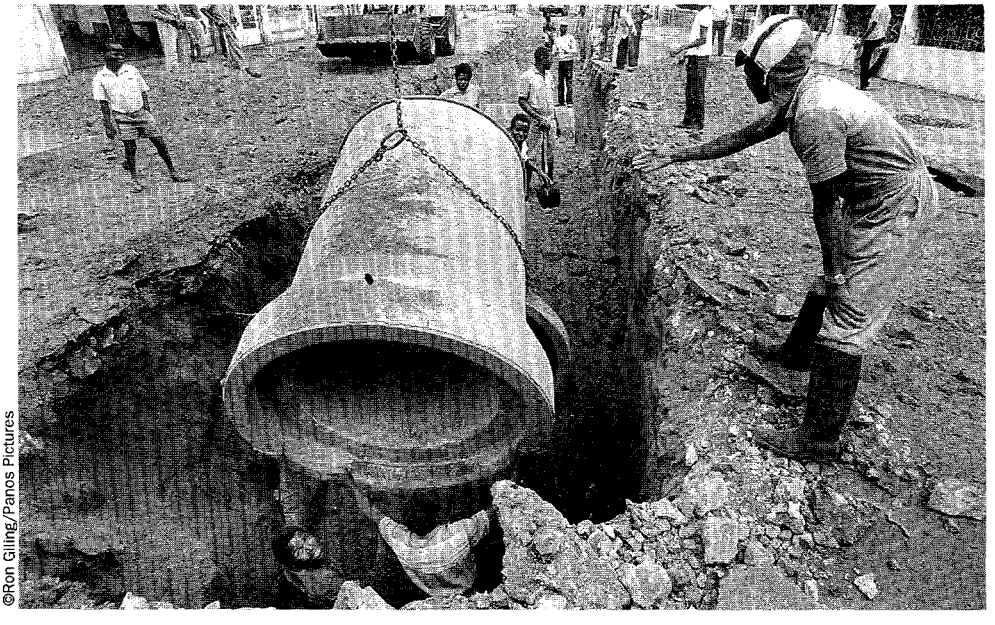
Principle 9. To achieve citywide coverage of infrastructure in the informal residential sector, government should adopt the role of facilitator and enabler rather than provider.

For this model to succeed, governments must change the way they view their role. In the past they were decisionmakers, builders, and providers. For the infrastructure to belong to the community, most of this decisionmaking power must be its. Governments cooperating with nongovernmental organizations should take the role of initiator instead, motivating the community and offering technical assistance. Rather than employing the old model's hierarchical approach, public-private partnerships that share responsibilities must be developed between governments and communities to achieve citywide benefits.

Principle 10. Local and international nongovernmental organizations can play a key role in assisting communities to develop infrastructure systems.

Nongovernmental organizations can play an important role in the infrastructure development process. However, their involvement can only come about if they change their approach from more narrowly defined project support and instead take the longer view. This involves implementing resources, technical assistance, monitoring, and continuity for the long term.

A shift is taking place in the way local communities and city governments view their respective roles with respect to infrastructure. Increasingly, multilateral organizations are shifting their priorities from neighborhoods to higher levels, yet sustainability remains crucial. Governments, private organizations and communities must work together to design systems that communities can build locally, operate and maintain, and upgrade to acceptable town levels. Because such systems cannot be achieved overnight and must be sustainable, they are a target for future development. Local communities will require as-needed assistance from organizations. Otherwise, standards will continue to deteriorate, mortality rates will remain high, and the poorest communities will never achieve acceptable living conditions. ■



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Charles Choguill is a professor of urban and regional planning at the University of Illinois. Formerly, he directed the Centre for Development Planning Studies at the University of Sheffield, United Kingdom.

Light Rails to Keep Salt Lake Afloat

GIOVANNI PADULA

Utah's largest city is built on the side of a vast salt lake and boasts one of the fastest growing pools of new labor, new housing, and new immigrants in America today. Its explosive population growth has contributed to an ever-climbing 10-year economic spiral. From 1991 to 1996, total migration into the state amounted to 108,000; the majority of this influx has been absorbed by the surrounding county. In addition to this flood of new residents, Salt Lake City also has the country's fastest growing birthrate. At 20 births per 1,000, the population is increasing at a 29 percent faster rate than the national average due in large part to the Mormon community, which constitutes 70 percent of the state.

These twin population trends have contributed to an exponential growth in suburbs that have spilled out from the city and overflowed onto the surrounding salt flats. The subdvisions now compete with the downtown area for investment, residents, and resources — throwing the city tax base out of whack in the process. And, for the first time in its history, the municipality is having to cope with some of the problems typical of most American cities: increased crime and congestion in the downtown area and a weaker educational infrastructure.

"Reducing the traffic congestion around the city should make downtown investment more appealing, and offer a better opportunity to plan the future of the metropolitan area," says Michael Christensen, executive director of the Utah Foundation. Residents have long been accustomed to cranes and construction, but in the past few months the deafening noise of jackhammers and Caterpillar vehicles has reached a new roar. Major construction began last April to widen Interstate 15 and stretch an asphalt python across the state capital to connect Ogden and Provo, towns north and south of the city. The corridor between the two towns, dubbed "The Software Valley," has been likened to Silicon Valley as high-tech start up companies — eager to imitate local successful giants like Novell and U.S. Robotics — quickly multiplied over the last 10 years.

The crescendo of the construction project is certainly matched in magnitude by the money invested in it: US$2 billion in services, equipment, and high-paying federal jobs. Commuters are already paying a high toll for the construction, condemned for the next few years to narrower detour roads and longer traffic jams. But the sacrifice, according to state and federal government officials, is well worth it. Salt Lake's highways had the fastest growing rate of traffic congestion of any U.S. metropolitan area and badly needed a makeover.

What makes Salt Lake City particularly interesting is that the highway renovation project has been accompanied by another investment, one that is increasingly popular among American cities challenged by traffic congestion or by weak links to their suburbs: the construction of a $300 million, electrically powered, light railroad system. It will accommodate commuters in modern cable cars traversing the 15-mile corridor between Salt Lake City and the suburban town of Sandy. All these

Full Funding Grant Agreements for Light Rail Projects

City/urbanized area	Type of project	Federal commitment
Boston	Underground transit between South Station and newly developed South Piers area in South Boston	$331 million
New York	Connecting link between East River tunnel and trunk line subway across central Queens	$306 million
Northern New Jersey	Light rail transit line along Hudson River waterfront opposite Manhattan	$604 million
Northern New Jersey	"Secaucus Transfer" — a new commuter and rail station in the Meadowlands	$444 million
Washington, D.C.	Mid-city Green Line, plus Blue Line extension to Branch Avenue	$965 million
Jacksonville	Completion of automated "people mover"	$44 million
Dallas	Construction of new light rail transit system	$160 million
San Juan	Construction of new light rail transit system	$307 million
St. Louis	Extension of light rail system into St. Clair County, Illinois	$244 million
Denver	Extension of new light rail system into southwest suburbs	$120 million
Salt Lake City	Construction of completely new light rail system	$236 million
Houston	Network of busways	$500 million
Washington/Baltimore	Improvements and expansion of MARC commuter rail network	$105 million
Los Angeles	Continued construction of Red Line rail transit system	$1.4 billion
Portland	Extension of light rail line to west of downtown Portland	$114 million
Baltimore	Three short extensions to a light rail line that initially opened in 1992	$85 million
Pittsburgh	Construction of busway between downtown and the airport	$121 million
Atlanta	Rail transit line between North Springs and Dunwoody	$305 million
San Jose	Westward extension of light rail line	$183 million
		$6.6 billion

investments have been accelerated by the prospect of the 2002 Winter Olympic Games in Salt Lake City. But the area's snowballing economic growth begs for the projects regardless, according to Salt Lake City mayor Deedee Corradini. "I am currently pushing the federal and state authorities to approve a second light railroad system linking the airport to downtown. I am so convinced of its value that I am ready to raise local sales taxes to finance this additional investment."

Building and funding the construction of railroads, hard-surface highways, and urban mass transit systems has always been a strategic issue for American cities — and often a matter of the city's survival and success or decline. Over the last 50 years, the iron-clad alliance of cars and highways, funded by federal gas tax revenues, has encouraged suburbs to pop up in what once was countryside, eroding old city centers. The old downtown area as a place to live and do business has been gradually supplanted by new asphalt arteries leading to the ever-sprawling suburbs. More recently, traffic congestion on freeways and turnpikes surrounding the big cities has caused gridlock that often turned into an economic nightmare, both for urban centers and the populace as a whole.

Not only do downtown-based businesses suffer when employees face long commuting trips, but, according to estimates by the U.S. Department of Transportation, traffic delays account for up to US$50 billion a year in burned gasoline. And this figure doesn't cover the hidden costs included by advocates of the controversial congestion pricing theory: pollution, poorer health for people breathing idling auto fumes, lost productivity, and forfeited leisure time for commuters stuck in traffic. The trend is only getting worse. In the 50 major U.S. metropolitan areas, the number of hours per capita spent in traffic jams jumped 95 percent between 1982 and 1993.

Even if decongestion of heavily trafficked roads around the city can make a downtown more attractive, as in the case of Salt Lake City, highway construction and renovation usually favor the suburbs. A modern mass transit system, on the other hand, creates a clear advantage for a city center. It offers an easy commute for suburbanites working downtown. They can park at the nearest mass transit station to avoid highway traffic jams. Moreover, mass transit offers other commuting conveniences: access to city colleges, shopping, entertainment, and cultural experiences.

New York City leads the United States in its heavy dependence on mass transit. But a host of Western cities has recently embraced this approach as well, relying in particular on light railroad systems — i.e., electric cable cars — to cope with their growing pains. Portland and San Diego have been among the pioneers, followed by Denver, Los Angeles, Dallas, and — more recently — Seattle and Salt Lake City. Light rail lines have also been built in Saint Louis, Buffalo, Pittsburgh. and Baltimore, with the primary aim of revitalizing battered city centers.

This trend toward light railroad and mass transit systems as a substitute for car commuting has been helped by the Intermodal Surface Transportation Efficiency Act (ISTEA) the federal transportation funding act approved in 1991 and up for renewal this year. ISTEA gave an important option to state and local authorities for the first time: the possibility to direct funding toward local mass transit and low-pollution projects from a federal trust fund that finances the highway system. Since 1991, about US$1 billion each year has been shifted to mass transit out of US$20 billion appropriated by Congress each year (on average) for highways and bridges. Without these funds, municipalities that had only local resources (such as sales taxes) to finance mass transit systems were forced to abandon such projects. "ISTEA can be considered the most important development in the relationships between

CONTINUED ON PAGE 31

Date of full funding grant agreements	Total project cost	comments
November 1994	$413 million	Will utilize electric trolley bus technology
February 1994	$645 million	Will ease congestion on nation's busiest and most congested subway line
October 1996	$992 million	Will tie together major new real estate developments
December 1994	$444 million	Will enhance flexibility for commuters by creating new transfer opportunities
Green Line: 4/93 Blue Line: 2/94	$1.5 billion	These two links will complete the 103-mile Metrorail System
August 1994	$109 million	Began in late 1970s as research & development project
September 1993	$281 million	Opened for revenue service in June 1996
March 1996	$1.2 billion	Importance of this project in San Juan demonstrated by size of the nonfederal share
October 1996	$339 million	Will expand an extremely successful transit line into new territory
May 1996	$176 million	Initial leg of system was built without federal assistance
August 1995	$313 million	Will be in service in time for 2002 Winter Olympics
December 1994	$625 million	Choice of busways made in Houston after many years of debate over rail options
June 1995	$132 million	MARC system has experienced significant growth in recent years
May 1993	$2.8 billion	Largest single full funding grant agreement in FTA history
December 1994 & November 1996	$276 million	Builds upon highly successful line that opened in 1988
November 1994	$106 million	This project is participating in FTA-sponsored "turnkey" demonstration
October 1994	$327 million	Pittsburgh has largest busway network in the Northeast
December 1994	$381 million	Yet another expansion of the highly successful MARTA rail system
July 1996	$325 million	Expands a light rail system that opened in 1987
	$11.5 billion	

Interview with Mexico City's Governor-Elect Cuauhtemoc Cardenas

YVES CABANNES

UA: *What do you intend to do to attract private investment to Mexico City?*

CC: It's important to establish a climate of confidence in the city to attract new investment on favorable terms. The city can adopt certain tax measures to attract capital and float joint projects that will serve the overall interests of the city.

Over the past few weeks, the crime rate has increased and been met by a vicious police response. This atmosphere, created by the outgoing administration, has deterred new investors and discouraged those who have already made investments here. It's a very worrying situation, and a serious obstacle to the political transition currently under way in Mexico. The democratic government that will come into office on December 5 will endeavor to establish a calm, confident climate in Mexico City based on respect for the law and the individual. This will provide a basis for the federal district's economic development, which will be combined with equity and social justice.

UA: *How do you intend to coordinate public and private investment? Are they totally separate? Should the public sector support private investors?*

CC: In the case of Mexico City, it is essential to have close cooperation between public and private investment, together with a basic understanding of the role each should play. In a city as big as the federal district, this cooperation should be reflected in the ability of the two sectors to prepare and promote projects either jointly or separately to fulfill basic requirements of development and urban management through investments in projects. In this context, I am not necessarily referring to a form of complementary packaging between public and private investment, as much as the need to establish linkages between productive processes and the development of social infrastructure.

Public investment — which includes the exercise of regulatory functions — serves not only to provide basic services, but also to ensure that private investment will be available to shoulder broad responsibilities. The public sector also stimulates productive investment by providing direct and indirect tax incentives to establish clean industries and enterprises — which in turn — create jobs.

In recent years, the populace has lost sight of the idea that public investment can serve to regulate and provide guidance, while private investment can produce and generate social benefits. Within such a framework, a satisfactory relationship can be established between the two types of investment, provided that they have reached a fundamental agreement regarding the direction economic development will take.

UA: *On which areas or problems should investment be concentrated? What about the issue of providing benefits for all citizens, and the question of equity?*

CC: The very nature of Mexico City makes it quite clear which projects should receive the bulk of financing. The subsurface drainage system is vital to prevent flooding, because the city was originally built on Lake Texcoco. Public transportation — especially the subway system — is also an investment priority. In addition the city needs a reliable, permanent supply of drinking water. Water treatment is another aspect of this problem.

Secondary projects also require sizable investments. For example, environmental pollution, alternative modes of transportation and waste management, in addition to housing, health care, education improvements, and generating permanent employment.

An investment policy cannot be exclusively concerned with urban mega-projects; it must also establish the right kind of realistic links with the sort of microprojects that directly affect people's everyday lives, home, workplaces, and leisure activities. It's therefore important to prevent floods and provide jobs, ensure safe and inexpensive metro travel, and provide suitable housing and good schools.

UA: *How do you plan to mobilize resources and make them available to the informal sector? For example, how will you go about making credit available?*

CC: The informal sector continues to pose some of the most problematic economic and social difficulties faced by Mexico in the form of tax evasion and the enormous volume of stolen goods that are traded outside the formal economy. That the informal sector is really part of the general economic structure is undeniable. Therefore the basic problems it presents cannot be solved unless the country's economic model is modified. Mexico City must work in conjunction with the country to direct our efforts toward making the informal sector "formal" and bringing it into the formal economy.

UA: *In your campaign, you said that the system of toll highways in urban areas had been a failure. Why? What do you suggest should be done about the problem?*

CC: On August 22, the federal government announced that it was taking over the management of those highways that had been constructed during the previous administration. There are two major costs involved in this rescue package: MexN$19 million (US$2.5 million) for the repayment of bank loans, and MexN$27 million in debt forgiveness granted by the federal government to the enterprises. The failure of the highways privatization project is one more example of the overall failure of a development model based on privatization and the indiscriminate opening up of the Mexican market. In addition to all the miscalculations resulting from blind optimism, the problem of corruption also came into play. ■

Yves Cabannes is the regional coordinator of the Urban Management Programme in Quito, Ecuador.

Can Indian Cities Organize to Attract Funding?

JENEPHER W. MOSELEY

The India Infrastructure Report: Policy Imperatives for Growth and Welfare

New Delhi: Thomson Press; v 1-3, 1997

The India Infrastructure Report is a comprehensive and sophisticated analysis of the options available to India in building up the infrastructure needed to make the country a good place to live and work. The book does not specifically address the pros and cons of integrating public and private investment in the infrastructure of cities; however, a chapter on urban infrastructure offers a bird's-eye view of factors that could work for and against such an approach in India and elsewhere.

The book introduces a line of inquiry into how feasible it is for cities anywhere to coordinate urban investment and management for commercial ends if they lack even the basic amenities of adequate sanitation and drinking water. These are important questions for cities looking for private investment to supplement public funding for the development and management of the infrastructure essential to attract trade. It is no secret that the private sector is wary of investing in anything that is likely to be hazardous to health — or wealth.

HOW FEASIBLE IS IT FOR CITIES TO LURE URBAN INVESTMENT IF THEY LACK BASIC AMENITIES?

Size gives India a greater depth of technical capacity and private sector interest, lifting it from the bottom rung in terms of resources and existing amenities. Nevertheless, the gaps in her urban infrastructure present striking obstacles to trade and general welfare. As the 1994 *World Development Report* (WDR) notes, "In India, the proportion living in slum areas grew during 1981-91, while the share of the population living in poverty...declined. The lack of access to infrastructure is a real welfare issue." To meet all urban infrastructure needs between now and the year 2001, India would have to spend anything from Rs800 billion to Rs940 billion (US$23 billion).

Water supply and toilet facilities alone would require Rs210 (US$5 billion) between 2001 and 2011. The *India Report* cites some daunting current deficits: 20 percent of urban households have no access to safe drinking water, 23.35 percent have no toilet facilities, and — as recently as March 1992 — 52 percent had no sanitation facilities.

At the management level, elementary problems of coordination among municipal departments seem likely to hinder more ambitious coordination of infrastructure investment and management on a citywide basis. Road management is an example of poor coordination cited in the *India Report*. One result is a vicious circle affecting city roads, which are deteriorating under the strain of excess traffic. Congestion and the costs of maintenance are increasing at such a pace that the condition of city roads never catches up enough to ease communication. Another result seems to be the back-to-front situation in which roads are usually built before sewer lines are laid so that the freshly laid roads promptly have to be dug up again. This in itself suggests that India has some way to go before urban entities could orchestrate investment citywide, whether public or private.

Moreover, the report outlines plans for nodal coordination arrangements that would get around the existing multiplicity of agencies and programs, create urban development plans, and synchronize them with plans for the surrounding countryside.

None of this is going to be implemented until basic deficiencies at the sectoral level are taken care of; this presents complex and sophisticated financing problems. The authors are well aware of this. The longest chapter in the book is entitled "The Role of the Capital Market." The authors here analyze financing questions extensively, first of all to dispel traditional assumptions that, except for user charges and cost recovery, financing of public services can best be taken care of through the public sector. They deal extensively with debt management and the need to develop sophisticated capital markets, and they know well that supplementary private investment will be needed to expand urban investment. Already, as they note, "...needs for operation and maintenance of existing infrastructure have taken priority, and availability of funds for expansion and new products has diminished further."

And yet, the primacy of public funding is not going to go away. Both the *India Report* and the 1994 *WDR* acknowledge that government will still have to be the major source of funding for infrastructure of all kinds. This is in part because the long-term nature of infrastructure investment and the waiting time before it comes to fruition has traditionally made it seem particularly risky to investors and thus more sustainable by the public sector. It is also because of certain legal restrictions on private investment in the public sector. However, these constraints are breaking down, and the share of public financing in infrastructure development is seen as declining in India from the present 80 percent to around 55 percent by the end of 2005-06.

Whether India can get to the point where urban infrastructure management and investment will run smoothly enough to make it feasible to integrate sectoral amenities in cities — is not a question *The India Infrastructure Report* sets out to answer. What it does do is provide a great deal of data for figuring out the prognosis for this and other infrastructure issues. As such, this book is a valuable resource for any developing country seeking to benchmark in an effort to upgrade its infrastructure. ■

Jenepher Moseley is president of Scriptorium, a communications firm specializing in documents dealing with development issues.

People's Voice Heard by US-China Delegation

ROBERT McNULTY

As Chinese cities strive to modernize to keep pace with the world's growing megacities, they frequently find themselves caught between the past and the future. History often dictates how old-fashioned, entrenched governments will institute change; and, at the same time, it insists on a reverence for traditional culture. But realistic present and future needs demand urban renewal. How Chinese cities can best go about integrating their past with their future is the subject of a program, East and West, Comparative Study: Innovation and Tradition, conceived of by Chou Wen-Chung, director of the Center for U.S.-China Arts Exchange, which was funded by the Henry Luce Foundation, Inc.

In 1996, six Americans were sent to China and their counterparts brought to theUnited States by the Center to review problems and solutions common to three Chinese cities. The goal was an open exchange of ideas and workable solutions about how Chinese cities can maximize their opportunities for future modernization while ensuring cultural conservation.

Both groups agreed that China is presently in a position to take advantage of a major opportunity. More and more Chinese citizens want to play an active role in the future of their cities. They seek a greater voice and increased influence in planning and development objectives. As they press for more influence, China is in a unique position to invite their input for the benefit of the cities. If city governments incorporate the public perspective with forethought, they will have at their disposal a vast storehouse of voluntary organizations on which to draw for the future. When nonprofit and civic groups can become trusted partners with both party and government in urban development, renewal, and historical preservation, huge projects are more likely to be replaced with small-scale plans.

The three Chinese cities — Yangzhou, Changzhou, and Chanshu — were selected for their common characteristics. The populations of each shared ethnic and cultural roots and similar geography. All have been valuable agricultural producers and were at one time vital cultural centers. Perhaps most importantly, each city is being aggressively modernized, industrialized, and developed as a tourist attraction. They also share heavy pollution, traffic, and congestion problems. Furthermore, their public sanitation infrastructure is not yet city-wide, as the daily materialization of "honey buckets" outside each courtyard front door attests.

PUBLIC PARTICIPATION IS NOT ONLY *NOT* A WASTE OF TIME, BUT AN ASSET TO NEIGHBORHOODS.

The American delegation sought to educate the Chinese in two significant ways. The first objective was to offer a framework of lessons learned from the successes and failure of Western cities in such areas as zoning, development, and conservation. A second goal was to influence the delegation to include the previously ignored contribution of the public.

As more and more capital investment is funneled into China, free market opportunities will arise in Chinese cities. This will lead both to more sweeping infrastructure improvements and to an income increase from job expansion. Paradoxically, the two progressive changes may come into conflict: as improved infrastructure tears down the old face of the city to erect new buildings, influential citizens will likely use their voice to object to the razing of their cultural heritage. The concern for a balance between conservation and modernization is one reason the American delegation urged the Chinese to engage greater public participation.

The U.S. group also perceived a curiosity and desire among planners as well as elected and party officials to learn how to preempt potential public outcry by using development strategies that were more balanced and would engage the citizenry.

Recent news articles about massive destruction of traditional Beijing neighborhoods and consequent protest movements provided the U.S. group with a basis for their argument that public participation is not only *not* a waste of time, but an asset in finding more appropriate and workable development strategies for neighborhoods. And this participation constitutes a vital link for preserving the unique history and traditions of each city province.

The Chinese delegation likewise learned from observing two U.S. cities that long-term, small-scale projects can often add up to greater change than massive ones. Pointing out their own mistakes, the U.S. members discussed how sweeping government-sanctioned urban renewal projects of the past had had disastrous results, whereas citizen and nonprofit initiatives that created house-by-house renovations were sometimes more successful while simultaneously preserving neighborhoods.

In the exchange, some of the ideas put forth by the U.S. participants appeared to meet China's current agenda of urban requirements; some did not. In trying to give the Chinese the benefit of both the failures and successes of American urban experience, the U.S. group was left with the impression that Chinese cities will undergo an era of rapid development as they implement much-needed infrastructure requirements. In the process, the very essence of the traditional heritage that contributes to public well-being and builds generational bridges may be inadvertently damaged, destroying civic pride and community spirit.

Remedial action is, by nature, always a matter of too little too late. Nevertheless, we in the West have trodden the same path the Chinese now embark upon and made the errors they may make, and now find ourselves on a remedial course. We can only hope our visit will help to shorten their inevitable walk down the same wrong road to "livability" we in the West have taken. ■

Robert McNulty directs the Partnership for Livable Communities in Washington, D.C.

THE URBAN CALENDAR

These urban events were culled from *The Urban Age*'s current files. We are not always able to list events more than once, given space limitations. Please refer to past issues of *The Urban Age* for additional events scheduled in 1997. Send your announcements to: The Editor, *The Urban Age* Room F-6P-174, The World Bank Group, 1818 H Street, NW, Washington, DC 20433, USA. Fax: 202-522-3223; e-mail: mbergen@worldbank.org

CONFERENCES

Aligarh, India—November 24–27, 1997. **International Conference on Resource Management and Development Strategies.** Contact: Professor Abha Lakshmi Singh, Chairman, Organizing Committee, Department of Geography, Aligarh Muslim University, Aligarh 202 002, India. Tel: 05-71-400683; fax: 05-71-400528.

Calcutta, India—December 12–14, 1997. **International Workshop on Urban Rivers and Waterfronts: Conservation and Development, Environment and Ecology.** Contact: Professor Santosh Ghosh, Centre for Built Environment, 2/5 Sarat Bose Road, Calcutta 700020, India. Tel: 91-33-745424; fax: 91-33-943333.

Calcutta, India—January 16–18, 1998. **International Workshop on Disasters: Cities and Buildings.** Contact: Centre for Built Environment, 2/5 Sarat Bose Road, Calcutta 700020, India. Tel: 91-33-745424; fax: 91-33-943333.

Beer Sheva, Israel—April 4-7, 1998. **Urban Development: A Challenge for Frontier Regions.** Contact: Negev Center for Regional Development, Ben-Gurion University of the Negev, Beer Sheva, Israel 84105. Tel: 972-7-6472022; fax 972-7-6278991; e-mail golan@river.bgu.ac.il; Web site: http://www.bgu.ac.il/NCRD

Gazimagusa, North Cyprus—April 23–25, 1998. **Forum II: Architectural Education for the Third Millenium.** Contact: Forum II Coordination, Eastern Mediterranean University, Department of Architecture, Gazimagusa, TRNC, via Mersin 10, Turkey. Tel: 90-392-366-6588; fax: 90-392-36607918; e-mail: forum@emu.edu.tr; web site: http://www.emu.edu.tr/emu/board

EDUCATIONAL PROGRAMS

Amsterdam, The Netherlands—From November 1997-November 1998, the Averroes Foundation and UNESCO will present a series of three workshops on **Creating Better Cities with Children: Developing Strategies for Change.** The series is designed to introduce advocates for children's interests to processes for implementing principles of Agenda 21 and the Habitat Agenda for engaging the energy and creativity of children and youth in developing more livable cities. Contact: Joyce Cordus, Averroes Foundation, Linnaeushof 6, 1098 KH Amsterdam, The Netherlands. Tel: 31-20-5929-639; fax: 31-20-5929-677; email: averroes@euronet.nl; Web site: http://www.euronet.nl/averroes/

University of Leuven, Belgium—The university is offering a **Master of Architecture in Human Settlements**. The one-year program, taught in English, will focus on issues of housing, architecture, and urban planning in a context of development under scarce resources and pressing environmental constraints. Contact: Post Graduate Centre Human Settlements, Department of Architecture, Urban and Regional Planning, Faculty of Applied Science, K.U. Leuven, Kasteel Arenberg, B-3001 Leuven (Haverlee). Tel: 32-16-321371; fax: 32-16-321984.

University of Canberra—Managing urban development on the scale anticipated will be a major challenge for governments, communities and the private sector. Establishing the proper structures of governance to ensure that development is well managed and produces livable and sustainable urban environments is a major taks. To that end, the University of Canberra has established a twelve-month urban management program in the Centre for Developing Cities, offering a Masters degree and a Graduate diploma in Urban Management for middle managers and professionals.

The program moves from introductory and contextual material through development of an understanding of the principles of strategic planning, macro and microeconomic principles and policy in an urban context, systems of governance and administration, public and private sector roles, and development financing, environmental policy and sustainable development, management decisionmaking and project evaluation. It focuses then on the application of these principles to decisionmaking in urban development, and provides in situ learning in a large, rapidly growing Asian city. The particular city will vary from year to year. Contact: Professor Lyndsay Neilson, Centre for Developing Cities, University of Canberra, PO Box 1, Belconnen ACT 2616, Australia. Tel: 61-6-06-201-2633; fax: 61-6-06-201-5034; e-mail: lrn@design.canberra.edu.au

Lund, Sweden—The Swedish International Development Cooperation Agency, in cooperation with the Lund Centre for Habitat Studies, will offer two advanced training progams, March 2–April 24, 1998. **Architecture and Development** considers the professional role of architects and planners in design and implementation of housing and other building projects. **International Construction Management** deals with the roles of civil engineers and planners in planning, financing, and implentation of buildings and civil works. Contact: Lund Centre for Habitat Studies, Box 118, S-22100 Lund, Sweden. Fax: 46-46-222-4545; e-mail: adic@lchs.lth.se; Web site: http://www.lchs.lth.se

Rotterdam, the Netherlands—The Institute for Housing and Urban Development (IHS) is conducting the following three-month courses in 1998: Urban Poverty—Strategies to Reduce Urban Poverty at the Local Level, January 7–April 8; Municipal Environmental Policies and the Preparation of Local Agendas, January 7–April 8; Housing Policy and Finance, January 7–April 8; Urban Environmental Planning and Management, April 22– July 25; Housing Delivery and Project Management, April 22–July 25; Urban Environmental Planning and Management, September 2–December 2; Land Management in Cities, September 2–December 2. Contact: Intitute for Housing and Urban Development Studies, P.O. Box 1935, 3000 BX Rotterdam, the Netherlands. Tel: 31-10-402-15-44; fax: 31-10-404-56-71; web site: http://www.ihs.nl

Training Tomorrow's City Managers Today

DON AITKIN

As the world's cities grow at an astonishing rate, urban governments are scrambling to keep up with the explosive demands for infrastructure that burgeoning populations are placing on them. If they once had time on their side to design and develop sustainable systems, city planners and managers are now running on borrowed time — for the present and for the future. The recent population explosion in cities and the onslaught of immigration into them means more hands digging deeper and faster into fewer pockets. Both in terms of financing and future planning, urban governments are having a hard time opening those pockets. Increasingly, they are turning to universities for tomorrow's managers today.

The rate of change is so great that the old models for managing cities have become unworkable. For example, Pakistan's city of Karachi is five times larger than it was 35 years ago. Yesterday's planners could often assume a slow and orderly increase in scale, while residents waited for plans to be adopted and implemented before relocating in the new areas of the city.

Today's city administrations simply don't have that kind of time. More than a third of Manila's population are squatters, whose dilapidated dwellings are hastily slapped together with whatever materials they can scrounge and quickly thrown up wherever space is available. Water, sewage, electricity, and gas — not to mention roads, schools, and hospitals — often are only incorporated into the city after the new residents have taken root.

City governments are further compromised by overburdened national governments, which are increasingly shifting the responsibility for providing services to local jurisdictions. They are further hampered by their connection to the global international finance network, which itself requires much-needed modernization, adding a set of pressures that competes with the demands of residents from newly impoverished areas.

The managers of today's cities cannot rely on time-honored skills which are no longer effective. Whereas a strict separation of functions between engineers, accountants, and administrators was a workable arrangement in cities where growth was slow and predictable, in today's pressure-cooker urban environment, it can result in political implosion and collapse.

THEY WILL NEED TO DRAW ON SKILLS THAT INCLUDE GREATER COMPETENCE IN A WIDE SPECTRUM TO SYNTHESIZE DIVERSE INFORMATION INTO A DO-ABLE FRAMEWORK.

City planners, managers, and government economists must master an infinitely broader breadth of understanding than was true for their predecessors. Regardless of their background and specific area of expertise, they must take a more international, less parochial, perspective. They need to draw on skills that include greater competence in a wide spectrum of financial interrelationships, especially the fast-flowing international money market, and a capacity to synthesize diverse information into a do-able framework.

Political savvy is crucial as well, if politicians are to maintain peace in their cities. Bustling new megacities contain within them seeds of local, even national, conflict. The sewage generated by a more affluent section of the city could, for example, conceivably be funneled downstream to become part of the water supply to a ghetto if disparate city representatives don't work together for the good of the whole. The potential for violent disruption or infrastructure breakdown among the underprivileged populace can best be averted by advance planning that incorporates them in the future. Manila's urban squatters represent a sizable enough group that an angry reaction from them could result in economic chaos for the entire city.

Although a new generation of urban managers is needed, each city cannot start over tabla rasa, with a clean slate. The first task is to re-educate those presently in management positions. Only over time can a corpus of knowledge, through newly trained administrators, be built up to equip their successors to inherit these responsibilities smoothly.

Much of the capacity to carry out the training lies with the universities. Like cities, the world's universities have grown at an astonishing rate, and have undergone drastic transformations as well. Ninety percent of today's universities did not exist in the fifty years since the end of the Second World War, and they are dealing with a body of knowledge that is 50 times larger than we had then.

Whereas the older universities were designed around specific disciplines — physics, history, philosophy, anatomy — newer ones

seek to bundle diverse disciplines to better address increasingly complex and multifaceted social needs. The breadth of this coupling is vast. For example, students may combine environmental science with engineering, nursing, education, management, marketing, tourism, etc. University programs designed to train the next generation of urban managers involve transdisciplinary courses integrating economics, international finance, political science, management, contemporary history, and geography.

The most effective programs range across issues as diverse as globalization and international socioeconomic trends; designing sustainable development; managing urban systems; capacity-building; and creating partnerships among government, business, and academic theorists on the forefront of new trends. If tomorrow's megacities will lead the world into the future, then the world's universities are today shaping the men and women who will lead those cities. ■

A historian and political scientist, Don Aitkin is vice-chancellor and president of the University of Canberra.

The Centre for Developing Cities at Australia's University of Canberra offers an intensive one-to three-year masters degree program in urban management. The course consists of 12 one-month modules, which can be taken at separate times or sequentially over a year. The teachers include professionals from around the world known for their eminence in this field. Because tomorrow's urban managers will be required to solve problems quickly, the program covers dilemmas with which real world practioners are currently grappling. For more information, contact:

Administrative Offices
Centre for Developing Cities
Faculty of Environmental Design
The University of Canberra
P.O. Box 1
Belconnen ACT 2616
Australia
Tel: 616-06-201-2633
Fax: 616-06-201-5034
Web site: http://cities.canberra.edu.au
E-mail: lrn@design.canberra.edu.au

Downtown As A Classroom

Downtown As A Classroom is a collaborative program between the South Carolina Department of Education (SDE) and the South Carolina Downtown Development Association (SCDDA). Begun in 1994 as an outgrowth of discussion on how downtowns and schools could better support each other, it is underwritten by SCANA Corporation, which provides financial incentive awards to outstanding participating communities.

The aim of Downtown As A Classroom is to generate community support for the needs and improvement of education and enhance the economic vitality of rural downtowns. The program encourages the involvement and partnerships of businesses, public officials, school boards and administrators, teachers, students, and parents.

SDE and SCDDA provide assistance to specific projects through training, such as leadership or building collaboration skills, and by facilitating local project development. SCDDA is the program's general coordinator. A steering committee provides oversight, direction, and expertise.

The following goals were established by Downtown As A Classroom to be achieved by each local project. Implementation of these goals is left to the discretion of the community.

- involve youth in the design and execution of the program;
- provide students with a hands-on laboratory for applying school learning to real-life situations by using the resources of a downtown as a training tool in the arts, civics, history, mathematics, and communications;
- instill a greater sense of community within participants by building partnerships, improving relationships between diverse community members, and increasing support of downtown by schools and of schools by downtown.
- expose downtown to new markets, such as students and their parents; and
- create buy-in from leadership in the community, including school administration, community leaders, teachers, and government.

For further information, contact:
Downtown As A Classroom,
SCDDA
P.O. Box 11637
Columbia, SC 29205 USA.
Tel: 803-256-3560
Fax: 803-799-9520
E-mail: community@masc.state.sc.us

URBAN CHALLENGE

CONTINUED FROM PAGE 25

local, state, and federal governments in the last 60 to 70 years," says Brian Cudahy of the Federal Transit Administration, a U.S. Department of Transportation agency.

The struggle between highway commuters and mass transit travelers will be one leitmotif of the new transportation bill that the U.S. Congress began debating this autumn. President Clinton has already proposed a successor of ISTEA (dubbing it NEXTEA — National Economic Crossroads Transportation Efficiency Act) and U.S. cities are eager to grab some of the discretionary spending that the new act would allow them to use toward mass transit.

But dissenting voices are growing louder. Most transportation projects, both highway and mass transit, are still political "pork barrel." "City mayors simply try to get their share of the pie without a careful cost-benefit analysis of projects," says Clifford Winston, a transportation issues expert at the Brookings Institution. He accepts the idea that cities might need federal subsidies to cope with poverty and economic decline but cautions, "It is better to use direct subsidies to alleviate these problems than to build highways or mass transit systems that lack an effective pricing policy or are badly built." More attention, according to experts like Winston, should be directed toward imposing tolls on highly congested highways during peak traffic hours. He also thinks light railroad systems should be carefully assessed because they tend to cost more than other mass transit. Too often, they fail to carry the ridership estimated by urban planners.

Like other burgeoning urban areas, Salt Like City copes with unforeseen problems and faces new opportunities. On the one hand, inner city poverty taking hold, on the other, new metro areas offer potential for economic gain. Taking a cautious approach to building could result in diminished growth opportunities, but — conversely — expanding too widely might produce roads and rail lines that may turn out to be unused, ineffective, or a waste of resources.. ■

Giovanni Padula is a New York correspondent for Il Mondo *magazine.*

"What Investment Bankers Bank On"
(See Taylor interview pg. 20)

Assigned Reading:
City Mgrs. Today, pg. 30 –

Cardenas, Governor of Mexico City:
Fiscal Autonomy?

Chasing the INFRABUCK

#10 Steps to SUSTAINable Urban Infrastructure
(page 22)

- where do we go from here?
- Public-Private Partnerships