

OVERVIEW

This report is about infrastructure in Latin America and the Caribbean (LAC) and the extraordinary transformations that have shaped it over the last 15 years. It is about the false hopes and disappointed expectations that have surrounded private sector participation, and also about the progress made and the lessons learnt. It is about an upper middle income region whose infrastructure coverage has fallen below the middle income average, despite its attracting more private investment in infrastructure than any other developing region.

Infrastructure is hampering LAC's ability to grow, compete and reduce poverty. This has happened as the governments of the region have largely offloaded responsibility for reform and finance to the private sector, or simply let sectors deplete capital. More than a decade ago, a key conclusion of the 1994 World Development Report on Infrastructure for Development was that public-private partnerships in financing had promise but governments had a continuing, if changed, role to play in infrastructure. Today's analysis of infrastructure in Latin America and the Caribbean only reinforces those conclusions.

This report has four key messages:

- **LAC needs to spend more on infrastructure.** The region is spending less than 2% of GDP on infrastructure – but 4 - 6% per annum is needed if it is to catch up or keep up with countries that once trailed it, such as Korea or China. Infrastructure costs must be borne by either users or taxpayers, regardless of how these are financed. So the implication is that cost recovery from users must improve. This entails changing the payment culture as well as putting in place effective provisions to protect those who really cannot afford to pay. But governments will also need to spend more – on the poor (although cross-subsidies can help) and on sectors with limited cost recovery potential.
- **It also needs to spend better.** A better allocation of resources is needed between investment and maintenance. New investments must be focused on increasing productivity and competitiveness – which need not come at the expense of social goals: universal coverage of water, sanitation and electricity could be achieved over ten years by spending less than a quarter percentage point of GDP per annum. Subsidies must be better targeted to benefit those who need them. And better concession design will ensure that governments do not take on more risk than necessary and are not saddled with large contingent liabilities.
- **Governments remain at the heart of infrastructure service delivery.** Private participation does not reduce the need for public involvement. Governments still need to regulate infrastructure provision as well as paying for a good share of investments. They must leverage their resources to attract as much complementary financing as possible. And they are still responsible for setting distributional objectives and ensuring that resources and policies are available to permit access for the poor.
- **The private sector is needed, but bringing it back requires building on the lessons of the last decade.** Private transactions have collapsed to less than a quarter of their peak level and show no immediate sign of recovering, given investors' disaffection with emerging markets. Bringing back the private sector will require improving the risk-return ratio for projects. This entails decreasing

regulatory risks and improving the framework for private participation in infrastructure (PPI) as well as developing risk mitigation mechanisms. It also means improving public perceptions of PPI, which are so overwhelmingly negative in some countries as to be a serious constraint on further PPI. This, in turn, requires greater transparency, improved transaction design and oversight to reduce renegotiations and poor performance, and better management of those that stand to lose.

Organization of the report

The first section of the main report reviews progress made in infrastructure coverage and quality and discusses the impacts this has had on growth, competitiveness and the fight against poverty. The second section argues that the main issue has been that there has not been enough improvement in the management of resources, which have been insufficient anyway, and also reviews the region's experiences with PPI. The third section builds on the lessons of the last decade to tackle the key challenges: improving social and economic returns from infrastructure, managing PPI better and raising new finance for infrastructure. The rest of this overview provides a quick summary of the report.

Sins of omission

This report does not cover two critical sectors that should arguably be included in any discussion of infrastructure. The first is housing (which is infrastructure in its own right, but also provides the “shell” through which the much of the impact of water, sanitation, and electricity is felt. Indeed, housing is a critical component of any economy, accounting for the vast majority of people's investments and wealth. Its exclusion from the report is not due to an under-estimation of its importance, but rather to the fact that it draws upon different skills and literature. The same can be said for hydrocarbons, which are critical to a number of countries of the region.

It is difficult in a report of this kind to do justice to the tremendous diversity of the region – countries vary from Caribbean islands with less than 100,000 inhabitants to Brazil with close to 180 million people; from Haiti with an income per capita of US\$467 to Mexico with more than \$6,000. It is our belief, however, that the key messages of this report apply to all countries, regardless of size and income, although the best ways to implement the recommendations may vary. For example, small countries may need to pursue cross-country initiatives more than large ones (as in the Caribbean's ECTEL agency for telecom which is the world's first cross country regulatory decision-making body).

Infrastructure in LAC over the last decade – improvements have been too modest

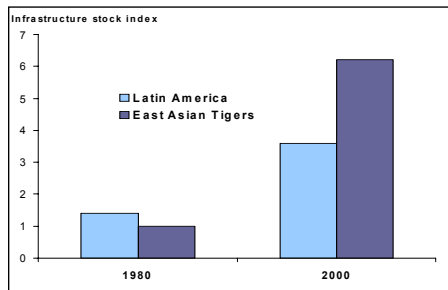
Coverage and quality of infrastructure have increased in most sectors and countries of Latin America and the Caribbean over the last decade. There have been major improvements in access to water and sanitation, electricity, telecommunications, ports and airports. Road transport is the only sector in which coverage has not changed much.

However, the region has lost ground relative to competitors and peers. In 1980, LAC had higher coverage of productive infrastructure such as roads, electricity and telecommunications than the countries that subsequently became known as the East Asian Tigers. Today, the Tigers lead by a factor of three to two. LAC also trails behind the middle income average as well as China, even though the region is richer in per capita terms. The only sectors in which the region has done

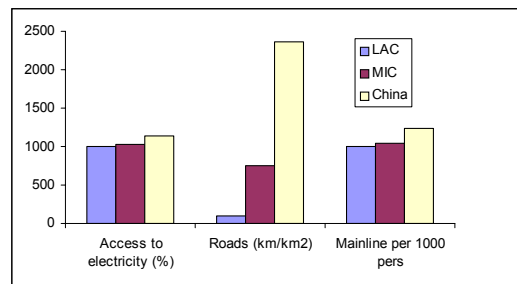
comparatively well (at least in terms of coverage) are water and sanitation.¹ But even there, there is no room for complacency: 58 million Latin Americans lack access to potable water and 137 million have no adequate sanitation.

Figure 1: Latin America has lost ground against the East Asian Tigers, China and Middle Income Countries

(a) Infrastructure index, LAC vs. Tigers



(b) Infrastructure stocks, LAC vs. China and MICs



Note: Infrastructure stock index includes paved roads, electricity generating capacity and telephones (main lines and mobile) per worker. The index is calibrated so that East Asian Tigers had a value of 1 in 1980. Source: Calderón and Servén 2004; World Development Indicators.

This is hampering economic growth and the fight against poverty. Studies suggest that the growth impact is large: for example, improving the region’s infrastructure to the level of Korea (the East Asian Tigers median) could result in annual per capita GDP growth gains of 1.4 to 1.8% of GDP. It could also reduce inequality by 10% to 20%, thereby helping make growth more pro-poor (Calderón and Servén 2004). The investment required would, however, be substantial: at least 4 - 6% of GDP per year over 20 years. At the micro level, the poor quality of infrastructure is affecting the competitiveness of businesses – indeed, while 55% of private sector entrepreneurs complain that infrastructure is a serious problem in Latin America, only 18% do in East Asia.

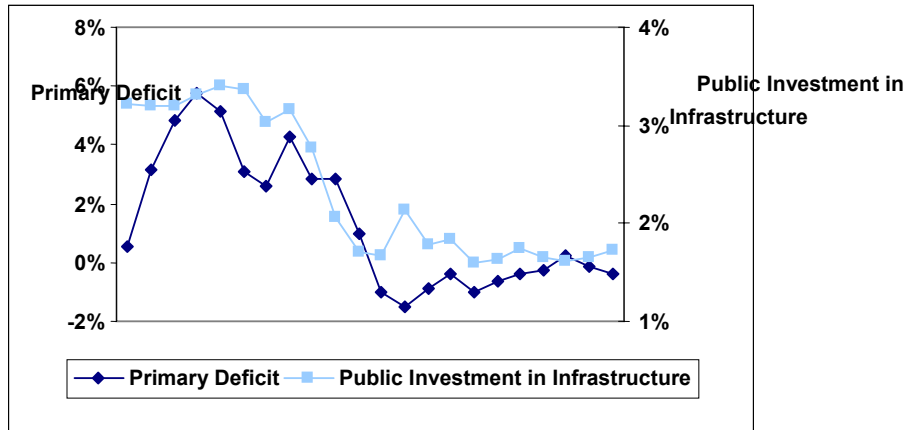
Private entry could not offset public retrenchment

Two major developments have shaped infrastructure trends in the last fifteen years. First, many Latin American countries experienced traumatic macro-economic crises that required drastic fiscal adjustments. Second, technical, financial and regulatory innovations led to a sea-change in the infrastructure paradigm, with the notion that the private sector would become central in both the financing and provision of infrastructure while the role of governments would be mostly limited to a regulatory one.

In most Latin American countries, public investment, particularly in infrastructure bore the brunt of fiscal adjustment. Regionally, public investments in infrastructure fell from more than 3% of GDP in 1988 to about 1.6% in 1998 (Figure 2). Politically, these were much easier to cut than current expenditures such as salaries and pensions. Brazil, the most extreme case, actually increased current expenditures while cutting investments, especially in infrastructure.

¹ No readily available, systematic data exists for comparison in terms of ports, airports and urban transport infrastructure.

Figure 2: Primary deficit and public infrastructure investment (% of GDP)

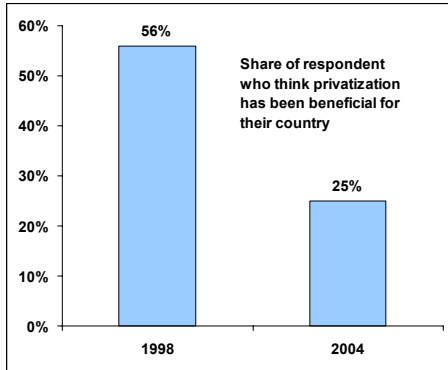


Source: Servén, 2005. Note: average of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Mexico and Peru.

However, Latin America did spectacularly well in attracting PPI. It was the beneficiary of half of the \$786 billion in infrastructure projects with private participation in the developing world between 1990 and 2003. And PPI did transform infrastructure provision. At the start of 1990, only 3% of telephone and electricity connections in the region were provided by private companies, and almost no water utilities were in private hands. By 2003, private utilities were managing 86% of telecom subscriptions and 60% and 11% of electricity and water connections respectively (Andres, Foster and Guasch 2005).

Still, private flows were never enough to offset the massive collapse in public investment (although they came close in aggregate: at the peak, in 1998, investments projects with PPI amounted to 1.7% of the region’s GDP). In addition, private interest was focused on a limited number of countries (six of them attracted 93% of all flows) and sectors (telecommunications absorbed nearly half of regional PPI).

Figure 3: Privatization has become very unpopular in Latin America



Source: Latinobarometro surveys, 1998-2002

Today, public opinion in the region has turned against PPI to the extent that it has become a serious constraint in many countries (Figure 3). And private investors’ appetite for both emerging markets and infrastructure has waned. Investments with private participation have now collapsed from about US\$71 billion in 1998 to US\$16 billion in 2003. A further illustration is

given by the decline in the average number of bidders on power distribution transactions from four in 1998 to less than two in 2000 and 2001 (Harris 2003).

But the public reaction is at odds with the generally positive evaluation of the impact of privatization: in most cases, efficiency has improved, and coverage and quality increased. Labor productivity has also generally improved, although this is largely due to substantial layoffs. But most studies suggest that the layoffs were small relative to the overall workforce and that they were reversed as employment grew in the medium run. Most of these effects (increases in prices and efficiency, as well as layoffs) took place in the transition to privatization with changes in the five years prior to privatization, generally much greater than in the five years that followed (Andres, Foster and Guasch 2005). The impact on the poor has also generally been good, mostly because they have often been the primary beneficiaries of increases in coverage.

Contrary to perception, concessionaires do not appear to have made excessive profits. The picture that emerges is that concessions are a risky business, and that about 40% of concessions may never turn a profit, at least on their original terms (Sirtaine et al. 2005). Only in telecommunications do concessions appear almost always profitable. These results need to be treated with caution however, as they rely on estimates of the cost of capital (which are imprecise), and actual outcomes are affected by concessionaires' ability to renegotiate. Nevertheless, the reduced appetite of the private sector for PPI in LAC does testify to the absence of extraordinary returns.

Popular rejection of the PPI model may largely be due to poorly managed perceptions, as well as unreasonable expectations. In addition, several researchers have argued that macro-economic crises lead to blanket rejections of the market economy model and that people do not distinguish job losses due to recessions from those due to privatization. More generally, the perceived transparency and fairness of a transaction is crucial in shaping public perception.

The reaction to PPI may also be due to excessive renegotiations and a few well publicized failures. Guasch (2004) finds that 30% of the region's concessions were re-negotiated, with the incidence rising to a staggering 74% in the water and sanitation sector. Whatever the motivation (opportunistic behavior on the part of governments or concessionaires, poorly designed contracts or exogenous shocks) frequent renegotiations are costly, disruptive, anticompetitive, and lead to a perception of lack of transparency.

Many of the difficulties that have occurred with PPI are due to immature regulatory frameworks and institutions. Introducing PPI required sweeping changes in the region's regulatory, legal and institutional frameworks, which often were not fully functional by the time privatization came about. In addition, with the benefit of hindsight it is quite clear that analysts and reformers were overly optimistic as to the ability of reforms and regulation to isolate transactions from political influence – and as to the appropriateness for Latin America of models developed for mature infrastructure networks in industrialized countries.

In addition, cost recovery proved elusive. Even though it appears to have improved in water and sanitation as well as in electricity, it has only been fully reached (in most cases) for telecoms. Yet studies suggest that affordability is a problem only for a small minority of the population, with the exception of the poorest countries in the region. And in many cases, governments are unwilling or unable to enforce service payments – a common complaint of concessionaires.

Poorly targeted social tariffs hinder cost recovery and do too little for the poor. In most countries, social tariffs for water and electricity benefit far too many of the non-poor: 95% of Guatemalans

and 85% of Hondurans benefit from the social tariff in electricity. The result is a continued dependence on public transfers. In Mexico, for example, low electricity tariffs set by the Ministry of Finance result in the need for a public subsidy amounting to close to 1% of GDP.

Having laid out this background, we now turn to the key challenges that Latin America needs to address. These are organized around the four key messages of this report.

Message 1: Latin America needs to spend more on infrastructure

How much is needed for infrastructure investments depends, of course, on the goal set. Universal coverage for water and sanitation and electricity could be achieved over ten years at the relatively modest cost of about 0.25% of GDP. Adequate maintenance of existing assets in WSS, electricity, roads, rail and telecom would require about 1% of regional GDP. A “business as usual” approach suggests that a further 1.3% of GDP would be needed in new investments to satisfy consumer and firm demand based on modest growth assumptions. (See Annex II on investment needs for details).

Pulling these estimates together, the implication is that about 2.5% of GDP would be enough to respond to expected growth in demand from firms and individuals, maintain existing infrastructure and achieve universal coverage in WSS and electricity. This is a lower bound estimate as it does not include the cost of rehabilitation (which is likely to be large) or needed investments in urban transport, ports and airport.

But a much higher amount (4% to 6%) of GDP would be required to bring LAC to Korea’s level of coverage over 20 years or simply to keep up with China. Clearly spending on infrastructure alone will not be sufficient to guarantee for LAC the kind of growth that these countries have been experiencing in recent decades. And strong growth obviously generates more demand for infrastructure, and money to pay for investment. Nevertheless, it is clear that a failure to keep up with other countries’ infrastructure can only harm the region’s competitiveness. Adding maintenance, a growth and competitiveness-enhancing scenario would require annual expenditures of 5% to 7% of GDP. While ambitious, this is not unrealistic. Similar increases were in fact achieved by Korea (as well as China, Indonesia, and Malaysia) over the 20-year period from the late 1970s to the late 1990s.

This could not be funded by the public sector alone (or would require a massive reallocation of resources): public expenditures amounted to an average of about 22% of GDP in the region in 2000-2001, with total public investments around 3% of GDP. But investments with PPI only currently amount to only about 0.9% of regional GDP, and most of this is in energy and telecoms.²

The implication is that governments need to better leverage their resources to promote PPI. And also that greater cost recovery is needed – there is only so much the taxpayer can or should fund. Cost recovery has largely been achieved in the telecommunication sector and is technically not achievable in roads except for a tiny fraction of the network, so not much change can be expected in these two sectors.³ On the other hand, there is room to increase cost recovery in water and

² Of the 0.9% of GDP, 0.43 went to the energy sector, 0.41 to telecom, 0.05 to transport and 0.01 to WSS.

³ Toll roads require a minimum amount of traffic to be commercially viable. As a result, even in industrialized countries, toll roads only account for 5% to 10% of the primary network, which itself

sanitation and electricity (even though cost recovery in these sectors is already higher in LAC than in any other developing region and has actually improved over time), and probably in ports and urban transport.

Higher tariffs are a reasonable policy goal only if they are affordable. But simulations show that affordability is a problem only for a small share of the population in LAC, with the exception of some of the poorer countries in the region (Bolivia, Honduras, Nicaragua, and Paraguay) where a utility bill of \$10 a month is already a substantial burden for 30% to 50% of urban households. Government commitment and backing is critical for greater cost recovery (indeed many private operators complain of a lack of support and enforcement in cost recovery) as is improved subsidy targeting.

Message 2: Latin America needs to spend better

Better subsidy targeting would go a very long way in both freeing up resources for investment and maintenance, and making tariff increases socially feasible. Modifying existing tariff structures (for example by reducing the size of the subsidized block of increasing block tariffs) would help reduce the overall cost. The impact on targeting may be positive for electricity where there is a relationship between quantity consumed and income, but much less so in water where the relationship between consumption and income is more tenuous. In countries that already have means-based social assistance, existing databases can be used to identify the poor and their needs. In countries that do not, geographic targeting is an option, although one that can exclude deserving households while including too many non-poor ones. But restructuring or abandoning consumption subsidies can be politically difficult. Eleven years after the passage of a public services law in Colombia that required base utility tariffs to rise to cost recovery levels, the water sector continues to make substantial fiscal demands.

Better expenditure allocation is also needed. In particular, not enough is being spent on maintenance. Many countries lack a reliable source of funding to ensure the regular maintenance needed, notably in roads which are mostly publicly funded and hence subject to the vagaries of the fiscal situation. New investments should aim to focus on strategic goals, such as completing networks. But tackling bottlenecks should not come at the expense of providing service to the poor, which, as mentioned earlier, can be done at a relatively low cost. Decentralization and participatory planning can help – although they can also complicate matters.

Expenditures can also be made more efficient in a number of ways. More reliable expenditure flows would substantially reduce the overall cost of investment programs as well as allowing for regular maintenance programs. In Brazil's road sector for example, disruption in payments to contractors occurs regularly, due to budgetary shortfalls, and are sometimes used by contractors to invoke price escalation clauses. Similarly, Governments tend to pay much more for goods and services than the private sector, due to collusion among vendors and other factors. An effective procurement (or competition) agency can significantly reduce total costs. For small countries, a case can be made for regional procurement agencies.

Finally, a better PPI framework can help reduce the cost of attracting private resources and improve the benefits of PPI. Regulatory risk bids up the cost of capital by 2% to 6% (Guasch and

represents only about 10% to 20% of the overall network (Heggie and Vickers 1998). Toll roads in the US, for example, represent 0.08% of all paved roads

Spiller 2004). Andres, Guasch and Foster (2004) find that improvements in quality and efficiency of services brought about by privatization are much greater when the concession was awarded competitively and the autonomy of the regulator was greater.

The award criteria and regulatory regime matter as they affect the incentives facing concessionaires. Price cap regulation, for example, has been very common in Latin America and has been found to have the highest impact on efficiency improvements. However, it is riskier for the concessionaire (because it does not guarantee profits), thereby increasing the cost of capital and is much more prone to renegotiation than other regimes. And renegotiations are costly – financially, in terms of disrupted services, and through their impact on the credibility of the PPI model.

Concretely, a better PPI framework entails improving award processes to ensure transparency and competitiveness. It also requires better concession design to clearly state events that would trigger renegotiations, as well as guidelines for the process. Contracts also need to specify information to be disclosed. This, combined with an adequate regulatory accounting framework, is critical for regulators to cope with the asymmetry of information inherent in any concession. Finally, lessons have been learnt on the relative desirability of particular regulatory regimes.

In addition, risks can be managed and allocated better. Contracts, in particular, should better identify and allocate the different risks involved. Governments need to focus on improving the risk-return ratio of investment projects, but must be careful which risks they assume. Many face enormous contingent liabilities from such excessive commitments made in the past.

Third-party guarantees are increasingly necessary. Infrastructure concessions often use project financing, which may require risk protection instruments (particularly against regulatory and exchange rate risk) to make the risk-return ratio attractive to outside investors in such projects. But when the government accepts such risks through guarantees or other structures, lenders and investors become exposed to its sovereign risk and the credit rating this implies. This may be unacceptable to international and even local investors, who may be heavily exposed to sovereign risk already, as is the case with many Latin American pension funds and insurance companies as these often invest mostly in government securities.

A critical remaining difficulty concerns institutional reform. While many of the technical improvements discussed earlier are fairly straightforward, their implementation depends on having the right institutions and capacity in place – a much more difficult undertaking. It may be unproductive to require a comprehensive set of functional institutions as a prerequisite for private participation in infrastructure projects. Institutional advances in infrastructure will unfold at a pace that depends on the political economy of reform, the cultural context, and the country-specific ways of securing property rights.

Message 3: Governments remain at the heart of the infrastructure challenge

With or without private sector participation, governments remain responsible for sector reform and regulation. This includes the management of the political economy of reform. Infrastructure reforms are political processes, prone to backlash. Reform “losers” may aim to recover the benefits they enjoyed in the past, while reform “winners” may not feel like they have really benefited, as they perceive either that current sacrifice will not be rewarded with future gains, or that private firms will eventually capture most of the gains. To push reforms forward, governments and regulators need to find ways to take the reforms out of “redistribution traps”, in

which the gains of one group become (or are perceived as) the losses of another. If those who stand to lose have veto power, the reforms will not consolidate.

Governments also remain responsible for social goals. Again, with or without PPI, the design, monitoring and funding of social policies are public responsibilities (although cross-subsidies can help pay for them, notably in water and electricity). But the private sector can be tapped, for example through output-based aid. And small scale providers can offer low cost solutions for to service to the poor. Social tariffs are not only critical for social reasons; they are also critical to the success of any reform.

Governments are responsible for much of infrastructure finance, both directly and indirectly, by helping structure financing frameworks. A critical issue is how to generate the fiscal space for increased public investments. A number of countries are saddled with a large debt burden. Many (Brazil, Colombia and Peru, for example) suffer from expenditure rigidities, as more than 90% of the budget is non-discretionary (pensions, social security, debt service, wages, transfers to sub-national governments). Some have scope for increasing tax collection (Honduras) while others do not. In fact, in the case of Brazil, where the tax-to-GDP ratio has reached 35%, simulations suggest that the impact of a further tax increase would more than offset the growth and welfare benefits of increased infrastructure investments (Cavalcanti and Nascimento 2005).

Several options have been suggested to increase fiscal space, based on the argument that current rules only reinforce the tendency of politicians to cut investments rather than more politically sensitive current expenditures. One approach could be to adopt alternative rules, such as the so-called golden rule that permit borrowing to finance capital but not current expenditures. Another could be to exempt particular investments based on their social or economic rates of return. The first option has been rejected by the IMF, while implementation of the second is unlikely to allow for significant fiscal space to open. The way forward will probably have to be determined on an ad hoc basis by countries through a combination of expenditure reallocation, improved expenditure efficiency and reliance on increased revenues associated with better growth performance.

Governments can also help in providing a financing framework for long-duration infrastructure investments. For example, investors are likely to favor projects in which substantial local currency financing can be incorporated. This can be done either by developing local capital or debt markets or through local currency loans, hedging products or creative financing structures offered by private, bilateral or multilateral financing institutions. Partial Risk Guarantees (PRGs) from multilateral institutions can protect lenders or bond holders against other perceived risks, providing the credit enhancements that project companies require to raise adequate financing. Governments have a critical role to play in establishing wholesale facilities for these instruments, such as the recent World Bank PRG facility established in Peru.

Finally, sub-national entities need to be able to borrow to fund the infrastructure they are responsible for. This of course needs to be done in the context of a prudent inter-governmental framework and in many countries requires substantial reforms. In the shorter term, multilateral institutions, such as the World Bank, have various instruments allowing countries to borrow and on-lend in local currency to sub-nationals.

Message 4: The private sector is needed, but bringing it back will require learning from the past

The private sector is critical, for financial resources as well as the know-how and management skills needed for better infrastructure performance. An improved PPI framework, concession design and risk management instruments are important factors in attracting back the private sector. Another element is better management of the political economy of reform. Indeed, winning back public opinion is probably one of the most pressing challenges of PPI in the region today.

Improving the perception of PPI will require a number of steps. Concessions need to be granted in a transparent manner. Re-negotiations need to be less frequent. And finally, governments need to shoulder their responsibilities - on painful reforms, on appropriate safety nets for those who stand to lose from the reform process, and for the poor.

Facing the Challenges: Setting Priorities

In the 1990s the emphasis was on the fight against poverty, which was equated rather narrowly with a need to increase social services. This culminated with the Millennium Development Goals that focus on reducing poverty and improving health and education outcomes. Indeed today Latin American countries spend about 8% of GDP on health and education expenditures (quite a bit more than East Asia, middle income countries or China) and a similar amount on social security and welfare.⁴ As for infrastructure, the thinking was that the private sector could finance much of what was needed as a combination of efficiency gains and greater cost recovery could ultimately generate sufficient returns.

Today the pendulum has swung somewhat. The World Bank's recent Annual Review of Development Effectiveness produced by its internal evaluation department calls for a renewed focus on infrastructure. It argues that more attention should be paid to the growth agenda and that just focusing on the social sectors is not enough for poverty reduction. Similarly, the IMF's Independent Evaluation Office has argued that more attention should be paid to the quality of fiscal adjustment, and that fiscal consolidation came at the expense of public investment. And the private sector is less enthusiastic about infrastructure projects— especially in emerging markets – while Latin America's people massively reject the privatization model.

This report does not argue that governments need to slash social expenditures in favor of infrastructure but rather that they should consider all the considerable potential returns on infrastructure investment - not just financial, but economic and social –when setting budgets. This is not based on a simplistic view that by narrowing the infrastructure gap between East Asia and Latin America, the region will be transformed into a collection of “tigers.” Common sense, as well as solid empirical evidence, shows that infrastructure is necessary for growth and poverty alleviation - necessary, but clearly not sufficient. And the returns to infrastructure projects vary with the level of infrastructure already in place, and with the quality and efficiency of the individual projects, just as for any other investment.

The financial and human resources available for improving infrastructure will still be limited. How then to set priorities among all the competing needs for investments or reform? Our

⁴ Note that health and education expenditures tend to increase with income and LAC is richer than these other groups.

suggestion, for the short term, is to go for the low hanging fruits, meaning the interventions that are not too costly financially or difficult politically. On the publicly managed infrastructure side, this includes improving procurement, stability of financial flows for public investment and maintenance, and better maintenance programs. On the PPI side, it means not guaranteeing inappropriately, developing better financial products (particularly ones that tap local financial markets) and applying what has been learnt about the better design of contracts.

As for investments, one key argument of this report is that LAC can afford universal coverage in water, sanitation and electricity, if appropriate technologies and standards are used. In addition, the context of scarce resources implies that investments need to focus on bottlenecks in existing systems rather than on overall expansion.