17

Infrastructure and Development: A New Area for International Cooperation

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I would like to put forward that the time has come to include infrastructure on the international policy agenda of developed nations in support of growth in developing countries. Based on extensive experience accumulated during Chile's democratic governments, from 1990 to 2010, I illustrate the impact that a sound infrastructure plan has on growth and equity and how developed countries and companies can invest and build partnerships with the public sector and private local firms. New ideas for economic development should be addressed by the G20. The G20 must operate "as a premier market place for development paradigms" (Lim 2010, p. 71).

Infrastructure as a Vital Part of Development Policies

Economic policies and instruments aimed at higher economic growth are usually dispersed or applied in segments. They reflect different settings and circumstances, and countries lacking a coherent strategy and a systemic vision usually pay the price down the road. In the recent past, the proposals most frequently made by international organizations and developed countries to less developed ones concerned inflation control, reduction of fiscal deficits, and flexible rates of exchange. Those proposals also preached a reduction in the functions and the size of the public sector and the freeing up of market forces.

A different set of policies has now been designed to pursue social objectives—poverty reduction, basic housing, health, and education. On the growth and

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investment side of international cooperation, in addition to aid, trade exceptions, and incentives for foreign investments, new instruments have gained relevance: innovation, technical assistance, free trade agreements (FTAs), and public-private partnerships in infrastructure.

However, what is still lacking is a better understanding of the interaction between the different approaches and a way to link and integrate them into one framework and thus achieve sustained development. As Colin Bradford points out, "21st century challenges are horizontal, characterized more by linkages than their isolation from other issues" (Bradford 2010, p. 43). To be successful, then, infrastructure policies and plans also must work together.

Infrastructure's Impact on Development

Building infrastructure contributes enormously to economic growth and equal opportunities. It facilitates export expansion by increasing productivity, lowering transport costs, and creating new connections with areas suitable for agriculture, mining, and tourism. It also helps to reduce marginality, a major cause of poverty, by connecting new and rural areas by land, sea, rivers, and air. In addition, it facilitates regional integration and social inclusion by providing easier access to education, health, water, electricity, and markets for small firms. New ventures, investments, and employment soar.

Studies show a clear and positive correlation between growth and investment in roads, ports, airports, dams, and water systems (Rozas and Sanchez 2004; Machicado 2007; and Cipoletta, Perez, and Sanchez 2007). In most cases—in Latin America, Asia, and Europe—research demonstrates that the correlation is higher in the early or middle stages of a country's economic development.

However, these two effects of infrastructure—growth and equity—are often unnoticed, not emphasized enough in political debates or given priority by international organizations, in spite of their high multiplier effect. Such a weak perception of the importance of infrastructure must be corrected in order to gain the political support needed for a persistent and stable level of investment.

Lessons from the Chilean Experience

The Chilean case (1990–2010) is a useful and successful example. Investments in infrastructure confirm a positive link with growth, territorial integration, and the competitiveness of main export activities. The continuity and stability of policies and projects during a span of two decades proved fruitful.

The military dictatorship (1973–89) left the country with a high deficit in public works, among other flaws. The new democratic government had to deal with consolidating democratic procedures and human rights, reducing inflation and unemployment, attracting foreign capital, and reducing poverty. The development strategy that was devised to address those issues—which was followed by four successive governments—was named "Growth with Equity."

Export growth was enhanced by a series of free trade agreements (fifty-seven agreements were in operation in 2010), and as a result, new markets were available for our exports. But exporting required a rapid improvement in infrastructure. The long distances from Chile to large markets made it imperative to reduce transportation costs, create greater capacity, and improve the quality of services. Moreover, our development strategy had a priority: to play an active role in the South Pacific by offering good infrastructure services and free trade agreements for trade and investment between Asia and South America. Chile's free trade agreements with China, Korea, and Japan on one hand and Argentina, Brazil, and other Latin American countries on the other require good infrastructure and efficient logistics—in addition to supportive customs, financing, and security arrangements, strict anticorruption norms, and the right, proactive attitude for achieving results. Chile's membership in APEC (whose 2004 meeting took place in Santiago) reinforced the commitment to expand toward the Pacific. New laws including incentives to attract foreign firms to take advantage of our FTAs with Asian countries were passed in order to transform Chile over the long term into a "platform" for drawing companies that produce goods and services for the international market.

Meanwhile, a number of Latin American nations have developed a major plan comprising large projects to connect different countries through roads, electric facilities, and oil and gas pipelines. The IIRSA initiative (Initiative for the Integration of Regional Infrastructure in South America), which was created in 2000 in Brasilia and includes twelve countries, has helped to design a new vision for Latin American integration. IIRSA has identified 514 projects (forty-seven large groups of projects) with an estimated investment of $69 billion (see www.iirsa.com).

In Chile, public investment in infrastructure expanded after 1990, but the need exceeded the available resources by far. To accelerate growth and increase equity, the government required more resources. Besides public financing, two other sources could provide funds—international financial organizations (World Bank, Inter-American Development Bank, Corporacion Andina de Fomento) and private capital. The government decided to resort to the latter by enhancing public-private partnerships.

Between 1993 and 1998 three bills were sent to and then revised and approved by Chile's Congress. The first law established new procedures and formulas for granting long-term concessions to private firms for the building and operation of public works, in particular interurban and urban highways and airports, supervised by the Ministry of Public Works. The initial success of those initiatives led to a new stage, in which the same model was used to build jails, dams, hospitals, and public buildings and even to plan a very large tunnel through the Andes to connect Chile and Argentina. In that case, both countries have had to harmonize their concession laws.

In a short period of time, highway and airport services were upgraded. The first law was improved in 2010, taking into consideration the criteria suggested by the OECD (OECD 2007). The state was also able to free its resources in distant regions, connecting areas with comparative advantages in agriculture, mining, and aquaculture. In addition, toll roads had a progressive effect on income distribution because they were paid for by resources extracted from those who used cars instead by fiscal income from all citizens.

The second law concerned ports. It allows private capital to invest in and manage ports through a long-term agreement, while infrastructure will stay in the state's hands. Public bidding attracted many Chilean and foreign companies, and our capacity and productivity grew.

The third law concerned water. The state owned several water supply plants located in various parts of the country. By law, the state granted concessions to private companies to operate those plants and build others and defined strict regulations to ensure water supply and quality and to decide prices. As a senator, I participated in the discussions to put enough safeguards in place to ensure efficiency, consumer protection, and a transparent system for defining prices and resolving controversies. The system has worked. Subsequent adjustments have been made to include sewage treatment in cities and to expand underground rainwater channels in cities.

In 2010, over 99 percent of the Chilean population had access to potable water and over 95 percent had treated waste water in urban centers. These figures rank among the highest in the world. A positive effect was reflected in health indexes and agricultural production. Public funds became available for investing in rural areas, dams, and flood protection.

With regard to energy, private companies are operating in the generation, transmission, and distribution of energy under a regulatory system to ensure investment as well as efficient and sustainable production through a price calculation procedure. At the same time, a new law was passed in order to provide incentives for investing in renewable energy.

These laws, procedures, and institutions created to ensure coordination allowed Chile to advance rapidly. Private investment, mostly foreign, contributed with almost 30 percent of total financing in public works between 1995 and 2010. Furthermore, thanks to such private flows, the government liberated resources to build smaller projects favoring low-income families around the nation.

Infrastructure expansion resulted from a national plan. Success depended and will depend in the future on consensus building. This approach was embodied in “Chile 2020: Infraestructura para el Desarrollo [Chile 2010: Infrastructure for Development],” a January 2010 report issued under my direction by the Ministry of Public Works (www.mop.cl/2020).

Preconditions for a Successful Infrastructure Program

The implementation of a systematic infrastructure program requires a more advanced level of economic and institutional development. At least five preconditions should be in place to ensure success:

—*A shared political decision* based on the conviction that human capital (education) and physical capital (infrastructure) are the two pillars on which the future must be built. The public sector should focus on both, from a long-term perspective. That requires a global view and a commitment shared by both principal national forces—the government and opposition parties—to lend continuity to a set of projects and strategies through different administrations. Moreover, developed countries must commit themselves to increase financing from international financial institutions for infrastructure projects.

—*A responsible economic policy* that ensures stability, reduces ups and downs, prevents fiscal deficits, and applies flexible exchange rates. Inconsistencies or fluctuations in public investment constitute the worst adversary for infrastructure projects, which are the first to suffer when fiscal cuts occur. In the Chilean case, monetary and exchange policies were taken in harmony with fiscal measures. Public debt decreased from 70 percent to 7 percent of GDP between 1990 and 2010. The creation of the Economic and Social Stabilization Fund (financed by the increase in copper prices) enabled better macromanagement, low inflation, and financing of public initiatives in the midst of the international crisis to sustain employment.

—*Laws and institutions* that build confidence among local and foreign investors, covering the need for an independent and efficient judiciary, a sound procedure for resolving disputes, transparency of all bidding processes, a clear anticorruption stance and measures to combat it and, finally, a specialized government unit made up of capable professionals who can design, negotiate, and supervise infrastructure works.

—*A solid and duly regulated banking system* that can ensure that major infrastructure programs have access to private financing. After a rough financial crisis in the 1980s in Chile, new regulations were established. Today the Chilean banking system shows high capital ratios and provisions, and it was not infected with toxic assets. Such solidity is an advantage for infrastructure development. First, the banking system is able to provide short-term financing for construction and, second, it has the capacity to transform short-term credits into a bond system to cover the fifteen to twenty years needed to finance concessions.

—*A long-term plan* that transcends one administration and is followed by the next. Such a process requires the active participation of regional actors as well as local participation and technical support. It should be revised every two to four years to introduce the necessary adjustments.

It is worthwhile to explore, in addition to the five preconditions, why infrastructure projects do not seem to be of great relevance in public debates and political proposals. It is also important to seek ways to extend support for such projects, both nationally and internationally. In my experience, it is feasible to increase public perception of the importance of infrastructure when there is a clear political commitment. Sustained efforts to provide and share information with the public, members of national legislatures, and major stakeholders are needed to highlight the importance of infrastructure projects for development and equity in their respective regions. A change in perceptions requires a narrative that can stand over the long term. As projects affect specific areas and communities, it is essential to foster partnerships with regional governments to jointly define projects and provide financing while simultaneously creating opportunities for citizens to participate in the preparation of plans.

One should bear in mind that major investments in roads, dams, airports, and generation plants, among others, are carried out far from cities and are not easily seen by the population at large. Neither do they benefit lower-income groups directly, since members of those groups often do not use cars, much less airplanes. For them especially, clear explanations are needed about the positive effects of infrastructure projects in their daily lives. Moreover, in order to avoid conflicts, governments must have nationwide programs that include most areas and cities, establish regional balance, define priorities, and make real benefits known to those involved—for example, the benefits of connectivity for growth, of water systems for health and agriculture, of ports and airports for exports, and of tourism for opportunities for small firms and employment.

Finally, I think that evaluation of infrastructure projects in general tends to minimize the benefits and must be reviewed. Usually, such evaluations measure only time savings and exclude collateral innovations such as the creation of new ventures, improvements in quality of life, and easy and rapid access to public services, education, and health. In the case of cultural or ecological tourism, proposals for special programs, which normally are more expensive, are discarded when expected traffic creation and spending by tourists are underestimated.

On the international side, the possibility of attracting foreign companies to invest in infrastructure in developing and emerging countries will depend on the preconditions described previously, but additional factors may help. A government counterpart of private firms, with high technical standards and the administrative authority to make decisions and solve problems, will be invaluable. The promotion of the main projects among potential investors will also favor a positive response.

Moreover, in the early phases, foreign investors may require additional guarantees or ensured minimum income until the concession system gains stability.

In Chile, the experience has been successful. Spanish firms took the lead, followed by builders and concession managers from Italy, Germany, Sweden, and Mexico. All of them had extensive experience in their countries of origin, so they were familiar with the kind of business they were involved in. Along the road, some of them failed while others consolidated and expanded. More recently, Italians and Colombians took over some Spanish firms. When Chile called for bids to build hospitals, firms from France and Brazil presented offers, sometimes as consortia made up of different companies.

The benefits for Chile have exceeded costs. Organizational expertise and technology were transferred, and Chilean companies learned from them. Partnerships soared. Banks and services from the countries of origin follow the companies. Officials from other governments, primarily Latin American but and also from Eastern Europe, came to observe this experience and the workings of our system. International companies also learned and transferred the knowledge that they acquired abroad.

When business is sound, with clearly outlined laws and procedure in place, governments can explain their aims and thereby attract investors. This approach can now be enhanced by governments of developed countries that are willing to search for new avenues of international cooperation.

Time for International Cooperation in Infrastructure

The time has indeed come to give priority to infrastructure in development plans and projects.

—Actions must transcend aid and trade exceptions. Infrastructure is an essential factor for growth, enhancing exports, increasing productivity, and improving the well-being of low-income families.

—Developed countries (and also emerging ones) can actively promote the participation of national and regional financial institutions as well as their large firms in financing and bidding for new projects. Banks and pension funds are and will be more involved in the future in such initiatives. Large contractors and companies that operate concessions can associate with their local counterparts and transfer their knowledge and management expertise.

—A synergetic combination of public funds, international financing, and public-private partnerships (PPPs) could be designed specifically for different countries, in accordance with their level of development and multiyear plans.

—PPPs are a new and specific form of foreign investment. Banks can agree to long-term financing with governments based on guarantees like minimum income for new concessions.

—Many countries (Chile and Korea, among others) show positive performance in PPPs. They can offer technical information and share their institutional and legal experiences to attract investment to other developing countries, helping them to create a regulatory system that facilitates the building of trust for a promising public private partnership. OECD (2010) reports a vast variety of best practices. Such factors are worth considering when thinking about new global initiatives to attain a "strong, sustainable, and balanced growth," as stated in the G20 framework.

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