

Chapter 6

TOWARD A SEAMLESS ASIA



6. Toward a Seamless Asia

Connecting a diverse Asia through seamless and environment-friendly infrastructure will help in achieving and sustaining an integrated, poverty-free, prosperous, and peaceful Asia. To the best of ADB and ADBI's knowledge this is the first time that such a study on regional infrastructure has been undertaken. The key messages of the study are as follows:

- The required infrastructure investment for pan-Asian connectivity in the transport, communications, and energy sectors during 2010–2020 would produce substantial real income gains of about \$13 trillion for developing Asia during this period and beyond.
- A PAIF should be established to help coordinate and integrate existing subregional infrastructure initiatives toward a seamless Asia.
- During 2010–2020, Asia needs to invest a total of around \$8 trillion in overall national infrastructure and an additional \$287 billion in specific regional infrastructure projects—an average overall infrastructure investment of \$750 billion per year.
- An AIF is needed to mobilize Asian and international funds and help prioritize, prepare, and finance “bankable” regional infrastructure projects.

Asia is home to more than half of the world's population, with a wide variety of resource endowments and cultures. Its landmass is vast, with abundant natural resources, and large and diverse energy reserves. It is dotted with factories, workshops, and businesses, both small and large, that produce a range of goods and services. Above all, it has enormous potential—but unfortunately, much of it goes untapped.

The reasons for not realizing this potential are many, but an important one is that Asia's many resources are often not well connected to each other. Economic growth springs from the widening and deepening of markets—and the diffusion of new technologies across and between them—but geography often stands in the way. For instance, farmers in remote rural areas may produce food that city dwellers across Asia would love to eat—if only the time and cost of shipping it over a long distance to such consumers were not prohibitive. And while the distance cannot shrink, the cost of trading at a distance can. Import tariffs can be slashed, customs procedures streamlined, better infrastructure connections built, and logistics systems improved. Infrastructure connectivity can bring benefits to the region in many ways. Roads, railways, airways, seaways, and fiber optic cable that connect business centers of neighboring countries can enhance intraregional trade. Cross-border gas pipelines and electricity grids make it possible for energy surplus countries to profitably export excess resources to energy deficit neighbors.

The benefits of trade liberalization and low-cost, timely, reliable, and integrated regional infrastructure networks can be seen first hand in Asia's busy ports, through which most of the region's traded goods are shipped, as well as in the coastal regions around them. It can be witnessed in Bangalore, connected to the region and the world by fiber optic cables that are lifelines for its technology and services companies. Increasingly, it can be seen in Asia's airports, through which a rising share of the region's trade transits. Less visibly, but perhaps most importantly, it is evidenced by the increasingly sophisticated and efficient production networks and supply chains that crisscross parts of the region to take advantage of its comparative advantage.

While parts of the region's infrastructure are world class, it is generally below the global average as this study details, and under increasing strain from rising populations and rapid growth. These problems limit development, endanger the competitiveness of those all-important production networks, and prevent the networks' poverty-reducing benefits from expanding. Distant Pacific island countries, landlocked Central Asian states, inland provinces of the PRC, remote rural Indian states, the Indonesian archipelago—all, among others,

suffer from the inadequacies of Asia's infrastructure connections. That they are often bypassed by development is a tragedy not just for the people who live there, to whom opportunity is denied, but for Asia as a whole, whose vast resources are underemployed. Disparities in development also generate large waves of migration and can cause social strains.

The good news is that the findings of this study confirm that the benefits of upgrading and extending Asia's infrastructure networks are so large that they would benefit all countries in the region—and even the rest of the world. For example, better connections to coastal areas would not just benefit inland areas, they would boost trade and economic growth in coastal areas, too. Regional infrastructure development creates a win-win situation for all participating countries.

This study finds that between 2010 and 2020, developing Asia needs to invest a total of about \$8 trillion in overall national infrastructure, 68% for new capacity and 32% for maintaining and replacing existing infrastructure. Some of this is for regional infrastructure as defined in Box 1.1. In addition, this study has also identified 1,077 bilateral, subregional, and pan-Asian infrastructure projects that are in the pipeline and could be implemented by 2020 at a cost of around \$287 billion. These include 989 projects in transport that cost approximately \$205 billion and 88 in energy that cost around \$82 billion.⁶⁹ This amounts to an overall infrastructure investment need of about \$750 billion per year during this period.

Appropriate infrastructure investment to facilitate increased regional infrastructure integration (physical connectivity) would bring Asia large welfare gains, mainly through increased market access, reduced trade costs, and more efficient energy production and use. The required investments in the region's transport, telecommunications, and energy infrastructure would generate net real income gains of about \$13 trillion during 2010–2020 and beyond. Economies that

⁶⁹ This list must be used with caution. It was compiled from a variety of sources, some much more detailed and rigorous than others, and includes proposals at various stages of definition, preparation, review, and vetting.

trade more and those that have the biggest unmet infrastructure needs would gain most.

Of the identified 1,077 regional projects, Asia should prioritize 21 high-priority “flagship” infrastructure projects, which could be implemented by 2015 at a cost of \$15 billion. These consist of 10 projects in the GMS (five in transport and five in energy), six in Central Asia (four transport corridors and two energy projects), and five in South Asia (two in energy and one each in transport, telecommunications, and tourism). The successful implementation of these priority projects and their wider regional benefits could create a strong impetus towards further strengthening regional infrastructure networks.

As this study goes to press, the global financial turmoil and resulting economic downturn are still unfolding. If the current crisis is prolonged, demand from advanced economies will remain stagnant and thus depress Asia’s exports and production. However, the crisis does not alter the broad thrust of this study—on the contrary, it gives added weight to it. The lessons of the Asian financial crisis of 1997–1998 are clear: cuts in infrastructure investment that jeopardize future recovery should be avoided. Some economies, such as the PRC and Republic of Korea, have already adopted fiscal stimulus packages that accelerate and increase infrastructure investment. Wherever possible, other governments should undertake similar measures. While an economic downturn may reduce some of the increasing pressure on overburdened existing infrastructure, it does not obviate the need for upgrading and extending the network over the time frame of this study (i.e., 2010–2020).

Traditionally, Asian countries have prioritized export markets outside the region, especially in the US and Europe, and their infrastructure reflects this. But the prospect of a prolonged downturn in those major markets underscores the need for a rebalancing of Asia’s economies towards demand within the region. It is in Asia’s interests—and the world’s—that the region direct more of its energies towards satisfying local needs. This requires many policy changes, not least of which includes prioritizing improvements in connectivity within the region.

In the long term, the full benefits of Asia's size and diversity can be realized only by creating a single Asian market where goods and services can move freely and seamlessly. Moving towards that long-term vision requires world class and environment-friendly pan-Asian infrastructure networks—with open connections to regional and global markets, driven by political leadership as well as economic logic; built up from national, bilateral, and subregional programs; and guided and supported by broad-based and effective regional institutions that ensure their proper development and financing.

6.1. A Framework for Regional Infrastructure Cooperation

A pan-Asian approach to infrastructure development may initially be difficult. Progress in developing existing pan-Asian initiatives, such as the AH and the TAR, has been limited. At the subregional level, some groupings, such as the GMS, cooperate more closely than others. Connections between subregions—notably between South and East Asia—are particularly weak.

Improved pan-Asian connectivity in transport and energy can be achieved through a variety of channels such as:

- developing national infrastructure that connects remote and inland areas—particularly in large countries—to the country's economic centers and coastal areas, thus linking them to the rest of Asia and the world;
- developing regional infrastructure that enhances national connectivity—for example, connecting India's landlocked northeastern region to the nearest port and economic center (Kolkata) through Bangladesh;
- connecting two neighboring countries to form a two-country hub or corridor;
- connecting several countries in a subregion to form a regional hub, corridor, or market; and
- creating connections among subregions.

In view of Asia's varied needs and circumstances—and varying political commitment to closer integration—national and subregional programs proceeding at different speeds and on different tracks offer the best way forward for now. But the many overlaps among existing subregional programs can help build connectivity across subregions, such as Central Asia, South Asia, and Southeast Asia.⁷⁰

Until now, Asia has followed a largely bottom-up and market-driven approach to infrastructure development. But it now needs to complement this with a more top-down, market-expanding, and demand-inducing approach geared toward a seamless Asia. This involves:

- building world-class, interconnected, environment-friendly regional transport networks of road, rail, waterway, sea, and air links that promote trade and investment within the region and with global markets, and widen access to markets and public services;
- developing greener cross-border energy projects that allow countries to benefit from their natural endowments, and that provide efficient and secure supplies of electricity, coal, gas, oil, and alternative energies;
- expanding, deepening, and increasing the efficiency of regional production networks and supply chains by streamlining policies, systems, and procedures, such as customs procedures and other bureaucratic impediments that hamper regional and global connectivity; and
- developing stable and efficient national and regional financial markets that channel savings from around Asia and the rest of the world into productive investments, notably infrastructure, throughout the region.

Creating a seamless Asia would have many benefits such as:

- increasing trade, investment, and economic integration in Asia;

⁷⁰ For example, BIMSTEC could link SASEC and SAARC to the GMS and ASEAN; SECSCA could connect South and Central Asia; IMT-GT corridors could be connected to India; the GMS's northern road and rail corridors could connect the PRC to India through Myanmar; and the GMS's western corridors could connect India, Malaysia, and Thailand.

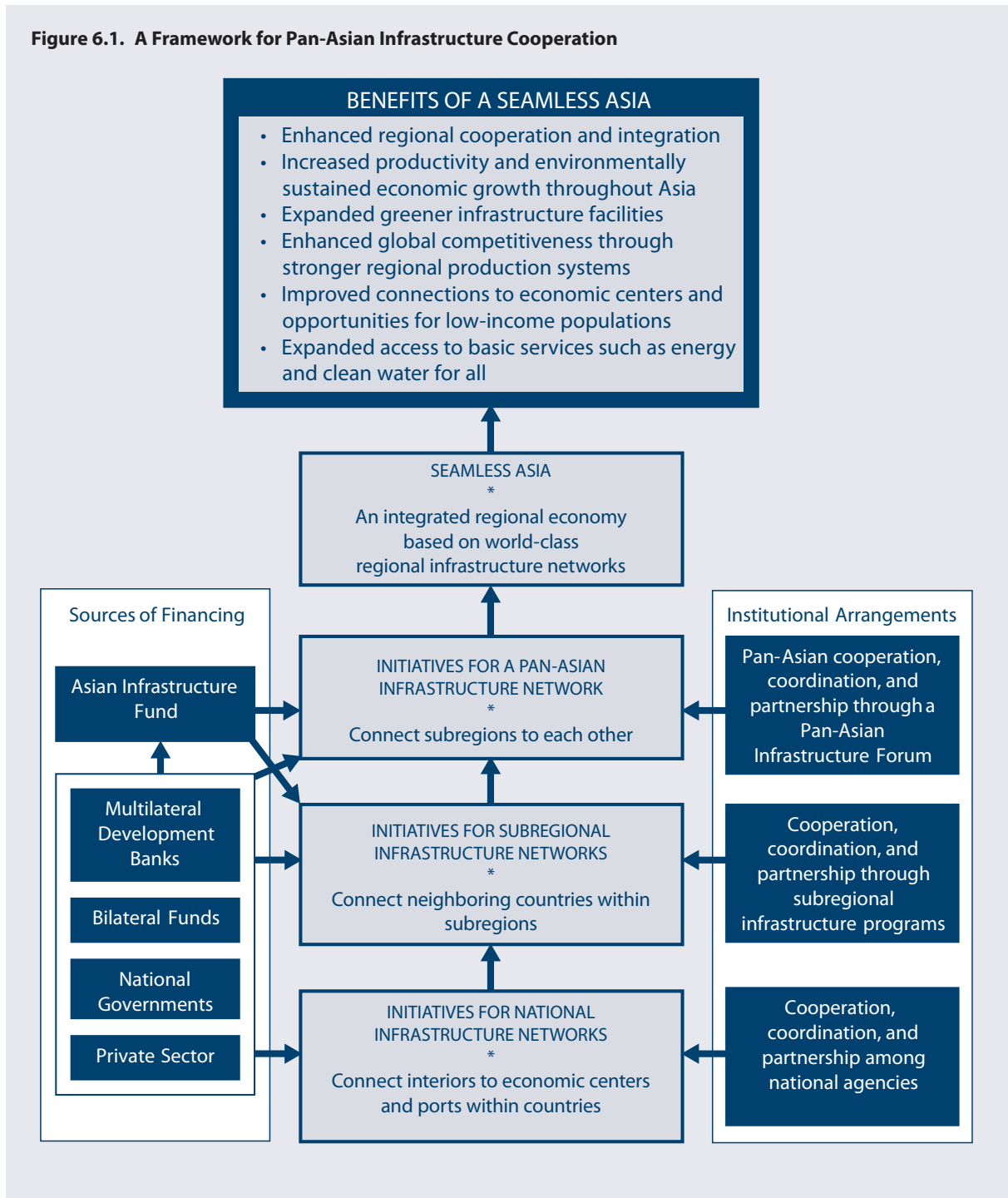
- promoting inclusive and environmentally sustainable economic growth;
- reducing costs and delivering environmental benefits (e.g., lower energy costs, local pollutants and greenhouse gas emissions);
- shifting to low-carbon, greener infrastructure such as renewable energy, railways, waterways, and road transport by deploying more fuel-efficient vehicles and cleaner fuels;
- reducing poverty and helping to provide for people's basic needs, widening access to economic opportunities, and improving people's quality of life as an essential complement to national development strategies;
- enhancing the region's international competitiveness through stronger regional production systems and reducing logistics and transport cost;
- narrowing the development gap within Asia by improving the connectivity and competitiveness of poorer countries (particularly small, landlocked, and archipelagic ones);
- promoting greater trade within Asia to replace lower export demand from global markets, and to help rebalance sources of growth in the medium term; and
- ultimately, creating a vast single Asian market that can provide large efficiency gains, increase regional demand, and invest Asia's savings more productively.

A framework for regional infrastructure cooperation towards a seamless Asia is presented in Figure 6.1.

Achieving a seamless Asia requires:

- a common vision;
- strong leadership and a shared commitment from Asian leaders, as well as strong partnerships and institutional capacities within and across countries;
- common pan-Asian infrastructure strategies in which infrastructure investment is prioritized, as well as coordinated policies in sectors such as transport and energy;
- institutional arrangements for planning and implementing consistent infrastructure plans at the national, subregional, and

Figure 6.1. A Framework for Pan-Asian Infrastructure Cooperation



regional levels through effective coordination, cooperation, and partnership;

- effective planning and implementation of regional infrastructure projects through good policies and institutions that address the asymmetric distribution of projects' costs and benefits and manage negative socioeconomic impacts across countries so as to ensure win-win outcomes among participating countries; and
- effective financing instruments, as well as conducive policies and regulations that complement public sector financing, help to mobilize the region's vast savings, and encourage PPPs.

6.2. Main Findings and Recommendations

This study has developed four main themes: supporting regional trade and investment (Chapter 2), harnessing the benefits of regional infrastructure (Chapter 3), developing effective policies and institutions (Chapter 4), and financing regional infrastructure (Chapter 5). This section highlights its main findings and recommendations.

Supporting Regional Trade and Investment

Asia's trade-related infrastructure has greatly improved, but it must continue to do so in order to sustain economic growth and regional integration. Where infrastructure connections are good, Asia's trade has expanded rapidly (at least it had until the current crisis). Trade within East Asia has risen particularly fast. But where infrastructure connections are poor, such as within South Asia and among Asian subregions, trade remains low.

Infrastructure gaps—a lack of connections between national electricity grids and gas pipelines, and a failure to harness common energy resources, such as rivers with hydroelectric potential—also hamper regional energy trade. Greater regional energy trade would reduce costs, increase the diversity of supplies, enhance energy security, and often benefit the environment as well.

As Asian economies have liberalized their trade policies, infrastructure deficiencies have become an increasingly significant impediment to trade. Infrastructure improvements would do more to lower the cost, and hence increase the volume, of trade in Asia than would eliminating the remaining tariffs and nontariff barriers.

Asia's traded goods are transported mainly by sea. But as traded content shifts from bulky goods toward lighter, often higher value products, goods are increasingly sent by air. Relatively few goods go long distances by road or rail, as demonstrated by the fact that trade among Asian countries that share a land border is much lower than elsewhere in the world. Improving rail and road connections to efficient ports is particularly important for inland areas and landlocked countries, as they tend to encounter high trade costs.

Exports are diversifying across new markets with smaller flows, and intraregional trade in parts and components for regional production networks accounts for a growing share of total trade. As production becomes increasingly fragmented and traded internationally, the competitiveness of each economy in a regional production network depends on the other economies in the production network; all the economies in a network, therefore, have an incentive to cooperate in order to enhance each country's competitiveness. However, if the current crisis is prolonged, demand from advanced economies for Asian exports will decelerate and, therefore, trade outside the region may not be a driving force for economic growth in the immediate future. To mitigate the medium-term consequences of the ongoing crisis, Asia will need to put greater emphasis on increasing regional demand through expanding intraregional trade. Enhancing competitiveness and extending it beyond the coastal regions of Asia where it is currently concentrated is thus vital to Asia's future success.

These trends underscore the need for efficient and cost-effective logistics networks that combine speed, flexibility, and timely information, thus providing uncomplicated connections. As well as boosting countries' export competitiveness, these would attract and facilitate greater investment in productive capacity, increase

employment opportunities for the poor, and broaden consumer choice for billions of Asia's citizens.

Harmonizing and strengthening soft infrastructure is an essential complement of enhanced physical infrastructure, as is cooperation on trade facilitation. The sequencing and complementarity of investments are also important. Where physical transport infrastructure already exists, complementary soft infrastructure, such as customs harmonization, may be relatively more important than further physical investment.

Harnessing the Benefits of Regional Infrastructure

Evidence of the economic benefits of infrastructure investment in general is overwhelming. The marginal productivity of telecommunications, transport, and power infrastructure significantly exceeds that of non-infrastructure capital. Several broad studies of developing Asian countries echo international findings that better infrastructure—especially road transport and electricity—significantly reduces poverty.

Regional infrastructure can be expected to have many of the same benefits as domestic connective infrastructure, not least since much national infrastructure has a regional impact. Connective infrastructure expands and links markets together, enabling firms to reap economies of scale, permitting greater specialization in production, and allowing a finer division of labor. Areas of dense economic interaction also bring improved learning opportunities and greater knowledge spillovers. Creating and improving regional infrastructure networks can thus boost an economy's rate of innovation and technological advancement, increasing long-term growth. But as a public good, infrastructure is often undersupplied, especially when it involves more than one country. Regional governments would therefore benefit from working together to produce it. Such collective action would tackle the free-rider problem and produce gains that cannot be reaped by acting alone.

Studies on the impact of regional infrastructure are scarce, and measuring the broader benefits of connecting national infrastructure networks is particularly complex. But careful economic modeling shows that the benefits of cross-border infrastructure projects are large. Benefits tend to be widely distributed, and often help the poor most. Case studies in Central Asia, the GMS, and South Asia show that the benefits of subregional infrastructure projects greatly exceed their costs. As discussed earlier, the benefits of an energy project in Central Asia were found to exceed its costs by a factor of three, as were those of a transport project in South Asia. The benefits of the GMS transport network exceed its costs by 50%.

The case studies find that poverty declines substantially in each country in the respective subregions, with a significant part of the poverty reduction occurring in the rural sector. Evidence in the GMS shows that, while the PRC and Thailand tend to make the largest absolute welfare gains, Cambodia and the Lao PDR gain most relative to the size of their economies.

But while regional infrastructure projects can bring big economic gains, they may also have negative impacts. Some people may experience negative effects. People may be displaced from their land. Traffic accidents may increase. Human and drug trafficking, and the incidence of communicable diseases also may rise. Perhaps most importantly, infrastructure can cause local and global environmental damage. Efforts to make transport and energy investments more environmentally friendly and, in particular, to mitigate impacts on climate change, have to be accompanied with many infrastructure projects.

Developing Effective Policies and Institutions

Without effective policies and institutions, cooperation on regional infrastructure is likely to be haphazard, limited, sporadic, and ultimately ineffective. Asia can learn from the experience of its own subregional programs as well as from other regions, notably Europe and Latin America. While the lessons from other regions could be

useful, ultimately, Asia must craft policies and institutions that are appropriate for its own needs and circumstances.

The EU's experience shows that creating a framework for regional infrastructure cooperation often requires the active role of a third party, an honest broker, to forge the convergence of interests. In Asia, this role could be filled by multilateral institutions such as ADB and UNESCAP, among others. These organizations could appoint coordinators from among top-level decision-makers in the region.

Latin America's experience shows that a forum for dialogue and cooperation can help build awareness of the benefits of regional integration and infrastructure, filter out unproductive projects, coordinate among various national and subnational agencies, and increase stakeholders' participation.

In the medium-term, the ongoing global economic crisis is likely to lead to a structural shift in Asian economies, away from exporting to advanced economies and toward satisfying rapidly growing demand within the region. This underscores the need for a pan-Asian platform to plan and coordinate the investments in regional infrastructure needed to facilitate this adjustment.

This study therefore has proposed that a PAIF be established to help coordinate and integrate existing subregional infrastructure initiatives toward a seamless Asia. It would bring together all the key stakeholders in the region, to help build consensus about, prioritize, and coordinate regional infrastructure plans. It could also develop harmonized standards, based on international best practices where possible, for regulatory and legal issues, as well as a common framework for handling and mitigating negative social and environmental impacts. Within the PAIF, sectoral subforums could also be established—for transport and energy, for instance—as well as subforums for soft aspects of infrastructure matters, such as regulatory and legal issues.

Financing Regional Infrastructure

Financing infrastructure projects is challenging for many reasons—and regional ones involve additional complexities. As a result, developing and financing regional projects is a slow and complicated process, even in the EU. Political leadership from the highest level is necessary but not sufficient, as Latin American experience demonstrates. Regional projects are usually a low priority for domestic policymakers responsible for allocating budgets and requesting assistance from multilateral institutions. Also, these types of projects often involve constructing infrastructure segments in parts of a country with little economic activity and few advocacy groups. Concessionary financing from external sources is therefore sometimes necessary to make a project more economically and financially viable.

Attracting private sector investment in regional projects is particularly difficult because of the additional risks and uncertainties involved. Given the turmoil in global financial markets, it is unrealistic to assume that many cross-border projects in Asia will involve PPPs in the near term, although PPPs may play a bigger role in the future if the substantial challenges involved with their use can be overcome.

The region's vast domestic savings, including those accumulated in SWFs, would be the main source of financing for Asia's massive infrastructure investment requirements. Due to the turmoil in global financial markets, the public sector will necessarily continue to play a dominant role, with spending from government budgets supplemented by funds channeled through domestic and regional financial markets.

Asian governments must bolster their collective work to mobilize a large pool of regional savings for regional infrastructure investments. If such “bankable” regional projects are created, then private financing involving PPPs could be obtained. Strengthening national and regional bond markets—notably through vehicles such as the ABMI and ABF—is one of the first steps in creating a viable source of infrastructure financing to tap Asia's vast savings. Effective financing instruments and policies and regulations that help mobilize the region's vast savings and encourage PPPs are also needed.

This study has proposed that an AIF is needed to help mobilize Asian and global funds, and to prepare and finance “bankable” regional infrastructure projects. The AIF’s capital could come from a variety of sources, including governments, MDBs, bilateral agencies, and SWFs. It should have a legal identity so as to help finance projects through its own resources as well as by issuing bonds or through cofinancing with other entities, including national governments, private investors, and international financial institutions.

The AIF would help finance projects identified, agreed upon, and prioritized by the PAIF. Its project preparation facility would expedite and help finance the preparation of formally agreed upon regional projects. It could also provide grants and concessional financing in order to make regional projects financially viable and bankable. It might also need to provide guarantees against major risks, such as operational, financial, country, and political risks.

6.3. The Way Forward

The road to a seamless Asia is long and arduous. This study has hopefully helped to chart the route ahead, to set out some of the obstacles and how to bypass or overcome them, and to warn against detours and false turns. Its message is clear: in these uncertain times, Asia should not pause or turn back, but rather press ahead with the challenging—and immensely rewarding—task of integrating this vast and diverse region for the benefit of all its citizens. Building bridges, highways, railways, transmission lines, and pipelines across the region should be a priority for the region’s policymakers. It will help to boost growth and spread its benefits more widely. It will enhance the region’s competitiveness and extend its global reach. It will help reduce poverty and promote greater environmental sustainability. But it is possible only with political leadership commitment and partnership at the highest level. It is time to start moving towards a seamless Asia now.