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EFFICIENT ECONOMIC INTEGRATION TO FACILITATE GLOBAL VALUE CHAINS

ANDREW ELEK

CRAWFORD SCHOOL OF PUBLIC POLICY, THE AUSTRALIAN NATIONAL
UNIVERSITY

CONTACT: ELEK@NETSPACE.NET.AU

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Efficient economic integration to facilitate global value chains

Andrew Elek

Introduction¹

Recent dramatic improvements in transport and communications, especially information technology, have transformed the nature of production and distribution. Most products are now 'made in the world', with firms in many economies adding value along international production networks, or global value chains, in line with their ever-evolving comparative advantage. The word 'trade' is no longer an adequate description of global commerce. The flow of goods passing along value chains is just one thread within intertwined flows of services, financing, people movement and information.

The widening reach of these value chains has already delivered immense economic benefits, especially in East Asia where these networks have been pioneered. There are very many opportunities to add to these gains. Governments can work with each other and with their private sectors to reduce the costs and risks of moving products and factors of production along these chains.

Most of the products moving along global value chains no longer face significant traditional border barriers to trade. Therefore, the efficient way to facilitate these chains is to improve physical, institutional and people-to-people connectivity. The potential gains from international cooperation to boost connectivity are now far greater than from further trade negotiations.

Large investments are needed to improve connectivity, not only in better transport, communications and energy networks, but also in the skills and institutions needed to operate economic infrastructure. In the short-term, financing is available for upgrading infrastructure – the current binding constraints on improving connectivity are limits of skills and institutional capacity. These constraints cannot be overcome by imposing new rules in trade agreements. International cooperation to improve skills and institutions requires a patient process of learning together, sharing relevant information, experience, expertise and technology.

Most of the necessary policy reforms can be implemented by individual governments, acting in their own interest. Any government can take steps to reduce regulatory problems and logistic bottlenecks that impede participation in value chains. But governments do not need to act alone. Cooperating with others, especially with neighbouring economies, can add significant benefits by learning from the experience of others and from the positive network effects of wider participation in practical

¹ This article is based on a presentation to the 30th Pacific Economic Community Seminar: "Improving Supply Chain Connectivity towards a Seamless Regional Community", Taipei, September 2015. I wish to express my gratitude to the organizers, the Chinese Taipei Pacific Economic Cooperation Committee (CTPECC)

cooperative arrangements, such as a regional single window system for customs processing.

There are very many such opportunities for mutually beneficial cooperation. These are positive-sum games with all-round benefits. Voluntary cooperation, not trade negotiations, is the most efficient way to play such positive-sum games.

Concerted decision-making by groups of governments to facilitate value chains are similar to the successful concerted unilateral liberalization by APEC economies in the 1990s. APEC and the ASEAN Economic Community process are examples of successful concerted unilateral facilitation, already saving business billions of dollars every year. A lot more could be achieved with bolder vision and the will to devote more resources to improving connectivity. China's 'one belt, one road' initiative, backed by finance from the new Asian Infrastructure Investment Bank is a new and promising way to scale up cooperation to facilitate global value chains.

Facilitating global value chains

Global value chains have played an important part in making East Asia the most dynamic part of the global economy. Taiwan, Hong Kong and mainland China, have become very closely linked to each other, the rest of Asia and the world economy. These links have made a significant contribute to their. success. Labour costs in mainland China are now rising rapidly (Garnaut, 2010), so the pattern of value chains in East Asia need to be adjusted rapidly.

The unbundling of production and nature of value chains is explained by Baldwin (2011), Fung (2005), Hummels (2008), and Wafai (2008).

Value-added along the chain



This diagram illustrates the sources of value added to a jacket, showing that value chains are more than a process of combining various intermediate inputs to create a

final product. Value chains are intertwined flows of goods, services, finance; business people; intellectual property and other information. The policy challenge is to facilitate these flows by reducing the cost and risks of all of these international transactions.

To tackle this challenge efficiently, policy-makers should respond to the stated priorities of the business people who manage value chains. A recent survey of their priorities for economic integration within the emerging ASEAN Economic Community (AEC) can be summarised as follows:

- Across-the-border issues: for example import and customs administration, efficiency, and integrity including through greater use of information and communications technology.
- Standards and conformance measures: strengthening certification bodies and moving towards international standards.
- Investment facilitation: adopting international best practices.
- Transport and communications: better connectivity, including harmonising rules and regulations to improve ICT connectivity.
- Non-tariff barriers: including work towards automatic import licensing and mutual respect of professional qualifications.
- Strengthening and implementing rules: including pro-competitive regulations and effective intellectual property rights.²

This list of business priorities indicates that tariff barriers are no longer the main constraints on international commerce. Some traditional trade barriers remain on a few sensitive products (notably agricultural commodities and low-technology manufactures). These residual border barriers are costly, but they affect only a small, and rapidly shrinking, share of international commerce.

Most of the goods, services and information flowing along global value chains do not face significant tariffs or quantitative restrictions. Therefore, the people managing global value chains are asking governments to shift attention from painful trade negotiations and look at more important constraints on global commerce including inadequate transport and communications networks and needless differences in the way economies are regulated. These problems can be addressed by improving physical, institutional and people-to-people connectivity.

Improving connectivity

Research on opportunities for economic integration show that the potential gains from better connectivity are now far greater, than from any further marginal reductions in border barriers:

- reducing port clearance times by one day can potential to save up to 1 per cent of the value of traded products (ADB,2009);
- bringing the ports of below average APEC members half way to the APEC average efficiency would result in a 10 per cent increase in intra APEC trade, worth about 280 billion (Wilson et al, 2003), and
- *“supply chain barriers to international trade ... are far more significant impediments to trade than tariffs. In fact, reducing supply chain barriers could*

² See ERIA (2012) page 4.

increase world GDP over six times more than removing all tariffs.” (World Economic Forum, 2013)

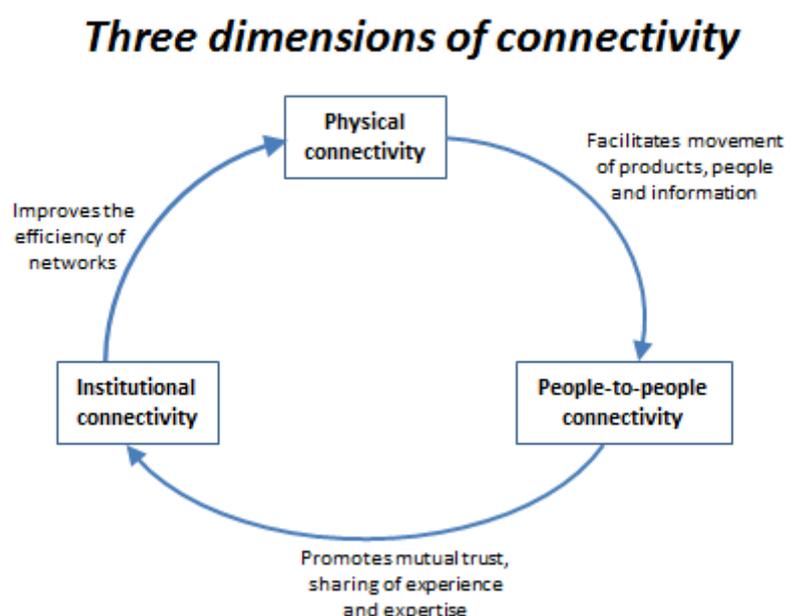
Some of these potential gains can be obtained by narrowing the huge gaps in transport and communications networks in the Asia Pacific:

- OECD (2011) estimated that global infrastructure requirements over the next two decades will be around \$50 trillion.
- The ADB (2009) estimated that developing Asian economies need to invest \$US8 trillion in economic infrastructure from 2010 to 2020;
- The American Society of Civil Engineers (2013) estimated that the United States should spend US\$3.6 trillion by 2020 on infrastructure.

Improving networks is not just a matter of planning new roads and grids to join dots on a map. The highest returns will come from attention to the efficiency of existing assets, including existing roads ports and airports. Efficiency can be improved in many ways, for example by expanding capacity (such as new container handling machinery, or adding new lanes to roads), adequate attention to operation and maintenance and by investing in skills and institutions.

Efficient international transport, communications and energy networks needs cooperation among governments; for example to move towards shared norms (such as common road safety rules) and inter-operable systems for moving people and products across borders. Meeting such objectives and working towards more transparent and more compatible regulations in different economies needs good institutional connectivity. Facilitating value chains also needs institutions that can cooperate smoothly with corresponding organizations of other governments, for example by adopting compatible software and data formats and, perhaps most importantly, mutual trust among officials in these institutions.

As the following diagram illustrates, efficient physical connectivity needs institutional connectivity which, in turn, requires people-to-people connectivity.



Upgrading transport and communications networks and institutions takes time, pointing to the need for long-term plans. These plans should not set grandiose end-points such as ‘a seamless regional economy by 2030’. Such ideals can never be reached – there will always be room for improvement, including by smart use of new technology. Medium-term targets are a better way to measure whether moving products and factors of production is really becoming cheaper, easier and faster. Reaching realistic targets, for example reducing the time taken to move products through ports and airports, will yield measurable benefits for the private sector, and build the confidence needed to achieve further improvements in connectivity.

Plans for better connectivity must be based on sound understanding of immediate as well as longer term constraints. Trillions of dollars will need to be invested in better transport, communications and energy networks in the next few decades. However, financing is not the main problem in 2015: right now, there are not enough well-prepared economic infrastructure projects compared to the funds available at remarkably low real rates of interest (Kocherlakota, 2015).

The most urgent challenges are to improve the enabling environment for investment, for example by:

- ensuring timely provision of land for expanding transport, communications and energy networks;
- implementing cost recovery policies to translate potential economic returns to financial returns.
- upgrading institutions to make effective use of economic infrastructure, for example by:
 - creating single windows for moving products across borders; and
 - using information technology to facilitate movement of people needed to manage and operate value chains.
- preparing a pipeline of bankable investments in economic infrastructure, learning from experience and using help from multilateral development banks.

Cooperation to boost connectivity

Individual governments are responsible for the policy decisions needed to meet the challenges listed above. Any government that wants its producers to succeed in global value chains should be making policy decisions on better customs procedures and other ways to reduce costs and risks of international commerce.

While individual governments will need to make most of the hard decisions on capacity-building and institution-building, they do not have to act alone. Coordinating reforms to facilitate value chains with other governments can add value to unilateral actions: economies can learn from the experience of others and international cooperation can lead to significant positive network effects.

The following examples illustrate opportunities for practical cooperation among governments to facilitate global value chains.

Business mobility – the APEC Business Travel Card network

Recent experience of setting up, managing and adapting international value chains has shown the need for smooth business mobility in parallel with flows of products, financing and information. The APEC Business Travel Card (ABTC) has proved to be an effective means to facilitate the movement of business people around the Asia Pacific.³

The ABTC system was pioneered by six governments, without any need to negotiate international, legally binding rules. An iterative process of learning together helped to improve efficiency by sharing expertise, software and risk assessment techniques – other examples indicate that a similar process is needed for most cooperative arrangements to reduce the costs and risks of value chains.

The pioneering members of the ABTC designed it as an ‘open club’ – a cooperative arrangement that aims to attract new participants, thereby adding to positive network effects. All other APEC governments have since joined the arrangement once they understood its benefits.

ASEAN Single Window for customs clearance

ASEAN governments have all agreed to set up single windows for customs clearance in their own economies to improve their prospects for participating in international value chains. They are cooperating to harmonize their processes to create the ASEAN Single Window for customs clearance – they are doing so because they are aware of the need for efficient customs procedures and they are helping each other because they have a shared self-interest in efficient customs procedures throughout ASEAN.

The regional system of single window needs to be backed by smooth exchanges of information and compatible software for entering and processing data and shared norms for risk assessment inspections. The necessary procedures and regulations are being developed by means of an iterative process of learning together – adapting existing legal frameworks to allow the effective use of information and communications technology to facilitate cross-border electronic exchanges. Officials, drawing on private sector expertise, are helping each government to draft, then apply any necessary changes in domestic legislation (Luddy,2012). Such legislation needs to provide for flexibility, since operational norms will need to change continually to draw on international experience and to take advantage of new technology.

It would be counter-productive to try to impose detailed, binding international operational norms in a constantly evolving technological environment. Fortunately, there is no need to rely heavily on any ASEAN-wide authority to enforce compliance – every participating ASEAN government has a strong incentive to apply the norms agreed by this iterative cooperative policy development process.

The most difficult challenge is to help all ASEAN governments to upgrade their institutions and skills to operate national single windows efficiently. Such cooperation relies on an ongoing will to share relevant information, experience, expertise and

³ Up-to-date information on the APEC Business Travel Card is available at:
<http://www.apec.org/About-Us/About-APEC/Business-Resources/APEC-Business-Travel-Card.aspx>

technology, which needs to be driven a perception of self-interest to reap the positive network effects of efficient single windows throughout the region. The necessary will to share and to learn together cannot be created or sustained by a one-off negotiation of binding rules in a trade agreement.

Efficient ports and airports

An important opportunity for reducing transaction costs of both domestic and international commerce is to invest in improving the efficiency of Asia Pacific ports and airports. Such improvements would allow more population centers to become engaged in production networks. Reducing shipping costs would be of particular benefit to Asia Pacific economies such as Indonesia and the Philippines which include many islands as well as to help integration Pacific Island economies with APEC economies.

Some ports in the Asia Pacific have developed world's best practice while others have a long way to go to catch up. Moreover, the systems that operate in one place are not necessarily compatible with those in another. International cooperation (for example among APEC economies) can encourage sharing good practice, capacity building and developing a commitment to interoperability, by means of harmonizing standards and regulations. As noted in Wilson et al (2003), such an initiative to upgrade ports would lead to significant economic gains. The potential gain would be greater if the efficiency of airports and currently minor shipping ports could also be raised half-way to current best practice.

All Asia Pacific governments are already eager to improve their trade logistics. Therefore, the investment needed to enhance the efficiency of ports and airports will happen at some time. Discussions, sharing information and experience, then cooperation among economies interested in making improvements, can make these investments happen sooner and at less cost, compared to separate efforts by individual economies.

It will take some time and effort to define the scope of a large multi-year ports and airports upgrading program. Improving efficiency is not just a matter of building more infrastructure. Enhancing the efficiency of ports or airports will also need investment in policy development, institutional development, training as well as investment in information technology and hardware.

Common features of cooperative arrangements

These examples of cooperation indicate that the greatest challenge is not the design of the arrangements, but to create the necessary institutional and human resource capacity to make the arrangements work well over time and to seize new, or wider opportunities. Perhaps the most important common feature is that cooperative to improve physical, institutional or people-to-people connectivity lead to mutual benefits to all participants. Moreover, the wider the participation, the greater the benefits to all due to positive network effects. In technical terms these arrangements are positive-sum games – and game theory tells us that participants have a self-interest in obeying the rules of the game.

Effective cooperative arrangements, for examples, regional single windows, do require coordinated reforms to harmonize norms of operation. But they do not require a mechanism to enforce them. Where cooperative arrangements lead to

mutual benefits, each governments has a self-interest in agreeing to, then implementing these norms.

The potential for positive network effects means that the arrangements are best designed as open clubs which can be joined by any other government that demonstrates that it is willing and able to implement the norms of the arrangement among existing members. Moreover, it is in the interest of members to encourage and help others to join.

Open club cooperative arrangements can be initiated by any group of pioneer governments: for example, the ABTC and the ASEAN Single Window system have been created by different group of governments, but they could each lead to Asia Pacific wide, or even global arrangements to facilitate value chains.

Yet another advantage of positive-sum game is that each individual game can be played on its own merits – there is no need for package deals. For example, there is no need to delay implementing, or widening a system of single windows while waiting for a separate cooperative arrangement to enhance a system for visa facilitation. There is certainly no need to make practical arrangements to improve value chains wait for a trade deal to liberalize tariffs on sensitive products.

Concerted unilateral facilitation

The examples above, and many other opportunities to facilitate global value chains point to the scope for concerted unilateral decision-making.

Smart governments want their producers to become productively engaged in international value chains. They can act unilaterally, in many cases, to help their firms plug into these international networks. For example, all governments should do their best to streamline customs procedures – they should set up national single windows, even if their neighbours are not yet interested. And every government should be investing in better domestic transport, communications and energy networks, no matter what others are doing.

However, the benefits of unilateral steps to improve connectivity can be greatly magnified by working with others; encouraging them to make concerted efforts to strengthen their domestic connectivity and to link their efforts to other economies.

As explained by Baldwin (2011), many Asia Pacific governments moved unilaterally to cut tariffs and other border barriers to trade in order, acting in their own self-interest. Their ability to overcome the vested interest of protected producers was strengthened by the fact that other Asia Pacific trading partners were cutting their border barriers within the process of concerted unilateral liberalization agreed within APEC (Elek, 2005 and Garnaut, 2005).

During the lead-up to the vital 2015 Paris conference on climate change, most governments are also engaged in concerted unilateral decision-making – they are making unilateral, voluntary commitments to limit their future greenhouse gas emissions.⁴ Their capacity to make substantial commitment is helped by the knowledge that others are sharing the global task of containing global warming.

⁴ These Intended Nationally Determined Contributions (INDCs) to limiting greenhouse gas emissions are set out at United Nations (2015).

These precedents are relevant – so it may be useful to define a strategy for better connectivity to facilitate value chains as a process of concerted unilateral facilitation. This strategy can build on the ways existing forums are already cooperating to improve connectivity.

ASEAN Economic Community (AEC)

Southeast Asian governments are committed to creating the ASEAN Economic Community. They have adopted an ambitious Master Plan for ASEAN Connectivity (MPAC) as a vital part of that commitment. That plan sets out strategies for:

- harmonizing economic regulations, including for investment and competition policy;
- mutual recognition of standards and qualifications;
- enhanced connectivity of transport, communications and energy infrastructure;
- promoting electronic transactions and enhanced trade logistics through e-ASEAN.

In each case, the plan calls for cooperation among ASEAN governments and their private sectors to upgrade skills and institutions and to ensure that their economic policies can attract the financial investments in physical, institutional and people-to-people connectivity.

Most of the specific arrangements to implement the MPAC are being designed by a process of concerted unilateral facilitation, agreeing on the norms that are needed to make arrangements like the ASEAN Single Window work, then sharing the information, experience, expertise and technology to help economies at quite different stages of development to build the necessary human and institutional capacity.

Asia Pacific Economic Cooperation (APEC)

Since its establishment in 1989, APEC has made a useful contribution to people-to-people connectivity. Officials from all around the Asia Pacific have shared experience and expertise to help all their economies reach more of their potential for sustainable growth. Some of this work is to encourage structural adjustments within their economies, for example to bring policies more closely in line with APEC's agreed guiding principles, for example on investment and competition policy (Elek, 2009).

Consultations have also led to closer institutional connectivity. The APEC Business Travel Card is the best-known cooperative arrangement. There are many others, including sharing expertise and technology among customs agencies, which are delivering significant economic benefits. Some of the policy analysis by APEC groups, such as the work on supply chains, is making an indirect contribution to physical connectivity by identifying ways to reduce choke points (APEC, 2012b). Much more could be done by investing more resources in human resources and institutional development.

In an example of concerted unilateral facilitation, Indonesia set up a public-private partnership (PPP) Centre to help attract private investment into economic infrastructure (APEC 2013a). This centre is acting as a pioneer of what is expected to

become a network of PPP Centers around the region, sharing and encouraging the adoption of successful strategies for designing and implementing these partnerships.⁵

APEC leaders adopted a sound Framework for Connectivity (APEC, 2013b) in 2013 to create a seamless, well-connected Asia Pacific region. However, the 2014 Blueprint for Connectivity (APEC, 2014) falls well short of a plan comparable to ASEAN's MPAC. It does not attempt to define the nature and size of investments in capacity-building, software and hardware needed to connect the region. Moreover, APEC has not considered any strategy for mobilising the resources needed for any significant improvements in the region's transport, communications and energy networks.

Regional Comprehensive Economic Partnership (RCEP)

The RCEP process not moved beyond trying to negotiate a trade agreement., so this new process has yet to make any worthwhile contribution to connectivity.

The RCEP has the potential to boost connectivity if participants agree to work towards wider objectives. In principle, participating economies could work towards a wider version of the AEC.⁶ That work could commence by drawing up an RCEP master plan, comparable in scope and connectivity to the one guiding physical, institutional and people-to-people connectivity within ASEAN (Elek, 2014)

Accelerating concerted unilateral facilitation

Each of these existing forums could accelerate their cooperation to enhance connectivity. Opportunities include:

- ASEAN governments could collectively invest more resources to define a pipeline of bankable projects to improve, or fill gaps, in their transport and communications networks;
- APEC could build on its successful business travel card system to include more categories, perhaps starting with officials, academics and then tourists.
- drawing from ASEAN's experience, other economies could set up, or adapt their national single windows to be inter-operable with the ASEAN Single Window system, facilitating value chains more widely throughout Asia.

Concerted unilateral facilitation of value connectivity does not have to happen within existing groups such as ASEAN or APEC. Cooperative arrangements pioneered in any forum can be extended to any other economy, anywhere. For example, other economies, perhaps Cambodia, Laos, Myanmar, or even Brazil, could be encouraged to become part of the APEC Business Travel Card system whenever they demonstrate their capacity to implement the necessary security norms and adopt compatible software. Over time, a voluntary process of cooperation could lead to a 'Smart Economy Travel Card', with potentially global coverage. In another example, many economies already participate in 'trusted traders' systems; this cooperative arrangement allows containers (for example from New Zealand) to pass through the ports of the United States and other participants without further security checks (Humphries, 2014).

⁵ G20 Leaders, meeting in Australia in 2014, have launched The G20 Global Infrastructure Initiative, including a Global Infrastructure Hub (see G20, 2014)

⁶ The objectives and principles for RCEP are set out in ASEAN (2012)

International economic cooperation to improve connectivity can take full advantage of variable geometry. If cooperative arrangements which reduce costs of delays along value chains are designed as open clubs, then concerted unilateral facilitation can link more and more economies in ever-widening ways.

If any government takes steps which improve physical, institutional and people-to-people connectivity within their own economy or with other economies, that provides an example for other governments. And any pair, or group of, governments can pioneer a mutually beneficial cooperative arrangement, such as moves to promote business mobility. If that cooperative arrangements is seen to be effective, and it is designed as an open club, then any other economy can join, whether or not they are members of an existing institution, such as APEC, or a free trade agreement.

As discussed below, membership of a formal FTA is neither necessary, nor sufficient to improve connectivity with other economies.

The role of free trade agreements

More and more economies are already linked by bilateral or regional preferential trade agreements (often called Free Trade Areas). In recent years, these agreements contain chapters related to connectivity, for example on customs procedures or more general dimensions of trade facilitation.

Chapter 7 of the Korea-US FTA on Customs Administration and Trade Facilitation is a typical example.⁷ Some of its detailed articles, for example on transparency and release of goods require governments to adopt sensible policies to facilitate trade. Accepting these rules can ensure that governments get rid of policies that increase costs and risks of moving products across border barriers. However, imposing binding rules does not mean that all opportunities to facilitate value chains are followed up.

Improving connectivity more than obeying rules – governments, working with each other, and with their private sectors, need to design and implement domestic reforms or international cooperative arrangements within that framework.

The trade agreement chapter does encourage such progress, asking that Parties to the “endeavour” to take useful further steps. Examples include:

each Party shall endeavor to develop electronic systems that are compatible with the other Party’s systems, in order to facilitate bilateral exchange of international trade data, and

the Parties shall endeavor to conduct joint training programs and to exchange information on customs laboratory techniques.

Such statements of good intentions are also helpful – they outline an agenda for future facilitation. Asia Pacific governments which are committed to moving towards a more seamless environment for regional business should be able to agree to apply such provisions to facilitate value chains that link their economies to the rest of the world.

Any government could adopt these basic undertakings set out in in this chapter of the Korea-United States agreement and/or in the relevant model chapters for trade agreements adopted by APEC ministers (APEC, 2012a). Doing so would indicate that they were interested in encouraging investment in value chains involving firms from

⁷ available at:

https://ustr.gov/sites/default/files/uploads/agreements/fta/korus/asset_upload_file732_12705.pdf

their economies. Moreover, governments can commit themselves to cooperating in the ways outlined in these chapters with any other economy, whether or not they had negotiated an agreement with them. There is no reason to delay such mutually beneficial opportunities to cooperate voluntarily, whether or not there is an agreement on matters like trade liberalization, which need to be negotiated.⁸

Making such minimal commitments to facilitate value chains is no more than a beginning. They are a foundation for implementing policies to arrangements to reduce the costs or risks of value chains. The next steps are to make unilateral decisions to improve physical, institutional and people-to-people connectivity and/or to design and implement cooperative arrangements with other governments. Taking those steps is essentially a process of concerted unilateral facilitation, similar to what is already happening in APEC or the ASEAN Economic Community.

In other words, concerted unilateral facilitation to improve connectivity can take place among any group of economies whose governments want to help their firms to plug into value chains. Parties to trade agreements are just one example of such a group. All such groups will need more than statements of good intentions – they will need to invest both time and money to improve connectivity.

Mobilising resources for better connectivity

The most urgent challenge is to increase investment in policy development, skill formation and institutional modernization; in order to:

- enhance the capacity to design and prepare projects to fill gaps in transport and communications infrastructure;
- ensure efficient project management during the construction of new infrastructure (or to expand and/or rehabilitate existing infrastructure);
- install and operate the software needed to ensure physical infrastructure can be used efficiently;
- implement pricing and other market management policies that provide incentives for efficient performance and ensure adequate revenue to service borrowing as well as for adequate operation and maintenance.

The financing needed for policy development and other capacity-building needed to meet these needs are quite small relative to current investments by governments. However, very few governments are devoting even these modest resources. Unless the capacity to design and implement projects is improved, gaps in infrastructure will continue to widen.

If and when governments make the necessary investments in policy development, a pipeline of bankable projects should be ready for financing. Trillions of dollars will then be needed in the next two decades to close the currently widening gaps in economic infrastructure in Asia and the rest of the world.

⁸ There is no need to wait to include such provisions to facilitate value chains in free trade agreements. Adopting them unilaterally will encourage commerce with all other economies, not just partners in trade deals, without having to wait for the conclusion of negotiations on many other issues. Moreover, adopting these common sense provisions will not upset the 'balance' of any potential trade agreement - refusing to cooperate on practical and mutually beneficial opportunities to facilitate value chains will not create any significant leverage in negotiations about politically difficult issues, such as market access for sensitive products.

It will not be easy to mobilize such large financing rapidly. But it should be possible for some governments with good policies and working with good financial institutions, to set some early examples of how public and private investment can be channelled into economic infrastructure.

Governments have financed by far the largest share of these investments so far – that will not change rapidly. Most of the investments in better physical connectivity are domestic or international public goods. Grenville (2013) explains that it is not realistic to expect direct private sector investment to finance a large share of investment in public goods. At the same time, the amount of public investment that will be needed for significant additional investment in physical connectivity is much larger than most governments can expect to finance from public savings. It will be necessary to attract finance from global capital markets – finding ways to steer some more of the global pool of savings, including private sector into economic infrastructure.

Extensive research has identified several potential channels. These include:

- public-private partnerships (PPPs) to draw on saving accumulated by institutional investors (including pension and sovereign wealth funds);
- intermediation by development banks who can borrow from international capital markets on good terms, then on-lend to governments (or group of governments) to finance economic infrastructure.

PPPs are not a magic solution for drawing in the private sector; they are not always suitable for financing domestic or international public goods. It is not efficient to try to attract direct private investment in individual projects - individual firms or institutional investors cannot, and should not, be expected to have the expertise to evaluate individual economic infrastructure investment opportunities. A more efficient strategy is needed to intermediate private savings into infrastructure that does not require investors to evaluate the costs, rates of return and risks of particular projects.

Development banks, such as the World Bank and the ADB, are designed to borrow from global capital markets and on-lend to government agencies to invest in national or international public goods. Their credit ratings allow them to borrow at relative low rates. They can find ways of pooling the risks of individual projects to help attract some direct investment of private savings, including from institutional investors and sovereign wealth funds. Multilateral development banks can also minimize risks for investors by ensuring that infrastructure projects are well managed during construction and operation.

Development banks have been meeting these challenges for decades. However, existing multilateral development banks have not made an adequate contribution to financing economic infrastructure in recent years. Net lending on commercial terms by multilateral development banks has been negative in five of the last ten years.⁹ They have the expertise to scale up their support for better connectivity. Unfortunately, they do not have an adequate capital base for that and political problems make it hard for them to enlarge their capacity.

At a time of unprecedentedly low interests, deficient global demand and growing gaps in much-needed transport, communications and energy networks, the world needs new channels to fix this massive failure of global capital markets. The new Asian Infrastructure Investment Bank (AIIB) is, therefore, a welcome and timely initiative.

⁹ Source: OECD statistics available at: <http://stats.oecd.org/Index.aspx?datasetcode=TABLE1>

The Asian Infrastructure Investment Bank

The new Asian Infrastructure Investment Bank (AIIB) will boost development banking to begin to fill gaps in economic infrastructure, starting in Asia. China has established the AIIB, with initial capital of US\$100 billion raised from 57 foundation members. China's backing will ensure the AIIB's early access to capital; the constraints to expanding operations are more likely to be limits of expertise (Elek, 2014a).

Cooperation with existing multilateral development banks, including the World Bank and the ADB could allow a rapid growth of financial to boost connectivity. Capital raised by the AIIB can be complemented by project selection, preparation and management skills from existing MDBs. The World Bank and the ADB have stated that they are willing to cooperate in this way (Donnan, 2105).

The AIIB's capacity to sustain a rapid expansion of activity will depend on whether it operates along sound commercial lines. Some of its early lending should be devoted to help governments create a pipeline of bankable projects in order to help establish a record of successful operations.

The prospects for making sound investments will encourage governments to borrow from the AIIB (or other development banks). The potential for successful infrastructure investment that will yield financial returns adequate to repay loans depends on whether investments fit into a coherent long-term vision and plan for better connectivity among economies.

'One belt, one road'

The 'one belt, one road' initiative, again by China can provide an overarching framework for better physical, institutional and people-to-people connectivity. These new land and sea silk routes are designed to connect China's economy to the rest of the world, with an early emphasis on links towards Europe through the rest of Asia.

The principles and objectives of the proposal have been set out in detail by the Chinese government, with emphasis on joint consultation and mutual benefit.¹⁰ The initiative demonstrates China's stated commitment to shouldering more responsibilities and obligations within its capabilities, using its strength in infrastructure construction and financial resources. Any other government can participate, adding to positive network effects (Liu, 2015)

Recognising the capacity constraints to better connectivity among economies are weaknesses in transport and communications links China has indicated it is willing to lead the massive investments required both in the actual infrastructure and the human resources and institutional modernisation needed to make full use of it (Xi, 2015).

China is also willing to back its One Belt, One Road initiative with the necessary financial resources: options include the already announced US\$40 billion Silk Road Fund, the China-ASEAN Interbank Association, the Shanghai Cooperation Organisation Interbank Association and the China-Eurasia Economic Cooperation Fund (Cai, 2015). Perhaps most importantly, the initial US\$100 billion capital base of the AIIB can leverage considerably larger amounts of finance from international capital markets at a time of sagging global demand and extremely low interest rates.

¹⁰ http://news.xinhuanet.com/english/china/2015-03/28/c_134105858.htm

Other multilateral development banks, including the World Bank and the Asian Development Bank, have not only declared their willingness to help the AIIB succeed, but are also likely to look for ways to accelerate their own lending for essential infrastructure in order to retain their relevance. At last, there is some prospect that the US\$8 trillion gap in economic infrastructure can begin to be narrowed.

The initiative provides an overarching framework for many ongoing efforts to improve connectivity and cooperation between China and other economies (Brant, 2015). India may, at last, be linked into East Asian supply chains (Gupta, 2015). Implementation of the MPAC will be accelerated (Basu Das, 2015). Central Asian countries are likely to be able to finance power stations, manufacturing plants and pipelines, perhaps in return for gas contracts with China. Many other investments, including the improved transport links between China and Pakistan (Ashraf, 2015) will also be subsumed into the 'one belt, one road' vision.

It will take many years to implement this bold and innovative initiative. However, once the benefits of early investments begin to deliver significant and measurable benefits to better-connected economies, the 'one belt, one road' program is likely to be followed by similar programs that can form a network of global cooperation to boost physical, institutional and people-to-people connectivity.

Conclusion

Improving physical, institutional and people-to-people connectivity is the most efficient way to reduce cost and risks of value chains. The most immediate constraints are limits of skills and institutions to prepare, implement and manage projects. Most of the reforms to overcome these constraints can, and should, be implemented by individual governments, in their own interest. Coordinating these reforms with other governments provides opportunities to learn from others and leverage the gains from unilateral reform through positive network effects. If cooperative arrangements which reduce costs of delays along value chains are designed as open clubs, then concerted unilateral facilitation can link more and more economies to improve connectivity among all economies.

ASEAN and APEC are good examples of voluntary cooperation to improve connectivity. However, they have made only modest gains, due to inadequate investment in the capacity to design, implement and finance projects. The new AIIB can help overcome these capacity constraints, then move on to finance investment to help upgrade currently weak transport, communications and energy networks. The 'one belt, one road' initiative will provide a framework for the investments needed in Asia and set an example for efficient global cooperation to facilitate value chains.

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