Triangular Development Cooperation as a Platform for Japanese Infrastructure Exports, Part 1

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I. Introduction

This article reviews and discusses the potential of TDC (triangular development cooperation) within the framework of ODA (Official Development Assistance) in strengthening the export of Japanese infrastructure-related goods and services to overseas markets. The TDC is a concept of economic partnerships between various stakeholders in developed as well as developing countries that is based on comparative economic advantage.

To elaborate on the utility of the TDC model for international development as above, first, this article describes the difficulties faced by Japanese infrastructure and other companies in doing business and winning infrastructure project tenders in developing countries. Then, this article introduces the conceptual framework of TDC within the context of the infrastructure export sector, which is the Government of Japan's term for exports of not only infrastructure-related machinery and components, but also related services and assets. Finally, this article provides an illustration of the differences in business, political and other types of opportunities and risks between P (Partner)-type developing countries which are mainly middle-income countries, and R (Recipient)-type developing countries which are mainly low-income countries.[1] [2] The said opportunity-risk analysis is a prelude to Part Two, which will elaborate on three hypothetical models of TDC that may apply to Japanese infrastructure exports and investments.

[1] For the current 2015 fiscal year, low-income economies are defined as those with a GNI (Gross National Income) per capita, which was calculated by using the World Bank Atlas method, of USD 1,045 or less in 2013. Accordingly, middle-income economies are those with a GNI per capita of more than USD 1,045 but less than USD 12,746, and high-income economies are those with a GNI per capita of USD 12,746 or more. "New Country Classifications," The World Bank, accessed October 22, 2014,
http://data.worldbank.org/about/country-and-lending-groups.

[2] The terminologies of the participant countries in TDC (triangular development cooperation), namely P (Partner)- and R (Recipient)-countries are adopted from the Japan International Cooperation Agency's (JICA) models of TDC that leverage the strengths of middle-income and low-income countries to increase the efficacy of ODA (official development assistance) for all relevant stakeholders. See Akio Hosono, Triangular Cooperation: Major features of JICA's approach and lessons learned, (Japan, Japan International Cooperation Agency).

Ⅱ. Japan's Position in the Global Infrastructure Sector

Non-OECD (Organization of Economic Cooperation and Development) members countries, which are mostly developing countries already account for nearly half of the global GDP, and are forecast to constitute around 60% of the global economy by 2030.[3] Between 1970 and 2010, the share of developing countries in global industrial production in current prices increased dramatically from 13% to 41%, while their share in global exports of manufactured goods increased in a similar fashion from 7% to 40%.[4] Thus, Japanese infrastructure companies may no longer view rapidly-industrializing developing countries as mere markets for advanced products and technologies, but also as partners in developing infrastructure abroad.

However, Japanese infrastructure companies cannot be said to be in a strong position in the infrastructure markets of developing countries. One reason is that, competition among global infrastructure companies for winning infrastructure projects in those countries is evolving into one that is price-based and commoditized. Thus, well-established infrastructure companies from middle-income countries such as China, India, Brazil, Malaysia and other countries, namely the Brazilian construction and engineering firm, Odebrecht and the South African power utility company, Eskom, among many others, have been able to win tenders for EPC (engineering, procurement and construction) projects at the low- to mid-end of the spectrum of price and technology. As a recent example, Malaysia's Scomi Group has won a tender to procure equipment and trains for Brazil's Sao Paulo Line 18 monorail project.

Further, companies from Western developed countries such as Germany and France are able to compete with such firms due on their know-how in project management and infrastructure O&M (operations and maintenance), which are niche, bespoke and high value-added services that are less likely to be commoditized.

Unfortunately, Japanese companies have traditionally been focused on exporting infrastructure-related goods such as components and machinery, and thus may find it hard to compete with either lower-cost developing-country companies or Western companies for work in overseas infrastructure projects.

In the light of the evolution of the positioning of developing countries within the global infrastructure sector as above, the role of TDC (triangular development cooperation) has been highlighted and has become a prominent agenda in the international development sector in the last few years while SSC (South-South cooperation) has been in discussion for decades. [5]

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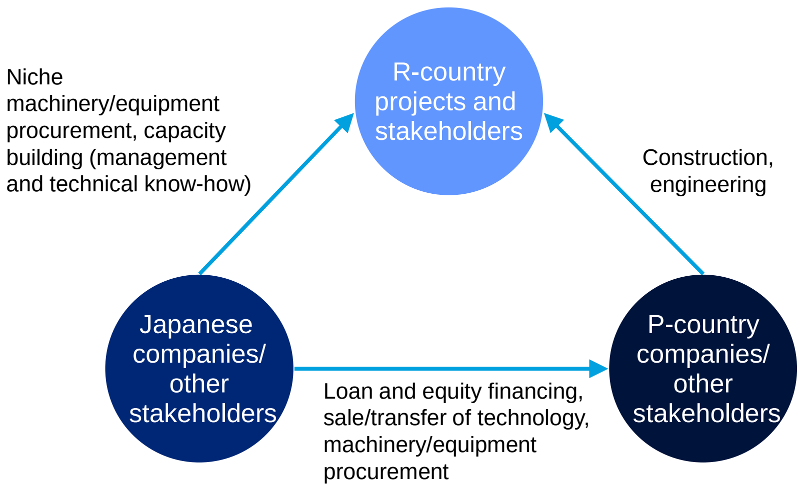
[3] "Economy : Developing countries set to account for nearly 60% of world GDP by 2030, according to new estimates", OECD, accessed July 18, 2014, http://www.oecd.org/dev/pgd/economydevelopingcountriessettoaccountfornearly60ofworldgdpby2030accordingtonewestimates.htm
[4] Deepak Nayyar, "Developing countries in the world economy," Oxford University Press Blog, October 16, 2013, accessed August 5, 2014. http://blog.oup.com/2013/10/developing-countries-in-the-world-economy/
[5] Sachin Chaturvedi, Characteristics and Potential of TDC (triangular development cooperation): Emerging Trends, Impact and Future Prospects, (New York, UNDESA, 2012).

III. On the TDC (Triangular Development Cooperation) and Japan's Infrastructure Export Sector

As mentioned earlier, TDC is a concept whereby a developed and technologically advanced country partners with and builds capacity in a P (Partner)-type developing country which has achieved middle income status and above. Then, the P-country, sometimes together with the said developed country, aids and partners with R (Recipient)-type developing countries that are less developed and have lower incomes per capita than the both the developed and P-country and which may include Least Developed Countries (LDCs). This concept was developed due to the perceived higher synergy that may result from a reduced socio-economic and cultural gap between a developed country and a developing country with the entry of a middle-income country as an intermediary. TDC is a variant of South-South cooperation, where cooperation between developing countries is augmented by technological, capital and human resources inputs from developed countries.[6]

Considering the aforementioned TDC concept and the problems of the lack of competitive advantage of Japanese infrastructure companies in winning infrastructure project tenders abroad, one idea is to utilize existing the Government of Japan's aid such as export credits for financing Japanese exports to overseas markets, ODA and investment insurance within the partnership framework between the Government of Japan or Japanese companies on one side, and the Partner country (P) and the Recipient (R) countries on the other. TDC can be used as a hedge to the high cost and risk of doing business in developing countries, because the costs and risks may be distributed among P-countries and R-countries. Also, by focusing on niche sectors and cooperation with local business partners, business competition may be reduced for Japanese companies. Following the above, an eventual goal is to develop P-countries into viable economic and business partners of governments and companies or banks from the developed countries, so that the P-country parties are able to share the risks and costs of investing in both P- and R-countries with the developed-country parties. Figure 1 below is an example of how the TDC model can be applied in the infrastructure export sector.

Figure 1: General TDC model for the infrastructure export sector



Source: Deloitte Tohmatsu Financial Advisory Co., Ltd., based on JICA's (Japan International Cooperation Agency) reports.

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[6] The Government of Japan has been working on the TDC concept for over 10 years, and its first triangular cooperation scheme was through the third country training program (TCCP) scheme with Brazil in 1985.

According to the above general TDC model for the Japanese infrastructure export sector, the Government of Japan or private-sector banks and companies may focus on providing equity investment and project financing, and also on selling technology and machinery to the P-country companies. At the same time, the Japanese parties and companies can also provide niche technology and machinery/ components, and management and technical capacity-building to infrastructure projects in R-countries.

Also, the Japanese parties may focus on niche sectors such as smart cities in middle-income P-countries, where advanced technology and high controls systems integration are in demand. Further, Japan can aid in strengthening the rule of law, regulations and policy-making processes, and also in building capacity in technology and corporate governance in the P-countries, which can then improve the P-countries' economic competitiveness, and hence, future business opportunities in the said countries for Japanese businesses. Then, Japan and the P-countries can focus more on basic capacity-building in the less-developed R-countries, and on facilitating the P-countries' companies to build basic infrastructure in the R-countries. The model may be augmented by project finance and financial aid including ODA, as well as project insurance and other services from international organizations such as the World Bank, whose presence in high-risk countries may be seen as reassuring for private and government project lenders.

In addition, since Japan will be in a working partnership with the P-countries, the relationship with P-country infrastructure companies is likely to be more collaborative than competitive, thus reducing the cost of business for Japanese companies within the parameters of the infrastructure export TDC models.

IV. Illustration of Opportunities and Risks in P (Partner)- and R (Recipient)- countries

As alluded to earlier, hypothetically, a Japanese infrastructure company doing business abroad may be able to reduce business and political costs and risks by leveraging the respective strengths and values of P-countries and R-countries. While the exact opportunities and risks for infrastructure companies may vary across individual countries, we may summarize that such opportunities and risks can be categorized into that of the middle-income P-countries and low-income R-countries, as shown in Table 1 below. Note that the list in the table below is only an illustration, and is non-exhaustive.

Table 1: Examples of opportunities and risks of P- and R-countries (non-exhaustive)

		P-countries (middle-income, e.g. Brazil, Malaysia)	R-countries (low-income, e.g. Myanmar, Mozambique)
Oppor-tunities	Financial	● Relatively strong local banks which can provide local-currency loans ● Relatively financially-strong local governments which can provide financing options/ guarantees	● More opportunities for foreign banks to operate autonomously without excessive foreign investment restrictions, due to the lack of financial over-regulation

		● Relatively developed financial infrastructure (i.e. for earnings remittance and other purposes)	
	Business	● Relatively strong local supply chains ● Relatively strong local business partners with an established market presence	● The R-countries' greenfield climate encourages P-country companies to do business in partnership with Japanese companies ● More roles for foreign government development agencies and international organizations
	Political/ Regulatory	● With the right connections, the P-countries' more experienced civil service can prove helpful to helping investors navigate the local regulatory environment, as compared to the R-countries' civil service ● Local law and other professional services firms can be strong partners	● Relative lack of foreign investment restrictions due to the lack of incentive to protect domestic industries which may not be as strong as the P-countries' industries ● Through targeted involvement of international organizations, legal measures such as quality arbitration can be assured
Risks	Financial	● Relatively high and variable interest rates ● Variable local currency exchange rates	● Very high and variable interest rates ● Lack of strong local financial institutions to function as local financing partners
	Business	● Relatively low level of management and technical know-how ● High price-based competition with infrastructure firms from P-country and other developing countries.	● High logistics cost ● Lack of bankable[7] projects ● The business feasibility of projects may not fit risk appetite of foreign investors
	Political/ Regulatory	● Lack of regulatory clarity and consistency ● Corruption	● Higher probability of force majeure events like military coups, and severe damage from natural and man-made disasters due mainly to poor physical and institutional infrastructure ● Lack of working laws on PPP (Public-Private Partnership) and other infrastructure projects ● Corruption

Source: Deloitte Tohmatsu Financial Advisory Co., Ltd.

[7] Project or proposal that has sufficient collateral, future cash flow, and high probability of success, to be acceptable to institutional lenders for financing. See Business Dictionary, "Bankable: Definition", accessed January 2 2015, http://www.businessdictionary.com/definition/bankable.html#ixzz3QbFvfIUj.

From Table 1, we can infer that the P-countries lie on the development spectrum between developed countries like Japan, and R-countries. Based on this inference, when compared to R-countries, on the one hand, P-countries generally have stronger rule of law and regulations, a more robust finance industry, better infrastructure and stronger local business partners. On the other hand, P-countries may have more restrictive foreign investment regulations to protect their relatively strong domestic industries and thus have less room for involvement of international organizations and foreign companies to participate in infrastructure projects. Quantitative data may back this inference up: in 2012, an UNCTAD (United Nations Conference on Trade and Development) discussion paper shows that on average, the middle-income developing countries' trade openness indices for the years 1980 and 2010 are generally lower, and its average tariffs in 2007-2009 are generally higher than that of low-income developing countries.[8]

V. Moving to the TDC Models for the Japanese Infrastructure Export Sector in Part Two

In Part Two, we will introduce and elaborate on three hypothetical models of TDC that may apply to Japanese infrastructure exports and investments. The three models are in the EPC (Engineering, Procurement and Construction) sector (the "indirect participant model"), the O&M (Operations & Maintenance) sector (the "capacity-builder model"), and EPC and O&M for Niche Sectors (the "partnership model"), respectively.

[8] United Nations Conference on Trade and Development. Trade, Income Distribution and Poverty in Developing Countries: A Survey. (Discussion Papers No. 207, July 2012): 10.