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Japanese and Chinese infrastructure development strategies in Central Asia

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Abstract

This paper compares Japanese and Chinese infrastructure development strategies in post-Soviet Central Asia (CA) by analyzing the similarities and differences in the approaches of the two Asian economic powers. This paper develops several arguments with respect to the Japanese and Chinese approaches to infrastructure development in CA. This paper argues that the discourse of mutually exclusive interests in China and Japan's development of various infrastructure-related projects in CA is empirically unproven. Most of the Chinese engagements emphasize the creation of energy and transportation infrastructure (construction), while Japan's main areas of focus are the maintenance, modernization, and rehabilitation of current infrastructure. Thus, this paper suggests that China positions itself as CA's leading economic partner, while Japan is CA's leading assistance provider. These two roles have different implications. Furthermore, the current infrastructure engagements of Japan (from assistance to partnership) and China (from exploitation to contribution to the region) in CA demonstrate both countries' attempts to adjust and search for new opportunities.

Keywords: BRI; Central Asia; China; High Quality Infrastructure; Japan; Silk Road

1. Introduction

In the years following the collapse of the Soviet Union, various infrastructure facilities in Central Asia (CA) remained as legacies of Soviet policies. The majority of railroads have historically connected CA to Europe and the Middle East by passing through Russian territory. The goods transported through energy transportation networks were similar to those of the Soviet era, which included mostly mineral resources (oil, gas, etc.). Agricultural products (such as cotton) were also transported to Russian and other East European markets. Therefore, many have claimed that the infrastructure constructed in the CA region during the Soviet years, although very beneficial for regional states, still constitutes part of the Soviet and post-Soviet colonial structure as far as CA is concerned. In addition, the products produced by CA producers frequently duplicate each other, thus making CA states competitors on the international market and demotivating the development of infrastructure between CA states. Therefore, the rise of China and the increasing role of Japan in this region have both been cautiously welcomed by the expert community and politicians because they are bringing new infrastructure projects of a decolonizing nature and not only linking China and Japan to CA states but also linking regional states to each other (Dadabaev, 2014, 2018a, b, c). Some of these new initiatives have included the China-supported BRI (Belt and Road Initiative) infrastructure projects and the creation of the Asian Infrastructure Investment Bank (AIIB). Japan-supported infrastructure (ODA-related, Central Asian Regional Economic Cooperation (CAREC), Quality Infrastructure concept, etc.) in the CA region, financed through the Asian Development Bank and the Japan Bank for International Cooperation, has also been hailed as supporting the independence of these countries and providing necessary networks to sustain and develop their economies. At the same time, such intensification of infrastructure-related projects in the CA region has led many to describe this situation in alarmist tones (Auezov, 2013, 2015). The most recent example of such alarmist rhetoric is anti-Chinese riots in Kyrgyzstan where local residents protested Chinese investments into gold mine as something which brings destruction to local livelihood and environment (*Kyrtag*, 13 April 2018). PM Iskakov announced that these protests are fueled and supported by certain politicians and political forces. Such riots and protests are not exceptional and happen in CA frequently in recent years (Dadabaev, 2013b). In particular, certain warning concerns have been voiced about the neo-colonizing potential of Chinese-financed and Chinese-constructed projects and about the possibility of a new Great Game among various powers – including Japan – as part of the rivalry over regional resources and infrastructure projects (Liu, 2016). The motivations behind these powers involvement in infrastructure-related projects have been questioned.

In response to such alarmist rhetoric, this paper enquires into the motivations behind China's and Japan's engagement in infrastructure-related projects in the CA region. The main questions to be considered in this paper are the following: How can Japanese and Chinese infrastructure development projects in the CA region be interpreted and narrated? What are the similarities and differences in how these two countries frame their approaches to infrastructure development?

To answer these questions, this paper will analyze the motivations of Japan and China through the following layers of analysis. The paper will first provide a concise overview of the general foreign policy orientations of Japan and China in CA to illustrate the framing of infrastructure development strategies in this region. This paper will then consider the relevance of Japanese and Chinese infrastructure to the notions of human and regional security and subsequently consider the relevance of the economic aspects of these infrastructure projects to the roles played by China (biggest trade partner) and Japan (one of the largest aid providers). This paper will then focus on two particular projects, namely, rail and energy infrastructure-related projects conducted by China and Japan to highlight the differences in the approaches of these two states. Due to word limitations of this paper, it would be impossible to cover all the countries. Thus, the two cases of railroad infrastructure are selected from centrally positioned country in CA, namely Uzbekistan, to illustrate the argument of this paper.

This paper develops several arguments with respect to the Japanese and Chinese approaches to infrastructure development in CA. First, in line with criticism of the 'new Great Game' sentiments voiced inside and outside of the CA region (Swanstrom, 2005; Cooley, 2012; Uyama, 2015), this paper argues that the discourse of mutually exclusive interests in the development of various infrastructure-related projects in CA by China and Japan is premature and largely unproven. Most of the Chinese engagements emphasize energy and transportation infrastructure creation (construction), while for Japan, the main fields of focus are the areas of current infrastructure maintenance, modernization, and rehabilitation. Thus, this paper suggests that China positions itself as the largest economic partner to CA, while Japan is the largest assistance provider. These two roles have different implications. Second, the current infrastructure engagements of Japan (from assistance to partnership) and China (from exploitation to contribution to the region) in CA demonstrate the attempts at adjustment motivated by both countries' search for new identity formation and standing in the region.

2. Foreign policy orientations with respect to CA and infrastructure development

Any narration of infrastructure development in CA by China and Japan needs to be considered by integrating the two countries' infrastructure construction within their general foreign policy engagements in the CA region. As has been discussed in the literature, the collapse of the Soviet Union presented both China and Japan with a new frontier of foreign policy engagement (Dadabaev, 2013a, 2013b, 2014, 2018a, 2018b). While for Japanese foreign policy, this new frontier required starting from scratch, for the Chinese, the launch of newly established relations has been further complicated by the number of problems left unresolved from the era of the Soviet Union, the most important of which was land/border claims. In addition, issues of separatism and cross-border militancy were considered to be potentially troublesome for China in the early and mid-1990s, thus making security

China's highest priority in comparison to the economy and other areas in this part of the world (Dadabaev, 2014). Therefore, it was natural for the Chinese government to attempt to first strengthen trust with CA regional states and decrease the level of tensions in the bordering areas through 1+3 and - later in Shanghai - five negotiation processes (Ramani, 2016). In this process of constructing 'good neighboring relations', the general principles of the Chinese foreign policy of non-interference in internal affairs and the seeking of mutual benefit and common prosperity were well received by many of China's CA counterparts, contrasting with the constant criticism of CA states' domestic policies by the Western states in Europe and North America (Zhao, 2013). In addition, the Chinese attitude also signified Chinese resentment of Western criticism of its domestic human rights record. Thus, both China and the CA states have come to realize that they have shared not only concerns but also values (Shanghai spirit) and shared international constraints (such as criticism of their governance styles and fear of interference into internal affairs to name a few), which eventually shaped Sino-CA relations. With the formation of the Shanghai Cooperation Organization (SCO), successes in security-related issues spilled over into the area of economic cooperation, paving the way for a number of infrastructure development projects that eventually peaked with the announcement of the Silk Road (BRI) initiative and the goal of improving the connectivity of the CA region both with China and with other countries (National Development and Reform Commission, 2015; Office of the Leading Group for the Belt and Road Initiative, 2017: 11-17).

Therefore, the infrastructure development projects conducted in the CA region are part of the Chinese policy of developing 'good neighbor' relations with this region. Such 'good neighbor' rhetoric includes promoting the interconnectedness of China and its CA counterparts to meet the economic development needs of both CA regional states and Chinese bordering provinces. In the discourse of the 'good neighborhood', establishing a secure neighborhood for China is also connected to infrastructure projects, which induce economic development (Yu, 2017). Economic development, in turn, is considered to be a pillar of sustainable stability and security (Wang, 2016). Building a 'good neighborhood' in CA was rooted in the initiatives established between China and its CA counterparts long before BRI was announced and is connected to the border delimitation and confidence-building initiatives of the early 1990s, which later led to the SCO and eventually incorporated the CA region into BRI. Additionally, the Shanghai spirit, which implies common decision making and common benefits, is similarly reflected in the discursive 'selling' of the BRI initiative to CA states. Interestingly, Chinese multilateral initiatives (e.g., BRI) are being simultaneously developed with bilateral initiatives, such as strategic partnership agreements with Kazakhstan, Tajikistan, and Uzbekistan. These strategic partnerships often refer to multilateral agreements, and it is often difficult to distinguish which of the initiatives are purely bilateral and which are of a multilateral nature. For the Chinese expert community, both are consistent parts of Chinese engagements, with each one supporting the other.

For the Chinese government, bringing infrastructure to CA is not 'charity' but rather part of the realization that connectivity and infrastructure development can be additional building blocks in constructing a new international identity for China, in which the country not only exports goods and services to other countries but also constructs an area in which Chinese approaches (to development) and values (governance and interstate relations) are accepted, shared, and further developed. The 'Silk Road' narrative strategy has served to further a convenient and historically based discourse that is easily understood and accepted by CA counterparts because it 'paints' the CA region as arguably central to the success of the whole project.

For the Japanese government, the launching of its engagement with the CA region was less complicated than the Chinese engagement in logistical terms. Japan did not have any unresolved problems or issues with CA republics. In contrast to East Asia, there are no images of Japanese imperialism or neo-colonialism in CA. In addition, Japan projected the image of being both an economic superpower

¹Shanghai spirit implies norms that connect the issues for cooperation prioritized by both countries without seeking unilateral gains. These norms also imply the importance of mutual sacrifices and compromises for mutual gains.

²As an example of such new engagement, see Ministry of Foreign Affairs of the People's Republic of China (2015).

and the second largest economy in the world. Furthermore, on their visits to CA, the Japanese government and its officers at the Ministry of Foreign Affairs and Ministry of Finance often expressed sympathy toward colleagues in newly established partner ministries, comparing their long working hours to the practices of Japanese post-war institutions (Makhmudov, 2016: 83). Therefore, many of the Japanese government's initial assistance initiatives were not part of the larger strategy toward this region but were the result of the individual initiative of Japanese Ambassadors and visiting officials from various ministries. This highlights the initial challenge facing the Japanese government in conceptualizing the role and place of CA in overall Japanese foreign policy, which was over-focused on East Asia and South East Asia and paid little, if any, strategic attention to other parts of Asia (Uyama, 2003).

However, by the mid-1990s, the Japanese government had come to recognize a new international environment in which Japan's standing needed to be sustained, and Eurasia would become the next new frontier. This was the theme of PM Hashimoto's address in 1997, when he called for the activation of relations between Japan and the Eurasian states. Interestingly, the discursive image of the Silk Road was also used by Japanese PM Hashimoto to depict Japan's connection to the CA region (Hashimoto, 1997). This resulted in the Obuchi mission in 1997 and various initiatives of PMs Obuchi and Mori that aimed to activate relations with Russia and CA states. However, it was only during the administration of PM Koizumi that the Japanese PM first visited CA, launching the institution-building process between CA and Japan. The peculiarity of the Japanese government's approach to institution-building in CA is that it emphasizes empowering regional states in their capacity to address regional and global problems and promoting cooperation between regional states, for which Japan can serve as both mediator and financial supporter.

At the same time, the largest difference between the Chinese and Japanese engagements in this region is that Japan, in its infrastructure development and aid allocation, emphasizes universal values such as democratic governance, transparent procedures, and human rights as well as Asian values of cooperation and step-by-step progress (ODA Charter, 2003). In addition, Japan is part of the OECD (Organisation for Economic Co-operation and Development) and its DAC (Development Assistance Committee) which also sets certain standards regarding provision of developmental assistance. In practical terms, this means that Japan is willing to support many infrastructure development projects in CA as long as the transparency of financial flows and the technical implementation of projects are guaranteed. This is not to say that the Japanese government and corporations can completely avoid corruption and the deficiency of governance procedures. In contrast, on certain occasions, the Japanese projects and a number of government official have been pressured to provide irregular payments to local officials to proceed with certain initiatives (particularly in Uzbekistan). However, such situations, when uncovered by the Japanese government and press, were denounced, and the aid to CA countries involved in such schemes has been reduced (JICA, 2014a). The Japanese ODA charter also clearly emphasizes the importance of transparency and good governance (including eradication of corruption) as necessary conditions for Japanese involvement in infrastructure development and assistance. This hybridity of Japan's value orientations in its relations with CA states demonstrates the duality of its value orientations both domestically and internationally. While Japan displays some understanding of various problems facing CA states, it also emphasizes some Western values. At the same time, Japan is also often accused of violations of these values, which the Japanese government rebuffs as Japan-bashing, similar to the CA rebuffing of international criticism.

3. Framing of infrastructure projects

In their infrastructure development projects, both China and Japan attempt to use frames that are easily accepted by the host countries and international community. However, their branding of their infrastructure development – and their selling points for such projects – differ significantly, reflecting the different national and international standing of each country. In 2013, on a visit to CA, the Chinese President announced that the launch of the Silk Road Economic Belt had five different

implications (Sun, 2017). For the Chinese government, the initiative is first a foreign policy component of the realization of the 'Chinese dream' strategy announced by the President of China. Second, it represents 'bridging' between Chinese producers and international markets through two sets of roads (continental and maritime). Third, as explained below, it is an attempt to establish a stable, prosperous, and thus secure neighborhood by revitalizing China's presence in nearby areas (Mitchell and McGiffert, 2007: 7-9). Fourth, it is also a strategy to bring about the development of various provinces in China by increasing demand for their products. Finally, it contributes to increasing interdependence between China and other countries through BRI and thus to strengthening their mutual relations. The CA region is considered to be a key region in the construction of one such Silk Road - namely, the Eurasian Land Bridge. As mentioned elsewhere, the notion of the Silk Road is an easily understood branding strategy, which is assisted by its historical connotations. It is also a concept that is open to interpretation and places different states at its center. To the Chinese, China is the launch pad and the main source of both financing (through the AIIB and other instruments) and ideas behind this concept. For CA states, however, the narrative of this initiative puts the CA region at center stage of the project because, presumably, without the participation of CA states, there will not be a Silk Road. Additionally, CA states consider this road to be the road of job creation and technology transfer as opposed to a simple Chinese trade route. Despite such differences in 'readings', the Chinese BRI initiative deliberately maintains the validity of all types of interpretations to motivate member states and facilitate the smooth construction of the relevant railroad and energy-resource infrastructure.

There are three main components of the Chinese BRI scheme that relate to CA states. First, all previous projects related to the import of gas and oil from CA to China (for instance, the 2800 km pipeline from Kazakhstan to China of 2006 and the Sino-Kazakh logistics hub of 2014) are to be integrated into the BRI initiative as a part of a grand strategy. As discussed below, there were many strategic agreements between China and its CA counterparts and energy resource-related projects that were developed on a project-based level prior to the BRI announcement. However, with the announcement of the BRI initiatives, there was an attempt to integrate and 'fill in' the BRI initiative with as much substance as possible to emphasize the diversity of its directions and its importance to CA.

Second, Chinese infrastructure-related projects are not an attempt at development mentorship. These infrastructure facilities do offer a business model or a model of development (in terms of certain technologies, know-how, and the way these infrastructure can be utilized), but they are not an attempt to impose a 'Chinese way of doing things'. In contrast, these projects constitute a pattern of economic cooperation in which the Chinese government and participants ensure that their interests are taken care of, while it is up to the CA counterparts to make sure that the arrangement serves their national interests in a 'win-win' manner.³ It is often the case that CA states do not have the capacity or political will (because of corruption) (for example see Aidar, 2018) to ensure that their national interests are properly guaranteed in infrastructure projects, and they blame the Chinese side for mishaps. However, the general Chinese approach to such projects has a pragmatic 'partnership not mentorship' logic.

Third, the notion of the mutual complementarity of goals behind infrastructure-related projects is another backbone of Chinese engagements, in which Chinese projects often attempt to link and complement national development goals. In this way, the Chinese government aims to ensure that infrastructure development not only serves Chinese producers and consumers but also receives commitment from their CA counterparts (e.g., see Dadabaev 2018a). The outcomes do not necessarily correspond to such declared goals. Frequently, incorrectly identified national goals might lead to problems with Chinese infrastructure development. In terms of infrastructure project implementation, the claims often made by CA governments and NGOs are that the poor quality and the environmental, demographic, and social costs of Chinese projects outweigh their benefits (for the latest protests and claims, see Kyrtag 2018; for previous debates on this, see Dadabaev 2013a). In particular, the prime complaints of CA partners are that the Chinese corporations involved in the infrastructure

³On the evolution and deconstruction of 'win-win' principle, see Dellios (2017).

development projects brought in their own workforces, although the necessary skills were often available in CA countries. In addition, the treatment of the local workforce has often been cited as discriminatory. Despite such obvious problems, discursively, the notion of mutual benefit has always been articulated in framing infrastructure development.

Japanese engagement in and support for infrastructure development has been driven by the following main principles. First, Japan, being distanced from the region and not having any common borders with it, favors the concept of 'open regionalism'. This implies that Japan, while attempting to build and enrich its CA-plus-Japan dialog, does not aim to build an exclusive regional forum, thus not counterposing it to any party wanting to play the constructive role in the region. Neither Japan claims exclusivity in terms of participants. Such an approach corresponds to Japan's overall foreign policy engagements elsewhere and reflects its geographical proximity to the CA region. Another important factor that has forced Japan to adopt such a policy is that countries located between Japan and CA (China, Russia, and South Korea) have complicated 'love-hate' relations with Japan. In these countries, it is important to ensure the proper understanding and acceptance of Japanese engagement in CA to project a powerful image of Japanese relations with respect to the interests of these states. The notion of open regionalism suits such accommodation goals well.

Second, beginning with their independence, Japan has always played the role of a major donor to the CA states. Japanese officials and foreign policy practitioners have displayed paternalistic support toward the newly independent states of CA since the early years of their independence. Some arguably claim that this turned into a 'mentorship' at times (Murashkin, 2015: 56), which if true, contrasts with the Chinese approach of 'partnership not mentorship' mentioned above. This role for Japan has led to commitments and support being channeled through the Ministry of Foreign Affairs and Ministry of Finance to Uzbekistan, Kyrgyzstan, and Tajikistan. Uzbekistan, in particular, has enjoyed Japanese developmental aid support throughout its independence, which has resulted in Uzbekistan being the leading recipient of Japanese developmental aid in this region (Uyama, 2003: 178). Additionally, Uzbekistan has shown a very high level of support for Japanese initiatives at both the political and public levels. Japanese priorities in terms of ODA allocation, however, have changed several times since the 1990s. At first, the logic of Japan's Ministry of Foreign Affairs was that smaller amounts of Japanese loans would be more efficient when extended to demographically and territorially smaller countries such as Kyrgyzstan and Tajikistan. However, with time, it became obvious that such loans disbursement was not very successful for several reasons, including weak state administration in Kyrgyzstan and Tajikistan and a lack of capacity to effectively use and eventually repay the Japanese ODA loans. This situation has forced a re-adjustment in the attitude of the Japanese government toward Kazakhstan and Uzbekistan. However, Kazakhstan displayed a desire to attract more direct Japanese investments as opposed to governmental ODA loans. Thus, the main focus of Japanese ODA loans is now on Uzbekistan. However, as seen in the flows of aid and direct investments from Japan to CA, the majority of infrastructure-related projects supported by Japan rely on ODA assistance. This results in a conceptualization of Japanese infrastructure development as 'assistance, not economic partnership'. This is in stark contrast to the Chinese approach of 'economic partnership (not assistance)' outlined above.

To compensate for the shortcomings of the Japanese infrastructure-related engagement and to provide incentives for Japanese corporations to engage their Asian (including CA) counterparts, the Japanese PM has announced a 'Partnership for Quality Infrastructure', which is analyzed in the next section, while employing the strategy of 'packaged exports', which is explained in detail in the sections below (Abe, 2015). Essentially, this has been an attempt to encourage Japanese corporations to invest more in CA, while the Japanese government provides financial and conceptual support for such engagements. In real terms, the concept of 'Partnership for Quality Infrastructure' is meant to send a message to potential partners that Japanese infrastructure know-how might be more expensive when compared with other available alternatives (including those of China), but it provides quality and standards that might be worth the money spent on it. Therefore, this initiative can also be interpreted as an attempt by the Japanese PM to turn the weaknesses of Japanese infrastructure

development projects, namely, their high costs, into a competitive advantage by emphasizing unrivaled Japanese quality and impeccable standards. The Japanese (unmentioned) 'other' in this initiative is China, with its cheap and fast infrastructure projects that have not always been received with satisfaction because of issues and concerns with quality and standards.

In terms of the security-related frames employed in narrating their projects, the definition of 'security' in the cases of Chinese and Japanese infrastructure development projects have different meanings. In the Chinese government's interpretation, the notion of security has been closely related to economic cooperation, of which infrastructure development is considered to be a part (Ramani, 2016). Therefore, for the Chinese government, economic cooperation involving the construction of large and small infrastructure projects means providing economic opportunities to the receiving party while also contributing to the overall improvement of the security situation. In this case, the Chinese interpretation of security implies fighting insecurity, identified as terrorism, separatism, and extremism. Any project that brings about development for the Chinese government has the implication of also addressing the socio-economic roots of terrorism and crime. Therefore, for many experts in China, the issues of economic infrastructure development cannot be separated from those of fighting terrorism. Logically, the infrastructure development projects that connect China (and in particular, its unstable region of Xinjiang) to CA are framed in the official Chinese government discourse as bringing about development, which in turn brings stability.

Japanese infrastructure development in CA is vaguely connected to Japan's security concerns. The Japanese government's official security discourse related to infrastructure development is generally connected to the need for assistance in fighting drug trafficking and the notions of rebuilding and pacifying Afghanistan (Embassy of Japan in Uzbekistan, 2016). Frequently, direct and indirect (through international organizations such as ADB) support for infrastructure development - such as that exemplified by the Central Asian Regional Cooperation an initiative - attempts to facilitate better conditions for connectivity between Afghanistan and its CA counterparts to promote the economic development of Afghanistan and thus provide solutions to social and economic problems in that country. The logic of Japanese support for such a project is somewhat similar to that behind Chinese support for developmental projects; they bring stability, which then brings security. However, the biggest difference between the Chinese and Japanese approaches is that Japan emphasizes the notion of human security - the notion that received support in Japan in the mid-1990s. To further this goal, Japanese assistance has been extended to other projects that provide food security and water supply security. These projects were more focused on the demographically bigger countries of Kazakhstan and Uzbekistan, while certain programs were also maintained in smaller countries of Kyrgyzstan and Tajikistan.⁵ For the Japanese government, any infrastructure development needs to be centered on the concept of human security and the creation of secure and sustainable livelihoods for the populations living where the infrastructure-related projects are built. This notion has also been reflected in the High Quality Infrastructure Partnership initiative. In addition, such infrastructure development often entails the development of human capacity, a component that is emphasized by Japanese practitioners and policy-makers as reflecting the 'Japanese-ness' of Japan's developmental assistance.

4. Trade partner vs Aid provider

As demonstrated above, there are several instances in which the framing of Chinese and Japanese foreign policies – and of their infrastructure development projects in CA – differ from one another. However, the biggest difference can be seen in the different roles each country plays when

⁴See for instance JICA report on Assistance to the Republic of Uzbekistan on increase of agricultural production (JICA 2003a, 2003b). Also see JICA Training Assistance to Uzbekistan and Tajikistan in Agricultural and Rural Development Report (JICA, 2003a, 2003b).

⁵For the efficiency of assistance to the agricultural sector of Kazakhstan, see report on Ministry of Agriculture, Forestry and Fisheries of Japan (2013). Also see Nobe (2010).

implementing their infrastructure development projects. Both China and Japan prioritize different areas of their projects and use different strategies in approaching them. For China, several areas are defined as the highest priorities for Chinese corporate and state interests. Even before the BRI initiative was announced, Chinese corporations were actively involved in the extraction of mineral resources and in the creation of energy pipelines for exports of these resources into China. Kazakhstan, Uzbekistan, and Turkmenistan were prioritized in these types of projects because of the rich resources they possess and their interest in developing alternative (to Russia) markets for their resources. What followed was the construction of transport corridors, which included not only traditional energy-resource export pipelines but also roadways and railroads to connect Chinese producers with markets in CA and with transit areas to bring their goods further into Russia, Europe, and other parts of the world. In addition to constructing new corridors, Chinese infrastructure development also involved attempts to connect already existing corridors with the new ones, as exemplified in the country-related listing below (Tables 1–5).

As seen above, energy resource-related projects are of primary importance to China because of domestic demand for energy-related products, the resource-based structures of CA economies, and the close geographic proximity of CA to Chinese consumers. These projects allow energy resources to be delivered to end-users in a relatively rapid manner and at lower transportation costs compared with other alternative energy-resource producers. Moreover, projects to create trade hubs in the areas bordering Kazakhstan, Kyrgyzstan, and Tajikistan were also attributed high priority for China because they were intended to connect producers in China with consumers in CA. There were also several transportation infrastructure projects, such as tunnel construction in Uzbekistan, involving the creation of transportation facilities with technology not available to CA counterparts. In such projects, the main construction force has been the Chinese construction companies and a workforce brought into CA from China. These projects signified breakthroughs in certain areas - and had profitgenerating potential - for CA states because the transportation hubs are considered to intensify economic intra-state and inter-state trade within CA. Furthermore, there were a few instances in which projects related to energy and resources were implemented using the land-for-infrastructure schemes, with a few infamous ones in Tajikistan and Kyrgyzstan. These projects were specifically implemented in economically less endowed countries (Kyrgyzstan and Tajikistan), where financing for infrastructure has not been available and where certain plots of land were transferred to China using a long-term lease. However, such instances have been rare and have been met with public disapproval in the countries involved. This has also led to the abandonment of 'land-for-infrastructure' practices, while the Chinese foreign ministry officially plays down the prospects for such deals in CA.

In terms of funding for these projects, several financial instruments have been used by the Chinese government to generate financial support. Among these instruments, those most committed to financing infrastructure projects are Exmibank, along with the newly created AIIB, the Silk Road Fund, and the SCO bank. The financial resources provided by these institutions, combined with Chinese construction know-how and the relatively low cost of various infrastructure-related projects, serve as powerful instruments in promoting Chinese-led projects in CA.

Over the years since the CA republics' independence, Japan has allocated a massive amount of ODA financial assistance toward supporting the independence of these states (JICA, 2012). Some of this assistance has been channeled to infrastructure development projects, including improvement of water-related facilities and the quality of motorways, the construction of bridges and transboundary crossing points, and the provision of necessary equipment. In particular, the construction and provision of border crossing points between Afghanistan and its CA counterparts have been Japan's most significant contributions to promoting trade and fighting drug trafficking. The provision of equipment for customs controls allows shortening the time required for checks at the borders and allows more thorough checks to be conducted (for instance, see JICA, 2010). Without such facilities, transportation through the borders required a considerably longer time for controls, while the efficiency of customs inspections was rather low. Other projects included the construction of solar and conventional energy generation plants (JICA, 2013a, 2013b).

Table 1. Some of the representative infrastructure-related projects: Uzbekistan

| China | Japan |
|--|---|
| Transportation 2013-2016 Qamchik Tunnel and Andizhan-Pap railroad (CRTG and UzrailCo Rail and motor road corridor Energy 2005 CNPC-UNG = UzChina National Petroleum Corp. | Modernization of facilities Navoi thermal power station – loan Torakurgan thermal power plant – loan Tashkent electricity generation plant – loan Talimarjan thermal power station – ADB Transportation related Karshi-Termez railroad (2015–2020) – loan aid Agriculture infrastructure Amu-Bukhara Irrigation System Rehabilitation Loan ADB Environmental/disaster management (2014–2018) Disaster prevention and management plans (with WB) |

Table 2. Some of the representative infrastructure-related projects: Kazakhstan

| China | Japan |
|---|--|
| Energy (million dollars) (1) 1997 CNPC-Aktobemunaigas–Aktobe (2) 2005 CNPC-Petro-Kazakhstan (3) 2008 CNPC-TransAsiaGas KZ-China pipelines (4) 2009 CNPC-JV Mangistaumunaigas (5) 2009 SINOPEC-Caspian Investment Resources — Transportation-related (1) Rail Korgas Pass, Khorgos (2) Second Eurasian Land Bridge (Lianyungang–Kazakhstan's Druzhba) (3) Silk Road connected motor road construction | Energy-related (billion Yen) (1) Uranium and rare-metal exploitation (2) Sustainable energy generation plants (2014–2018) Transportation-related (1) CAREC Logistics Hub (Janbul) (–2014) – loan (6.36) (2) Trainings and expert dispatches (private financing and management of roads) Agriculture infrastructure development (1) Training (preservation of crops) (2014–2016) Environmental/disaster management (2014–2018) Manufacturing Tokyo Atom Plan, Toyota assembly |

Another aspect of Japanese involvement in infrastructure development in CA relates not only to the creation of new energy-related infrastructure in the region but also to the maintenance and modernization of Soviet-era infrastructure (Mitsubishi Power Systems, 2015). This represents one of the most important aspects of infrastructure development in CA because, although the basic infrastructure in CA states was well constructed in the Soviet era, many elements of the infrastructure created by Soviet planners are now aging and require urgent modernization. Modernizing the existing infrastructure is just as important as creating new infrastructure. Japan possesses expertise and know-how in this area, and Japanese corporations are often the winners of bidding contests for projects focusing on the modernization and maintenance of energy generation plants throughout CA as well as projects for water pumping stations (for details, see JICA, 2013c).

In terms of new infrastructure creation, as if to compensate for the higher costs and lack of financial commitment from Japanese financial institutions for projects in CA, the Japanese PM announced the Partnership for High Quality Infrastructure in 2015 (Abe, 2015). Although this initiative is not CA-focused and is not directly linked to Chinese international expansions, the Japanese PM is certainly concerned with increasing the competitiveness of Japanese infrastructure development projects internationally. To promote Japanese strengths in such projects, the Japanese government emphasizes that Japanese involvement in projects is motivated not only by the gains Japan stands to receive from them but also by certain standards, such as high-quality and the long-term needs of the receiving

 $^{^6}$ For emphasis of this side of assistance see JICA (2014b).

Table 3. Some of the representative infrastructure-related projects: Tajikistan

| China | Japan |
|---|--|
| Energy (million dollars) (1) 2006–2010 CTEAS-High-voltage 'North-South' electricity line LEP 500–EXIMBANK (2) 2006–2008 CTEAS-High-voltage 'North-South' electricity line LEP 220–EXIMBANK (3) 2008 SINOHYDROCorp.Zeravshan DAM-EXIMBANK (4) 2010 CTEAS-Nurabad DAM-EXIMBANK- (5) 2010 CTEAS-Heat generation plant-Dushanbe-EXIMBANK (6) 2011 CTEAS-High-voltage electricity line Hudzhand-Aini-LEP 220–EXIMBANK (7) 2012 CTEAS-Sogd-500 South-North power station-EXIMBANK Transportation-related Railroad, motor road, and land-for-infrastructure scheme | Modernization of infrastructure (water supply) (billion Yen) (1) Hatlon water supply rehabilitation – grant (2) Pyandzh–Hamadoni public water supply – Tech. (–2020) Energy related (1) Modernization of Dushanbe power generation plant (2014–2017) — Transportation-related (1) Modernization of Dushanbe int'l airport (2015–2017) – grant (2) Modernization of road management system – Tech (3) Improvement of air navigation system – Tech. (4) 4. Provision of equipment for the maintenance of Sogd–Hatlon roads – grant |

Table 4. Some of the representative infrastructure-related projects: Kyrgyzstan

| China | Japan |
|---|---|
| Transportation-related China-Europe transport corridor China-Kyrgyzstan-Uzbekistan railroad - Water energy-related Kambarta Dam-related interests Logistics and trade hub construction Land-for-infrastructure swaps | Transportation-related (1) The Project for the Reconstruction of Kok-Art River Bridge on the Bishkek-Osh Road - loan aid (2) The Project for the Improvement of the Equipment for Road Maintenance in Osh, Jalal-Abad and Talas Oblasts - loan aid (3) Modernization of Manas Int. Airport - grant (4) Modernization of international roads - loan Agriculture infrastructure development for export Four projects on OVOP (one village one product program) (2011-2015) - technical assistance Environmental/disaster management (2011-2012) The Project for Strengthening Disaster Response and Risk Assessment Capacities (through UNDP) Promotion of market economy (1) Japan center as a permanent educational institution (2) Short-term training for fields above (3) Volunteers dispatches |

country. Although the costs of Japanese infrastructure projects are sometimes higher than the costs of available alternatives, the Japanese PM emphasizes that such costs are attributed to the fact that Japan has high standards, such as economic efficiency (which means that the receiving party is not over-indebted as a result of implementing a project), safety (including human security and security of livelihood), resilience to natural disasters (based on the experience Japan has acquired as a natural disaster-prone country), and consideration for the environmental and social costs of such projects. This point is of special importance because Japan is at the forefront of the development of environmentally friendly technology and is also frequently cited as a better infrastructure development partner than China or other available alternatives. Finally, Japan emphasizes that its infrastructure development projects contribute to local society in terms of both access to infrastructure and the transfer of technology/know-how.

To operationalize these principles, the Partnership for High-Quality Infrastructure emphasizes a fourfold mechanism that largely builds on the assistance-extending expertise and experience of the Japanese government. This includes but is not limited to the expansion of assistance through JICA

Table 5. Some of the representative infrastructure-related projects: Turkmenistan

| China | Japan |
|--|---|
| - Energy (million dollars) (1) 2007 CNPC - Yashiltepe (2) 2007 CNPC International - infrastructure for oil-gas extraction (3) 2007 CNPC International - TM-China pipeline construction and exploitation (4) 2009 CNPC-CPTDC - extraction of oil in South Ilatan (5) 2011 PetroChina - extraction of oil in South Ilatan - Production-related (1) 2007 Mariazot facility for the production of chemicals - EXIMBANK (2) 2. 2007 Glass factory - EXIMBAN | Energy-related Introduction of sustainable energy generation plants (2014–2018) Transportation-related (1) CAREC Logistics Hub (Janbul) (–2014) – loan Training and experts dispatched regarding private financing of roads and their management Energy-resource extraction and processing plants |

projects, collaborating with the ADB for financial assistance, funding high-risk projects through JBIC and other risk-taking financial institutions, and importantly setting the standards of the Japanese Partnership for Quality Infrastructure as the international standards for infrastructure project implementation (Office of PM, 2015).

5. Contested railroads? Chinese railroads and their Japanese alternative

As mentioned above, one of the most ambitious proposals of the Chinese government with respect to CA region is the proposed construction of the 'Silk Road Economic Belt' (consisting of six economic corriCARECdors, of which the Eurasian Land Bridge, China–CA–West Asia, and the '21st Century Maritime Silk Road' are relevant to CA) BRI concept (for details, see Office of the Leading Group for the Belt and Road Initiative, 2017: 11–17). Because this proposal required a financing arm, the AIIB was established to secure a stable and consistent source of funding for BRI (see National Development and Reform Commission, 2015). While the plans for such transport corridors have been discussed at the interstate committees between China and its CA counterparts, one of the breakthroughs was achieved during the visit of the newly elected President of Uzbekistan to China in May 2017. Among the great number of agreements signed during the visit, several (railroad infrastructure development for US\$520 million and Tashkent–Osh road construction for US\$220 million) were related to transportation infrastructure development. These were part of the agreement between Uzbekistan and the PRC to facilitate smooth international road transportation between the countries, which involves the simplification of procedures and the creation of an environment to increase the transportation of goods using land roads (Decree of the President of Uzbekistan, 2017).

This project stipulates transportation infrastructure (rail and motorways) construction between the Uzbek city of Andijan and the Chinese city of Kashgar, with a route going though Kyrgyz Osh and Irkesham. This is the shortest route from China to Uzbekistan, and both countries are interested in its construction (Titova, 2017). China has called for such railroad construction for several years as a way to connect China with other markets in Europe through CA's transport networks. For Uzbekistan, this represents the shortest way to transport its goods into China by avoiding Kazakh railroads, which result in a longer transportation period and higher costs (for details, see Dadabaev 2018b). Kyrgyzstan also announced that construction of such road will free it of dependence on Kazakh and Russian railroads for transporting its goods. This announcement was made in light of recent Kazakh–Kyrgyz tensions regarding the alleged interference of Kazakhstan in the Kyrgyz election process in 2017.

Uzbek President Karimov lobbied for this project on several occasions. Governments of China and Uzbekistan discussed this project back in 1992 during the visit of Foreign Minister of China at that time Qian Qichen to Uzbekistan. In 1994, Uzbek President Islam Karimov has raised the importance

of construction of a direct railway from Uzbekistan to China through Kyrgyzstan during PM Li Pen visit to Uzbekistan (Khodzhaev, 2007: 103). In 1998, China has signed an agreement with Uzbekistan and Kyrgyzstan on the construction of this road and motor way (Khodzhaev, 2007: 103). It allows to shorten the distance to transport its goods from China by avoiding Kazakh railroads. It also decreases dependence of China on Kazakh railroads thus pre-empting difficulties in transporting goods if relations between China and Kazakhstan worsen in the future.

Prior to the BRI announcement, in 2012, Kyrgyzstan drafted its own railroad project along this route, which was supposed to be 380 km longer than the current one. Kyrgyzstan attempted to create a railroad system that would not only connect China to Uzbekistan through the shortest route but also cover remote areas of Kyrgyzstan currently not connected to the national railroad system (Ramtanu, 2016: 20). However, Uzbekistan and China objected to such a route change, as it implies losses in terms of time for transporting goods and costs associated with construction (see, for instance, Pannier, 2017). With the warming of Uzbek–Kyrgyz relations in late 2016 and 2017 and the crisis in Kyrgyz–Kazakh relations in 2017, the Kyrgyz President announced that Kyrgyzstan will prioritize construction of this road.

In addition to railroad infrastructure, a motor road connecting China to Uzbekistan through Kyrgyzstan is also planned for construction. The border crossing point of Irkeshtam is located 240 km from Kyrgyz Osh and is within 285 km of Uzbek Andijan. The distance from Irkeshtam and Kashgar is 250 km. The construction of these railroad networks is prioritized by China and its CA counterparts such as Uzbekistan and Kyrgyzstan. However, there are certain challenges which include but are not only related to the route to be used for such construction, technicalities of the transit of goods through Kyrgyzstan as well as the financing of the project, especially its Kyrgyz part.

In addition to railroad construction, the Chinese Railway Tunnel Group, which built the Kamchik Tunnel in Uzbekistan, has also committed to the construction of a motorway under the Kamchik Tunnel for vehicles, which is called the project Kamchik 2 (China to help build second tunnel at Kamchik Pass, 2017). The railroad and motorways mentioned above are intended to increase connectivity between CA and China and create new transportation infrastructure that is currently non-existent.

Japan's stated goal for involvement in this area is somewhat similar to China's: aiming to assist CA countries in modernizing their infrastructure. In this sense, JETRO maintains that the infrastructure construction projects supported by the Chinese government – such as the China Land Bridge (CLB) and the Trans China Railway (TCR) – do not necessarily collide with Japanese intentions in this region but, on the contrary, may have the effect of enhancing trade between CA and Japan through seaports in China. JETRO, in particular, also emphasizes that existing railroads do not necessarily serve the interests of developing relations between CA and Japan, and thus additional infrastructure, even that financed by China, can support connectivity between Japan and CA (JETRO, 2013). However, as described below, Japanese participation in the railroad infrastructure projects aims to modernize existing infrastructure as opposed to creating new infrastructure from scratch. Such an approach relates to many factors, as described in the sections above, such as the ambiguity of CA's importance for Japan, its relative distance from the CA region, limited Japanese corporate penetration of CA, and a lack of massive financial resources comparable in scale to the Chinese resources to be spent in CA region.

Until the death of the first Uzbek President Karimov, the government of Uzbekistan emphasized infrastructure projects that supported the independence of the Uzbek railroad system from other countries. This was also the tendency of the support provided by JICA to, for instance, the Karshi–Termez railroad electrification project in Uzbekistan so that Uzbek goods would not have to cross the borders of Turkmenistan while being transported within Uzbekistan's own territory. Moreover, the support provided by JICA aimed to modernize infrastructure that was constructed in this region during the Soviet era. CAREC (Central Asia Regional Economic Cooperation) and TRACECA (Transport Corridor Europe–Caucasus–Asia) are excellent examples of Japanese support for modernizing and constructing transport-related infrastructure in this region.

The major problem with the Chinese railroad projects – a problem emphasized by both Japanese and CA experts – is that the infrastructure projects did not lead to the accumulation of infrastructure construction know-how in the countries where the projects were implemented. Therefore, the Japanese have attempted to learn from Chinese involvement and offer not only technology but also training so that the projects can later be maintained by CA specialists.

Japanese infrastructure involvement in this region does take the form of direct involvement by the Japanese government through its ODA program, with JICA as its main actor; there is also support for the CAREC and TRACECA projects. A recent attempt by Japanese companies to expand the scale of their overseas infrastructure involvement occurred in 2010 under the scheme of 'packaged infrastructure overseas expansion Package-gata kaigai tenkai', supported by the office of the PM to stimulate the expansion of Japanese corporations into Asia-centered international infrastructure projects (Japanese railroads fighting their way in the world, 2015). One of the biggest aims of this scheme was to promote exports of technology and hardware related to the construction of railroad infrastructure, as Japan is rightly famous for the safety and reliability of these products. Such expansion aims at the exports of not only high-speed train technology but also conventional railroad infrastructure construction, for which cooperation has been established among the Ministry of Foreign Affairs, Ministry of Economy and Industry, Ministry of Land, and JBIC as the main financial institution (Package-gata kaigai tenkai [Packaged infrastructure overseas expansion], 2010). Moreover, a company called Japan Consultants was established in 2011 (Japan Consultants LTD, 2011). The projects involve not only the construction and provision of technology but also - importantly - maintenance after the project has been completed.

In the majority of cases, infrastructure expansion involves packaged exports (installing the hardware and software), exports of integrated systems (exports of not only the infrastructure of railroads but also complementary infrastructure such as railroad lights and other supplementary equipment), and exports with operational obligations (implies not only installing the previous two elements but also committing to operating the system after it is in place). Japan now aims to actively use the first type of involvement (referred to as packaged infrastructure exports) through JICA and to use its capacity to recognize the needs of other developing countries and offer them such exports in place of ODA assistance.⁷

Infrastructure-related projects in CA supported by the Japanese ODA can be effectively represented by Japanese involvement in Uzbekistan. In Uzbekistan, the particular railroad infrastructure project supported by Japan is Tashguzar–Kumkurgan railroad modernization (JICA, 2013d, e). The goal was to enhance the railroad's capacity to facilitate the transit of a larger number of trains; the project was launched in 2004 and completed in 2010. Although Japan did construct a completely new rail line linking regions of Kashkadarya and Surkhandarya of Uzbekistan, this project was aiming rehabilitating the existing railway line between Karshi and Tashguzar in Kashkadarya regions and promoting transport goods without having to cross the border of Turkmenistan (JICA, 2013d, e). Thus, although Japan does construct smaller sections of railroads, these are connected to the projects of rehabilitation of existent infrastructure and are generally not as large as Chinese infrastructure construction.

In addition, the Karshi-Termez railroad has been modernized (by the electrification of some railroad parts), followed by the modernization of the Tashkent-Fergana railroad, which required technology that Uzbekistan did not possess at that time and which was provided by Japanese corporations (JICA, 2013d, 2013e). Japan has also provided Uzbekistan with the software that enabled the latter to develop a more effective schedule for railroad functioning, which is considered to be a type of knowhow previously unavailable in Uzbekistan. Nevertheless, the problem with this provision of technology to CA states, and Uzbekistan in particular, is that these countries receive a large amount of support for

⁷The Japanese railroad lights system prides itself for its cost-efficiency in usage because, unlike other alternatives, the Japanese signal light system is operated wirelessly and does not require connecting railroad lights by cable with one another. Also, it can not only operate with lower required maintenance costs but also can reboot and automatically restart operations more rapidly in case of emergencies. For details, see Japanese railroads fighting their way in the world (2015).

infrastructure development from Japan, China, and Germany. However, the degree of complementarity among the different technologies is not high, thus creating problems with maintenance. In addition, the software used by the majority of CA states in creating their railroad schedules is mainly based on old Russian technology such as 'RIXT', which is not modernized and does not have a high degree of complementarity with the technology being provided by other countries (Koizumi, 2018).

As seen above, China and Japan are actively engaging in infrastructure development in CA. However, they see their roles and contributions differently, with China attempting to connect CA infrastructure to its own and Japan aiming to export its technologies and providing expertise in modernizing the available infrastructure mainly through the ODA assistance scheme.

6. The case of Japanese energy-related infrastructure development in Uzbekistan

In addition to transportation infrastructure development, another area of active Chinese and Japanese engagement is energy-related infrastructure development. The issues and patterns of cooperation between CA countries and China and Japan are also well exemplified by the case of their interactions with Uzbekistan. Chinese interest in this energy-rich CA country relates to three types of engagements: energy-based resource export infrastructure (from Uzbekistan to China), new extraction infrastructure, and the creation of an energy-resource processing sector of the economy (Ramtanu, 2016).

The most recent and the largest agreements between Uzbekistan and China were those focusing on the joint production of synthetic fuel (US\$3.7 billion), investing in Uzbekistan's oil industry (US\$2.6 billion), and agreements on cooperation in the construction of energy generation plants (US\$679 million).

Among Uzbekistan's exports to China, mineral and natural resources constitute a considerable share of the trade between the countries. According to agreements concluded in May 2017 during Mirziyoev's visit to China, contracts identified natural gas (6 billion cubic meters worth US\$734 million), uranium (US\$30 million), textiles (US\$200 million), leather (21.3 million), and agricultural products (US\$1.6 million) as products to be exported to China by the end of 2017. In addition, plans have been articulated for additional exports of natural gas to reach US\$2.4 billion for the years 2018–2020 (Uzbekistan plans to increase exports of gas to China to 10 billion cubic meters until 2021; Uzbekistan nameren narastit postavki gaza v Kitai, 2017).

There are a few plans for the construction of additional natural gas pipelines to connect Turkmenistan, Uzbekistan, and Kazakhstan to Chinese consumers. However, these discussions have not yet materialized into specific construction projects or financial commitments because of questions regarding the economic sustainability of the pipelines' operations.

In terms of new extraction rights, CNPC secured the co-financing contract with Bank of China for a drilling project at the gas condensate field in Bukhara by establishing JV New Silk Road Oil and Gas, which was set up by UzbekNeftGaz (UNG) and China's CNODC (a subsidiary of CNPC; see Uzbekistan-China JV New Silk Road oil and gas commences drilling in Bukhara, 2017). According to the license granted to the joint venture, it plans to develop the existing wells and drill another 16, with annual production to reach 1 billion cubic meters of natural gas and 6,500 tons of condensate (Uzbekistan-China JV New Silk Road oil and gas commences drilling in Bukhara, 2017).

In terms of the generation of new industries, Uzbekistan concluded an agreement between UNG and the Chinese Development Bank (worth US\$3.7 billion, of which US\$1.2 billion is to be financed by China) to finance the establishment of a plant to produce synthetic fuel at Uzbekistan's largest gas refinery complex, Shurtan (Uzbekistan: President's China trip yields giant rewards, 2017; Voloshin, 2017). Accordingly, the plant is intended to process 3.6 billion cubic meters of natural gas into 743.5 thousand tons of synthetic fuel, 311,000 tons of aviation fuel, 431.1 thousand tons of naphtha fuel, and 20.9 thousand tons of liquefied gas (Uzbekistan I Kitai podpisali soglazhenij na summu bolee, 20 mlrd [Uzbekistan and China signed agreements for more than 20 billion], 2017). Interestingly, technological support for the plant is to be provided by South Korea's Hyundai

Engineering & Construction under a license provided by South Sasol. The technology for turning natural gas into liquefied gas is provided by the Dutch firm Haldor Topsoe.

Hydro-energy generation has also been an area of Chinese interest, with a US\$3 billion agreement between the Ministry of Commerce and Uzbekgidro signed in May 2017 to install and use approximately 300 water pump stations for electricity generation (Uzbekistan I Kitai podpisali soglazhenij na summu bolee, 20 mlrd [Uzbekistan and China signed agreements for more than 20 billion], 2017). This is also in line with Uzbekistan's own strategy of hydro-energy development adopted in November 2015, which aims to invest US\$889.4 million into this sector between 2016 and 2020.

The modernization of the current energy-generating capacity of Uzbekistan has also been prioritized in negotiations. In particular, China Railway Tunnel Group (CRTG) and China Coal Technology & Engineering Group began the modernization of a coal extraction plant to achieve extraction levels of 900,000 tons of coal per year, with the amount of investment equaling US\$94.5 million (Startovala modernizatsiya predpriyatiya 'Shargunkomir', 2017). In addition to the modernization of plants generating traditional sources of energy, non-traditional sustainable sources such as biomass generation have also been the subject of agreements. UzbekNeftegaz, AKB Agrobank, and China's Poly International Holding signed a memorandum of cooperation to establish the production of modern biogas plants worth US\$10 million and to assist in the modernization of eight domestic enterprises, including the JSC Oil and Gas and Chemical Engineering Plant, in line with the governmental Program of Measures to Increase Biogas Plants in Uzbekistan for 2017–2019 (Program for increased use of biogas in farms adopted in Uzbekistan, 2017). As seen from the areas and projects above, China is committed to investing in economically sound project infrastructure and sectors of the economy that did not previously exist in the country. This reflects the economic might of China and the expanding nature of its corporate interests.

Japanese companies and state agencies do not commit to engagements in the way that China does, as explained above. As mentioned by scholars, 'ODA projects are not foot-in-the-door pathways for Japanese involvement in Central Asia' but rather 'are the bulk of their business operations and sometimes the only raison d'être for regional presence' (Murashkin, 2015: 60–61). Thus, Japan (the government, its affiliated agencies, and corporations) is keener on using Japanese expertise that is not available in China or elsewhere to both cement its presence in this region and emphasize the 'Japanese-ness' of the assistance schemes. At the same time, the major difference from the Chinese approach is that Japanese involvement in this region is largely led by the initiatives of the Japanese government and not the interest of private enterprises, which lack information on CA markets and the confidence to act in 'new waters'.

Among the many issues, the Japanese developmental agencies, most prominently JICA, tend to emphasize the aging of the energy supply infrastructure and its inefficient functioning as the problem leading to losses of already scarce energy resources before they reach end-users. Thus, Japan, in its CA engagements in general and in Uzbekistan in particular, contributes to the modernization of such infrastructure because it possesses the needed technology and because the task does not require the scale of investments required to launch new sectors of the economy, as exemplified by China's involvement.

The case of Japanese involvement in the energy sector of Uzbekistan is again symbolic in this respect. For instance, in a drive to liberalize the market for energy resources, the government of Uzbekistan shifted the power over energy supply from the Ministry of Energy to the SJSC Uzbekenergo in August of 2001 (JICA, 2014c). Accordingly, the JICA reported that according to its estimates, 85% of the energy provided by 46 thermal plants in Uzbekistan was generated from thermal power, while only 12% of the energy was from water-related resources (JICA, 2014c). However, the majority of thermal plants constructed and functioning in the country were built during the 1960s and 1970s and have been aging; they were considered to be functioning at 60% of their capacity. In particular, the turbines of the thermal plants were subjected to severe effects of aging, and urgent action is required to modernize them. The second problem has been related to the fact that this aging energy supply infrastructure was not only inefficient but also produced a massive amount of

 ${\rm CO_2}$ gas emissions per GDP, placing Uzbekistan among the world's leading polluters (JICA, 2014b). The problem of energy supplies has been the most acute in the Fergana Valley, where the population density is highest. Modernization and construction of thermal energy generation infrastructure in this part of the country were calculated to provide an 8% increase in the energy supply to end-users (JICA, 2014c).

In terms of the JICA support for the modernization of thermal power plants, the announced goal was to support energy infrastructure modernization both in terms of hardware (meaning provision of technology and equipment) and software (meaning provision of training and development of human capabilities to maintain the system) (Turakurgan thermal power station construction project, 2014). While JICA acknowledges that it lacks the resources to provide for the projects on a scale equal to that of China, JICA emphasizes the specialized nature of JICA's contribution to energy-related infrastructure development by providing twofold assistance: modernizing existing infrastructure and providing training to enable local technicians to run the system sustainably in the long run. In terms of hardware support, JICA has assisted by providing turbines in 2010 (under a co-funding scheme with the ADB) and 2013 (under the ODA scheme) to modernize the Talimarjan and Navoi thermal power plants, respectively (JICA, 2014b). Such assistance provides not only a renovation of existing facilities but also a more efficient technology, which enables the use of thermal energy with a higher degree of efficiency (Environment Department of Tokyo, 2012). Similarly, the modernization of the Turakurgan facility – capable of 800 MW – was launched in November of 2014 (JICA, 2014c; Ministry of Foreign Affairs, 2014).

Turbines provided as part of the ODA have been produced by Mitsubishi Hitachi Power Systems (MHPS) and used at the Navoi 1 plant. In October 2016, MHPS and Mitsubishi Ltd. provided the turbine for the Navoi 2 plant (Project on GTCC plant construction in Navoi 2, 2016).

In providing such equipment, Japanese companies use the following criteria to evaluate the environments in which they operate. According to an interview with representatives of Tashkent, for MHPS, there are three main criteria used to evaluate the operational environment: first, the existence of a need (large population and aging infrastructure); second, the existence of a pro-Japanese environment in the country; and third, a high degree of literacy in the region.

In terms of the challenges encountered by the Japanese corporations, one aspect is the difficulty of delivering Japanese technology to end-users because the guidelines and manuals are written in Japanese. Although the Japanese government has invested large amounts of resources into encouraging Japanese language education, the level of Japanese literacy required to read technical documentation was too high, thus requiring many interpreters.

In terms of approach, the Uzbek government supports the Japanese approach because it generates both technology transfer and employment. It also contrasts with the Chinese approach, which favors bringing hardware and a workforce into the country, as exemplified by Chinese engagement in Kyrgyzstan. Uzbekistan did not allow this approach to be applied and thus continues to favor the Japanese assistance scheme (Interview with the anonymous staff at the Embassy of Japan to Uzbekistan, March 2016).

7. Conclusions

As outlined above, both China and Japan consider CA to be one of the new frontiers for developing their infrastructure and expanding their corporate interests. Although their areas of interests largely overlap and are mainly focused on energy and transportation infrastructure, there are significant differences in how these countries justify, frame, and narrate their involvement in infrastructure development in this region. The countries use similar strategies of contributing to CA regional development by providing expertise and infrastructure to assist these states' decolonizing agenda. Both China and Japan attempt to define the importance of CA regional engagement through the lens of not only external expansion but also domestically. For China, such importance is related to connecting its producers to international markets, while for Japan, it is about the expertise it possesses

domestically, which can contribute to international development and impact domestic growth. Thus, in the Chinese case, such redefining of CA's importance is obviously connected to the constrains of domestic development of Xinjiang and other areas; in the case of Japan, CA serves a good example to demonstrate how the Japan adopts domestically (through ODA, Quality Infrastructure Initiative, etc.) to adjust to the new role Japan needs to play in the international affairs. Thus, CA plays a role of a new frontier for such domestic adaptation in the Japanese case.

There are striking differences in the approaches and roles of each of these states. Close geographic proximity is a significant advantage for China in arguing for the intensified construction of infrastructure that connects Chinese producers and CA consumers. In addition, energy and transport infrastructure offers CA states an alternative for exporting their raw mineral resources. As seen from the list of projects above, Chinese-led energy and transport infrastructure projects are gradually showing signs of spillover into other areas, and some projects now include the construction of assembly lines in CA. In addition, the complementarity of Chinese projects with other states (Russian-led EEU and others) serves China well for now because the Chinese government backs up its corporate interests through offers to insure the risks taken by Chinese corporations and by providing financing for infrastructure development. Moreover, with an increase in the Chinese presence and the number of infrastructure-related projects, there is also an increasing concern among CA states regarding China's utilitarian approach to CA, as is demonstrated by the case of Kyrgyzstan. This could be among the grand challenges to further Chinese penetration in this region.

The Japanese approach to CA in general and to infrastructure development in particular differs significantly from China's. Japan attempts to build its competitive advantage by emphasizing the notions of (a) human security-centered infrastructure and (b) more advanced technology. In addition, Japanese support for smaller infrastructure development projects (such as agriculture, community building, and customs) outside the energy-related fields received a warm welcome in most CA countries. Further, Japan's lack of geographic proximity can also serve as a positive feature and even as a competitive advantage for the broader participation of Japanese corporations in infrastructure development because this contrasts with China's assumed neo-colonization. However, there is a need for Japan to move away from the emphasis on energy-related infrastructure/imports of energy resources because the geographic distance between Japan and CA complicates the task of transporting CA energy resources. Finally, the Japanese promotion of quality infrastructure represents an adjustment to both the competitive environment for new opportunities and Japan's attempt to frame its more expensive technology as competitive advantage.

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