

Chapter 5

The Central Asian Republics

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Introduction

Regional economic integration has gained prominence in recent years as a mechanism to achieve various objectives such as market access, enhancement of manufacturing capabilities, the creation of regional value chains (RVCs) and, in turn, employment generation and poverty alleviation. In addition, the recent initiatives created by the Trans-Pacific Partnership (TPP) and the Trans-Atlantic Trade and Investment Partnership (TTIP) seek not only to take advantage of Asian economic dynamism but also to consolidate the leading economic forces of the United States of America and the European Union. This is corroborated by the fact that while TPP members include the dynamic Asian economies, the TTIP is an attempt to consolidate the economic might of the Western world by forging partnership agreements between the United States and the European Union. The European Union and Central Asia relations have been progressing under the Strategy for a New Partnership since 2007. The Customs Union (CU) and the Single Economic Space (SES) among Belarus, Kazakhstan and the Russian Federation were replaced by the Eurasian Economic Union (EAEU), which came into effect on 1 January 2015. The EAEU comprises Armenia, Belarus, Kazakhstan, Kyrgyzstan and the Russian Federation.

On the other hand, Asian economic regionalism is characterized by private sector-driven production fragmentation and RVCs as well as the phenomenon of variable geometry. The latter is explained in terms of various Pan-Asian economic integration initiatives expressed over time, i.e., the Asia-Pacific Trade Agreement (APTA), ASEAN+1, ASEAN+3, ASEAN+6, and the East Asia Summit. APTA is the oldest of these initiatives. More recently, the ASEAN+6 process is being consolidated with the launch of negotiations on the Regional Comprehensive Economic Partnership (RCEP).

In addition, several of the East and South-East Asian countries are now also part of the interregional TPP, in which the United States plays a predominant role. This is clearly an effort by the Americas to tap into the economic dynamism of the Asian region. More recently, China's suggestion for another mega-grouping viz. the Free Trade Area of the Asia-Pacific (FTAAP), under the aegis of the Asia-Pacific Economic Cooperation (APEC) forum, is yet another development that makes the trends towards regionalism in the Asia-Pacific region more pronounced. These examples serve to highlight the imperative of evolving a Pan-Asian economic integration strategy, fostered through strong and efficient institutional mechanism.

Overall, one implication of the above trends in Asia is that they are challenging one of the oldest groupings, i.e., APTA. One of the merits of APTA is that it includes some of the most major dynamic economies of Asia such as China, India and the Republic of Korea. If APTA

fails to take advantage of its dynamic membership it will be marginalized by a grouping such as the RCEP, since it also includes these three economies as members. However, another merit of APTA is that it has an open membership.

The outcome of the above Asian economic configurations is the importance of exploring whether APTA can eventually evolve into a Pan-Asian economic grouping, which could be by expanding the membership of APTA to cover other regions of Asia, in order to make the grouping the most representative of the Asia-Pacific region.

Available researches suggest that the Central Asian Republics (CARs) have enormous potential to benefit from regional economic integration (ADB, 2006; Das, 2012). On the other hand, existing Asian initiatives have not been able to include them in any meaningful regional economic integration processes, with a few exceptions. This chapter assesses the potential benefits from accession to APTA by the CARs as well as the Participating States of APTA and possible strategies for expanding APTA membership to the CARs.

A. Macroeconomic performance of the CARs

The CARs are rich in natural and human resources but quite diverse in terms of their stages of development. This is most evident in terms of their levels of GDP; for example, the GDP of Kazakhstan is \$231 billion while the GDP of Kyrgyzstan is \$7.22 billion. While Tajikistan's GDP is also very low, Uzbekistan and Turkmenistan have GDP in the medium range. The varying level of development among Central Asian economies is an aspect that stands out quite clearly. However, with the exception of Kyrgyzstan, in terms of GDP growth, all the other CARs have recorded impressive and high growth rates. With regard to purchasing power, the CARs display a wide range of per capita GDP, but on average they are characterized by good market size. Similarly, except for Kyrgyzstan, per capita GDP is rising at a healthy rate in these countries.

In terms of the structure of CARs economies, the services sector is the most dominant sector, except in the case of Turkmenistan, where manufacturing has the highest share in GDP. This is important in the light of developments made in APTA to which subsequent sections of this chapter revert.

Manufacturing also remains a sector of significance in the GDP of other CARs. What is disturbing to note in the macroeconomic indicators is a very high inflation rate, except in the case of Turkmenistan. Savings and investment ratios are moderate, suggesting further room for improvement that can have growth-inducing effects in future.

The external sector shows very high trade openness; however, with the exception of Kazakhstan, the absolute level of trade is meagre with total trade value of \$116 billion in 2013. However, a much clearer picture of FDI inflows would be provided by the cumulative FDI in each of these countries. For the same year, FDI inflows appear important, except in Tajikistan.

Overall, the macroeconomic context suggests that the Central Asian economies have tremendous scope for development through higher savings and investment rates as well as through greater trade and FDI integration. This is supported by their reasonably good social indicators pertaining to health and education. The only worrying factor is the high rates of inflation in these economies; apart from that, the macroeconomic context makes these economies quite amenable to regional economic integration, which can help them to achieve their growth and developmental objectives.

B. Trade in goods: Structure, direction and trade policies

1. Structure and directions of trade

(a) Structure

Since the focus of this study is on APTA's integration with Central Asia, the analysis of the structure of exports and imports in each of the CARs is relevant. This is captured in table 5.1, which shows that the share of primary commodities in the export basket of almost all the countries in Central Asia is very high. A notable feature is that the share of primary commodities actually increased between 1995 and 2013 in the case of Kazakhstan and Turkmenistan, while the share declined in the cases of Kyrgyzstan, Tajikistan and Uzbekistan. The shares have remained high, most notably in the case of Turkmenistan.

Together with the structure of GDP in these countries, in which agriculture occupies the least share of GDP while industrial and services sectors remain significant, such a high percentage of primary commodities in the export basket of these economies highlights the phenomenon of production-export mismatch.

Further, the import basket of CARs (table 5.1) shows that the share of manufactured goods in total imports is high. What is more, it increased between 1995 and 2013. These figures point to another notable feature of these economies in terms of high dependence of imported manufactured goods. This implies that these economies need to create a more diversified manufacturing base through an industrialization policy helped by regional cooperation in the areas of trade and FDI by exploiting the trade-investment nexus.

The trade structures of the CARs provide three important insights – production-trade mismatches, a less diversified manufacturing base and adverse terms of trade due to the fact that exports mainly comprise primary products whereas imports largely consist of manufactured products.

Table 5.1. Central Asian economies: Share of primary commodities and manufactured goods in total exports and imports

(%)

Country	Primary commodities		Manufactured goods	
	1995	2013	1995	2013
Exports				
Kazakhstan	61.85	90.24	38.15	9.75
Kyrgyzstan	63.72	55.87	35.40	43.62
Tajikistan	84.82	80.74	15.12	11.96
Turkmenistan	93.03	94.71	6.78	5.27
Uzbekistan	92.74	60.40	7.20	39.48
Imports				
Kazakhstan	39.67	21.03	59.16	78.22
Kyrgyzstan	59.48	42.03	40.51	57.97
Tajikistan	53.26	41.40	45.98	56.36
Turkmenistan	32.42	11.21	65.95	85.45
Uzbekistan	26.24	23.14	72.22	73.92

Source: UNCTAD statistics, 2014.

Note: Primary commodities (SITC 0 + 1 + 2 + 3 + 4 + 68 + 667 + 971); manufactured goods (SITC 5 to 8, less 667 and 68).

(b) Direction of trade

Direction of trade of the CARs is presented in table 5.2, which shows the top five export destinations and import sources. In this regard, special focus is given to CARs trade linkages with the European Union and the Russian Federation. In cases where the European Union and the Russian Federation do not feature in the top five trade partners, their percentage shares are also mentioned for each country and are highlighted in bold.

It is also evident from table 5.2 that with regard to exports to the European Union the largest share is in the case of Kazakhstan (45.62%). Among the other CARs except Turkmenistan, the European Union is not placed in the top five, as its shares in exports are only 4.78% for Kyrgyzstan, 7.05% for Tajikistan and 2.33% for Uzbekistan; in the case of Turkmenistan it does feature in top five but with a relatively low share (8.65%). The scenario is bit different from the point of view of imports by the CARs as the European Union does feature in the top five import sources in each country. It is a major import source for Kazakhstan (18.06%), Turkmenistan (15.02%) and Uzbekistan (14.13%), and to a lesser degree, Kyrgyzstan (5.16%) and Tajikistan (5.46%).

In the case of the Russian Federation as a major CARs export destination, it is placed in the top five for Kazakhstan (8.54%), Kyrgyzstan (8.85%) and Uzbekistan (18.25%). In the case of Tajikistan and Turkmenistan, it does not feature in the top five export destinations of Tajikistan and Turkmenistan where it accounts for shares of 3.68% and 1.06%, respectively. In the case of the Russian Federation being an important import source for

the CARs, it is remarkably one of the top five import sources, accounting for shares of 35.65% in Kazakhstan, 20.89% in Kyrgyzstan, 16.11% in Tajikistan, 16.28% in Turkmenistan and 21.74% in Uzbekistan.

Table 5.2. Major trading partners of CARs (share in %)

Country	Major export partners	Major import partners
Kazakhstan	European Union (45.62), Russian Federation (8.54), Canada (4.02), Romania (3.46), Austria (2.56)	Russian Federation (35.65), China (25.36), European Union (18.06), Ukraine (4.29), United States (2.22)
Kyrgyzstan	Kazakhstan (29.98), Uzbekistan (28.05), Russian Federation (8.85), United Arab Emirates (6.94), Afghanistan (5.55), European Union (4.78)	China (52.26), Russian Federation (20.89), Kazakhstan (7.51), European Union (5.16), Turkey (4.0)
Tajikistan	Turkey (36.09), Islamic Republic of Iran (9.15), China (8.62), Kazakhstan (7.43), Bangladesh (7.23), European Union 7.05, Russian Federation (3.68)	China (41.58), Russian Federation (16.11), Kazakhstan (11.99), Turkey (6.31), European Union (5.46)
Turkmenistan	China (67.72), European Union (8.65), Turkey (4.98), United Kingdom (3.30), Afghanistan (2.82), Russian Federation (1.06)	Turkey (22.29), Russian Federation (16.28), European Union (15.02), China (13.0), United Arab Emirates (6.75)
Uzbekistan	China (27.86), Russian Federation (18.25), Kazakhstan (13.29), Turkey (11.84), Bangladesh (8.16), European Union (2.33)	Russian Federation (21.74), China (20.26), Republic of Korea (15.26), European Union (14.13), Kazakhstan (10.47)

Source: IMF DOTS, 2015.

2. Trade policies of the CARs

To assess any external economic engagements of the CARs, it is necessary to understand the existing trade policy contours.

Before looking at a brief profile of the trade policies of the CARs, it is important to review the status of their multilateral trade engagements under WTO. First, as table 5.3 shows, only Kyrgyzstan, Tajikistan and Kazakhstan have been members of WTO since 1998, 2013 and 2015, respectively, while Uzbekistan has observer status, Turkmenistan is neither a member nor observer. Second, the simple average applied tariffs are not very high in most CARs (the data for Turkmenistan is not available).

It is notable that the simple average bound tariffs of Kyrgyzstan and Tajikistan for all products are 18.25% and 8.1%, respectively. For agricultural products, they are somewhat higher at 12.7% and 11.3%, respectively. Non-agricultural goods are thus characterized by lower simple average bound tariffs to the extent of 6.7% and 7.6%, respectively. The simple average applied tariffs for all products are lower at 4.6% and 7.8%, respectively, while applied tariffs on agricultural goods are higher on average than non-agricultural goods in the case of both countries. Though the bound rates of Kazakhstan are not available, yet its applied tariffs are within 10% for all goods.

In the case of non-members, the average applied tariffs are also quite low; agricultural goods attract higher average applied tariffs than non-agricultural goods, except in the case of Uzbekistan which has the highest average applied tariffs for all goods at 15.4%, agricultural goods at 19.1% and non-agricultural goods at 14.8%.

Table 5.3. WTO status of CARs

Country	WTO accession	Simple average tariffs – applied (%), 2014			Simple average tariffs – bound (%), 2014		
		All goods	Agricultural goods	Non-agricultural goods	All goods	Agricultural goods	Non-agricultural goods
Kazakhstan	30 November 2015	8.6	11.6	8.1	6.1	7.6	5.9
Kyrgyzstan	20 December 1998	4.6	7.6	4.1	7.5	12.6	6.7
Tajikistan	2 March 2013	7.7	10.7	7.2	8.1	11.4	7.6
Turkmenistan	Non-member and non-observer	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Uzbekistan	Observer	14.8	18.8	14.2	N.A.	N.A.	N.A.

Source: WTO, Trade Profiles 2015.

Note: Bound rate of Kazakhstan is taken from https://www.wto.org/english/news_e/news15_e/kazakhstan_e.pdf.

3. Challenges for the CARs

The trade policies of the CARs differ in several aspects; however, they share certain common challenges. One of the major and common issues is that all the five countries are landlocked and share borders with each other and with the Russian Federation, China and Afghanistan. This creates the problem of highly concentrated export markets due to which they mostly trade among themselves, making them over-dependent on each other and a few other countries. Also, imports from other countries outside the region reach them via the countries which they share borders with. The other concerns common to all are the lack of product diversification and excessive reliance on exports of natural resources.

Since they gained independence from the former Soviet Union, the five Central Asian economies of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan have been liberalizing their trade policies in order to integrate their economies with the global economy. The path to this aim has been varied; however, it includes some similarities that arise due to the similar nature of these five economies. All the CARs have been trying to increase their trade within the region as well as with other economies, and it is a well-known fact that both exports and imports of these countries have increased over the years. However, where some countries have focused more on exports, some have chosen the path of reducing import value to achieve a trade account balance.

Kyrgyzstan and Tajikistan have put greater emphasis on increasing their export volumes by using export development and promotion strategies. They try to make their customs procedures less stringent. One such example is the uniform information system established by Kyrgyzstan to streamline its custom procedures. These two countries are trying to formulate their custom procedures to bring them into line with internationally-set norms and regulations in order to further enhance the process of integration with the world economy.

The economies of Kazakhstan, Turkmenistan and Uzbekistan, on the other hand, rely more on import substitution policies that are intended to protect their domestic industries. They use various tariff and non-tariff barriers to restrict the volume of imports; however, the intensity of protection differs from country to country. Uzbekistan has relatively more stringent laws as the Government requires a licensing system designed to restrict both exports and imports in order to avoid high trade deficit.

C. Services sector and trade in services

It is a well-known fact that economic growth in Central Asian countries has primarily been driven by oil and natural resources in past decades. The growing concern that these resources will eventually be exhausted has led to some shifts towards industrial goods as well as the services sector across the region (box 5.1). The services sector has gained significance in Central Asia and constitutes approximately half of the value-added of GDP in the region. Although Kazakhstan exceeds in this area, as the value-added from its services sector is quite large; the sector has also undergone expansion in other four CARs.

The financial sector in Kazakhstan has expanded and remittance incomes have increased for Kyrgyzstan and Tajikistan. Furthermore, financial services, telecommunications, real estate and tourism are expected to gain even more importance and greater financial deepening, boosted by higher domestic demand for credit. Investment in infrastructure, including further upgrading of telecommunications and business services, will help support production, employment and international trade in services (ADB, 2014b).

Box 5.1. Importance of the services sector in the CARs

Kazakhstan is the largest economy in Central Asia. The services sector is an important component of its national economy and accounts for 54% of total GDP. The largest segments within the services sector are retail trade, transport, information and communications technology, real estate and professional services. However, despite the rise of the services sector, exports are largely concentrated in the oil-related extraction, construction and pipeline transport services.

The services sector is also the biggest sector in Kyrgyzstan, having overtaken agriculture as the main contributor to GDP. At an average growth rate of more than 8.1% between 2000 and 2010, it is the fastest-expanding sector in the Kyrgyzstan economy. Much of the sector's contribution comes from retail trade and the tourism services sector (e.g., restaurants and hotels). Lake Issyk-Kul is one of the largest alpine lakes in the world and a prominent destination for international tourists in Kyrgyzstan.

Tajikistan's services sector has also seen dramatic improvement in the past five years, with both exports and imports of services increasing significantly. The increase is mainly attributable to increased exports of transport and business services, including mining services in which Tajikistan has a comparative advantage. In 2012, exports of services amounted to approximately \$817 million, whereas imports stood at approximately \$1 billion. This increased importance of trade in services is reflected in the percentage share of trade in services in the GDP for Tajikistan, which increased from 12.3% in 2008 to 24.5% in 2012.

In Uzbekistan, the services sector constitutes about 48% of GDP and has contributed more to growth than either industry or agriculture in the past decade. From 2007 to 2010, the services sector in Uzbekistan grew by 13.3%, well above the 8.7% of overall economic growth rate. The growth was driven by strong performance in financial and telecommunications services, which posted a combined growth of 24% in 2011.

Because of its rich culture and heritage, Uzbekistan also has enormous potential for developing its tourism sector. Even though the country possesses various tourism attractions and resources, and leads the region in the number of UNESCO-designated world heritage sites, tourism accounts for only 0.2% of the services sector output and has seen little growth over the past five years. This is due to an underdeveloped air transport market, strict visa regime and an unorganized tourism sector.

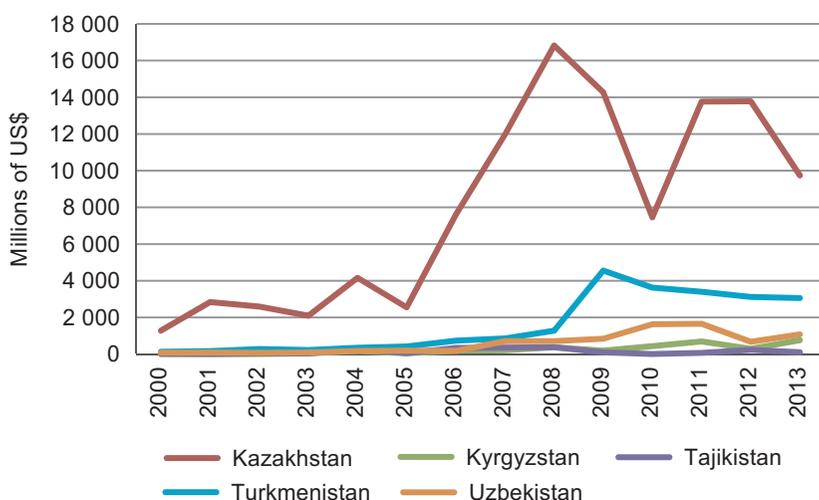
Turkmenistan's economy is dominated by large, state-owned companies. Initially, after independence from the former Soviet Union, emphasis was placed on heavy industry and, more recently, on the oil and gas industry. The country's services sector remains neglected, and unlike other post-communist countries in the region, the percentage of workers in the services sector has decreased since the breakup of the former Soviet Union. Services contribution to the national output is also the lowest in comparison with other countries in the region. Moreover, unlike other CARs, Turkmenistan's share of services has fallen sharply since 2006. This can be attributed to the increasing role of the hydrocarbon economy in Turkmenistan and inadequate macroeconomic reforms to increase the role of the private sector in the economy. However, despite the relatively less importance of services sector, it grew by 13.9% in 2013, which was well above the country's 7.3% growth in industry and 10% in agriculture.

Source: Excerpted from USAID, 2014.

D. Foreign direct investment in Central Asia

Having explored the potentials for trade integration within Central Asia, this section focuses on the broad trends in FDI inflows in the CARs and on some of the specific FDI projects related to them, taking these as the basis for charting a course for Central Asian investment integration.

Figure 5.1. Dynamics of FDI inflows in Central Asia, 2000-2013

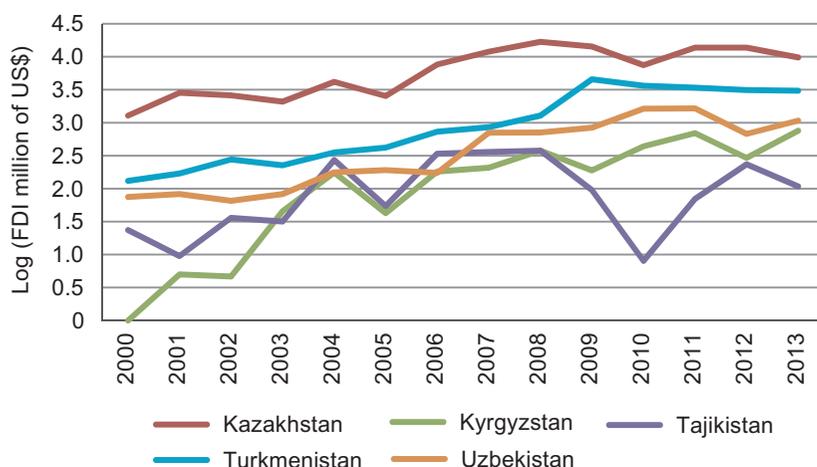


Source: Based on annual FDI flow data in UNCTAD statistics, 2014.

There are three noticeable features pertaining to the dynamics of FDI inflows in the Central Asian economies under consideration during 2000-2013. First, the Central Asian economies display an asymmetric nature as hosts to FDI inflows (figure 5.1). For example, during the period under consideration, Kazakhstan's FDI inflows climbed steeply from around \$2 billion to more than \$10 billion. However, Tajikistan and Kyrgyzstan have remained much weaker hosts of FDI with their inflows still hovering at between \$1 million and \$2 billion. Figure 5.1 also shows that with the exception of Kazakhstan and Turkmenistan, the CARs have remained unattractive destinations for global FDI inflows. In addition, since the volatility in annual FDI inflows is not obvious in figure 5.1, the log values of FDI inflows to the CARs are plotted in figure 5.2. The trends shown in figure 5.2 suggest that in most of the CARs dynamism of FDI inflows, which differ from country to country, have been rather volatile.

The preceding trends are on a time series basis, which is supplemented by an analysis of FDI inflows and outflows in the CARs during the most recent years for which data are available, in order to gain a micro-level view of the structure of FDI and its importance in these countries. Data for 2013 on distribution of FDI inflows and outflows for the Central Asian economies are under two different classifications – as transition economies and as

Figure 5.2. Dynamics of log values of FDI inflows in Central Asia, 2000-2013



Source: Based on annual FDI flow data in UNCTAD statistics, 2014.

Note: Since the vertical axis scale is in log, the negative values get dropped; therefore the Kyrgyzstan series starts from 2001.

landlocked developing countries. When classified as transition economies, the CARs appear to have been important recipients of FDI in 2013, especially in terms of inflows. This is because of their relative attractiveness within the group of transition economies in terms of FDI destinations. However, Kyrgyzstan and Tajikistan lag behind other Central Asian economies in this regard. In terms of FDI outflows, Kazakhstan and Kyrgyzstan have emerged as sources of such outflows (table 5.4).

Table 5.4. Distribution of FDI flows among Central Asian transition economies by range, 2013

Range	Inflows	Outflows
More than \$5 billion	Kazakhstan	
\$1 billion-\$4.9 billion	Turkmenistan, Uzbekistan	Kazakhstan
\$0.5 billion-\$0.9 billion	Kyrgyzstan	
Below \$0.5 billion	Tajikistan	Kyrgyzstan

Source: UNCTAD, 2014.

Note: Economies are listed according to the magnitude of their FDI flows.

When the CARs are classified as landlocked developing countries (LLDCs) their performance, especially as the hosts of FDI inflows, is impressive among the set of LLDCs; which Kazakhstan, Turkmenistan and Uzbekistan were the leading destinations in 2013. In terms of FDI outflows, Kazakhstan emerged as the leading source in the same year among the LLDCs in the region (table 5.5).

Table 5.5. Distribution of FDI flows among Central Asian landlocked economies by range, 2013

Range	Inflows	Outflows
More than \$1 billion	Kazakhstan, Turkmenistan, Uzbekistan	Kazakhstan
\$500-\$999 million	Kyrgyzstan	
\$100-\$499 million	Tajikistan	
Below \$10 million		

Source: UNCTAD, 2014.

Note: Economies are listed according to the magnitude of their FDI flows.

Although under the two different classifications the range differs and the economies change their position, the relative order of the economies remains the same, both for inflows and for outflows. The exact trend and nature of FDI flows in the CARs is discussed in box 5.2. The FDI inflows are somewhat concentrated in just Kazakhstan and Uzbekistan, in the extractive industry. One important feature of the FDI inflows in the region is in terms of mergers and acquisitions (M&A), such as the \$6.3 billion takeover of Polyus Gold International of the Russian Federation by Kazakh Gold.

Box 5.2. FDI flows of the CARs as landlocked developing countries

FDI inflows to LLDCs have reached a record high. The largest recipients of inflows were again Kazakhstan (37%) and Turkmenistan (9%). FDI inflows to Kazakhstan increased by 20%, led by strong investment in hydrocarbons. However, Turkmenistan experienced falls for the second year in a row. For example, although Turkmenistan attracted \$3.2 billion of FDI inflows in 2011, these inflows have followed a downward trend since 2009. The recipients of the largest amount of FDI were Kazakhstan (\$8 billion in 2011, compared with \$2.5 billion in 2010), and Uzbekistan (\$7.6 billion in 2011, compared with \$2.4 billion in 2010), reflecting the destinations of large-scale projects. The receipts of these two countries represent 40% of all greenfield investments in LLDCs of Central Asia.

Investments in the extractive industry accounted for almost 80% of greenfield investments in Uzbekistan. Following the previous \$1.3 billion investment by the United Arab Emirates in chemicals in 2011, the country attracted another large-scale investment in the manufacturing sector. Indorama of Singapore, a petrochemicals group, announced a joint-venture project with the Uzbek national gas company, Uzbekneftegaz, and the Uzbekistan Fund for Reconstruction and Development, to build a polyethylene production plant under a government programme to enhance and develop polymers production.

The Indorama also has a stake in Uzbekistan's textile industry. The Indorama project accounted for 89% of Singapore's greenfield investments in the Central Asian LLDCs. Investments of \$5 billion from Asia and the Russian Federation also came to Uzbekistan, accounting for 70% of FDI inflows of Uzbekistan.

Source: UNCTAD, 2012.

It is interesting to note that the CARs featured quite prominently among the largest greenfield projects in LLDCs in 2011, with Uzbekistan leading, followed by Kazakhstan and Turkmenistan. In terms of the number of projects, Kazakhstan led with three projects, followed by Uzbekistan and Turkmenistan with two each. In terms of the investment size of the projects, Uzbekistan attracted some \$5 billion FDI whereas Kazakhstan was able to attract three projects worth \$4 billion. What also clearly stands out is that the sources of these greenfield projects in the CARs were primarily the Russian Federation, United Kingdom, Singapore, Canada and China (table 5.6).

Table 5.6. Ten largest greenfield projects in LLDCs, 2011

Host economy	Industry	Investing company	Home economy	Estimated investment (US\$ million)	Estimated No. of jobs created
Uzbekistan	Natural, liquefied and compressed gas	LUKOIL	Russian Federation	5 000	3 000
Zimbabwe	Iron ore mining	Essar Group	India	4 000	3 000
Kazakhstan	Iron ore mining	ENRC	United Kingdom	2 100	3 000
Uganda	Oil and gas extraction	Tullow Oil	United Kingdom	2 000	783
Uzbekistan	Urethane, foam products and other compounds	Indorama	Singapore	1 190	3 000
Kazakhstan	Basic chemicals	Nitol Group	United Kingdom	1 000	1 200
Turkmenistan	Natural, liquefied and compressed gas	Thermo Designing Engineering	Canada	923	356
Kazakhstan	Other petroleum and coal products	Tethys Petroleum	United Kingdom	923	356
Turkmenistan	Natural, liquefied and compressed gas	CNPC	China	923	356
Zambia	Copper, nickel, lead and zinc mining	NFCA	China	700	1 201

Source: UNCTAD, 2012.

Note: LLDCs (Landlocked Developing Countries); ENRC (Eurasian Natural Resources Corporation); CNPC (China National Petroleum Corporation); and NFCA (Non-Ferrous China Africa).

E. Energy resources in the CARs

The macroeconomic context of the CARs suggests that these economies are quite amenable to regional economic integration that can help achieve their growth and developmental objectives. This effort would be further facilitated by the availability of energy resources in those countries (table 5.7), whereby generation of, and trade in energy would be possible with enormous developmental implications (Das, 2012).

Table 5.7. Energy resources of the CARs, 2010

Energy resources of Central Asia	Kazakhstan	Kyrgyzstan	Tajikistan	Turkmenistan	Uzbekistan
Production of hydro energy (Mtoe)*	0.69	0.89	1.36	0.00	0.93
Total production of energy (Mtoe)	156.75	1.18	1.51	46.29	54.15
Primary supply of coal and peat (Mtoe)**	36.39	0.54	0.09	–	1.06
Primary supply of oil (Mtoe)**	17.10	1.24	0.54	4.18	3.99
Primary supply of gas (Mtoe)	22.56	0.39	0.30	17.34	37.67

Source: Energy balances of non-OECD Countries (2012 edition).

Note: * Does not include electricity output from pumped storage plants; ** 2011 estimates.

Mtoe = Million tonnes of oil equivalent.

The Central Asian economies have some of the world's largest energy supplies. The OECD estimates that Kazakhstan holds 65 years of oil reserves and 308 years of coal reserves (Farra *et al.*, 2011).

In the case of its energy resources constitute 2% of the total primary energy resources of Central Asia and 30% of all hydropower potential of the region, of which only 10% is currently being utilized. The hydropower potential of its rivers is estimated to be 18.5 million kWth while the potential for output is 160 billion kWth. The largest hydropower potential is found in the basin of the Naryn and Sary-Djaz rivers, which have an annual river flow 30-40 cubic kilometres (km³) (CAREC, 2012). The hydroelectric potential of small rivers and drains (with an average long-term flow of 3 to 50 m³ per second) is about 5-8 billion kWth annually, of which only 3% is being used.

The major asset of Tajikistan is its water resources and the country possesses significant hydro-energy potential. Both Kyrgyzstan and Tajikistan are mountainous countries with rich water reserves whose most abundant potential resource is hydroelectricity.

In the case of Turkmenistan, its natural wealth lies in natural gas. Turkmenistan is a leading producer of natural gas and holds 223 years of natural gas reserves as per reserves-to-production ratio, based on the amount of resource used in one year at the current rate. Exploration and export of oil and gas play an important role in the economy of the country.

Similarly, Uzbekistan is rich in natural resources, including hydrocarbons and considerable deposits of gold, copper, lead, zinc, uranium, natural gas and oil. The country is among the 10 largest world producers of gas and has a developed energy sector. Up to 50% of the generation capacity of Central Asia's integrated energy system is located in Uzbekistan, and its production of primary energy exceeds 55 million tonnes of oil equivalence. The major source of primary energy in the country is natural gas, accounting for 85% of the total energy output.

F. Regional trade agreement initiatives of the CARs

The CARs have been engaging in various investment treaties and free trade agreement initiatives. These can be depicted by the number of bilateral investment treaties (BITs) and free trade agreements (FTAs) signed by these countries. As table 5.8 shows, the largest number of BITs has been signed by Uzbekistan (50), followed by Kazakhstan (47), Tajikistan (35), Kyrgyzstan (32) and Turkmenistan (27); however, the actual number of treaties that are currently in force is less than the number of treaties signed by each country. It is also evident that Kazakhstan has the highest number of FTAs (18) followed by Kyrgyzstan (13), whereas Uzbekistan, Tajikistan and Turkmenistan have signed 11, 10 and eight FTAs, respectively.

Table 5.8. Trade and investment agreements of CARs

Country	Total BITs ^a	Total FTAs ^b
Kazakhstan	47 (34 in force)	18
Kyrgyzstan	32 (24 in force)	13
Tajikistan	35 (21 in force)	10
Turkmenistan	27 (19 in force)	8
Uzbekistan	50 (47 in force)	11

Sources: ^a UNCTAD, International Investment Agreements Navigator; ^b Asia-Pacific Trade and Investment Agreement Database, ESCAP accessed in June 2016.

The CARs have launched various initiatives of regional economic integration. These have entailed both bilateral and regional trade and economic cooperation initiatives, within the Central Asian region as well as with extra-regional partners, whether as a country or a grouping. Among the intra-Central Asia bilateral initiatives, each country has a trade agreement with another CAR, e.g. the following bilateral trade agreements: Kazakhstan-Tajikistan, Kazakhstan-Turkmenistan, Uzbekistan-Turkmenistan, Kyrgyzstan-Turkmenistan and Tajikistan-Turkmenistan. Some of the important extra-regional partners with whom CARs have bilateral trade agreements include Azerbaijan, Armenia, Belarus, Georgia, Moldova and the Russian Federation (Das *et al.*, 2012).

There are a large number of regional trade initiatives in which the CARs are involved, some are in force and some have been dropped or subsumed in other agreements¹. Most importantly, the CARs do not have an RTA within the Central Asian region. Another important regional grouping is the Customs Union of the Russian Federation, Kazakhstan and Belarus that is negotiating an FTA with the European Free Trade Association (EFTA) (Das *et al.*, 2012).

¹ Some of them are: EurAsEC (Eurasian Economic Community – terminated in 2014); ECOTA (Economic Cooperation Organization Trade Agreement); CISFTA (Commonwealth of Independent States Free Trade Agreement); US-CA TIFA (United States-Cambodia Trade and Investment Framework Agreement); NZ-RF-KAZ-BEL FTA (New Zealand-Russian Federation-Kazakhstan-Belarus Free Trade Agreement).

Most of the trade agreements have focused on tariff liberalization based on the negative list approach to negotiation. An absence of clarity on rules of origin (RoO) in these agreements suggests that the analytical rationale on the RoO role in the trade agreements of the CARs, whether within the region or outside, is not well understood. The RoO formulations could be moulded in such a way that they play a developmental role within a trade agreement.

In addition, these agreements only focus on trade in goods and do not include trade in services and investment; therefore, they are not comprehensive in their coverage. Possibly, the region lacks the analytical understanding of the fact that trade in goods, trade in services and investment have to be taken together, in light of their interlinkages, when adopting an integrative approach. Similar observations can be made in the case of regional trade agreements entered into force by the Central Asian countries with countries outside the region.

It should be mentioned that despite a whole range of bilateral and plurilateral agreements, there is only one that is in operation in any significant manner which is relevant to the purpose of this study – i.e., the CU and the SES among Belarus, Kazakhstan and the Russian Federation which is replaced by Eurasian Economic Union (EAEU). The Eurasian Economic Community (EurAsEC) is an international organization that ensures multilateral economic cooperation among its member States. Incorporated as an international legal body, in 2003 EurAsEC was granted observer status in the United Nations General Assembly. During its sixty-second session in December 2007, the General Assembly adopted the resolution “Cooperation between the United Nations and the Eurasian Economic Community (EurAsEC)”. The Eurasian Economic Commission (EEC), a single permanent regulatory body of the Eurasian Economic Union, and the SES started functioning on 2 February 2012. The intra-Eurasian Customs Union’s share of total CU exports to the world markets stood at 9.73%, which is not very high by global standards (table 5.9), whereas the share of Intra-Eurasian CU imports in total imports stood at 15.31% (table 5.10).

The implications of this important initiative are analysed towards the end of this study in the context of the inclusion of the CARs as the Participating States of APTA.

Having analysed the macroeconomic performance, energy resources, trade structure, trade policies, FDI linkages and regional economic integration schemes of the CARs, it is clear that those countries have the necessary conditions to become the Participating States of APTA in a mutually beneficial manner. However, this needs to be ascertained empirically with an analysis which provides a brief review of the current Participating States of APTA.

Table 5.9. Eurasian Customs Union exports

(US\$ million)

From	Belarus	Kazakhstan	Russian Federation	Total intra-CU exports	Total exports to world	Total intra-CU exports as a share of total exports to world (%)
To						
Belarus		868.21	16 829.30	17 697.51	37 161.5	47.62
Kazakhstan	74.85		5 351.56	5 426.41	62 230.6	8.72
Russian Federation	20 228.30	17 632.20		37 860.50	527 266.0	7.18
Total intra-CU imports	20 303.15	18 500.41	22 180.86	60 984.42	626 658.1	9.73
Total imports from the world	42 998.50	54 710.10	314 967.00	412 675.60		
Total intra-CU imports as a share of total imports from the world (%)	47.22	33.82	7.04	14.78		

Source: IMF DOTS, 2014.

Table 5.10. Eurasian Customs Union imports

(US\$ million)

To	Belarus	Kazakhstan	Russian Federation	Total intra-CU imports	Total imports from the world	Total intra-CU imports as a share of total imports from the world
From						
Belarus		82.34	22 887.50	22 969.84	42 998.50	53.42
Kazakhstan	955.04		19 395.50	19 395.50	54 710.10	37.20
Russian Federation	13 959.30	5 886.71		5 886.71	314 967.00	6.30
Total intra-CU exports	14 914.34	5 969.05	42 283.00	48 252.05	412 675.60	15.31
Total exports to the world	37 161.50	62 230.60	527 266.00	626 658.10		
Total intra-CU exports as a share of total exports to the world (%)	40.13	9.59	8.02	7.70		

Source: IMF DOTS, 2014.

G. Suitability of APTA for Pan-Asian economic integration

There are various reasons as to why APTA is suited for Pan-Asian economic integration. APTA is possibly the most broad-based grouping in Asia as it comprises membership from the South Asian, South-East Asian and East Asian sub-regions. The South Asian region is represented by Bangladesh, India and Sri Lanka; the South-East Asian region by the Lao People's Democratic Republic; and the East Asian region by the Republic of Korea and China. It is the only regional grouping in Asia with the most comprehensive scope of cooperation, including trade in goods, trade in services, investment, and several other areas of cooperation, including non-tariff measures (NTMs). It is also the only grouping with three of the world's most dynamic economies, i.e., China, India and the Republic of Korea, as current members. It also has a structured institutional mechanism with a Secretariat at the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) in Bangkok.

China and India have been playing an important role in the faster recovery of the Asia-Pacific economies due to their large import demand during the period of global economic recession. This exemplifies the extent of the future impact of APTA in the Asia-Pacific region, as it is the only preferential trade agreement to have both these two giant economies as members with populations and GDP that represent 67% and 38% of the region, respectively (APTA, 2013).

APTA has already progressed with regard to trade in goods negotiations, and the modalities are in place. The Participating States of APTA are about to conclude the Fourth Round of negotiations, which covers more than 10,000 items under preferential trade.

Current intra-APTA trade is not insignificant, with its exports accounting for 11.2% of total exports to the world (table 5.11). However, it is important to note that the absolute volume of intra-APTA exports increased from approximately \$127 billion in 2005 to \$351 billion in 2013, which represents an increase of 175%. This growth in intraregional exports in absolute terms is much higher than the 98% increase in the case of ASEAN, 130% increase for MERCOSUR, and 139% increase for IOR during the same period. Also, it is only just below the approximate 200% increase for SADC. It is equally important to observe that, in absolute terms, intra-APTA exports stood at \$351 billion, ahead of ASEAN (\$328 billion), MERCOSUR (\$59 billion) and SADC (\$24 billion), but behind IOR (\$640 billion) in 2013.

More importantly, in comparison to APTA, the least integrated among the sample of regional groupings, the intraregional exports of the CARs as a share of its global exports was very low at 4% in 2005 and 6.1% in 2013. Thus, a detailed analysis of CARs membership in APTA deserves serious consideration. This would be hypothetically helpful in augmenting the overall trade flows of APTA through CARs-APTA trade linkages.

It is worth mentioning that in analysing the intraregional trade flows, only export trends have been included because imports would only mirror the export behaviour at the aggregate

intraregional level. However, the extent of intra-APTA trade integration varies across members, with some countries having strong linkages and others having weak linkages. Strong intra-APTA linkages are displayed by the Republic of Korea and the Lao People's Democratic Republic, moderate linkages by India, China and Sri Lanka, and somewhat weaker linkages by Bangladesh.

In addition, exports from individual Participating States of APTA to the other APTA members have displayed enormous dynamism in recent times (Das, 2015); especially since 2002, all the member countries have shown an increasing trend in their exports to other members. This may well be due to tariff changes in the initial rounds of negotiations as well as bridging of the information gap and an increased awareness among the business communities of the members.

APTA is also set to launch negotiations on trade facilitation, trade in services, investment and other areas of cooperation, such as NTMs. In August 2011, the Participating States of APTA entered into force the Framework Agreement on the Promotion and Liberalization of Trade in Services, following the Framework Agreement on the Promotion, Protection and Liberalization of Investment, and the Framework Agreement on Trade Facilitation that were signed and ratified in December 2009.

It is also the first multilateral agreement among the developing countries of the region to adopt common operational procedures for certification and verification of the origin of goods.

Table 5.11. Intraregional exports among regional groupings of developing countries

(US\$ million)

Regional groupings	Total intraregional exports	Total exports to the world	Intraregional exports as a share of exports to the world (%)
2005			
APTA	127 340.23	1 160 494.16	10.97
ASEAN	165 457.14	652 998.14	25.34
MERCOSUR	25 670.39	221 137.72	11.61
IOR	268 717.19	1 022 835.48	26.27
SADC	8 327.03	92 420.01	9.01
CARs	1 504.76	38 013.01	3.95
2013			
APTA	351 300.11	3 129 670.21	11.22
ASEAN	328 806.98	1 262 529.86	26.04
MERCOSUR	58 946.84	421 069.80	14.00
IOR	640 409.95	2 179 791.21	29.38
SADC	24 917.28	195 828.82	12.72
CARs	5 200.39	85 280.19	6.10

Source: IMF DOTS, 2015.

However, despite its high potential, APTA did not progress fast enough in terms of deepening and widening preferential trade. One of the ways in which this could be achieved is by expanding the APTA membership. Hence, this chapter explores the possibility of membership expansion that will have positive impacts not only on the potential member countries from the CARs but also the Participating States of APTA.

H. Benefits from expansion of APTA membership

Having underscored some of the major aspects pertaining to the suitability of evolving APTA as the Pan-Asian economic integration mechanism and forum as well as the Ministerial mandate for expanding APTA membership, this section focuses on the quantification of benefits for new members from the Central Asian region and Mongolia.

1. Trade linkages between the Participating States of APTA and the CARs

It is evident from table 5.12 that more than 90% of Mongolia's exports to the world are directed towards the Participating States of APTA (mostly China). Mongolia's imports from APTA as a percentage of its total imports also stand at more than 44% (table 5.13). This obviously means that Mongolia is a good choice for APTA membership. However, future negotiations could focus on the potential for Mongolia's imports from APTA to increase further. The negotiations also need to focus through the APTA Framework Agreement on Investment to help diversify Mongolia's exports to other regions of the world, especially South Asia and Central Asia, which would be possible if the CARs become members of APTA. This is important in reducing overdependence of Mongolia on the Participating States of APTA for its exports.

In terms of growth rates, exports by the CARs to APTA members in relation to those to the world are very high and, at times, quite erratic. There are a number of reasons including a low base and almost no trade in some cases. In absolute volumes, the CARs' existing trade linkages with the Participating States of APTA are also quite impressive, making the CARs amenable to APTA membership. Inclusion of the CARs in APTA would help to create opportunities for them, with the exception of Turkmenistan which already has a high share of exports to APTA. From the import side, most of the CARs have significant potential to increase their imports from the Participating States of APTA. However, it should be noted that while the CARs are quite well integrated with APTA on the import side, APTA membership would provide possibilities for harnessing an increase in the trade in goods, given that FDI and trade in services interlinkages would take the levels of integration to a much higher level. In this regard, the CARs are good candidates for APTA membership.

It is worth mentioning that between 2005 and 2013, the CARs and Mongolia recorded much faster export growth to APTA member countries as a whole than with the world. The exports of the CARs and Mongolia to the Participating States of APTA as a percentage of their total exports to the world also registered a phenomenal rise during the same period except in the case of Kyrgyzstan. Similar trends are also evident on the import side (tables 5.12 and 5.13).

Table 5.12. Exports by the CARs and Mongolia to APTA member countries

Exports from		APTA members			World			Total exports to APTA members as a percentage of exports to the world (%)		
		2005	2013	% change	2005	2013	% change	2005	2013	% change
Exports to		2 632.6	15 211.0	477.8	27 858.4	62 230.6	123.4	9.5	24.4	158.6
Kazakhstan		38.5	58.7	52.7	633.8	1 130.9	78.4	6.1	5.2	-14.5
Kyrgyzstan		7.9	148.9	1 784.8	908.7	938.2	3.2	0.9	15.9	1 725.5
Tajikistan		40.0	8 231.5	20 494.2	4 957.4	11 932.7	140.7	0.8	69.0	8 455.4
Turkmenistan		624.3	2 335.1	274.0	3 609.8	6 256.7	73.3	17.3	37.3	115.8
Uzbekistan		578.4	3 212.2	455.4	1 063.9	3 516.2	230.5	54.4	91.4	68.0

Source: IMF DOTS 2014.

Table 5.13. Imports by the CARs and Mongolia from APTA member countries

Imports from		APTA members			World			Imports from APTA members as a percentage of imports from the world (%)		
		2005	2013	% change	2005	2013	% change	2005	2013	% change
Imports to		1 614.7	15 285.9	846.7	17 388.1	54 710.1	214.6	9.3	27.9	200.9
Kazakhstan		136.6	5 809.4	4 151.6	1 111.6	10 708.5	863.3	12.3	54.3	341.3
Kyrgyzstan		102.9	2 156.2	1 995.4	1 330.1	4 942.2	271.6	7.7	43.6	464.0
Tajikistan		126.6	1 470.3	1 061.0	2 608.7	9 682.9	271.2	4.9	15.2	212.7
Turkmenistan		823.1	5 171.3	528.3	3 565.2	14 248.5	299.7	23.1	36.3	57.2
Uzbekistan		370.0	3 152.9	752.2	1 175.0	6 887.0	486.1	31.5	45.8	45.4

Source: IMF DOTS 2014.

2. Mutual economic gains from CARs-APTA trade integration: CGE simulations

To realize the gains from trade integration, implementing an RTA is one of the most important steps. The effects of an RTA for the CARs with APTA member countries are simulated, using CGE modelling based on the latest GTAP 8 database released in 2012. Reduction or elimination of tariff barriers is a prerequisite under any RTA in order to step up bilateral and overall regional trade flows in the region under consideration. Considering the fact that trade flows are a function not only of tariff reduction or elimination, but also of trade facilitation measures – which may include simplification of customs clearance procedures, mutual recognition agreements for standards, technical cooperation and improvement in trade facilitation infrastructure – it was imperative to factor in both tariff liberalization and trade facilitation while assessing the possible trade and welfare gains.

Thus, this exercise included full tariff liberalization together with import-augmenting technical change denoting trade facilitation effects. This was done based on the latest GTAP 8 database. Regional aggregation included East Asia, South Asia, North America, the European Union-25, Central Asia, APTA Participating States and the rest of the world. In terms of sectoral aggregation, 57 sectors were mapped in terms of 10 sectors, with five sectors capturing the manufacturing sector as a whole.

Trade facilitation measures were formulated in the simulation as an “import-augmenting technical change” to estimate the impacts. In the model, a positive “import-augmenting technical change” or an improvement in efficiency of importing products lowers the market price (domestic price) of imported products. Specifically, the effects of 10% exogenous change in this efficiency improvement were investigated. The solution method was adopted as 1-Step Johansen and the parameters were taken as default.

The CGE modelling simulations were undertaken with trade liberalization and trade facilitation scenarios together. The simulated potential welfare and trade gains of an RTA among the CARs are presented in table 5.14, which presents a scenario of full tariff liberalization coupled with trade facilitation. Under this scenario, the welfare gains and regional exports accruing to the CARs and APTA member countries are both positive and substantive. Obviously, the gains in dynamic setting would be much more. Some of the sectors also show meaningful gains for both APTA member countries and the CARs. While the CARs gain potentially in sectors such as processed food, mining and extraction, other services and heavy manufacturing, APTA member countries' potential gains may lie in sectors that include textiles and clothing, utilities and construction, mining and extraction, transport and communications, and light manufacturing. In sum, a Central Asian RTA with APTA member countries through their membership is both welfare-enhancing and trade-inducing.

Table 5.14. CARs-APTA: Potential welfare and trade gains

Full tariff liberalization with trade facilitation			
S. No.	Dimension of gains	Extent of gains	
		Central Asia	APTA members
1.	Welfare gains (% of GDP)	1.27	0.90
2.	Regional export increase (%)	2 055.01	179.40
3.	Regional export increase by sector (%)		
3.1.	Livestock and meat products	21.33	09.06
3.2.	Mining and extraction	27.67	54.32
3.3.	Processed food	62.00	09.61
3.4.	Textiles and clothing	20.11	71.92
3.5.	Light manufacturing	20.32	34.99
3.6.	Heavy manufacturing	24.49	27.46
3.7.	Utilities and construction	20.20	66.54
3.8.	Transport and communications	23.01	43.97
3.9.	Other services	27.54	23.55

Source: Author's CGE simulation results based on GTAP 8 database, 2012.

3. Benefits to the CARs and APTA: Augmented gravity model estimation of gains

To project the trade potential for each of bilateral pairs of the CARs vis-à-vis APTA member countries in 2020, 2025 and 2030, an augmented gravity model was used. The details of this methodology are: model specification and economic rationale for choosing independent variables; the econometric estimation methodology adopted; data and measurement of variables; sampling method; and the mechanics through which the potential for trade can be made available. The results are presented in tables 5.15 and 5.16 for the CARs and APTA Participating States, respectively.

It is important to note that each of the bilateral pairs of the CARs vis-à-vis APTA Participating States displays enormous trade potential. Some exceptions exist due to data limitation and statistical anomalies arising out of outlier values of denominators, such as high GDP and relatively low export values, were dealt with through stratified sampling.

Table 5.15. Central Asia – APTA members projected trade potential matrix

(Per cent change over 2010)

Year	Bangladesh			China			India			Republic of Korea			Lao PDR			Sri Lanka		
	2020	2025	2030	2020	2025	2030	2020	2025	2030	2020	2025	2030	2020	2025	2030	2020	2025	2030
Kazakhstan	611	1 093	1 733	140	236	343	186	399	688	122	258	430	32 478	45 532	59 516	93	239	432
Kyrgyzstan	30 742	31 126	31 396	-69	-68	-67	189	275	367	105	105	104	28	69	111	6 086	6 270	6 381
Tajikistan	17 246	22 473	28 015	-86	-84	-82	817	939	1 053	277	315	349	552	781	1 020	4 092	5 483	6 936
Turkmenistan	-82	-80	-79	-18	-11	-5	193	215	235	259	280	299	541 601	586 430	624 758	315 020	339 322	360 181
Uzbekistan	-86	-82	-78	173	282	404	557	740	993	-14	41	76	1 502	2 031	2 576	14 795	19 380	24 071

Source: Based on author's estimations.

Note 1: Such large figures are because of a zero base, i.e., almost nil exports, and for them .0001 is taken for 0.

Note 2: Negative values.

Table 5.16. APTA members – Central Asia projected trade potential matrix

(Per cent change over 2010)

Year	Kazakhstan			Kyrgyzstan			Tajikistan			Turkmenistan			Uzbekistan		
	2020	2025	2030	2020	2025	2030	2020	2025	2030	2020	2025	2030	2020	2025	2030
Bangladesh	1 893	2 784	3 834	14 656	18 348	22 277	-85	-79	-71	54 484	69 410	84 836	308	483	687
China	25	87	161	-92	-89	-85	-40	-7	31	63	128	201	36	102	178
India	2 687	5 527	9 876	268	626	1 176	681	1 470	2 675	1 790	3 041	4 661	2 827	5 724	10 116
Republic of Korea	276	441	629	-29	-19	-10	28	83	146	182	253	325	-72	-61	-48
Lao PDR	55 756	84 846	119 190	330	532	776	403	660	963	2 566	3 924	5 537	6 517	9 743	13 501
Sri Lanka	167	226	284	-18	-2	14	183	245	305	5 523	7 561	9 788	9 305	12 592	16 137

Source: Based on author's estimations.

Note 1: Such large figures are because of a zero base, i.e., almost nil exports, and for them .0001 is taken for 0.

Note 2: Negative values.

4. Mutual intra-APTA aggregate trade gains with membership of the CARs

After revealing that an aggregate level trade potential exists among the CARs and the Participating States of APTA through CARs membership in APTA, this study attempted to identify items with high trade potential across different pairs of the CARs and the Participating States of APTA at the product level.

It is important to highlight the type of data constraints that were faced during the course of the study. Detailed trade data for all the CARs was not available for PCTAS at the HS 6-digit level, which prevented identification of potential items for intraregional trade between the CARs and the Participating States of APTA. Therefore, the UNCTAD database was used in undertaking the same exercise at SITC 3-digit level. A synoptic view of data availability is given in box 5.3.

Identification of the items was made at the HS 6-digit level and SITC 3-digit level with the help of two empirical techniques, i.e., (a) the RCA index and (b) the Dynamic Comparative Advantage.

$$(a) \quad RCA = (X_{ij} / X_{it}) \div (X_{wj} / X_{wt})$$

where

X_{ij} = Export of *jth* commodity from *ith* country to the world

X_{it} = Total export of *ith* country to the world

$X_{wj} = \sum X_{ij} \ i(1)w$, where w = set of country. = world's total export *jth* commodity.

$X_{wt} = \sum X_{it} \ i(1)w$, = world's total export of all the commodities.

(b) The Dynamic Comparative Advantage is defined as products satisfying three conditions of RCA that included feasibility and dynamism. Feasibility implies those products that reveal comparative advantage, i.e. $RCA > 1$ for CARs (APTA) was matched with $RCA < 1$ for APTA (CARs). The second criterion was to find which products show comparative advantages through the period under consideration, i.e., 2008-2012. This implies that $RCA > 1$ is increasing over the period under consideration for one side viz. CARs (APTA) was matched with items with $RCA < 1$ and RCA was decreasing during the same period for the other side viz. APTA (CARs). In order to measure how dynamic the comparative advantage of a particular product was, the growth rate of calculated RCA value between 2008 and 2012 was considered. Next, only those products whose RCA values exhibit strictly positive growth rate were considered. However, the number of products was being compressed because of this technique; therefore, the results obtained from the first technique of RCA are mainly presented here.

The trade gains by the CARs in terms of market access to APTA member countries after becoming the Participating States of APTA turns out to be approximately \$142 billion. Similar gains for APTA some \$28 billion (table 5.17 and 5.18).

Box 5.3. Data availability for Central Asian economies

Statistical source	Status of CARs
UNCTAD statistics	UNCTAD produces more than 150 indicators and statistical time series essential for the analysis of international trade, economic trends, foreign direct investment, external financial resource, etc. Data are available for all the Central Asian countries.
PC-TAS	PC-TAS contains five years of import and export statistics covering 230 countries and territories and broken down into 5,300 Harmonized System (HS Revision 2) products at the 2- and 6-digit level. However, out of the 5 Central Asian economies only 2 economies are covered and data for Tajikistan, Turkmenistan and Uzbekistan are not available.
United Nations Commodity Trade Statistics (COMTRADE)	COMTRADE stores more than 1 billion trade data records from 1962. More than 140 reporting countries provide the United Nations Statistics Division with their annual international trade statistics detailed by commodities and partner countries. Again, only two Central Asian economies, data are available i.e. Kazakhstan and Kyrgyzstan.
World Integrated Trade Solution (WITS)	WITS provides access to major international trade, tariff and non-tariff data compilations. Data are unavailable for Tajikistan, Turkmenistan and Uzbekistan.
IMF Direction of Trade Statistics (DOTS)	The Direction of Trade Statistics database contains data on the total value of merchandise exports and imports between each country and all its trading partners. Available for Central Asian economies.

Source: Author's compilation.

Table 5.17. Export potential of CARs to APTA member countries

(US\$ million)

	Bangladesh	China	India	Republic of Korea	Lao PDR	Sri Lanka	APTA
Kazakhstan	N.A.	58 249	57 642	4 049	N.A.	1 008	120 948
Kyrgyzstan	N.A.	350	699	829	N.A.	360	2 238
Tajikistan	41	620	33	881	18	213	1 806
Turkmenistan	1 126	4 960	1 924	3 290	465	1 569	13 334
Uzbekistan	587	316	273	2 282	71	143	3 672
CARs							141 998

Source: Author's calculations based on United Nations COMTRADE.

Overall, trade gains to APTA Participating States due to the inclusion of the CARs would be \$170 billion, which is an approximate 49% additional total aggregate trade gains in existing intra-APTA trade, when considering the fact that the existing intra-APTA trade is \$345 billion.

Table 5.18. Export potential of APTA member countries to CARs

(US\$ million)

	Kazakhstan	Kyrgyzstan	Tajikistan	Turkmenistan	Uzbekistan	CARs
Bangladesh	N.A.	N.A.	82	292	791	1 164
China	8 669	246	143	2 126	2 724	13 908
India	2 903	294	21	587	2 556	6 361
Republic of Korea	2 155	243	524	262	2 407	5 590
Lao PDR	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Sri Lanka	278	50	0	2	171	501
APTA						27 524

Source: Author's calculations based on United Nations COMTRADE.

These figures help in identifying product-country pairs with the presence of trade complementarity. The tables suggest two-way trade complementarities between the CARs and the Participating States of APTA for several important items based on RCA. For Kazakhstan and Kyrgyzstan the calculations and matching with APTA member countries were done at the HS 6-digit level whereas for the other CARs it was done at the SITC 3-digit level.

The methodology for calculating the potential range of exports from one side to the other needs explanation. On the basis of matched RCA codes, the export potential of CARs to individual APTA members was assessed and vice versa. The export potential of CARs to a Participating State of APTA was calculated as the difference between the imports of individual Participating States of APTA from the world and imports from the CARs at the disaggregated product level.

The potential range is then calculated at the product level as a minimum of CARs exports to the world and potential exports by the CARs to Participating States of APTA. The rationale behind taking the minimum of the two as the potential range of CARs economies is that for certain products the potential exports of CARs to the Participating States of APTA are much greater than what CARs economies are currently exporting to the world.

What is more important to note is that this technique still provides a conservative estimate of the potential range of CARs exports because there is no reason to believe that CARs cannot increase their total supply base, especially to APTA member countries given the special tariff concessions that will be available to them after integration with APTA. A similar exercise was carried out from the other side to obtain the export potential of Participating States of APTA to CARs and the potential range of the Participating States of APTA at the disaggregated product level.

This methodology can be expressed as:

$$PX_{ij} = M_{jw} - M_{ji}$$

$$PXR_{ij} = \text{Min}(X_{ij}, X_{iw})$$

where PX_{ij} = Potential export of country i with $RCA > 1$ to country j with $RCA < 1$ at disaggregated product level; M_{jw} = imports of country j from the world at the product level; M_{ji} = imports of country j from country i at the product level; X_{iw} = exports of country i to the world at the product level; and PXR_{ij} = potential export range of country i to country j .

I. Trade gains for the CARs due to APTA tariff concessions after the Fourth Round

This section evaluates the potential of Central Asian countries in terms of exports to the Participating States of APTA, given the existing schedule of tariff concessions, especially in terms of products and Margin of Preference (MoP).

Table 5.19. Summary of schedule of commitments

Concession-offering country	Before Fourth Round		After Fourth Round		Increase in coverage after Fourth Round	
	No. of products	MoP (%)	No. of products	MoP (%)	No. of products	MoP (%)
Bangladesh	209	14.1	540	21.90	258.37	155.32
China	1 697	26.7	1 331	33.25	78.43	124.53
India	570	23.9	1 661	34.60	291.40	144.77
Republic of Korea	1 367	35.4	1 389	32.40	101.61	91.53
Sri Lanka	427	14.0	145	28.00	33.96	200.00

Source: Based on the Participating States of APTA fourth Schedule of Tariff Concessions.

Note: MoP = Margin of Preference.

As shown in table 5.19, there has been a remarkable percentage increase in the number of products included after the Fourth Round compared with the Third Round of tariff concessions under APTA. However, it must be mentioned that the number of products in the cases of China and the Republic of Korea are at the HS 8-digit level, hence the difference in the number of products covered in absolute terms when compared to other countries.

It must be nevertheless mentioned that the increase after Fourth Round is in terms of the increase in coverage, in both the number of products as well as MoP, rather than a percentage increase in the growth of these numbers between the two Rounds. Therefore, this has been calculated as $[(\text{Fourth Round} / \text{Third Round}) \times 100]$ rather than $[(\text{Fourth Round} - \text{Third Round}) / (\text{Third Round}) \times 100]$. This has been done because the number of products varied due to the addition of new products and the deletion of other products, making the sample of tariff lines different in the two Rounds and preventing their exact comparison.

Furthermore, MoP has also shown a remarkable increase post-Fourth Round for all the major Participating States of APTA. It ranges from a 200% increase in the case of Sri Lanka to a 92% in the case of the Republic of Korea. The divergence in the percentage increases on a country-wise basis is possibly due to the base effect.²

Product-wise export potential of CARs vis-à-vis Participating States of APTA

At this stage, the product-wise export potential of individual CARs to individual Participating States of APTA was explored, using a simple but insightful methodology. For each Central Asian country, an attempt was made to match its global exports of a particular HS 6-digit level product with imports of the same product from the world by an individual Participating State of APTA. Further, HS 6-digit level items were extracted in cases where a Central Asian country made significant exports of those products to the world but where the same product was not imported by an individual Participating State of APTA from the Central Asian region, even though the Participating State of APTA was making substantial imports of the same product from the world. This methodology was also based on Ratna (2011) and it provided the export potential of CARs to APTA Participating States.

It should also be mentioned that this exercise was possible only in the case of two CARs, i.e., Kazakhstan and Kyrgyzstan, due to the non-availability of data at the HS 6-digit level for other CARs. The major potential export products from both countries to Participating States of APTA are listed in tables 5.20 and 5.21, respectively.

Table 5.20. Product-wise export potential of Kazakhstan to the Participating States of APTA, 2011

1. Bangladesh				
HS Code	Product description	Bangladesh imports from the world (US\$ million)	Bangladesh imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
520100	Cotton, not carded or combed	1 041	11	70
100190	Wheat, n.e.s. and meslin	588	7	582
100630	Rice, semi-milled or wholly milled, whether or not polished or glazed	379	0	29
270900	Petroleum oils and oils obtained from bituminous minerals, crude	222	0	55 174
720839	Hot roll iron/steel, n.e.s., coil >600 mm × <3 mm	198	5	480

² Data for the Lao People’s Democratic Republic before the Fourth Round are unavailable.

Table 5.20. (continued)

1. Bangladesh (continued)				
HS Code	Product description	Bangladesh imports from the world (US\$ million)	Bangladesh imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
720449	Ferrous waste and scrap, iron or steel, n.e.s.	175	0	202
271019	Light petroleum distillates, n.e.s.	142	0	2 430
390210	Polypropylene	132	0	36
790111	Zinc, not alloyed, unwrought containing by weight 99.99% or more zinc	81	0	721
120510	Rape/colza seeds, sowing, erucic acid $\geq 2\%$	69	0	20
271320	Petroleum bitumen	40	0	18
760110	Aluminium unwrought, not alloyed	40	0	512
721070	Flat rolled prod, iron/non-alloy steel, painted, varnished or plastic-coated, ≥ 600 mm wide	32	0	66
300490	Medicaments, n.e.s., in dosage	30	0	14
720711	Semi-fin prod, iron/non-alloy steel, rectangular/square cross-section containing by weight $< .25\%$ c, width $< 2 \times$ thick	30	0	32
740311	Copper cathodes and sections of cathodes unwrought	29	0	2 855
720720	Semi-finished product, iron/non-alloy steel, containing by weight $.25\%$ more carbon	28	0	399
721049	Flat rolled products iron/non-alloy steel, plated or coated with zinc, ≥ 600 mm wide, n.e.s.	26	0	417
847130	Portable digital computers < 10 kg	20	0	82

Source: United Nations COMTRADE.

Table 5.20. (continued)

2. China				
HS Code	Product description	China imports from the world (US\$ million)	China imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
270900	Petroleum oils and oils obtained from bituminous minerals, crude	196 771	8 859	55 174
740311	Copper cathodes and sections of cathodes unwrought	24 816	1 522	2 855
720241	Ferro-chromium containing by weight more than 4% of carbon	2 157	534	2 529
271019	Light petroleum distillates, n.e.s.	30 201	798	2 430
284410	Natural uranium and its compounds; mixtures containing natural uranium/ its compounds	1 829	1 405	2 137
260112	Iron ores and concentrates, other than roasted iron pyrites, agglomerated	6 824	527	1 559
260111	Iron ores and concentrates, other than roasted iron pyrites, non-agglomerated	105 553	237	1 186
260300	Copper ores and concentrates	15 339	449	881
271112	Propane, liquefied	1 716	2	838
790111	Zinc, not alloyed, unwrought containing by weight 99.99% or more of zinc	702	157	721
100190	Wheat, n.e.s., and meslin	249	0	582
110100	Wheat or meslin flour	6	0	551
760110	Aluminium unwrought, not alloyed	563	1	512
250300	Sulphur, except sublimated, precipitated, colloidal	2 021	250	499
720839	Hot roll iron/steel n.e.s., coil >600 mm × <3 mm	250	14	480
721049	Flat rolled products, iron/ non-alloy steel, plated or coated with zinc, ≥600 mm wide, n.e.s.	1 175	0	417
271113	Butanes, liquefied	1 193	3	392

Table 5.20. (continued)

2. China (continued)				
HS Code	Product description	China imports from the world (US\$ million)	China imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
281820	Aluminium oxide n.e.s.	778	0	376
261000	Chromium ores and concentrates	2 664	34	367
780110	Lead refined, unwrought	16	3	348
720230	Ferro-silico-manganese	12	5	319
720249	Ferro-chromium, n.e.s.	5	0	254
260800	Zinc ores and concentrates	2 042	70	231
740811	Wire of refined copper of which the max cross sectional dimension >6 mm	1 147	202	210
721012	Flat rolled prod, iron/non-alloy steel-plated or coated with tin, ≥600 mm wide, <0.5 mm thick	60	6	209
720449	Ferrous waste and scrap, iron or steel, n.e.s.	3 763	27	202
720917	Cold rolled iron/steel, coils >600 mm × 0.5-1 mm	1 446	41	195
810820	Unwrought titanium	9	0	164
260200	Manganese ores and concentrates etc.	2 678	7	105
740400	Waste and scrap, copper or copper alloy	16 338	0	91
720852	Hot roll iron/steel, not coil >600 mm × 4.75-10 mm	103	1	75
720916	Cold rolled iron/steel, coils >600 mm × 1-3 mm	448	7	74
720918	Cold rolled iron/steel, coils >600 mm × <0.5 mm	1 130	13	73
281990	Chromium oxides n.e.s.; chromium hydroxides	2	0	71
520100	Cotton, not carded or combed	9 466	8	70

Source: United Nations COMTRADE.

Table 5.20. (continued)

3. India				
HS Code	Product description	India imports from the world (US\$ million)	India imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
720241	Ferro-chromium containing by weight more than 4% of carbon	14	2	2 529
271019	Light petroleum distillates, n.e.s.	4 722	1	2 430
790111	Zinc not alloyed, unwrought containing by weight 99.99% or more of zinc	79	18	721
710691	Silver in unwrought forms	4 154	10	618
250300	Sulphur, except sublimated, precipitated, colloidal	456	0	499
721049	Flat rolled prod, iron/non-alloy steel, plated or coated with zinc, ≥600 mm wide, n.e.s.	331	0	417
780110	Lead refined unwrought	204	14	348
720249	Ferro-chromium, n.e.s.	55	3	254
740811	Wire of refined copper of which the max cross sectional dimension >6 mm	456	0	210
721012	Flat rolled prod, iron/non-alloy steel-plated or coated with tin, ≥600 mm wide, <0.5 mm thick	115	0	209
720449	Ferrous waste and scrap, iron or steel, n.e.s.	2 488	0	202
720917	Cold rolled iron/steel, coils >600 mm × 0.5-1 mm	458	0	195
740400	Waste and scrap, copper or copper alloy	960	0	91
283531	Sodium triphosphate (sodium tripolyphosphate)	83	3	88
281990	Chromium oxides, n.e.s.; chromium hydroxides	2	0	71
520100	Cotton, not carded or combed	181	0	70
252400	Asbestos	235	38	47
720837	Hot roll iron/steel, n.e.s., coil >600 mm × 4.75-10 mm	170	0	45

Table 5.20. (continued)

3. India (continued)				
HS Code	Product description	China imports from the world (US\$ million)	China imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
790112	Zinc, not alloyed, unwrought containing by weight less than 99.99% of zinc	52	18	43
281910	Chromium trioxide	10	5	40
760200	Waste and scrap, aluminium	1 211	0	24
284130	Sodium dichromate	9	1	15

Source: United Nations COMTRADE.

4. Republic of Korea				
HS Code	Product description	Republic of Korea imports from the world (US\$ million)	Republic of Korea imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
740311	Copper cathodes and sections of cathodes unwrought	2 862	85	2 855
720241	Ferro-chromium containing by weight more than 4% of carbon	583	17	2 529
284410	Natural uranium and its compounds; mixtures containing natural uranium/ its compounds	59	0	2 137
710812	Gold in unwrought forms, non-monetary	1 198	0	756
790111	Zinc, not alloyed, unwrought containing by weight 99.99% or more of zinc	147	3	721
710691	Silver in unwrought forms	65	20	618
110100	Wheat or meslin flour	20	0	551
760110	Aluminium unwrought, not alloyed	2 260	110	512
720839	Hot roll iron/steel, n.e.s., coil >600 mm × <3 mm	1 752	3	480
780110	Lead refined unwrought	329	6	348
720230	Ferro-silico-manganese	123	0	319
720249	Ferro-chromium, n.e.s.	103	18	254

Table 5.20. (continued)

4. Republic of Korea (continued)				
HS Code	Product description	Republic of Korea imports from the world (US\$ million)	Republic of Korea imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
720917	Cold rolled iron/steel, coil >600 mm × 0.5-1 mm	209	0	195
810820	Unwrought titanium	110	52	164
720916	Cold rolled iron/steel, coil >600 mm × 1-3 mm	346	0	74
520100	Cotton, not carded or combed	855	0	70
490700	Unused postage, revenue stamps; cheque forms, banknotes, bond certificates etc.	7	0	57
720837	Hot roll iron/steel, n.e.s., coil >600 mm × 4.75-10 mm	640	4	45
790112	Zinc not alloyed unwrought containing by weight less than 99.99% of zinc	65	0	43
720838	Hot roll iron/steel n.e.s., coil >600 mm × 3-4.75 mm	918	3	41
281910	Chromium trioxide	18	0	40
740500	Master alloys of copper	6	1	33
720836	Hot roll iron/steel, n.e.s., coil >600 mm × >10 mm	293	1	31

Source: United Nations COMTRADE.

5. Sri Lanka				
HS Code	Product description	Sri Lanka imports from the world (US\$ million)	Sri Lanka imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
271019	Light petroleum distillate, n.e.s.	1 874	0	2 430
270900	Petroleum oils and oils obtained from bituminous minerals, crude	1 354	0	55 174
710812	Gold in unwrought forms, non-monetary	604	0	756
100190	Wheat, n.e.s. and meslin	449	0	582
300490	Medicaments, n.e.s., in dosage	258	0	14

Table 5.20. (continued)

5. Sri Lanka (continued)				
HS Code	Product description	Sri Lanka imports from the world (US\$ million)	Sri Lanka imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
252329	Portland cement, n.e.s.	200	0	19
880240	Aircraft, n.e.s., of an unladen weight exceeding 15,000 kg	193	0	57
271119	Petroleum gases and other gaseous hydrocarbons, n.e.s., liquefied	171	0	170
720711	Semi-fin prod, iron/non-alloy steel, rectangular/square cross-section containing by weight <.25% c, width <2 × thick	134	0	32
270119	Coal, n.e.s., whether or not pulverised but not agglomerated	107	0	1 520
740811	Wire of refined copper of which the maximum cross-sectional dimension >6 mm	90	0	210
271320	Petroleum bitumen	68	0	18
390210	Polypropylene	67	0	36
847130	Portable digital computers <10 kg	54	0	82
252400	Asbestos	40	0	47
842952	Shovels and excavators with a 360 degree revolving superstructure	39	0	4
730890	Structures and parts thereof, i/s (ex. Prefab. buildings of heading No. 9406)	34	0	17
210690	Food preparations, n.e.s.	32	0	19
848180	Taps, cocks, valves and similar appliances, n.e.s.	26	0	39
720852	Hot roll iron/steel, not coil >600 mm × 4.75-10 mm	23	0	75
721070	Flat rolled prod, iron/non-alloy steel, painted, varnished or plastic-coated, ≥600 mm wide	23	0	66

Table 5.20. (continued)

5. Sri Lanka (continued)				
HS Code	Product description	Sri Lanka imports from the world (US\$ million)	Sri Lanka imports from Kazakhstan (US\$ million)	Kazakhstan exports to the world (US\$ million)
490700	Unused postage, revenue stamps, cheque forms, banknotes, bond certificates etc.	21	0	57
100630	Rice, semi-milled or wholly milled, whether or not polished or glazed	18	0	29
721049	Flat rolled products, iron/non-alloy steel, plated or coated with zinc, ≥600 mm wide, n.e.s.	18	0	417
732690	Articles, iron or steel, n.e.s.	18	0	14
760120	Aluminium, unwrought, alloyed	17	0	12
392113	Film and sheet etc., cellular of polyurethane	16	0	16
720851	Hot roll iron/steel, not coiled >600 mm × >10 mm	15	0	20
110100	Wheat or meslin flour	14	0	551
847490	Parts of sorting/screening/mixing/crushing/grinding/washing/agglomerating machinery etc.	13	0	11
850710	Lead-acid electric accumulators of a kind used for starting piston engines	13	0	47
180690	Chocolate and other food preparations containing cocoa, n.e.s.	12	0	21
848210	Bearings, ball	12	0	12
190110	Preparations of cereals, flour, starch/milk for infant use, put up for retail sales	11	0	12
780110	Lead, refined, unwrought	11	0	348
853720	Boards, panels, including numerical control panels, for a voltage >1 000 V	11	0	12
760110	Aluminium, unwrought, not alloyed	10	0	512

Source: United Nations COMTRADE.

Table 5.21. Product-wise export potential of Kyrgyzstan to the Participating States of APTA, 2011

1. Bangladesh				
HS Code	Product description	Bangladesh imports from the world (US\$ million)	Bangladesh imports from Kyrgyzstan (US\$ million)	Kyrgyzstan exports to the world (US\$ million)
271011	Aviation spirit	1 416	0	10
520100	Cotton, not carded or combed	1 041	0	31
999999	Commodities not specified according to kind	274	0	60
271019	Light petroleum distillates, n.e.s.	142	0	87
870323	Automobiles with reciprocating piston engines displacing >1 500 cc to 3 000 cc	53	0	10
070310	Onions and shallots, fresh or chilled	43	0	10

Source: United Nations COMTRADE.

2. China				
HS Code	Product description	China imports from the world (US\$ million)	China imports from Kyrgyzstan (US\$ million)	Kyrgyzstan exports to the world (US\$ million)
271019	Light petroleum distillates, n.e.s.	30 201	7	87
271600	Electrical energy	318	0	80
520100	Cotton, not carded or combed	9 466	1	31
261690	Precious metal ores and concentrates, n.e.s.	871	12	17
760120	Aluminium, unwrought, alloyed	265	0	3
851780	Electrical apparatus for line telephony/telegraphy, n.e.s.	5 250	1	3
760200	Waste and scrap, aluminium	4 625	1	2
251690	Monumental or building stone, n.e.s.	3	0	1
280469	Silicon, n.e.s.	97	0	1
510119	Greasy wool (other than shorn wool) not carded or combed	1	0	1
720421	Waste and scrap, stainless steel	263	0	1
780110	Lead, refined, unwrought	16	0	1

Table 5.21. (continued)

2. China (continued)				
HS Code	Product description	China imports from the world (US\$ million)	China imports from Kyrgyzstan (US\$ million)	Kyrgyzstan exports to the world (US\$ million)
860900	Cargo containers designed to be carried by one or more modes of transport	5	0	1

Source: United Nations COMTRADE.

3. India				
HS Code	Product description	India imports from the world (US\$ million)	India imports from Kyrgyzstan (US\$ million)	Kyrgyzstan exports to the world (US\$ million)
720449	Ferrous waste and scrap, iron or steel, n.e.s.	2 488	0	9
740400	Waste and scrap, copper or copper alloy	960	0	7
410120	Whole bovine hides <16 kg	13	0	2
410150	Whole bovine hides >16 kg	6	0	2
410510	Tanned sheep/lamb skins, wet	59	0	1

Source: United Nations COMTRADE.

4. Republic of Korea				
HS Code	Product description	Republic of Korea imports from the world (US\$ million)	Republic of Korea imports from Kyrgyzstan (US\$ million)	Kyrgyzstan exports to the world (US\$ million)
720449	Ferrous waste and scrap, iron or steel, n.e.s.	3 916	0	9
720851	Hot roll iron/steel, not coil >600 mm × >10 mm	3 570	0	2
760200	Waste and scrap, aluminium	1 098	0	2
847990	Parts of machines and mechanical appliances n.e.s. having individual functions	2 452	0	2
280469	Silicon, n.e.s.	490	0	1
732690	Articles, iron or steel, n.e.s.	1 390	0	1

Source: United Nations COMTRADE.

Table 5.21. (continued)

5. Sri Lanka				
HS Code	Product description	Sri Lanka imports from the world (US\$ million)	Sri Lanka imports from Kyrgyzstan (US\$ million)	Kyrgyzstan exports to the world (US\$ million)
271019	Light petroleum distillates, n.e.s.	1 874	0	87
710812	Gold in unwrought forms, non-monetary	604	0	1 005
271011	Aviation spirit	394	0	10
252329	Portland cement, n.e.s.	200	0	8
870323	Automobiles with reciprocating piston engines displacing >1 500 cc to 3 000 cc	173	0	10
551219	Woven fabrics, containing ≥85% of polyester staple fibres, o/t unbleached or bleached	111	0	6
070310	Onions and shallots, fresh or chilled	63	0	10
240110	Tobacco, unmanufactured, not stemmed or stripped	45	0	13
070190	Potatoes, fresh or chilled, n.e.s.	36	0	19
870423	Diesel-powered trucks with a GVW exceeding 20 tonnes	24	0	21
870899	Motor vehicle parts, n.e.s.	18	0	6
080810	Apples, fresh	10	0	8
740400	Waste and scrap, copper or copper alloy	9	0	7
820719	Rock drilling/earth boring tools, n.e.s., parts	9	0	9

Source: United Nations COMTRADE.

J. New areas for cooperation between the CARs and the Participating States of APTA

Most of the trade agreements within the Asia-Pacific region have focused on tariff liberalization following a negative list approach. It should be emphasized that these agreements focus only on trade in goods, and do not include trade in services and investment; therefore, the agreements are not comprehensive in their coverage. Possibly, the region lacks an analytical understanding of the fact that liberalisation of trade in goods, trade in services and investment have to be taken together with cognizance of their interlinkages, when adopting an integrative approach in RTA.

On the other hand, within the realms of APTA, the Framework Agreement on Investment and the Framework Agreement on Trade in Services, together with the Framework Agreement on Trade Facilitation, once implemented through the liberalisation commitments would help the CARs to integrate with the Participating States of APTA in these areas, especially due to three reasons: (a) greater investment needs to achieve developmental objectives such as employment generation; (b) a high share of services in their GDP; and (c) high trade costs due to the landlockedness of the CARs. These together form an important basis for CARs' membership in APTA.

Against this backdrop, there are a few important areas in which the CARs and the Participating States of APTA can cooperate. These are summarized below.

1. Investment cooperation: Horizontal specialization and vertical integration

As pointed out in section J above, the strengthening of trade-investment linkages is a prerequisite for achieving effective regional economic integration; however, this aspect is neglected in several FTAs, more so in the context of the CARs. This type of linkage helps to improve the export supply capabilities of the smaller countries.

The trade-investment linkages also run in both the directions. While an FTA can spur investment flows in terms of efficiency-seeking regional restructuring, it is the trade-creating joint ventures that ultimately have a decisive impact on regional trade flows. The trade-creating joint ventures are in a position to take advantage of the regional freer trade agreement. In this context, in a dynamic scenario, focus could be on vertical integration and horizontal specialization with the help of cross-country investment flows that strengthen trade-investment linkages. Essentially this may mean regional distribution of different stages of production in a particular industry in an integrated manner, i.e., vertical integration and specialization in the same stage of production with the help of product differentiation across the region (horizontal specialization). This is the basis of the argument highlighting the imperatives of investment cooperation within the ambit of the intra-Central Asia investment integration as well as between the Central Asia and APTA economic integration process.

Such processes have been largely confined to sectors such as food processing, cotton and power generation. Based on the industrial structure and the service sector economies in the CARs as well as the analysis pertaining to identification of sectors and products for future trade integration, within CARs and with APTA member countries, it is easy to identify potentials for FDI integration to scale up the initiative pertaining to vertical integration and horizontal specialization. Some of the sectors amenable to such endeavours include the dairy sector, sugar, fruit and vegetables, textiles and apparel, chemicals, automobiles and electronics, among others.

Considering the trade-investment nexus, the economic integration of the CARs with the Participating States of APTA could be stepped up by focusing on trade-creating joint ventures; the reduction and elimination of investment regulation that may impede investment flows; harmonization of investment regimes with all other members; and special focus on

the transfer of technology. Investment protection and facilitation would be crucial in the area of energy production and trade through environment-friendly technologies. The above would be consistent with the Framework Agreement on Investment of APTA member countries.

2. Trade in services integration

Services are different in their characteristics compared with goods. These unique characteristics also influence the way international transactions in services are conducted. Services possess three main characteristics that make them very different from goods. First, they are intangible, although often incorporated in tangible products. Second, they are non-storable. Finally, they involve a simultaneous action between the service provider and the service consumer. Moreover, unlike goods production, ownership of services is often not transferred during the process of service provision. Hence, services cannot be stored. Instead, the service supplier stores the capacity to provide service to be rendered when there is a demand for that service. The inability to store means that services are mostly produced and consumed simultaneously.

Due to the above characteristics, trade in services assumes a special character. The simultaneous nature of service transaction has an impact on the modalities of international transactions in services. Thus, issues related to trade in services need to be approached differently from trade in goods. For services trade to occur, the means of transporting services often have to be allowed to cross national boundaries. This makes international transaction in services more complex conceptually than international transactions in goods.

As noted earlier in this study, the services sector accounts for a large share in GDP of the CARs. Due to statistical constraints, it is not possible to identify the importance of trade in services in the overall trade volumes of the Central Asian countries. However, recourse to secondary material on the Central Asian economies reveals that some of the sectors that could be considered for trade in services integration include: (a) telecommunications and information technology (IT); (b) professional services; (c) construction and related engineering services; (d) educational services; (e) environmental services; (f) health-related services; (g) tourism and travel-related services; and (h) audio-visual services.

Given that the Framework Agreement on Trade in Services under APTA is already in place, it would be important to harness trade in services prospects between the CARs and the Participating States of APTA. This can be done in a framework of GATS-plus commitments. Some of the areas amenable to cooperation include travel and tourism, transportation, education, health, IT, banking and finance, recreational services, among others. To tap the potential of trade in services in some of these new areas, cooperation in terms of Mutual Recognition Agreements (MRAs) as well as the recognition of mutual standards and qualifications will be crucial.

Having analysed the prospects for regional economic integration in the Central Asian region and with the Participating States of APTA, it is imperative to identify certain relevant constraints that have prevented the region from integration, both within and outside, in a meaningful manner.

3. Trade facilitation

The basic prerequisite for trade integration between the CARs and the Participating States of APTA is the establishment of an adequate trading facilitation infrastructure. In this context, simplification and harmonization of trade procedures and practices will be crucial, as mandated by the Framework Agreement on Trade Facilitation under APTA. Some of the prime areas for cooperation may include: (a) notification of existing and new trade laws and regulations, including amendments; (b) the harmonization of trade-related fees; (c) the establishment of a Single Window for trade data and documentation requirements; (d) the establishment of risk assessment and management procedures; and (e) the use of automatic and information technology in customs procedures.

Central Asian countries have undergone some major reforms since independence and have intensified their regional cooperation efforts; however, their integration into the global economy remains limited. One reason could be unnecessary high trade costs, resulting partly from the landlocked situation of these countries, which makes trade and transit problems especially severe. Trade facilitation has an extremely important role to play in Central Asian countries as it can lead to expansion in intraregional and interregional trade, which is supposed to stimulate investment and economic growth in the long term. The benefits from the removal of deficiencies and inefficiencies in cross-border trade are expected to be much higher than the benefits realized from the removal of tariff barriers.

Trade facilitation is aimed at simplifying and harmonizing these procedures. The region requires a shift in trade policy that includes more trade facilitation measures rather than trade control measures.

International agreements on standardized forms can help in achieving this goal. The Framework Agreement on Trade Facilitation under APTA is one such example. This Framework Agreement addresses the areas of transparency and consistency, simplicity and efficiency as well as harmonization, standardization and cooperation. It includes additional provisions for institutional arrangements and assistance to LDC members. It promotes trade facilitation as an important module of a comprehensive strategy for national and regional development. It also focuses on strengthening regional cooperation in trade and related technical assistance, and capacity-building in trade facilitation, including paperless trade. The integration of CARs with APTA can help to gain benefits from such an international agreement, and can also gain from technical and other forms of assistance provided to member countries as part of this agreement.

Overall, the CARs would benefit from joining APTA due to the Framework Agreement on Trade Facilitation, as some of these countries share borders with China and Mongolia.

4. Energy security

The Asia-Pacific region has become increasingly dependent on energy imports to meet its energy requirements. Thus, addressing this challenge is an important issue for the development of countries in the region, more so among the Participating States of APTA.

The three major economies of APTA – China, India and Republic of Korea – are the top importers of fossil fuels (oil, gas, and coal). On the other hand, the CARs and other Asian countries of the region (i.e., the Islamic Republic of Iran, Kazakhstan, Azerbaijan, the Russian Federation and Turkmenistan) are the top fossil fuel exporters, as they have rich energy resources.

Just 11 countries – Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan, Turkmenistan, Uzbekistan, the Islamic Republic of Iran and Turkey – possess 14% of global oil reserves, 31% of global gas reserves and 19% of global coal reserves. Energy exports represent almost one-third of the GDP of Kazakhstan and Azerbaijan, and more than half of the total merchandise exports of Kazakhstan, Azerbaijan and the Islamic Republic of Iran. On the other hand, energy imports are equivalent to almost 10% of India's GDP, and more than one-third of its total merchandise imports. Even in the advanced diversified East Asian economies of Japan and the Republic of Korea, 30% of their total merchandise imports comprise energy commodities (Cho *et al.*, 2014).

Table 5.22. Energy complementarities between CARs and APTA members

Country	Self-sufficiency in energy ^a		Net oil imports/ GDP ^b
	1990	2010	2010
Bangladesh	0.84	0.83	0.07
China	1.02	0.91	0.07
India	0.92	0.75	0.10
Republic of Korea	0.24	0.18	0.11
Lao PDR			
Mongolia	0.80	4.57	0.16
Sri Lanka	0.76	0.56	0.12
Central Asia			
Kazakhstan	1.24	2.09	-0.83
Tajikistan	0.38	0.65	0.17
Turkmenistan	4.16	2.17	-0.37
Uzbekistan	0.83	1.26	-0.01
Kyrgyzstan	0.33	0.41	0.52

Source: Energy balances of non-OECD Countries, 2012.³

^a Self-sufficiency is defined as energy production/TPES (total primary energy supply).

^b A negative number represents net exports.

³ For the Republic of Korea, the data is taken from Energy Balances of OECD Countries 2012, available at <http://www.oecd-library.org/docserver/download/6112101e.pdf?expires=1461038947&id=id&accname=ocid195767&checksum=58670D0E0135C20E1E097917BF8F20D3>.

One of the major arguments in favour of expansion of APTA membership, to include the CARs, is the possibility of cooperation in energy trade. As it is amply evident from table 5.22, self-sufficiency in the Participating States of APTA is absent to a large extent, whereas in the CARs there is a surplus energy supply except in the case of Tajikistan and Kyrgyzstan.

Self-sufficiency is defined as a ratio of energy production to total primary energy supply. A ratio of less than 1 denotes a lack of self-sufficiency in energy, resulting in net oil inputs. In 2010, the ratio was less than 1 for Bangladesh (0.83), China (0.91), India (0.75) and Sri Lanka (0.56). However, the ratios were 4.57 for Mongolia, 2.09 for Kazakhstan, 2.17 for Turkmenistan and 1.26 for Uzbekistan. As a result, the ratio of net oil inputs to GDP is 0.07 for Bangladesh, 0.07 for China, 0.10 for India and 0.12 for Sri Lanka. Obviously, it is negative for Kazakhstan, Turkmenistan and Uzbekistan, and positive for Tajikistan and Kyrgyzstan. It is puzzling that Mongolia has a net oil import to GDP ratio of 0.16, possibly suggesting a tendency to save domestic energy supplies as well as domestic consumption.

Despite the obvious benefits from harmonization of energy trade between Central Asia and South Asia, and the Participating States of APTA, flows have been rather limited with only China importing significant quantities of oil (22%) and gas (45%) from the exporting region in 2012, while the Republic of Korea and India imported just 10% and 9% of their total oil imports from Central Asia and South Asia respectively.⁴ Thus, there is tremendous potential for greater diversification of the energy mix of the Participating States of APTA through imports from the CARs. This is because enormous complementarities exist between the current Participating States of APTA and most of the CARs. It also presents a strong case for membership expansion of APTA to include the CARs.

Energy Compact: Energy cooperation between the CARs and APTA Participating States

Following on from the preceding discussion, energy cooperation may entail engagement on a wide range of issues, under the rubric of an Energy Compact. Such an Energy Compact would mean going several steps beyond energy security. Energy discourse between the Participating States of APTA and the CARs need not simply aim at making the energy situation secure. Instead, they need to combine and consolidate, and then implement the various aspects of energy-related cooperation with a clearly laid-out timeline through a mutually-agreed arrangement; all these together would constitute an Energy Compact. This could have three important implications: (a) tapping trade complementarities in hydrocarbons; (b) developing energy resources in the CARs with FDI from those Participating States of APTA with the required capital and technological resources; and (c) developing an Energy Arc of cooperation that will benefit both sides. This may initially constitute:

- (a) The development of the APTA energy market including the CARs and mutual trade with the CARs;
- (b) The development of Central Asia's energy potential through:
 - (i) Development of hydrocarbon and hydropower resources;
 - (ii) Evolving an Energy Arc of APTA Participating States and CARs through cooperation in renewable energy, energy efficiency, energy saving and energy infrastructure development.

⁴ Ibid.

One aspect of the Energy Arc as part of the wider Energy Compact would be addressing the climate change issues, which has emerged as a real danger for the CARs, and the potential for tackling them with climate-smart goods and technologies available in the Participating States of APTA. This is discussed below.

5. Tackling climate change in CARs: Implications for cooperation with the Participating States of APTA

By 2050, Central Asia will see an increase in both summer and winter temperatures and will experience a decline in frost days and an increase in heatwaves. Overall, Central Asia will see an increase of 2°C. In addition, a decrease of 12% in annual runoff is predicted, which will have a major impact on water resources, such as the Aral Sea. Heatwaves and higher evaporation will lead to drought, the loss of crops and pastures, and the expansion of desert areas (World Bank, 2010).

In this regard, progress made in related areas by countries such as China, the Republic of Korea and India could be useful to the CARs. For example, the Chinese National Carbon Trading Scheme to create a “low carbon civilisation” could be carefully studied. Similarly, since 2015, the Republic of Korea has been considered as leading Asia in greenhouse gas legislation. In the case of India, the National Plan on Climate Change, which includes areas such as solar energy and enhanced energy efficiency, could be studied. The CARs and the Participating States of APTA could therefore cooperate in fostering clean technology innovation.

Climate-smart goods including clean technology capital goods

For sustained economic development through trade in goods and services, it is equally important to produce climate-smart goods, including clean technology capital goods and the provision of environmentally sound services. A combination of these would go a long way in making APTA economic integration a carbon neutral process.

Studies⁵ have shown that in order to limit the global average temperature rise to 2°C requires high investments in climate-smart goods and technologies, including energy efficiency, renewables, biofuels, nuclear, and carbon capture and storage. The investment estimates for 2010-2020 and 2021-2030 are \$2.734 quadrillion and \$9.361 quadrillion, respectively.

ESCAP (2012) calculations show that in 2009 China and Japan were the region’s largest exporters of climate-smart goods and technologies (CSGTs), followed by the Republic of Korea. China was also the leading importer of CSGTs, followed by the Republic of Korea. Regional exports and imports of CSGTs were also geographically highly concentrated, as the top 10 exporters accounted for (a) 98.2% of all CSGT exports from the Asia-Pacific

⁵ See, for example, Crawford (2012), *Promoting Trade and Investment in Climate-Smart Goods, Services and Technologies in Asia and the Pacific*, ESCAP, Bangkok.

region (with the top two exporters, China and Japan, representing 67% of the total) and (b) 89.5% of total imports (with the top three importers, China, the Republic of Korea and Japan, accounting for 51.5%). However, trade in CSGTs remains a small proportion of total trade. In 2009, Japan led with the highest percentage (5.4%) of CSGT goods in total trade, followed by China (3.78%) and the Republic of Korea (2.96%). For the Participating States of APTA, the average share of CSGT goods in total trade was 3.40%, compared with the global average of 2.9%. Japan and other regional economies; such as China and the Republic of Korea, on average, have a higher propensity to export CSGTs than to the world as a whole. On the import side, Azerbaijan (7.1%), Kazakhstan and Armenia (4.7% each) and the Republic of Korea (4.4%) were the highest importers of CSGTs. For the APTA group, the share of CSGTs in total imports in 2009 was 3.37%, while for ASEAN it was 2.85%.

Asia-Pacific's intraregional trade in CSGTs as a share of its total trade in CSGTs remained relatively stable at around 50% between 2002 and 2009, but trade in CSGTs outside the region has changed. Also, the estimated export potential for CSGTs in Asia and the Pacific in 2008 was between \$30 billion and \$35 billion.

Attempts have been made to explore the potential for intraregional trade based on an analysis of competitiveness, RCA and regional orientation in the areas of four climate-smart energy technologies, i.e., solar photovoltaic systems, wind generation, clean coal and energy-efficient lighting. The results showed that, in general, CSGT exports do not occupy high shares in overall trade, both globally and in Asia-Pacific; only three Participating States of APTA (China, the Republic of Korea and India) featured among the top 10 traders in CSGTs in 2009 (ESCAP, 2013).

These observations are important in the light of the challenges that are going to confront the Central Asian region and the Participating States of APTA due to increased economic activities in Asia, if the view that economic gravity has shifted to Asian region is correct. This calls for greater cooperation among the Participating States of APTA and the CARs. Of the latter, Kazakhstan has displayed a high share of CSGTs in its total imports. This situation may call for increased cooperation in the trading of climate-smart energy technologies, which is a subset of CSGTs as a whole.

It is important for the Participating States of APTA to make conscious decisions to remove tariff and non-tariff barriers on trade in climate-smart energy technologies. In this context, it should be noted that while the Asia-Pacific region on the whole is a net exporter of solar PV systems and energy-efficient lighting it is a net importer of the other two climate-smart energy technologies, i.e., wind power generation and clean coal technologies. ESCAP (2012) highlighted the fact that in 2009 the top 10 importers of solar PV systems, wind power and clean coal from the APTA group included China, the Republic of Korea and India, whereas in the case of energy-efficient lighting it included the Republic of Korea and India.

The above could form an integral part of the energy compact by focusing further on renewable energy, energy efficiency, energy saving and energy infrastructure development. It is therefore recommended that the Energy Compact between the CARs and APTA Participating States proposed here is signed and implemented at the earliest possible opportunity. That, in turn, will provide an important additional rationale for expanding membership of APTA in order to include the CARs.

6. Integrated cross-country and cross-sectoral tourism

Tourism is one sector on which the Participating States of APTA can focus, and thus reap the benefits not only within the services sector but also through that sector's interlinkages with other sectors. For example, tourism is related to history, architecture, health, religion, sports, events, and so on. Therefore, the Participating States of APTA could focus on a plan for integrated cross-country and cross-sectoral tourism that would include heritage tourism, health tourism, religious tourism, festival tourism, sports tourism, film festivals, music concerts and events tourism.

Table 5.23. Number of tourist arrivals of APTA Participating States and the CARs, 2005 and 2012

APTA countries	2005	2012	Percentage change
Bangladesh	208 000	303 000 ^a	45.67
China	46 809 000	57 725 000	23.32
India	3 919 000	6 578 000	67.85
Republic of Korea	6 023 000	11 140 000	84.96
Lao PDR	672 000	2 140 000	218.45
Sri Lanka	549 000	1 006 000	83.24
Mongolia	338 000	476 000	40.83
Central Asia			
Kazakhstan	3 143 000	4 807 000	52.94
Kyrgyzstan	319 000	2 406 000	654.23
Tajikistan	325 000 ^b	244 000	-24.92
Turkmenistan	12 000	8 000 ^c	-33.33
Uzbekistan	242 000	975 000 ^a	302.89

Source: World Bank database.

Notes: ^a 2010 figure; ^b 2008 figure; and ^c 2007 figure.

Tourism is another area that offers immense scope for cooperation, both among the Participating States of APTA and with the CARs. With the exception of China and the Republic of Korea, the number of tourist arrivals in absolute terms remains low in the other countries. Table 5.23 shows that while most countries registered growth in tourism between 2005 and 2012, Tajikistan and Turkmenistan registered a decline in the number of tourist

arrivals. This suggests a need for cooperation within the Participating States of APTA and the CARs to harness the commercial opportunities for trade and services in the various areas of the tourism sector as people travel with different purposes in mind.

The tourism sector has the potential to create a major increase of economic activities in trade in goods, trade in services and investment that cannot be overemphasized. Increased tourist arrivals in the Participating States of APTA and its expanded membership of the CARs could boost businesses related to construction, transportation, telecommunications, health services, financial and insurance services, automobiles, restaurants and the entertainment sectors.

K. Constraints to inclusion of the CARs in APTA

Based on available secondary material and the existing literature on the subject, this chapter has attempted to summarize the various constraints that may act against the CARs' inclusion in APTA. There are several studies which have observed the present of significant barriers to trade and investment integration in the CARs pertaining to trade policy, connectivity, banking infrastructure etc. (Pomfret, 2006; ADB, 2006; EC, 2007; McGlinchey and Johnson, 2005; EIB, 2012; Das, 2013; Das *et al.*, 2012). It is important to deal with these issues in order to develop a policy strategy that will enable the CARs to take full advantage of their membership of APTA. These issues include:

- (a) *Tariffs, export taxes and NTBs.* The more significant trade barriers pertaining to the CARs include:
 - (i) A complex tariff schedule and relatively high tariffs (Kazakhstan and Uzbekistan);
 - (ii) Escalation of tariffs (all the CARs);
 - (iii) Frequent and unpredictable changes in the tariff schedule (Kazakhstan, Tajikistan and Uzbekistan);
 - (iv) High implicit tariffs in the form of taxes that are levied on imported goods, but not on domestically produced goods, or higher rates for imported goods than for domestically produced goods (Kazakhstan, and Uzbekistan);
 - (v) Explicit export taxes (Kazakhstan); and
 - (vi) Prohibition and licensing of exports and imports of certain commodities (all the CARs). Uzbekistan appears to be continuing the application of restrictions on access to foreign exchange in regulating imports as well as the imposition of relatively tight restrictions on the cross-border movement of people and transport equipment in an apparent effort to restrict imports from neighbouring countries. These would have to be tackled during tariff negotiations in APTA;

- (b) *Kazakhstan as a CU member.* The average applied tariff in the CU is around 7%-8% which is at a similar level to the Participating States of APTA. As a result, the scope for tariff liberalization based on MoP with regard to MFN

rates would be limited if the CARs need to be included in APTA. Therefore, it is imperative that APTA moves from a mere PTA to FTA and an even more comprehensive arrangement by evolving into a Comprehensive Economic Cooperation Agreement of Asia-Pacific (CECAAP), as argued in the APTA Roadmap (Pomfret, 2006; ADB, 2006; EC, 2007; McGlinchey and Johnson, 2005; EIB, 2012; Das, 2013; Das *et al.*, 2012);

- (c) *Hard infrastructure.* Other significant barriers to trade in Central Asia are high transport costs, and long and unpredictable transport times for international shipments to and from the CARs. This is not only because of the landlocked and remote location of the CARs and their difficult topography, but also due to deficiencies in their transport networks, high costs and low quality of transportation and logistics services in the region, and difficulties with the movement of goods and transport equipment across borders and through the territories of the CARs and neighbouring countries. Air connectivity is yet another area that constrains trade and investment linkages, thus restricting business-to-business contacts, educational services, health services, tourism linkages etc. This is particularly true of the linkages between Central Asia and other Asian regions. Telecommunications linkages at times also act as a constraint, especially in South Asia. Internet regulatory policy varies across the CARs, thus acting as a major constraint to smooth electronic connectivity, which is vital for effective intraregional and extraregional trade and investment linkages;
- (d) *Soft infrastructure.* Trade facilitating customs procedures and rules are at differing levels of evolution in the CARs, and they lack harmonization across countries, thus acting as a major bottleneck for intraregional and extraregional trade linkages. This not only includes customs valuation and definitional issues but also procedural delays, complex documentation and inefficient clearances. Foreign direct investment and capacity-building programmes need to build on the soft infrastructure;
- (e) *WTO accession.* A lack of WTO membership for the non-member States, except Kazakhstan, Kyrgyzstan and Tajikistan, is a big constraint to trade flows, as WTO consistency in various rules makes trade regimes more harmonized and streamlined. Even for the WTO members, the capacity to deal with WTO issues remains rather limited;
- (f) *Banking systems.* The Central Asian region has been making a transition from the former Soviet Union era to a more market-based economic and banking system. In the CARs, inadequate banking services in many areas is constraining development of the private sector, especially in the case of small and medium-sized enterprises; this has remained an area of concern for augmenting trade and investment, both within and outside the region.

Managing credit quality, de-leveraging and developing a stable source of funding are important challenges for banks in the region, together with structural transformation and diversification in the banking sector. Several areas of trade finance, credit guarantee and insurance facilities remain underdeveloped.

Overall, the lack of adequate financial intermediation is acting as a major constraint to the trade-related and FDI-inducing trusted business environment, which has deleterious implications for regional and interregional economic integration;

- (g) *Investment regime.* The investment climate remains unpredictable in most of the CARs. It is characterized by confusing laws and regulations, often enforced arbitrarily. Problems facing investment have been identified in the area of land property rights, as they have not yet been fully established in most of the CARs. Policy reforms focusing on privatization and restructuring of the larger economic entities are far from completion. Moreover, registration and licensing procedures are time-consuming and need rationalization;
- (h) *Language barriers.* Inadequate knowledge of the English language, which is one of the most important business languages, acts as a barrier in Central Asia. This has important implications for the CARs' extraregional trade and investment linkages, especially when the focus is on Central Asia-APTA integration. While a common language within the Central Asian region is an advantage for intra-Central Asia integration, a lack of adequate knowledge of the English language could still act as a barrier when intraregional integration is viewed in terms of its linkages with the global economy. In other words, intraregional integration should not to be considered as an endeavour which is confined just to the region; it needs to be viewed alongside its business linkages with other parts of the Asia-Pacific region and even the rest of the world.

L. Conclusions and policy recommendations

This chapter explores ways and means of making the relatively lesser-integrated Central Asian region more integrated with APTA through the strengthening of trade and investment linkages, and provides an assessment of its feasibility. On the other hand, it is important for APTA to become a truly Pan-Asian economic grouping, which it currently is not and therefore faces serious challenges from other mega-economic groupings, both within Asia and outside the region. For this to happen, among the several existing constraints, APTA must focus on the expansion of its membership in order to widen the scope and scale of its economic complementarities.

1. Conclusions

The broad conclusions of the present study can be summarised as follows:

- (a) The macroeconomic context of the CARs suggests that these economies are quite amenable to regional economic integration with the Participating States of APTA, which can in turn help in achieving their growth and developmental objectives;

- (b) The trade structures of the CARs are characterized by production-trade mismatch – a less diversified manufacturing base and adverse terms of trade due to the fact that exports mainly consist of primary products, whereas imports largely comprise manufactured products;
- (c) The CARs have launched various initiatives for regional economic integration. However, there is a glaring absence of a region-wide FTA among the CARs. In substantive terms, most of the trade agreements of the CARs have focused on tariff liberalization subject to a negative list. These agreements lack clarity on rules of origin, especially their developmental role and trade-augmenting effects. These agreements also only focus on trade in goods and do not include trade in services and investment; therefore, they are not comprehensive in their coverage. Possibly, the region lacks an analytical understanding of the fact that trade in goods, and trade in services and investment have to be taken together in order to fully recognize their interlinkages when adopting an integrative approach;
- (d) Intra-Central Asia exports/imports as a proportion of total Central Asian exports/imports to/from the world have been rather low. It appears that the absence of a trade and economic cooperation agreement among the CARs has, among other factors, constrained regional trade integration;
- (e) The empirical estimations suggest the presence of trade complementarities among the CARs. The prospects of cooperation between the CARs and the APTA region have also been evaluated. There are substantive trade gains for the CARs in acceding to APTA as well as gains for the Participating States. The trade gains for the CARs would be approximately \$142 billion. Similar gains for the Participating States of APTA would be in the region of \$28 billion. Overall, trade gains for APTA from the inclusion of the CARs would be \$170 billion, which is approximately 49% increase in total aggregate trade gains from current intra-APTA trade. For Tajikistan, Turkmenistan and Uzbekistan, the analysis was carried out at the SITC 3-digit level due to data unavailability in HS;
- (f) APTA is potentially a more comprehensive regional arrangement as it includes trade in goods and trade in services and investment together with trade facilitation. The Framework Agreement on Investment, and the Framework Agreement on Trade in Services, together with the Framework Agreement on Trade Facilitation would help the CARs to integrate with existing Participating States of APTA in these areas especially due to three reasons: (i) greater investment needs to achieve developmental objectives such as employment generation; (ii) a high share of services in their GDP; and (iii) reduction in high trade costs due to landlockedness of the CARs. Together, these three facets form an important basis for CARs' accession to APTA. This is particularly relevant, given the fact that the CARs have largely had trade in goods agreements only, which are, limited in scope and comprehensiveness, except in the case of the Belarus-Kazakhstan-Russian Federation Customs Union;

- (g) Apart from trade, there are several other areas of cooperation that could be mutually beneficial to both the APTA region and Central Asia. These are:
- (i) Investment cooperation that focuses on trade-creating joint ventures; the reduction and elimination of investment regulations that may impede investment flows; harmonization of investment regimes; and special focus on transfer of technology;
 - (ii) Trade in services integration. Some of the areas amenable to cooperation include: travel and tourism; transportation; education; health; information technology; banking and finance; and recreational services. To tap the potential of trade in services in some of these areas, cooperation in terms of Mutual Recognition Agreements (MRAs), and recognition of mutual standards and qualifications will be crucial;
 - (iii) Trade facilitation. Some of the prime areas for cooperation could include: notification of existing and new trade laws and regulations, including amendments; harmonization of trade-related fees; establishment of single window of trade data and documentation requirements, establishing risk assessment and management procedures; and the use of automatic and information technology in customs procedures;
 - (iv) Energy security. The beginning of this chapter highlights the fact that the CARs have one of the largest energy reserves in the world, while most of the current Participating States of APTA are net energy importers. Given their future economic needs due to their high potential for higher economic growth trajectories, it is imperative that APTA expands its membership in such a manner that focuses on energy trade and energy security. Expansion of APTA membership to include the CARs would help in the development of an energy compact under APTA. This could have three important implications:
 - a. The opportunity to tap trade complementarities in hydrocarbons;
 - b. Development of energy resources in CARs through FDI from some of the other Participating States of APTA; and
 - c. Development of an Energy Arc of cooperation that will benefit both the existing the Participating States of APTA and the CARs as well as countries with capital and technological resources in APTA would be crucial;
 - (v) Tackling climate change in the CARs. By 2050, Central Asia will see an increase in both summer and winter temperatures and will experience a decline in frost days and an increase in heatwaves. Overall, Central Asia will see an increase of 2°C. To limit these changes, progress made in related areas by countries such as China, the Republic of Korea and India could be useful for the CARs. The estimated export potential for CSGTs in Asia and the Pacific in 2008 was \$30 billion-\$35 billion;
 - (vi) Integrated cross-country and cross-sectoral tourism. Tourism is one sector on which the Participating States of APTA can focus and reap the benefits not only within the services sector but also through interlinkages with other sectors. The tourism sector has the potential to create a spate of economic activities in trade in goods, trade in services and investment.

- (h) Although gains can be made from trade and integration in new areas of cooperation, significant barriers still exist to trade and investment integration in Central Asia with regard to trade policy, connectivity, banking infrastructure.

This chapter concludes by recommending accession of the CARs to APTA due to the potential for mutually advantageous gains by both sides from integration. That conclusion is further strengthened due to APTA's suitability to serve as an important mechanism for achieving the objective of Pan-Asian economic integration. Both the analysis and the quantification of potential positive mutual benefits of the CARs' accession to APTA further corroborate this point. While their economic and energy profiles match the needs of current Participating States of APTA, the CARs face enormous challenges to regional integration. To address this problem, a complementary process to their accession to APTA must be initiated, which could include sensitization and capacity-building programmes and modules on the economics of regional integration, among other aspects. Several newer areas need to be focused on in order to make the potential economic partnership between the CARs and APTA Participating States mutually beneficial and development-oriented.

2. Policy recommendations

To help the CARs gain accession to APTA, certain policy recommendations are made below on three levels, i.e., strategy, institutional mechanisms for membership expansion and negotiations on new areas.

(a) Strategy

There would have to be a two-pronged strategy for the CARs' accession to APTA. One would entail integrating Kazakhstan, since it is a member of a Customs Union together with the Russian Federation and Belarus. It appears that this CU is heading towards, including Armenia and Kyrgyzstan, in due course. The second strategy would be for the other CARs' integration with APTA, including Kyrgyzstan, until it becomes a full-fledged CU member.

Strategy I: As a part of strategy I, Kazakhstan's membership with APTA would, technically speaking, include by default the inclusion of the Russian Federation and Belarus in APTA, albeit indirectly. This is because these three countries are members of a CU with a common external tariff. By implication, imports by Kazakhstan from the Participating States of APTA can spill over to the Russian Federation and Belarusian markets. Similarly, exports from Kazakhstan could well be exports from the Russian Federation and Belarus to the Participating States of APTA.

One major implication of this would be a much more dynamic trade and investment profile of APTA as a grouping due to a de facto inclusion of an important economic bloc. However, the APTA rules of origin negotiated at the time of inclusion of Kazakhstan would be applicable to Kazakhstan and the Participating States of APTA with the understanding that those rules of origin would actually be for products originating in the CU, i.e., from the Russian Federation and Belarus; and not just Kazakhstan.

An important inference of this exercise would, in terms of any offer by Kazakhstan of MoP to the Participating States of APTA, be based on Kazakhstan's consensus with the Russian Federation and Belarus, as Kazakhstan's tariff liberalization offer would mean lowering of the Common External Tariff of the CU.

Adoption of a strategy of at least informal consultations by APTA with the Russian Federation and Belarus is recommended when negotiating tariffs with Kazakhstan.

Since the three countries have now attained a SES involving freer flows of goods, capital, labour etc., a Task Force could be set up to examine the scope and modalities of cooperation between APTA member countries and Kazakhstan on trade in services, including emphasis on Mode IV for the temporary movement of natural persons as well as FDI flows.

Strategy II: Negotiations in APTA with the other CARs could be conducted on the existing modalities and as per those recommended in the APTA Roadmap.

(b) Institutional mechanisms for membership expansion

While the procedures for accession to APTA are clear, what is possibly required is placing the CARs on a parallel track. This could include capacity-building programmes, business language training, cultivation of research on economic integration issues, and FDI in soft and hard infrastructure.

For this to happen, the APTA Secretariat could launch a formal Central Asia accession process that would deliberate on the above-recommended two strategies as well as initiate short modules on capacity-building programmes.

(c) Negotiations on new areas

Complementing the process of negotiations and the accession process, a Sensitisation Programme could be launched to apprise the policy makers and politicians of the imperatives for opening of trade in goods, trade in services and investment regimes. The economics of regional integration must be imparted on these countries with well-designed time-bound modules. In this regard, trade facilitation, trade in services, investment, energy security, climate change and tourism are the areas that need attention in a collaborative setting, as some of the important institutional mechanisms such as the APTA Framework Agreements already exists. Towards this end, an Expert Group could be established with representation from cross-cutting sectors and related areas of experience.

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