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Tajikistan's Transit Corridors and their Potential for Developing Regional Trade

Shokhboz Asadov

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Abstract

Tajikistan, like other Central Asian countries, has a limited domestic market because of its relatively small population, no access to ports, is removed from major markets, and faces significant economic discord among its trading partners. Improving the transit infrastructure is one way of addressing these issues. This paper assesses Tajikistan's pursuit of transit corridors and the establishment of multi-modal logistics services. It discusses the significant challenges and tough competition from neighbouring transit corridors that Tajikistan faces as it attempts to enhance its regional competitiveness.

Keywords

Central Asia, Tajikistan, Transit Corridor

JEL Codes: O18, O53, R42

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About the authors

Shokhboz Asadov is a Senior Researcher at the Institute of Public Policy and Administration of the University of Central Asia. He is a public policy expert with extensive professional and research experience in public administration reform initiatives in public finance, poverty reduction, results-based management, and trade policy. He has been involved in capacity building of public institutions and reviewing business processes in the delivery of public services by government agencies in Tajikistan.

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University of Central Asia
138 Toktogul Street, Bishkek 720001, Kyrgyz Republic
Tel.: +996 (312) 910 822, E-mail: ippa@ucentralasia.org
www.ucentralasia.org

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Acronyms

ABBAT	Association of International Automobile Carriers of Tajikistan
ADB	Asian Development Bank
AH	Asian Highway
BCP	border crossing point
CA	Central Asian
CAEC	Central Asian Economic Community
CAREC	Central Asia Regional Economic Cooperation
CBTA	Cross Border Transport Agreement
CIS	Commonwealth of Independent States
CPMM	Corridor Performance Measurement and Monitoring
EuRAsEC	Eurasia Economic Community
ECO	Eurasia Cooperation Organization
EU	European Union
FEZ	Free Economic Zone
GBAO	Gorno-Badakhshan Autonomous Oblast
GDP	Gross domestic product
ICT	Information Communication Technology
IFI	International finance institution
IMF	International Monetary Fund
KPH	Kilometres per hour
LPI	Logistics performance indication
Mln	Million
NATO	North Atlantic Treaty Organization
NTTC	National Transport and Trade Facilitation Committee
SCO	Shanghai Cooperation Organization
SPECA	Special Program for the Economies of Central Asia
SWD	Speed with delay
SWOD	Speed without delay
TCD	Time-cost-distance
TEU	Twenty-foot equivalent unit
TTFS	Transport and Trade Facilitation Strategy
TRACECA	Transport Corridor Europe-Caucasus-Asia
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
USA	United States of America
US$	United States dollar
WTO	World Trade Organization

1. Introduction

Central Asia's potential as a transit destination for trade is receiving increased attention. Businesses are interested if goods can be delivered on time, at a reasonable price and arrive at their destination undamaged. Tajikistan, faces significant challenges and tough competition from neighbouring transit corridors, and is seeking to improve its transport corridors and multimodal logistics services that could significantly enhance its regional competitiveness.[1]

Improving transit infrastructure would contribute to addressing many challenges in Tajikistan and other Central Asian (CA) countries which face similar issues, including limited domestic markets with small populations, lack of access to ports, distance from major markets, and significant economic discord among trading partners.

An important precondition of greater economic cooperation in Central Asia depends on improved communication between regional markets, as well with the major markets such as China, India, Russia and Turkey. Tajikistan could make an important contribution in this process as a transit country. This will require investment and modernizing road corridors. It is necessary to revise the road routes of regional corridors in Central Asia to strengthen their role as a significant integrating factor with the potential to enhance direct and transit trade between Tajikistan and Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, Afghanistan, China (specifically, Xinjiang Uygur Autonomous Region (XUAR)). Upgrades in infrastructure should be accompanied by improvements in policies and agreements aimed at facilitating trade and transit at border crossings.

This paper reviews recent trade dynamics of Tajikistan, existing conditions of the country' transit road networks and their potential to boost trade and transit of goods in the region. It also assesses some major challenges facing the region and the role of regional supply chains as opportunities for growth of trade, and offers policy recommendations.

2. Tajikistan's trading opportunities

2.1. Trade dynamics

The commodity structure of Tajikistan's foreign trade and the structure of its domestic production have not changed since independence and the dismantling of the Soviet system. This situation is a reflection of the slow progress of structural and economic reforms in the country, as well as Tajikistan's geographic location, underdeveloped transport links and weak regional trade ties. However, the small size of the domestic market in Tajikistan is pushing the country's retailers to sell products to neighbouring countries.

[1] The author is grateful to Bohdan Krawchenko, Roman Mogilevskii, Ashurboy Soliev and Lutfullo Sadmurodov for valuable comments and suggestions.

Exports of cotton and aluminum continue to generate about half of gross domestic product (GDP), two-thirds of annual foreign exchange earnings, and a quarter of tax revenues, and the recent asymmetry between the country's imports and exports has increased. Tajikistan key exports include raw materials (primarily aluminum and cotton fibre) to countries that are both end-users (Turkey, China), and those that are not (Netherlands, Switzerland and Latvia). Under conditions of stable structural invariance of foreign trade with these countries, Tajikistan's national economy is extremely vulnerable to external price shocks. Additionally, the dominant share of global aluminum markets is concentrated in ten multinational corporations.[2] Tajikistan's production is a small fraction of this market. Even if Tajikistan increased the production of aluminum to reach its long-term development target of 630 thousand tons of primary aluminium, its world share of aluminum production would be less than 5 %.[3]

The increase in world prices for aluminum and cotton fibre in 2010 and 2011 did not improve the country's trade balance. In 2010, the trade balance improved by 6.2 %, compared to 2009, although the prices of cotton fibre and aluminum increased by 162 % and 142 % respectively.[4] This is because trade liberalisation led to a steep increase in domestic demand, due to remittances from migrant labour that was met by the import of consumer goods. The current account deficit of balance of payments is financed mainly by international financial institutions since foreign direct investment is low.

The combination of a narrow export structure and the geographical concentration of Tajikistan's foreign trade flows increased the country's vulnerability to external shocks. As an open economy, ensuring the competitiveness of the country is possible through the creation of new economic sectors. Recently, steps have been taken that could potentially improve the country's balance of payments by fostering a trade environment to generate new sources of revenue and lower trade-related transaction costs. One such step is the 'One-Stop-Shop' system that is part of customs reforms launched on the eve of the Tajikistan's accession to the World Trade Organization (WTO). This system offers simplified procedures and minimum physical inspection of cargo, which in turn reduce cargo transit time and transaction costs. Further benefits can be realized by improved revenue collection, border controls and security, lower administrative costs, encouraging more trade and investment, and enhancing domestic competitiveness in both home and export markets. This measure should enhance the development of Tajikistan's transit sector, facilitate trade, and attract new investments to Free Economic Zones (FEZs) that are being established along main corridor routes.

2.2. Assessment of exports, imports and re-exports

Based on the government's analysis of Tajikistan's trading opportunities, a number of programmes have been adopted and institutional reforms have been implemented. One such programmes is the 'Export Development Program of the Republic of Tajikistan for the pe-

2 http://www.aluminiumleader.com/en/serious/industry/
3 http://minerals.usgs.gov/minerals/pubs/commodity/aluminum/mcs-2011-alumi.pdf
4 National Bank of Tajikistan, Banking Statistics Bulletin, no.1 (198) (Dushanbe: National Bank of Tajikistan, 2012).

riod up to 2015.' Adopted in 2006, the program provides for export expansion and diversification in three stages:

The first stage (2006-2008) included an analysis of opportunities for export development and necessary institutional reforms. Goals for this stage included removing barriers to export promotion and increasing foreign direct investment (FDI) in the import of equipment, technologies and other materials for the construction of strategic enterprises. The composition of exports was not substantially changed.

The second stage (2009-2011) was designed to provide measures to stimulate and initiate the diversification of exports. The goal for this stage was establishing the basis for the gradual achievement of a positive trade balance by increasing domestic and foreign direct investments, establishing regional networks and servicing networks for exports. During this stage, the government was tasked, among other measures, to complete the formation of transnational transport corridors thorough a review of automobile infrastructure, completing the construction of several bridges across the Pyanj River, and arranging year-round shipment via the Dushanbe-Kulyab-Kalai Khum–Kulma pass transport artery connecting Tajikistan and China.

The third stage (2012-2015) includes stronger measures to diversify exports and proposes a radical change in the commodity structure.

Tajikistan is still trying to implement the first and second stage of the strategy. Institutional reforms are proceeding at a slow pace, changing trade-related legislation is taking longer than expected, and identifying the primary priority export sectors of the economy has not been easy.

In addition to this programme, other government initiatives have been adopted.[5] Implementation of these programmes has also been slow, and the situation regarding external trade has not improved. In fact, from 2007 to 2011 the country's dependence on the external market increased. Moreover, the share of exports from 2007 to2011 decreased in volume by 14.4 %, while imports increased by 29.8 % (see Table 1).

Table 1. External trade of Tajikistan (2006-2011, Mln US$)

	2007	2008	2009	2010	2011
Foreign trade turnover	3923.6	4676.2	3578.7	3851.6	4443.3
Exports	1468.2	1406.3	1010.0	1194.7	1256.9
Imports	2455.4	3269.9	2568.7	2656.9	3186.4

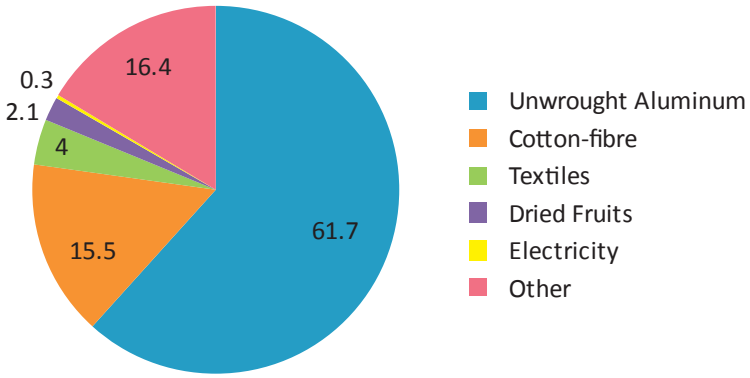
Source: Agentsvo po statistiki pri Presidente Respubliki Tadjikistan (2011, 2012)

Aluminum and cotton continue to dominate exports going to the European Union (EU), China and Turkey. The dominance of these commodities poses a threat to the economic security of the country. Countries in the Commonwealth of Independent States (CIS), with whom Tajik-

[5] These include the 'Programme of final processing of cotton fiber produced in the Republic of Tajikistan for the period up to 2015;' the 'Programme of development of light industry of the Republic of Tajikistan for the period 2006-2015;' the 'Programme of processing and production of final products from primary aluminum production in the Republic of Tajikistan for the period 2007-2015;' and the 'Programme of the development of processing of agricultural products in the Republic of Tajikistan for the period 2007-2015.'

istan could have more diversified trade relations, import only 0.6 % of primary aluminum and 32.1 % of cotton fibre.

Figure 1. Export structure of Tajikistan

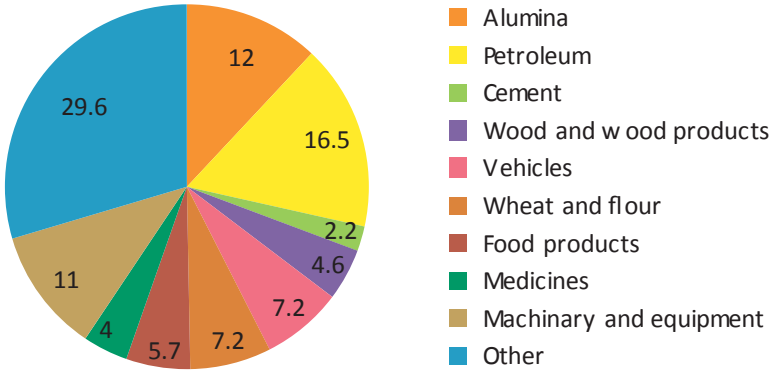


Source: Agentsvo po statistiki pri Presidente Respubliki Tadjikistan (2011)

The share of electricity in total exports declined dramatically in 2009-2010 (from 6.3 to 0.3 %) since Uzbekistan stopped importing electricity from Tajikistan. The share of goods (finished or semi-finished products) that is the staple of border trade is insignificant in the overall export picture. However, there has been growing regional trade including countries of Central Asia, Afghanistan, and the Eurasian Economic Community (EuRAsEC).[6]

Unlike its exports, Tajikistan's imports are quite diversified (See Figure 2).

Figure 2. Tajikistan's import composition



Source: Agentsvo po statistiki pri Presidente Respubliki Tadjikistan (2011)

In 2010, CIS countries accounted for 49.9% of Tajikistan's exports and 58.8 % of its imports. EuRAsEC provided 48.2 % of Tajikistan's imports with 32.2% coming from Russia and 11.0% coming from Kazakhstan. From 2006 to 2010, imports from Uzbekistan decreased from 10.2 % to 2.7 % because Uzbek authorities stopped exporting electricity and gas to Tajikistan. In 2010, the main export partners of Tajikistan were China (37.4%), Turkey (31.5%), and Russia (8.5 %).

[6] This will be discussed in detail in section 4.2.

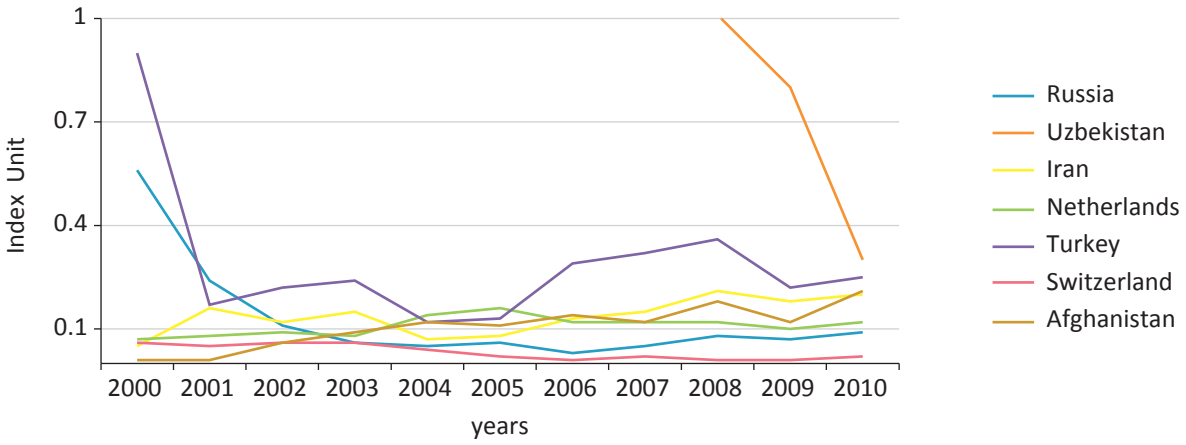
Key import partners in 2010, apart from Russia and Kazakhstan, were China (9.0%), Iran (5.3%), the United States of America (3.5 %), UAE (2.3 %), Turkey (2.3 %) and Afghanistan (1.5 %). Recently, the proportion of Afghanistan's share of exports and imports with Tajikistan has increased due to the expansion of cross-border trade and the re-export trade from Tajikistan.

Table 2. Geographic Composition of Foreign Trade of Tajikistan (2010)

Exports		Imports	
Country	Share (%)	County	Share (%)
China	37.4	Russia	32.3
Turkey	31.5	Kazakhstan	11.0
Russia	8.5	China	9.0
Iran	5.0	Ukraine	7.1
Afghanistan	4.4	Iran	5.3
Other	13.2	Other	35.3

Source: Agentsvo po statistiki pri Presidente Respubliki Tadjikistan (2011)

Figure 3. Intensity of exports of Tajikistan[7]



Source: IMF International Financial Statistics Data accessed 7 May, 2012) and Base Agentsvo po statistiki pri Presidente Respubliki Tadjikistan(2011).

In the past decade, Tajikistan's intensity of trade increased with countries such as Afghanistan, Iran and Turkey.[8] The intensity of trade with the Russian Federation is relatively stable and suggests the need to increase mutual trade. However, intensification of trade decreased with Uzbekistan, the Netherlands and Switzerland. Tajikistan and Uzbekistan could renew old trade relations, but only with mutual endowment of most-favored-nation status and the removal of unnecessary transit barriers that impede export opportunities of Tajikistan.

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7 Figure 3 shows the intensity of trade of Tajikistan with countries that were or are significant for the country's exports. To calculate the trade intensity index based on the export data of the Republic of Tajikistan, countries have been selected which occupied or occupy the highest proportion of exports of goods from the Republic of Tajikistan.

8 China is a recent leading trade partner for Tajikistan, so it is impossible to calculate intensity of trade over the same time period.

The trade intensity index value points to the need for Tajikistan to diversify the geographic structure of exports, diversify exports, and intensify regional trade.

An analysis of the commodity composition of Tajikistan's exports to neighbouring countries indicates that some goods, such as electricity and oil exports, were exported almost exclusively through regional and cross-border trade (see Table 3). Fruit and vegetables, electric appliances and consumer goods are also traded primarily through cross-border trade, between Tajikistan and Afghanistan.

Table 3. Main commodities exported by Tajikistan to countries in the region (2010, thousand US$)[9]

Commodities	Kyrgyzstan	Uzbekistan	Turkmenistan	Kazakhstan	Russian Federation[10]	Afghanistan
Domestically manufactured						
Electric energy	1278.0	0	0	0	0	2314.0
Cotton Fibre	0	1621.0	0	3414.0	39556.0	0
Onions	0	309.0	207.0	696.0	14448.0	760.0
Nuts	0	0	0	249.0	2138.0	410.0
Grapes	0	0	0	116.0	1618.0	0
Dried fruit	0	0	0	1758.0	20871.0	0
Fruit juice	0	0	0	1400,0	0	1074.0
Medicinal plants	47.0	0	0	0	440.0	0
Foreign manufactured						
Cars and trucks	93.0	35.0	0	504.0	339.0	4277.0
Oil and oil products	0	0	826.0	0	0	21650.0
Various electric equipment	108.0	0	0	27.0	0	156.0
Mining technical equipment and bulldozers	0	0	0	155.0	1093.0	0

Source: Agentsvo po statistiki priPresidente Respubliki Tadjikistan (2011).

Domestic commodities include traditional raw materials and agricultural products.

Re-exports are playing an increasing role in regional trade, as can be seen from the select list of commodities presented in Table 4 that figure prominently in the structure of regional trade. Re-exporting is contributing to the expansion of transit goods through the territory of Tajikistan.

[9] Mining equipment, medical plants, fruits and vegetables and other export commodities are listed if trading in these commodities in 2010 included at least two countries in the region. Insignificant volumes are shown as zero.

[10] Although the list of exported agricultural products of Tajikistan to the Russian Federation is large, the table indicates only those goods for which demand is significant and increasing.

Table 4. Select re-export goods with regional trade partners (2010, % of total export volume to corresponding country)

Product	Kyrgyzstan	Uzbekistan	Turkmenistan	Kazakhstan	Russian Federation	Afghanistan
Cars and trucks	1.4	0.4	1,6	2.5	0.3	8.2
Fuel and lubricant products	0	0	63.5	0	0	41.5
Electric apparatus	1.6	0	0	0.1	0	0.3
Mining equipment and bulldozers	0.5	0	0	0.8	1.1	0.06
Telephone sets					0.2	
Cement					0.1	
Bananas					0.01	
Medicine						0.4
Car spare parts				0.01	0.03	
Helicopters and airplanes						20.3
Motorcycles and bicycles						0.3
Others	1.8		0.8	2.1	2.0	5.0
Total	5.3	0.4	65.9	5.51	3.74	76.06

Source: Agentsvo po statistiki pri Presidente Respubliki Tadjikistan (2011).

Afghanistan is the most important market for the re-export of goods; over 76 % of exports from Tajikistan to Afghanistan are goods that are imported China, Russia, Kazakhstan and other countries. Turkmenistan is the second most important destination of re-exports, accounting for 66 % of the total volume of trade between Tajikistan and Turkmenistan. Notably, goods to Turkmenistan, Uzbekistan and Kyrgyzstan have a homogeneous structure (fruit and vegetables); while re-exports to the Russian Federation, Kazakhstan and Afghanistan are more diversified and include cars, trucks and mining equipment.

The expansion of the re-export business is primarily due to the implementation of publicly funded road reconstruction projects connecting the country with neighbouring countries. The opening of the road to China via the Kulma Pass (Kalasu on the Chinese side) and the rehabilitation of the Kyrgyz-Tajik road network at the Karamik border crossing point (BCP) contributed to a sharp increase of imports from China via road shipment. In the future, road projects and new railways in Afghanistan and Kyrgyzstan could lead to a significant increase in exports, turning the Tajikistan into an important transit country.

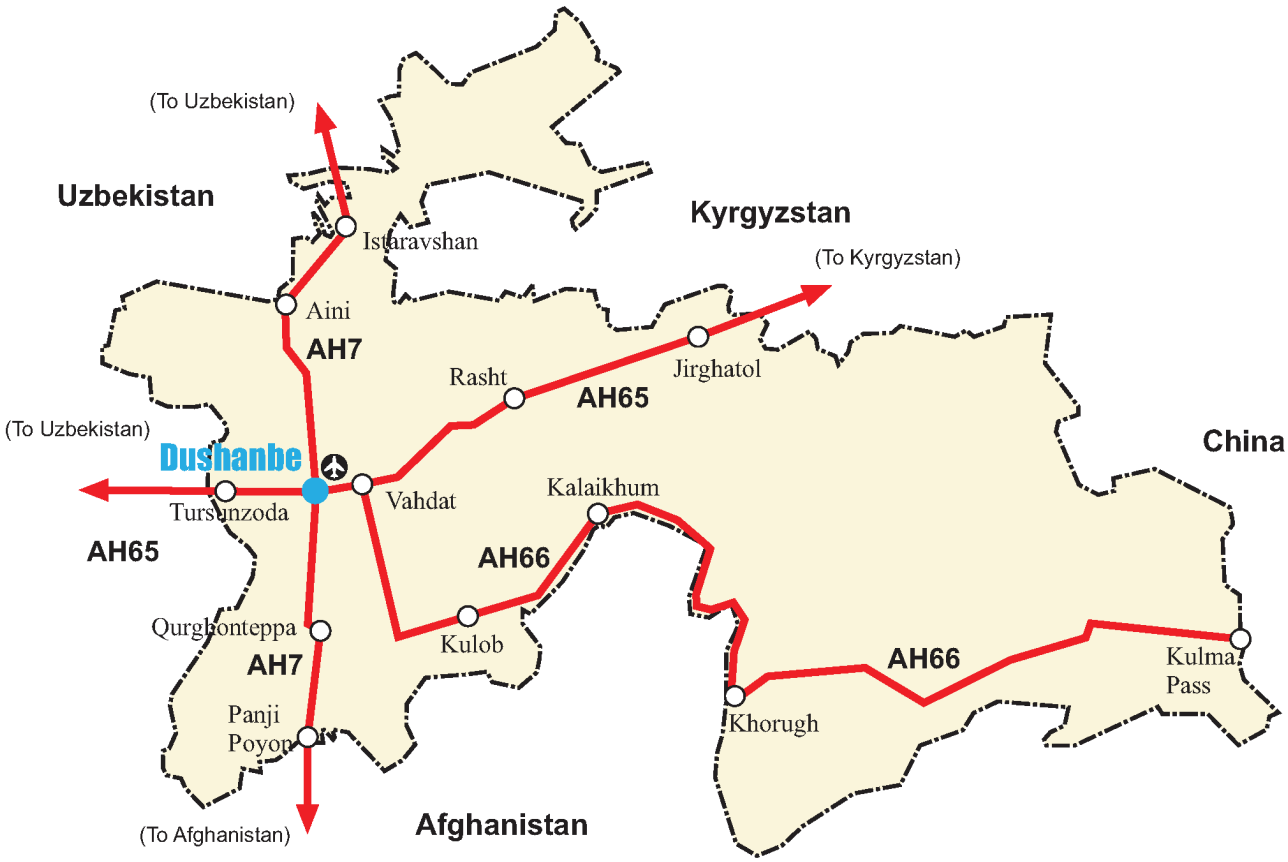
3. .Capacity of Tajikistan's transit corridors

3.1. Geographical aspects of transport dead-lock and mechanisms for cooperation between Central Asian countries

Tajikistan is a crossroad for commercial traffic. Its strategic locus serves as a bridge for the transit of goods and services between China, Central Asia and South Asian and Middle Eastern countries. Landlocked and dependent on cross-border and transport access, Tajikistan has common borders with China, Kyrgyzstan, Uzbekistan and Afghanistan. The Wakhan Corridor, just 20 km long separates Tajikistan from Pakistan. Despite its mountainous terrain, Tajikistan possesses an automobile transport artery of 17 roads of international significance and over 80 roads of national and rural significance that link Tajikistan and neighbouring states.

Three Asian highways (AHs) pass through the country (see Map 1). Dushanbe is the central point and hub for all the highway routes. AH-7stretches from north to south and serves as a gateway to South Asia via Afghanistan. AH-65 stretches from east to west, connecting Tajik-Kyrgyz and Tajik-Uzbek road networks. AH-66 passes through the center of the country to Dushanbe and heads towards Tajik-Chinese border at Kulma Pass and is the longest road artery in the country.

Map 1. Asian highway routes of Tajikistan



In the 1990s, the landlocked countries of Central Asia were concerned about their isolation from major regional markets, especially South Asia and the Middle East. The isolation was accompanied by regional political instability that combined with, poor infrastructure, and inadequate regulatory instruments and institutions presented quite a depressing picture. Today, the situation is more hopeful.

The countries of the former Soviet Union, China and other international organizations[11] with a stake in Eurasia took action to address existing challenges and constraints and urged states to join initiatives fostering regional cooperation, such as the EuRAsEC, the Shanghai Cooperation Organization (SCO), the Central Asian Economic Community (CAEC), and the Special Program for the Economies of Central Asia (SPECA). Unfortunately, most cooperative agreements within these initiatives have had little impact in harmonizing trade and transport policies of member states and reducing high transportation costs.

In 1993,the EU launched an interregional technical assistance programme, Transport Corridor Europe-Caucasus-Asia (TRACECA), aimed at strengthening economic relations, trade and transport communication corridors from Europe, crossing the Black Sea, the Caucasus, and the Caspian Sea into Central Asia. The key legal framework of the program, the 'Basic Multilateral Agreement on International Transport for Development of the Europe-Caucasus-Asia Corridor' was signed in 1998, and signaled the intention of participating states to progressively integrate their transport networks.

The TRACECA corridor (see Map 2) starts in Eastern Europe (Bulgaria, Romania and Ukraine) and crosses Turkey. The corridor continues, using the transport infrastructure of the Southern Caucasus, and a land connection towards the region from Turkey. A second route crosses the Black Sea to the ports of Samsun, Turkey, and Poti and Batumi in Georgia. This route reaches the railway networks of Turkmenistan and Kazakhstan via Azerbaijan's Caspian Sea routes that lead to Turkmenbashi, Turkmenistan and Aktau, Kazakstan. Further on the corridor passes through Uzbekistan, Kyrgyzstan and Tajikistan, reaching the borders of China and Afghanistan.

The multi-modal system of land and sea routes of TRACECA is of considerable importance for Eastern Europe, the Caucasus and Kazakhstan because of significant trade turnover.[12] Tajikistan's participation in the TRACECA corridor remains negligible because of the nature of the TRACECA network's interchange points. It is estimated that by 2030, Tajikistan's extra-TRACECA trade (i.e. trade with the rest of the world) will remain significantly higher than trade within TRACECA.[13] Nonetheless, the program's capacity building efforts directed at harmonizing transport policy and legal frameworks, traffic/cargo safety and environment protection has had a positive impact.

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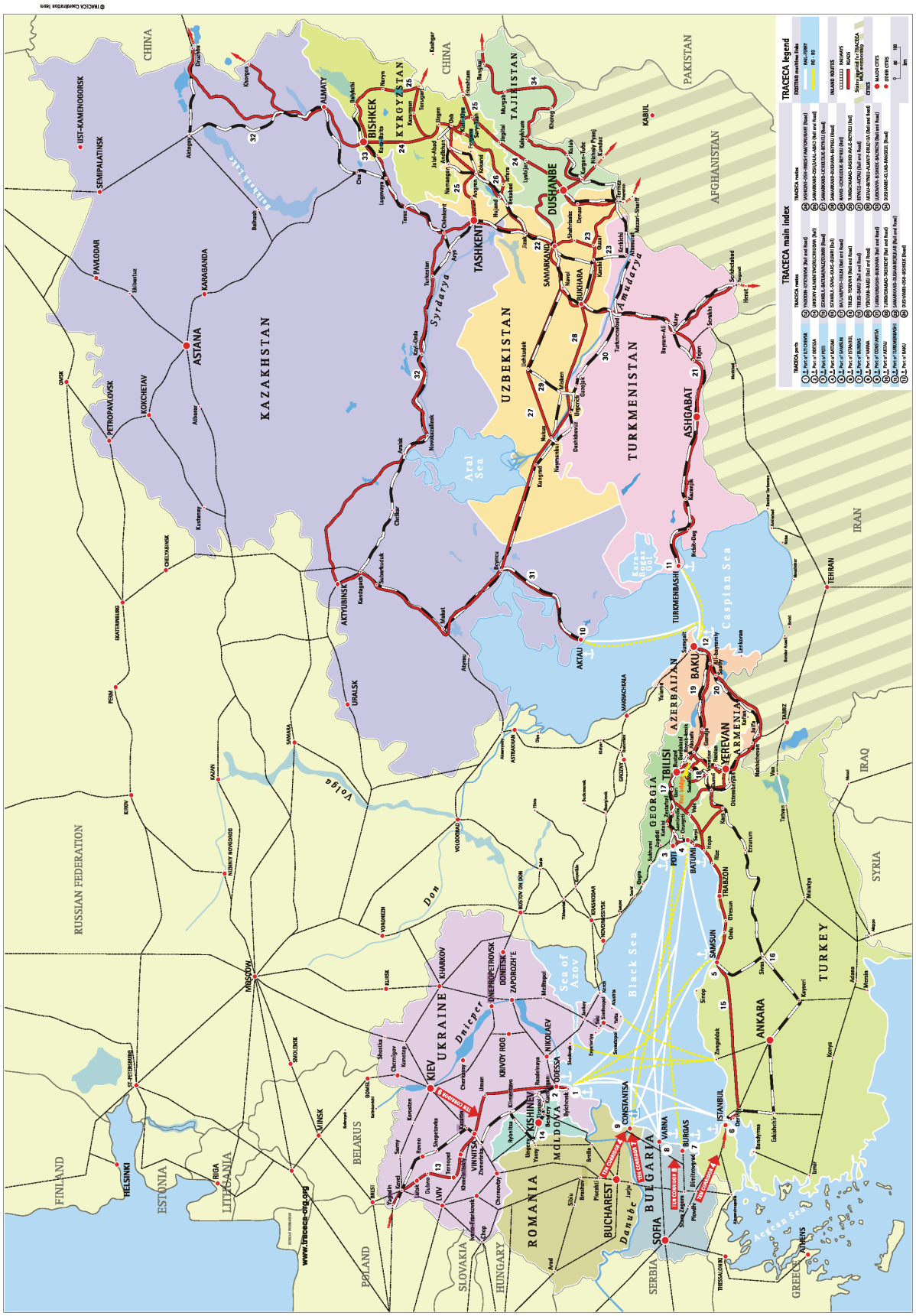
11 Including the Asian Development Bank (ADB), the Organisation for Security and Co-operation in Europe (OSCE), the United Nations Development Program (UNDP) and the UN Economic Commission for Europe (UNECE).

12 NEA, TRACECA *Transport and Trade Atlas* (Zoetermeer: NEA Transport Research and Training, 2009).

13 NEA, 2009.

Map 2. The TRACECA corridor



Source: www.traceca-org.org

In early 2000s, the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) launched the 'New Global Framework for Transit Transport Cooperation for Landlocked and Transit Developing Countries.' All CA states participated in ministerial-level meetings advancing proposals to facilitate the integration of landlocked countries into the global economy. UNESCAP is implementing a project identifying priority international intermodal transport corridors to link countries in the north (Russian Federation), the east (China and South Korea), and Central Asia. Three out of six proposed corridors are being studied, and institutional arrangements and frameworks are being elaborated to establish and implement cooperative mechanisms for the further development and operationalisation of the selected corridors.

Table 5. UNESCAP Corridors

Corridor	Route	Countries involved
Corridor1	Busan/Incheon-Tianjin-Beijing-Eranhot-ZaminUud-Ulaanbaatar-Darkhan-Sukhabaatar-Ulan Ude-Irkutsk-Novosibirisk-Petropavlosk-Yekaterinburg	Republic of Korea, China, Mongolia, Kazakhstan, Russian Federation
Corridor 2	Kaesong/Incheon/Busan-Lianyungang – Zhenzhou- Xi'an- Lanzhou- Turpan – Urumqi-Alashankou – Dostyk – Aktogai – Ushtobe – Almaty (– Bishkek)- Tashkent (-Dushanbe)-Samarkand- Novoi- Bukhara- Turkmenabad– Mary– Ashgabat- Turkmenbashi (Bukhara-Karshi- Sariosiyo-Dushanbe - Yangi Bazar)	Democratic People's Republic of Korea, Republic of Korea, China, Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan
Corridor 5	Urumqi-Kashi-Irkeshtam-Sary-Tash-Jirgatal-Dushanbe-Sariosiyo-Termez	China, Kyrgyzstan, Tajikistan,Uzbekistan

In late 1990s, the Asian Development Bank's (ADB's) Central Asia Regional Economic Cooperation (CAREC) Program became a key initiative for countries and multilateral institutions in the region trying to connect regional businesses, and increase institutional capacities to accelerate economic growth and reduce poverty. In a short period of time, CAREC become a major driving force facilitating regional cooperation and integration providing critical financial resources for construction. In 2007, following a decade of active assessment, evaluating, rehabilitating and capacity building, CAREC adopted its 'Transport and Trade Facilitation Strategy' (TTFS), followed by its 2008-2017 Action Plan. The TTFS remains a key strategy for CAREC and its overarching goals are "first, more open CAREC economies; second, World Trade Organization (WTO) membership for all CAREC countries; and, third, capacity development and knowledge transfer of trade and trade policy issues."[14] The main outcomes of the TTFS are to establish competitive transport corridors; facilitate efficient movement through corridors and across borders; and to develop sustainable, safe and user-friendly transport and trade networks. In 2011, CAREC members reviewed their progress and adopted a new strategy called 'CAREC 2020.'

[14] Asian Development Bank (ADB), *CAREC 2020: A strategic framework for the Central Asia Regional Economic Cooperation Program 2011–2020* (Manila: ADB, 2012).

3.2. Infrastructure and institutional capacity issues

Tajikistan is trying to streamline and systematize transit policy instruments to make it more attractive and customer-oriented. The country is a member of many transit transport global conventions and a signatory to regional partnership agreements and accords regulating customs transiting, third-party insurance, border controls and information and communication technology infrastructure.

In 2007, a Government Resolution[15] established a list of international cross border automobile terminals, as well as routes for transit passage for international vehicles. The existing cross border terminals are managed by the Association of International Automobile Carriers of Tajikistan (ABBAT). In 2010, over fifteen domestic companies, all members of ABBAT, operated as international cargo transporters, indicating greater involvement of the private sector.

Bilateral and multilateral agreements between government and transport authorities introduced quota-based permits for international cargo transportation. Over half of the 2010 quota (4,300 vehicles) was allocated to transporters operating with China because of growth of trade with that country.

Various studies on international trade and transport highlight the importance of infrastructure development as a precondition for the growth of transit business and cheaper transport costs. Transport costs of a median landlocked economy, such as Tajikistan's, are 50% higher than a median coastal country, an infrastructure improvement by one standard deviation has been found to reduce transport costs by an amount equivalent to a reduction of 6,500 sea km or 1,000km of overland travel.[16] A strong link between transportation costs and economic growth has been found with higher transport costs leading to a reduction of manufactured exports and reduced rents from natural resources for exporters of primary products. Countries with higher transport costs reduce trade and are less attractive to foreign direct investments. Regional integration agreements and facilities facilitate the lowering of tariffs and removal of barriers. The development of transit corridors and the delivery of goods with fewer stops and delays are critical for transit countries.[17]

Table 6. Tajikistan's road classification[18]

International Roads		National Roads		Local Roads		Total per category	
Category	Length (km)	Category	Length (km)	Category	Length (km)	Category	Length (km)
I	-	I	-	I	-	I	-
II	126	II	21	II	4	II	151
III	1,273	III	859	III	231	III	2,363

15 No.212, of 02.05.2007

16 Nuno Limao and Anthony J. Venables, *Infrastructure, Geographical Disadvantage and Transport Costs.* Policy Research Working Paper No.2257 (Washington DC: World Bank, 1999).

17 Steven Radelet and Jeffrey Sachs, *Shipping Costs, Manufactured Exports, and Economic Growth*. Paper presented at American Economic Association Meetings (Cambridge: Harvard University, 1998).

18 Based on Construction Norms and Regulations (SNIP -2.05.02 -85): Category I: Main long distance roads of international importance; Category 2: Highways of national importance; Categories 1 and 2 are highways with multiple lanes (3,75 m width); Category 3: Roads of regional and local importance, designed for less intensive traffic, advanced lightweight surface (lane width under 3.5 m); Category 4: Road of regional and local importance, paved (cobble, gravel) but not always improved (lane width under 3 m); Category 5: Local unpaved roads.

International Roads		National Roads		Local Roads		Total per category	
Category	Length (km)	Category	Length (km)	Category	Length (km)	Category	Length (km)
IV	1,588	IV	769	IV	1,144	IV	3,501
V	160	V	495	V	7,305	V	7,960
Total	**3,147**	**Total**	**2,144**	**Total**	**8,684**	**Total**	**13,975**

Source: State Unitary Enterprise "Design and Research Institute" (2011)

Tajikistan inherited an unwieldy bureaucratic approach towards the service sector and numerous new trade barriers emerged after independence in the early 1990s. It has not been easy to undo that legacy although it is clear that improving trade facilitation is a pre-condition of decreasing costs for freight transporters. Road transport accounts for over 75 % of all freight transportation and freight turnover in the 2008-2010 periods. According to 2010 Report by the Design and Research Institute of the Ministry of Transport[19], 90 % of the 14,000 km road network of Tajikistan is considered paved. However, the 1990s civil turmoil and economic hardship has resulted in a deterioration of road surface conditions. Tajikistan lacks Category One roads, and almost half the international roads have gravel and bitumen grouted surfaces, and around 30 % asphalt. Additionally, cumbersome "soft issues" such as excessive physical inspection, inadequate freight tracking, excessive documentation requirements and clearance delays impair service provision and lower the logistics performance of the country.

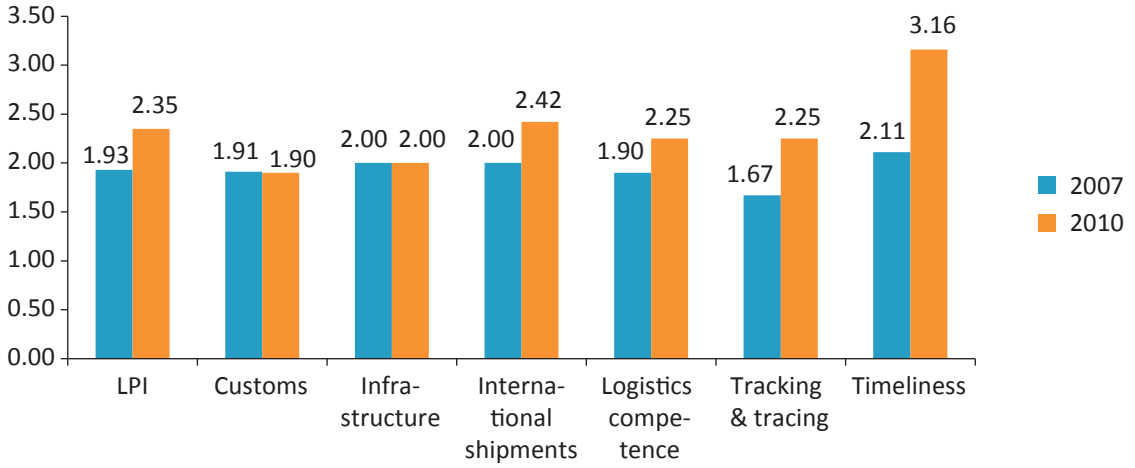
The World Bank's Logistics Performance Index (LPI) is an in-depth cross-country assessment of transport logistics performance that consists of six indicators:

- Customs: Efficiency of the customs clearance process.
- Infrastructure: Quality of trade and transport-related infrastructure.
- International Shipments: Ease of arranging competitively priced shipments.
- Logistics Competence: Competence and quality of logistics services.
- Tracking and Tracing: Ability to track and trace consignments.
- Timeliness: Frequency with which shipments reach consignee within scheduled or expected time.

The PLI ranks performance outcomes on a scale of 1 to 5 (a low number indicates high performance). The 2010 LPI results for Tajikistan show a moderate improvement of most indicators over a three-year period and a significant improvement in the timely delivery of shipments. Based on the LPI, if timeliness performance increases by more than one point, an average of six days is saved for importing and three days is saved for exporting goods. The improvement also implies that a shipment is five times less likely to be physical inspected at entry. However, infrastructure and customs indicators remained unchanged for Tajikistan, highlighting the slow implementation of institutional reforms and inadequate investments into infrastructure by the public and private sectors. Additionally, Tajikistan's 2010 LPI score is below those of its neighbours (Afghanistan, China, Kyrgyzstan, Uzbekistan) and Kazakhstan. Apart from Timeliness, Tajikistan lags behind in all other indicators (see Figure 5).

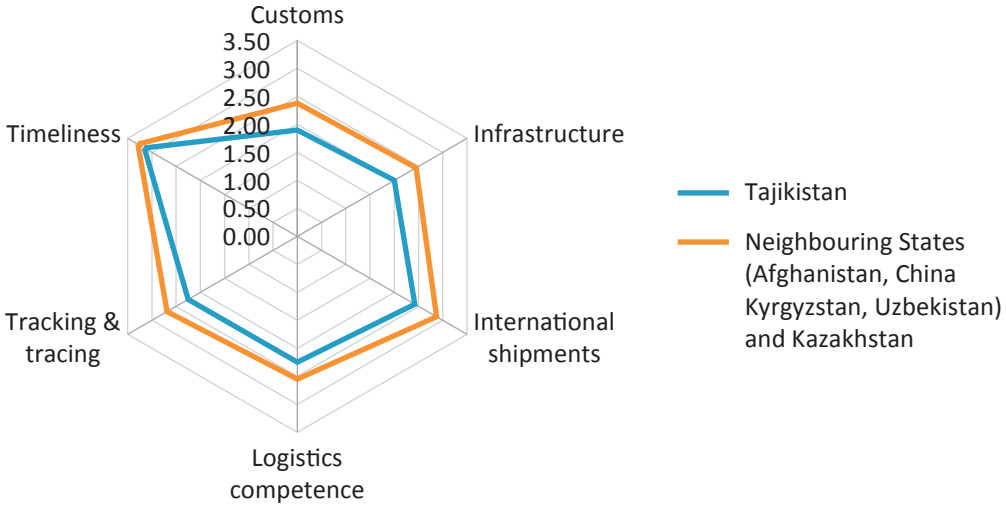
[19] State Unitary Enterprise "Design and Research Institute" (2011)

Figure 4. Tajikistan's Logistical Performance Scores



Source: World Bank (2007, 2010)

Figure 5. Logistical Performance Scores of Central Asian States (2010)



Source: Author's calculation based on World Bank (2010)

3.3. Tajikistan's Transit Corridors

A corridor is a route or a set of parallel routes linking two gateways (usually port to port). The corridor can be a road, railroad, sea route or a combination of these. All corridors are transit corridors, and in addition to serving intra-regional traffic needs, can be used to cross a single border or multiple borders.

CAREC's selection of its corridors was based on the inclusion rule of the participation of at least two CAREC countries and five criteria: Current traffic volume; Prospect for promoting economic growth and future traffic; Ability to increase connectivity between major population and economic centers; Potential to mitigate delays (including gauge change and BCPs); and Economic and financial sustainability of investments in infrastructure, technology and

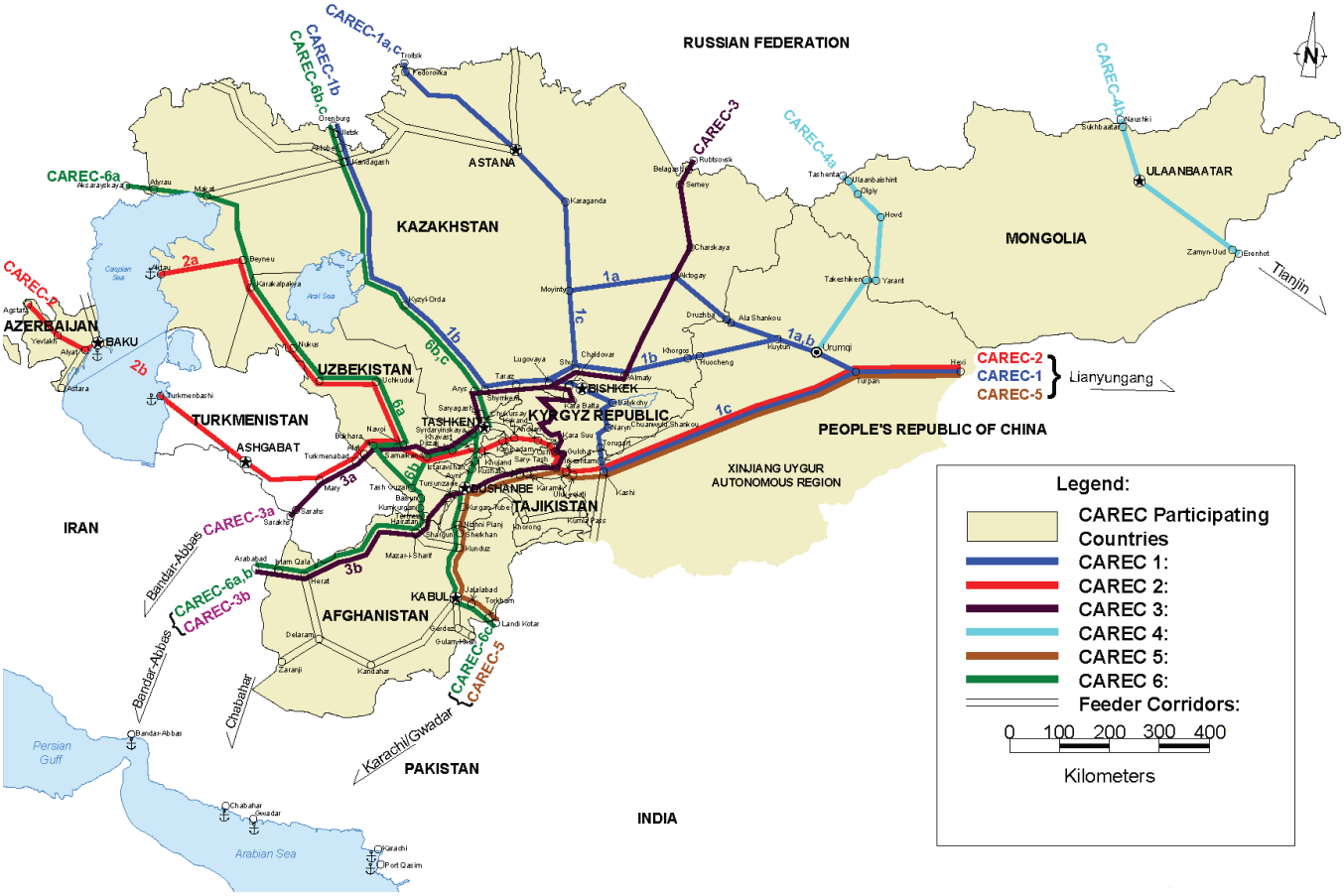
management.[20] A deepening of regional trade and transport cooperation among Central Asian states can result in significant economic advantages; according to some estimates, trade turnover of CAREC countries could triple in the 2005- 2017 period, averaging around 10 % growth per annum over the period.[21]

ADB has developed 6 CAREC Corridors (see Map 3):

- Corridor 1: Europe–East Asia
- Corridor 2: Mediterranean–East Asia
- Corridor 3: Russian Federation–Middle East and South Asia
- Corridor 4: Russian Federation–East Asia
- Corridor 5: East Asia–Middle East and South Asia
- Corridor 6: Europe–Middle East and South Asia

Geographically four of the six CAREC transit corridors run through Tajikistan's territory, although traffic volumes vary sharply from corridor to corridor. Three key corridors are discussed below.

Map 3. CAREC Corridors



Source: Tera International Group (2008)

20 ADB, *CAREC transport and trade facilitation. Partnership for prosperity* (Manila: ADB, 2009).

21 Tera International Group, *REG: Central Asia Regional Economic Cooperation Transport Sector Strategy Study.* Transport and Trade Facilitation Strategy Report, Final Report (Beijing: ADB, 2008).

CAREC Corridor 2: This is a multi-modal corridor (rail, sea, road) that, via six BCPs, provides connection for China to Turkey through Georgia, Azerbaijan, Turkmenistan/Uzbekistan, Tajikistan and Kyrgyzstan. The corridor enters Tajikistan at Nau BCP passes through Khujand and Kanibadam and enters Kyrgyz territory at Kara Suu, and leads to Yierkeshtam of China through Osh, Gulcha, Sary Tash and Irkeshtan. Tajikistan's part of the corridor is the shortest of all.

CAREC Corridor 3b: connects the Russian Federation to the Persian Gulf states via Kazakhstan, Kyrgyzstan, Tajikistan and Afghanistan. It connects the northern mining and forest regions of Russia and Kazakhstan with the commodity producers of the Middle East. To the north of Tajikistan, the corridor passes through Merke (Kazakhstan) and enters Kyrgyzstan through Chadovar, passing Karabalta-Gutcha and Sary-Tash. The corridor enters Tajikistan at the Karamik BCP on the Tajik-Kyrgyz border. It passes through Jirgital–Vahdat-Dushanbe-Tursunzade route in Tajikistan and enters Uzbekistan territory at the Saryasia BCP, enters Afghanistan at the Hairatan BCP, and leads to Bandar-Abbas in Iran.

CAREC Corridor 5: is one of the most direct routes from China to Central and South Asia, and offers great potential for the transport of goods from China and Pakistan, the re-export of good from Kyrgyzstan, and the transport of Afghan and Pakistan agro products and construction related materials. From the North it provides links to the Chinese railway network until the Kasha/Yirkeshitan area and it is suitable for multi- and intermodal transport. In Kyrgyz territory, the corridor enters at the Irkeshtam BCP, passes by Sarytash and reaches the Karamik BCP at the Tajik-Kyrgyz border. It passes through Jirgital–Vahdat-Dushanbe and heads directly south towards Kurgan-Tube all the way to the Nijniy Panj BCP. At the Afghan-Tajik border, it enters the Sherhan Bandar/Kunduz area and continues to the Kabul-Jalalabad route, crossing the Pakistani-Afghan BCP at Landi Kotal. The area from Torkham, Afghanistan to Irkeshtam, Kyrgyzstan is primarily a road network, with limited railway lines.

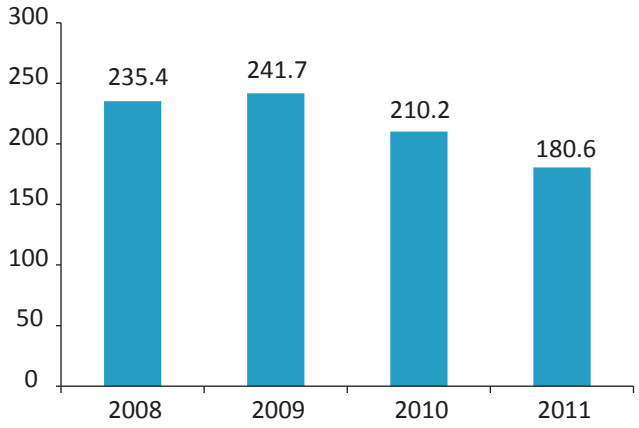
CAREC Corridor No.6c: is one of the longest CAREC corridors connecting European states with the Middle East and South Asia. This multimodal corridor proceeds from Russia-Kazakhstan-Uzbekistan and enters Tajikistan in the north at the Bekabad BCP. It passes through Nau-Shahristan-Ayni-Dushanbe-Kurgantyube to the Nijni Pynj BCP to Afghanistan. The corridor then follows the same route as Corridor 5, becoming a transit route for Pakistani and Indian goods to Russia and Eastern European states. Despite its potential, this corridor is currently considered the least reliable because of the ongoing political and economic stalemate between Tajikistan and Uzbekistan following disagreements over regional energy and water use, namely Uzbek objections to the construction by Tajikistan of the Rogun hydroelectric dam. Consequently, the transit of goods via the Bekabad border to a halt in 2011 and the BCP remains non-operational. Additionally, Tajikistan has yet to complete the Shahristan tunnel, funded by a Chinese loan, and to rehabilitate "Istiqlol" tunnel.[22] This route is considered strategic for the internal movement of passengers and goods between the north and the rest of Tajikistan.

Uzbek and Kyrgyz BCPs in the northern Tajikistan were main crossing points for Tajikistan's transit until 2011. The poor performance of Corridor 2 and 6 BCPs caused a sharp decline in

[22] Located under high-mountainous pass Anzob in Ayni District of Sogd Oblast.

cargo transit of Tajikistan (as illustrated in Figure 6). Detailed analysis of the transit dynamics of Tajikistan are covered in Section 4.2.

Figure 6. Figure 6. Volume of cargo transiting Tajikistan



Source: Ministry of Transport of Tajikistan. Data from various reports

4. Potential of Tajikistan's corridors and their impact on service sector expansion

Most international finance institutions forecast steady economic growth for CAREC countries. According to ADB, the GDP growth rate from 2010 to 2018 is expected at be about8 % on annual basis.[23] Trade within CAREC is expected to grow more than external trade as a result of increased regional cooperation in trade and transport. Freight transits will grow in both north-south and east-west corridors.

Central Asian transport corridors, as part of the international transport system, could ensure significant international freight, and to a lesser extent passenger traffic, through Central Asia. The transport system consists of movable and stationary facilities, as well as set of technological, legal and organisational conditions. Due to growing volumes of cargo transportation, substantial rehabilitation and modernisation of transit infrastructure is required.

According to the 'State Transport Development Program of the Republic of Tajikistan until 2025' (adopted in 2011), from 2014 until 2019, the government intends to invest heavily in the reconstruction and rehabilitation of 734 km of internationally significant roads at a cost of US$160 million. In this period, it also plans to allocate US$129 million to the maintenance of international and national roads. Overall, road transportation investments will represent about $500 million until 2015 and $680 million to 2020.

An important element in the development of a competitive transport system is the availability of modern logistics infrastructure. The lack of such infrastructure in Tajikistan is hindering both the development of the region, and Tajikistan's ability to benefit from its geographical po-

[23] Tera International Group (2008)

sition. According to the strategy, by 2015, Tajikistan will build three transport-logistical complexes in Hujand (north), Vahdat (centre and east) and Nijni-Pyanj (south), to increase regional transit through Tajikistan and serve the country's supply chain. This is especially important due to strategic location of Free Economic Zones in northern and southern Tajikistan.

Although short, mid and long term investments in the transport sector have been announced, a firm allocation of funding will be a major challenge for Tajikistan. However, such investments are important since the transport sector has a major impact on the economy with significant multiplier effects. They also have social, as well as geopolitical implications for the country and the entire region. Usually *direct effects* of public investments benefit workers and businesses engaged in the manufacturing of vehicles and equipment, construction and station facilities. This is not applicable to the Tajik economy since all such manufacturing goods are imported. *Indirect effects* offer opportunities for capital purchases, such as road equipment, special vehicles, spare parts, and other materials, and *induced effects* include the wages of construction workers, payments to businesses that provide road maintenance services, and the purchase of consumer goods.

Despite the positive outcomes of such investments, Tajikistan faces growing dependence on Beijing's regional trade dynamics, particularly when Chinese investments are involved. In many cases Chinese companies are awarded contracts for work and the supply of goods and services in Tajikistan. These companies engage a Chinese workforce leaving only low-paying jobs for Tajiks. Despite the advantage of the quality of work done by Chinese construction companies compared to local Tajik counterparts, the equality of opportunities and capacity building should be principles when negotiating loan terms, especially bilateral loans. Moreover, the benefits of the investments can also be subverted by powerful domestic lobbies and groups with vested interests.[24] Policymakers from Tajikistan must try to maximize the social and economic opportunities of transportation policy, address sector-specific vulnerabilities to corruption, and ensure equal access to the benefits.

4.1. Gender

The issue of gender is almost never raised when considering the development of transport, since it is considered largely irrelevant. This is, however, not the case and Table 5 presents a list of gender issues that should be considered and brought to the attention of officials. Traditional gender role stereotypes and patriarchal attitudes that only men should be breadwinners have confined the majority of Tajik women to their homes. If these barriers are not addressed, government efforts to stimulate the active participation of women in the labor force will be thwarted. Women face a number of barriers that hinder their participation in the transportation sector, including pregnancy and traditional expectations within the family as well as the nature of the work. Some professions in the sector, including long-distance drivers or road maintenance and rehabilitation workers in remote districts, require prolonged

[24] Sebastien Peyrouse, *Tajikistan's New Trade: Cross-Border Commerce and the China-Afghanistan Link*. Policy Conference Report (Washington DC: Ponars Eurasia, 2011) and Sebastian Peyrouse, *Human security in Central Asia: Can the European Union Help Out?* EUCAM Policy Brief No.21 (Madrid: EUCAM, October 2011).

absences from home. However, there are other occupations in transport and road construction that are highly suitable for women, especially if training is provided.

Table 7. Gender-related misconceptions in the transport sector

Theory	Reality
Gender is not a transport issue: it is a health, education, energy, water/ sanitation issue.	All access to these services are by road, either in terms of the provider or the client.
Gender is a cultural and social issue which is not in the realm of transport to resolve	This attitude reinforces and accommodates social restrictions imposed. The same prevailed in the developed countries in the early 20th century - with barriers broken down only through persistent intervention.
Building of roads, de facto, improves position of women and offers tremendous opportunities previously denied.	Unless baseline data is taken and comparisons before and after made, this cannot be taken for granted. Cases have been identified where road improvements have greatly added to women's burdens (i.e. increased agricultural responsibilities without concomitant compensation, flight of men from the area creating hardships, etc.)
With regards to ports. rail and aviation there are no gender issues.	Training and employment of females is all but totally disregarded in these sectors although the competence exists.
Introducing gender into project preparation, etc. is administratively cumbersome - another band - wagon issue of the Bank	No more arduous than any other requirements for project preparation. The same had been said of environmental issues. Managers have solved this problem by contracting out where expertise is limited.
Transport projects are assessed using economic cost-benefit analyses; there are no quantifiable benefits which can be identified with respect to gender.	Work has been done concerning the quantification of time savings with respect to women and improved transport efficiencies, but other techniques need to be developed and alternative methods of identifying unquantifiable benefits determined.

Source: United Nations Economic and Social Council[25]

Formal and informal cross border trade account for a significant portion of regional trade in Central Asia and transportation policy has an important impact on it.[26] Cross border trade generates additional work places at border markets and fosters small scale service provision such as storage facilities, catering and hostel services, especially in communities along borders. Women constitute the significant majority of cross border traders and for them and their families; this is a major source of income and employment. Improved transport corridors are expected to reduce the costs of road transport and the time needed to ship goods, leading to a positive 'efficiency shock' and a greater formalization of cross border trade. However, the net effect of such formalization could have a serious impact on the livelihoods of small cross border traders and small entrepreneurs. Large scale entities are likely to strengthen their

25 United Nations Economic and Social Council (ECOSOC), *The Inland Transport Committee and gender issues in transport.* Report to the United Nations Economic Commission for Europe Executive Committee on the Implementation of the Priorities of the UNECE Reform for Strengthening Some Activities of the Committee (Geneva: ECOSOC, 2009).

26 Bartlomiej Kaminski and Saumya Mitra, *Skeins of Silk: Borderless Bazaars and Border Trade in Central Asia* (Washington DC: World Bank, 2011).

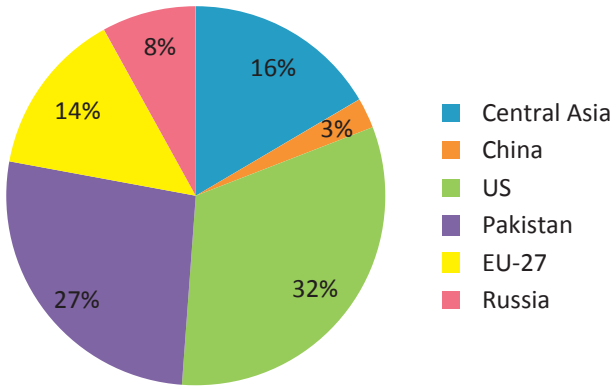
distribution networks and edge out weaker competitors, particularly individual entrepreneurs, by translating cost savings into lower retail prices for the final consumer.

Some positive steps are evident in recent transport corridor investment projects. ADB's transport sector rehabilitation assignments analyse gender-related issues at the initial investment project formulation and design stage. Project technical reports assess project potential to promote gender equality and women's empowerment by improving women's access to and use of opportunities, services, resources, assets, and participation in decision making; key related gender issues; and any adverse impacts on women and girls.[27] Although, this is a step forward in highlighting the importance of gender equality, specific gender-related indicators need to be developed to systematically evaluate this dimension. Such considerations may lead international development banks and the aid community, and ultimately government policy makers to conceptualize new approaches to gender in transport, with particular emphasis on links between transport and its contribution to increasing women's productivity and promoting social equity.

4.2. Afghanistan and Greater Central Asia

Despite the unfavorable security environment, China and Central Asia's trade with Afghanistan is on the rise (see Figure 7). Chinese mining, energy, communication and transport companies strive for unique opportunities available in the Afghan market. The northward trade dynamics of Afghanistan in the last few years is, to some extent, caused by the political tensions between Afghanistan and its eastern neighbour, Pakistan.

Figure 7. Afghanistan's main trade partners (2010)



Source: Author's calculation based on http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_114134.pdf

The supply routes of US-led coalition forces in Afghanistan have had to be diversified because of the deteriorating security situation in Pakistan, to include routes through Central Asia. Uzbekistan, via its stable rail networks, and Tajikistan via its road networks, are now involved in supplying fuel and other materials to US military bases in Afghanistan. The US has taken

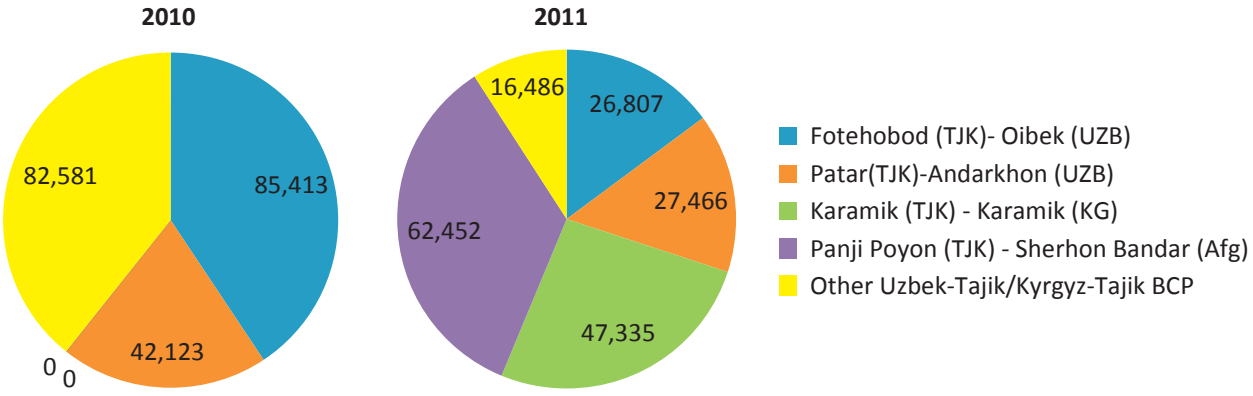
[27] See examples in Asian Development Bank, *Republic of Tajikistan: CAREC Corridor 3 (Dushanbe–Uzbekistan Border) Improvement Project* (Manila: ADB, 2010).

advantage of this momentum and taken initiatives to deepen regional economic cooperation between Afghanistan and Central Asia, as part of its vision for the economic development of the region and as an exit-strategy following gradual removal of its military forces from Afghanistan. Although this US-driven 'New Silk Road' initiative to fostering transit routes is destined to face challenges, it may also result in future investments and the inclusion of Central Asian enterprises in regional economic projects.[28]

Tajikistan's strategic objective in this respect is to capture these transit opportunities and enhance its corridors performance to facilitate trade and transport. In doing so, Tajikistan could contribute to the economic reconstruction of Afghanistan and peace-building efforts. The Karamik transport route (CAREC's Corridor 5) and the Tajik-Kyrgyz BCP have become significant in the transit of consumer goods in the region, and of petroleum products for NATO military forces from the US entrepôt at its base in Kyrgyzstan to its military stations in Afghanistan.

The importance of the Karamik route (CAREC's Corridor 5) has increased in recent years since it ensures Tajikistan's road transport connectivity with CA states and China. However, it has not realized its full potential because of the latest restrictive policies of Uzbekistan towards Tajikistan that resulted in a dramatic drop in the transit of goods through the Uzbek-Tajik BCP in 2011. According to recent data (see Figure 8), the volume of goods transiting at Uzbek-Tajik crossing points in the north of Tajikistan remains low. There has, however, been significant growth at the Karamik crossing point in the east. According to Ministry of Transport data for 2011 and 2012, the volume of transit passing through Karamik border on quarterly basis is similar to the volume of goods leaving Tajikistan at the Sherkhonbandar BCP of Afghanistan (see Figure 9).

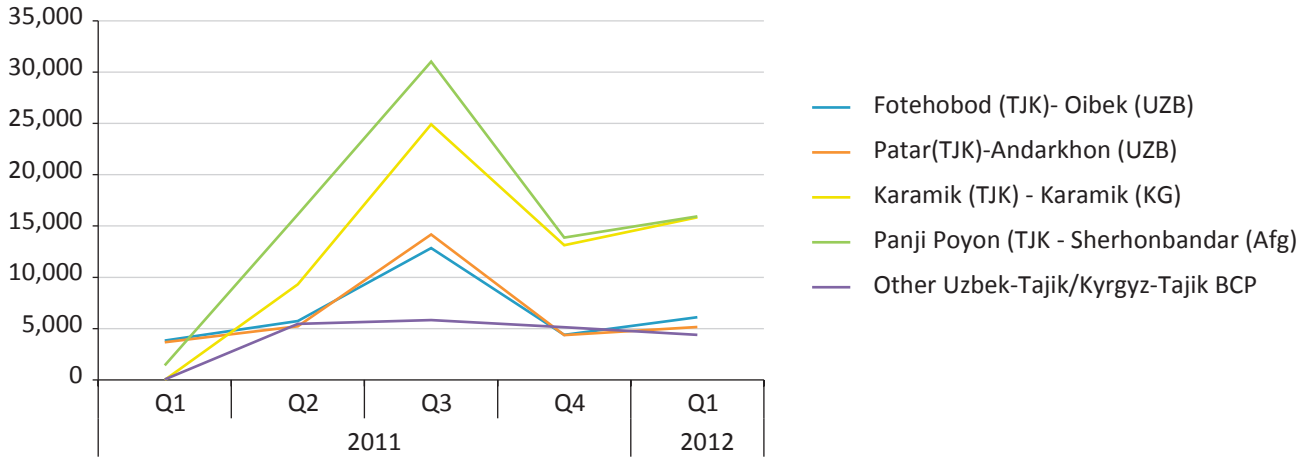
Figure 8. Volume of goods transiting via border crossing points of Tajikistan (in tons)



Source: Ministry of Transport of Tajikistan

[28] S. Frederick Starr, *Afghanistan Beyond the Fog of Nation Building: Giving Economic Strategy a Chance.* Silk Road Paper (Washington DC: Central Asia-Caucasus Institute & Silk Road Studies Program, 2011) and United States Senate Committee on Foreign Relations, *Central Asia and the Transition in Afghanistan* (Washington DC: Government Printing Office, 2011).

Figure 9. Transit of goods via border crossing points of Tajikistan (2011 quarterly, in tons)



Source: Ministry of Transport of Tajikistan

Politically, the further development of the Karamik transport route would provide Tajikistan with an alternative transport route for importing and exporting goods, by passing Uzbek territory albeit at higher transportation costs. A study is being conducted to assess the feasibility of building a railway network along Corridor 5.[29] Given the persistent challenges created by Uzbek Railway Authorities regarding the transit of imports and exports, Tajikistan is keen to realize this project to alleviate its strong dependence on the Uzbek transit route. The railway could potentially become part of a multimodal corridor, serving as an alternative route to the Caspian Sea and Persian Gulf ports for regional states.[30]

It is worth noting that Corridor 5 (its northern and central part) has the potential of shortening the route for transiting goods from China to the ports of Bandar Abbas and Chbahor (Iran), Karachi (Pakistan) and Istanbul (Turkey), and further on to Europe via Afghanistan, compared to alternative routes via Uzbekistan and Turkmenistan. A comparison of the length of the various routes is presented in Table 8.

Table 8. Transit routes from Kashgar, China to Bandar Abbas Port, Iran

	Length
Kashgar (China) –SaryTash (Kyrgyzstan) – Karamik (Tajikistan) -Dushanbe-Nijni Pyanj-Kunduz (Afghanistan) -Kabul (**part of CAREC Corridor 5**) –Kandahor – Zahidan (Iran) – Bam- Bandari Abbas Port	3479 km
Kashgar (China) –SaryTash (Kyrgyzstan) – Karamik (Tajikistan) -Dushanbe-Termez (Uzbekistan) (part of CAREC Corridor 3b) - Bukhara- Chorchu (Turkmenistan) – Mari (**part of CAREC Corridor 3a**)–Lutfobod (Iran) - Bandari Abbas Port	3948 km
Kashgar (China) - SaryTash (Kyrgyzstan) - Osh- Andijan (Uzbekistan) -Kokand-Hujand (Tajikistan) – Jizzakh (Uzbekistan) -Samarkand-Navoi- Bukhara- Chorchu (Turkmenistan)- Mary (**part of CAREC Corridor 2b**) - Sarakhs (Iran) -Mashhad-Kerman-Sarchan-Bandar Abbas Port (**part of CAREC Corridor 3a**)	3584 km

[29] National Information Agency of Tajikistan, http://khovar.tj/rus/archive/4548-nachalas-realizaciya-proekta-teo-uchastka-zheleznoy-dorogi-kashgar-gerat.html, (Dushanbe: Government of Tajikistan, 2012).

[30] If the political commitment made in 2010 by leaders of Afghanistan, Tajikistan and Iran to build a modern highway from Kunduz in Afghanistan to - Iran, bypassing Uzbekistan and Turkmenistan, comes to fruition.

Map 4. CAREC Corridor 5

Adapted from: Asil Gezen, Central Asia Regional Economic Cooperation (CAREC) transport sector strategy. Presentation (Beijing: TERA International Group, Inc, 2007).

The rehabilitation and construction of roads in Tajikistan aimed at resolving multiple transportation problems, including poor access within the country, would accelerate the process of transforming the country into a transit country. However, there are essential services, other than roads, that make up the necessary infrastructures for the efficient movement of goods and automobiles on highways, including, but not limited to:

- A network of appropriate catering establishments;
- Mechanic and repair facilities
- Hotel and other accommodation along corridor routes;
- International standards of parking;
- Entertainment centres and rest areas;
- Insurance services;
- Financial services;
- Storage and warehouses; and
- Car rental services.

The development of appropriate infrastructure to improve the transit of goods by road in Tajikistan requires huge investment. The basis of such investments in the first place is a public-private partnership, such as the one supporting the Central Tajikistan–Northern Tajikistan toll road. Other required subsidiary investments to provide services for the road traffic should be provided by the private sector, possibly with some government incentives.

The creation of a network of logistics organisations between CA countries could provide the necessary institutional infrastructure to improve freight traffic between the countries.

On-going rehabilitation and construction projects, and the liberalization of the delivery of transport services, have created business opportunities for private entrepreneurs. According to state statistics[31], between 1998 and 2009, the tonnage carried by private transport companies increased by almost 10 times. There was also a solid nine-fold increase in the tonnage of international freight carriers, indicating increased activity by forwarding companies using Tajikistan as a transit country. However, state statistics do not show the number of those employed in transportation services that operate on the basis of individual licenses. The bulk of employment in this sector is provided by hired vehicles, or by single-owners of vehicles working on the basis of patents, a fixed fee payable to tax authorities. The impact of transportation development is often localized in nature and this level of analysis is required to understand its broader economic impact. Available statistics do not highlight other related economic variables, such as land development and property values. Such data would be useful in understanding on how newly completed road and railway networks affect local economies.

In general, the creation of transport hubs linking Central Asian countries contributes to the development of trade in these countries, and regional integration. Diversification and increase in export volumes are an integral part of future economic growth and development of the region. Diversified output and exports expose companies to domestic and international competition, and lead to increased productivity.

4.3. Performance of CAREC Corridor 5

The ADB, specifically CAREC, stresses the use of indicators as an important tool for the decision makers to support, guide, and justify planning process, and assesses and evaluates transport corridor performance on a continuous basis. To ensure the sustainability of investments and to address bottlenecks, ADB monitors performance along the links and nodes of each CAREC corridor. The CAREC Corridors Performance Measurement and Monitoring (CPMM) programme uses the Time/Cost Distance (TCD) methodology to gather time and cost data associated with transit transport processes.

A significant factor influencing the choice of corridor route by transport companies are the regulatory enforcement practices of customs authorities, as well as other barriers and challenges that can offset the benefits offered by a given corridor. The costs of waiting, cumbersome customs clearance and other obstacles may become so expensive that transit flows divert to other routes.

CPMM indicators are sound, measurable, efficient and easy to understand by stakeholders, and offer an effective tool to CAREC state authorities making investment decisions and trying to optimize returns on investments. The indicators evaluate each corridor's infrastructure, quality of services and shipment of goods, key variables in assessing the impact of measures

[31] Agentsvo po statistiki pri Presidente Respubliki Tadjikistan (2011)

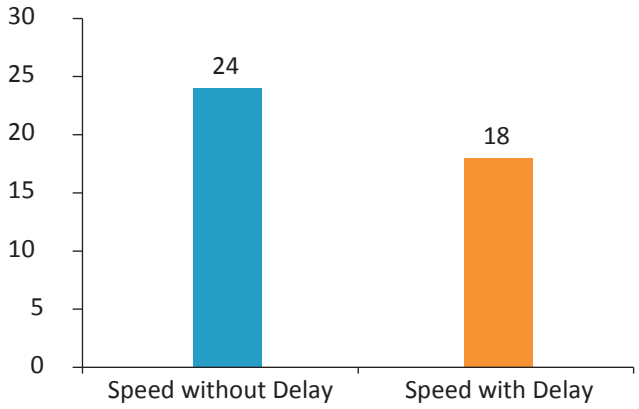
taken to facilitate trade along corridors. They allow an assessment of inputs such as the quality of the services, time and cost, which can help in identifying those components of a corridor that offer the greatest savings if improved.

In its 2009-10 CPMM Monitoring,[32] ADB measures speed with two indicators:

- **Speed without delay (SWOD):** or the average vehicle speed on the road or tracks when the vehicle is moving. "This measure does not include the time when the vehicle is stationary, such as waiting for customs clearance. Calculated by dividing the total distance over the driving time, this indicator is expressed in kilometers per hour (kph)."[33]

- **Speed with delay (SWD):** measures how fast a vehicle travels over the entire journey, including time spend for non-travel activities such as border-crossings and loading and unloading. The measurement is "calculated by dividing the total distance by the total time taken from origin to destination, also expressed in kph."[34] This indicator is higher or equal to SWOD, due to the additional activities it factors in, such as customs clearance, police stops and waiting time at BCPs.

Figure 10. Corridor 5 Speed Indicators (in kph)



Source: CAREC, CAREC Corridors Performance Measurement and Monitoring (2010).

With regard to timing, recent CPMM monitoring scored CAREC Corridor 5 scores high among all six corridors. No significant delays are registered at Tajik-Kyrgyz and Tajik-Afghan BCPs. However, the CPMM registered delays at the first and last BCPs of the corridor, namely Yierkeshitan-Erkechtam (China-Kyrgyzstan) and Landi Kotal–Torkham (Pakistan-Afghanistan) due to waiting in queues, escort by customs officials in convoys, weight inspections, and highway patrol police checks.

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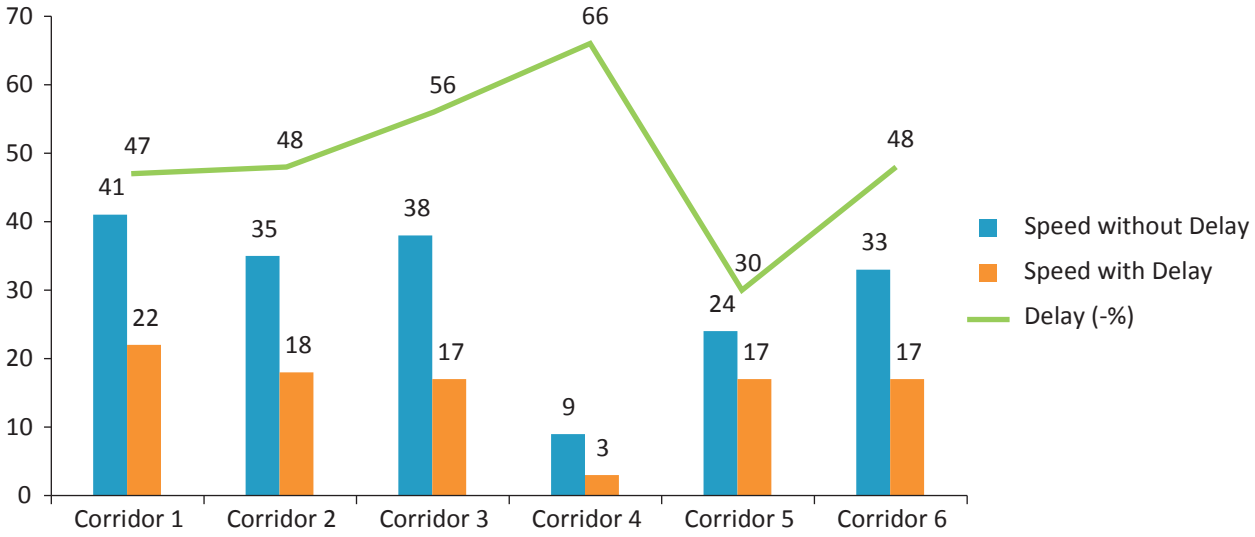
32 CAREC, *CAREC Corridors Performance Measurement and Monitoring: Annual Report (April 2009 to March 2010)*. 9th Ministerial Conference on Central Asia Regional Economic Cooperation, Cebu, Philippines, 31 October–2 November 2010. http://www.carecprogram.org/uploads/events/2010/SOM-Oct/CPMM-Annual-Report-2Q2009-1Q2010.pdf.

33 CAREC, CAREC *Corridors Performance Measurement and Monitoring* (2010).

34 CAREC, CAREC *Corridors Performance Measurement and Monitoring* (2010).

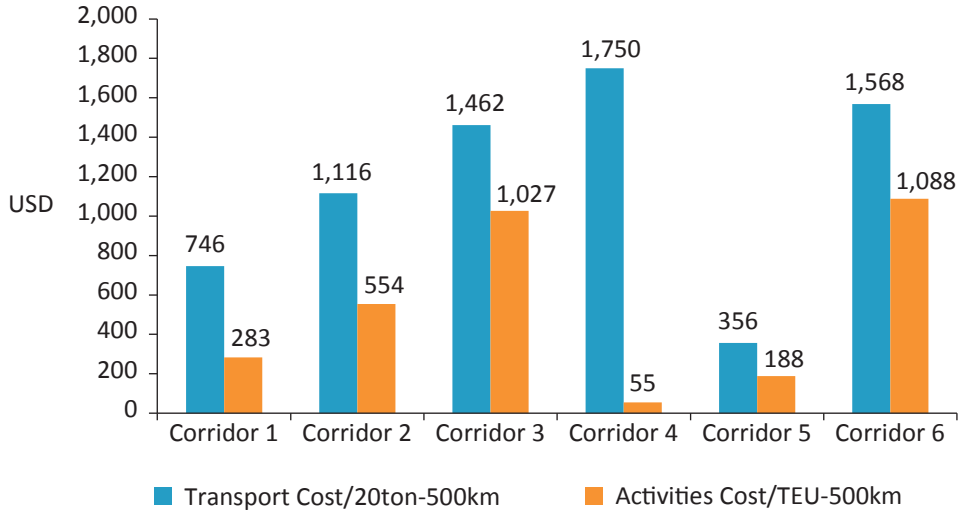
Figure 11. CAREC Corridors Speed Indicators (in kph)



Source: CAREC, CAREC Corridors Performance Measurement and Monitoring (2010).

With regard to transport cost, CPMM measures the total cost associated with moving goods, and all expenses incurred while stopping or crossing borders, including fuel, insurance, driver's salary, fees and road taxes. Figure 12 uses two primary variables for the cost analysis: the weight of cargo and the distance traveled to standardize data; the transport of 20 tons of cargo over a distance of 500 km for road transport. Corridor 5 is considered the most cost effective route (see Figure 4). Other corridors cost at least double the cost of Corridor 5 (Corridor 1) and as high as five times the total transport costs of Corridor 5 (Corridor 4). The CPMM results confirm that costs related to rail transport remain economical in comparison to road transport, due to less exposure to unofficial payments, in-transit damages and predictable fees.

Figure 12. Costs of transiting CAREC Corridors (Road cost per 20 tons / 500km)



Source: CAREC, CAREC Corridors Performance Measurement and Monitoring (2010).

5. Policy recommendations

Tajikistan considers transit as a key criterion for its attractiveness and competitiveness in the transport sector, and as an indicator of development to increase exports. Under current realities, indicators such as speed without delay, costs, service and stability are the main parameters for carriers in choosing a corridor route. The existing level of Tajikistan's road transport transit volume is insignificant compared to the potential trade growth between Central Asia, South Asia and Afghanistan in the coming decade. However, due to its unique geographical location, Tajikistan should be ready to capture transit income opportunities.

The approved Transport Sector Development Programme provides a basis for the improvement of the industry. It offers a list of investments for the short, mid and long-term; addresses the ecological safety of the transport sector; and outlines steps towards the automatization of communications within the sector. However, the programme objectives, goals and action plans must be regularly reviewed and updated to address new realities and changing environments in the country and the region.

Key goals should include higher standards of competitiveness of the transport system, and maximum satisfaction of beneficiaries through the provision of quality transport services. To this end, efforts should be made to improve regulations governing the implementation of transport services, customs regulatory frameworks and transit conditions to harmonize them with the legal provisions applicable for other CAREC member states. CAREC Corridor 5's successful performance can be further enhanced through improvements in border control technology, implementation of customs frameworks, veterinary and phytosanitary procedures and services, and an efficient transit convoying of goods across the state borders of Tajikistan.

Competition among CA countries to attract forwarders and carriers will only increase due to the potentially huge volume of transits in the future. The ability to respond with improved conditions and terms of corridors, along with related political, institutional and economic measures, is central to the success and viability of transport routes in Tajikistan. In 2011, Uzbekistan launched a process to establish a new international transport and transit corridor linking Qatar-Oman-Iran-Turkmenistan-Uzbekistan. Although the primary goal of this Uzbek initiative is to promote better access for its exports, it could also divert export flows of Kazakhstan, Russia and China from Tajikistan.

Similar measures by other neighbouring countries to improve their standing in the transit sector should be a clarion call for Tajik authorities to be more proactive in finding ways to strengthen the use of its transit corridors. Currently trade facilitation along Corridor 5 is handled through Cross Border Transport Agreement (CBTA) within the CAREC initiative. In March 2011, the Parliament of Tajikistan ratified the CBTA that had been signed between Kyrgyzstan and Tajikistan to encourage a greater flow of goods, services and passengers. The earlier established (2010) National Transport and Trade Facilitation Committee (NTTC) are responsible for overall policy direction and implementation of the treaty, and have the following functions:[35]

[35] The NTTC for Tajikistan is established and headed by a Deputy Minister of Transport

- Ensure that Corridor 5 is efficient and cost-effective;
- Market the corridor to increase its utilization;
- Support infrastructure planning and operations on the Corridor through proactive
- collection, analysis and dissemination of traffic data, analysis of other competitive corridors and business information;
- Promote sustainable maintenance of infrastructure;
- Encourage the implementation of improved customs transit procedures and the
- implementation of joint customs controls borders;
- Cooperate, where appropriate, with regional bodies with similar objectives.

CBTA is an important platform for regional transport cooperation. Afghanistan has signed a Protocol to join Tajikistan and Kyrgyzstan, expanding the geography of the Agreement and laying the ground for measures to enhance a proactive coordination body for CBTA implementation and monitoring. UNESCAP[36] suggests that in the process of harmonizing regulatory frameworks of similar initiatives, the availability of an advisory board consisting of beneficiaries and stakeholders, such as traders, clearing agents, freight forwarders, trucking companies, banks and insurance companies is a crucial step forward. Their role would be to provide information, ad hoc suggestions and recommendations to the Committees for improvement of border crossing facilities, formalities and procedures.

The funding and sustainability of any proposed institution to manage transport corridors requires carefully consideration. Funding for existing corridor groups could include membership fees, contributions by participating states, and traffic-based usage fees. Donor support should be secured in the initial phase. Once established, the committee should prepare an action plan with achieveable results, to enable a usage-based funding mechanism such as a tonnage levy. A usage fee would maintain pressure on the main stakeholders to deliver tangible benefits for corridor stakeholders to justify its funding. If introduced, the usage fee must be simple to collect and administer.

Making transport policy more responsive to the needs of women requires a structured approach to understanding their needs, identifying instruments to address those needs, while establishing an appropriate policy framework. It also requires that women are represented at each step of the planning and design process of transport corridor investment projects. Government agencies and non-governmental organisations, community-based organizations and women's groups should be identified and involved in planning and implementation.

Currently, an examination of implementation of some of public investment projects[37] in Tajikistan reveals an inequality in terms of temporary employment opportunities. International financial institutions and bilateral Chinese loans in the transport sector create hundreds of jobs and millions of dollars' worth of contracts. Job opportunities provide sustained employ-

[36] United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), *Study on National Coordination Mechanisms for Trade and Transport Facilitation in the UNESCAP* Region (Bangkok: UNESCAP, 2007).

[37] Ministry of Transport of Tajikistan (2010)

ment in the industry, with prospects for career growth and transferability of construction skills; qualities that could attract greater participation by women in transport projects.

A strategy of continued road rehabilitation to equip highways with transport communications, advanced telecommunications systems and engineering infrastructure is necessary. Road construction standards must be carefully examined and closely monitored by the relevant authorities. Applying advanced cement concrete and asphalt-concrete pavements is a prerequisite for meeting the highest international standards. In order to reduce construction and building costs, modern energy-efficient and energy saving technologies should be introduced.

Planned modern logistics facilities at BCP should also be established, to handle hundreds of thousands of tons of cargo each year. These facilities should be equipped with workstations for handling cargo, refrigeration chambers, freezers, warming rooms, and storage areas for hazardous goods and perishable foodstuffs. Alternatively, such centers could first be established along Free Economic Zones at Nijni Pyanj, Sogd oblasts, and Ishkashim in Gorno-Badakhshan Autonomous Oblast. The establishment of logistics centers should be prioritized while negotiating Public Investment Projects at the next Tajikistan Donor Community Meeting, since private sector investment is unlikely in the immediate future.

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