

CENTRAL ASIA REGIONAL COOPERATION PROGRAM

SEMINARS ON TRADE LOGISTICS AND CAREC CORRIDOR PERFORMANCE MONITORING

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INTEGRATED APPROACH FOR PERFORMANCE MEASUREMENT AND MONITORING

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1 Barriers Pertaining to Transport and Transit

All CAREC countries or regions are landlocked and situated far from major international seaports and developed country markets. In addition, the CAREC region has a difficult topography, which complicates their transport links with other parts of the world, particularly South Asia. The situation is exacerbated by deficiencies of the transport networks, high costs and low quality of transport and logistics services, and difficulties with movements of goods and transport equipment across borders and through the territories of the CAREC countries/regions and neighboring countries.

The result is that transport costs are relatively high, and transit times are long and unpredictable for international shipments to and from the region.

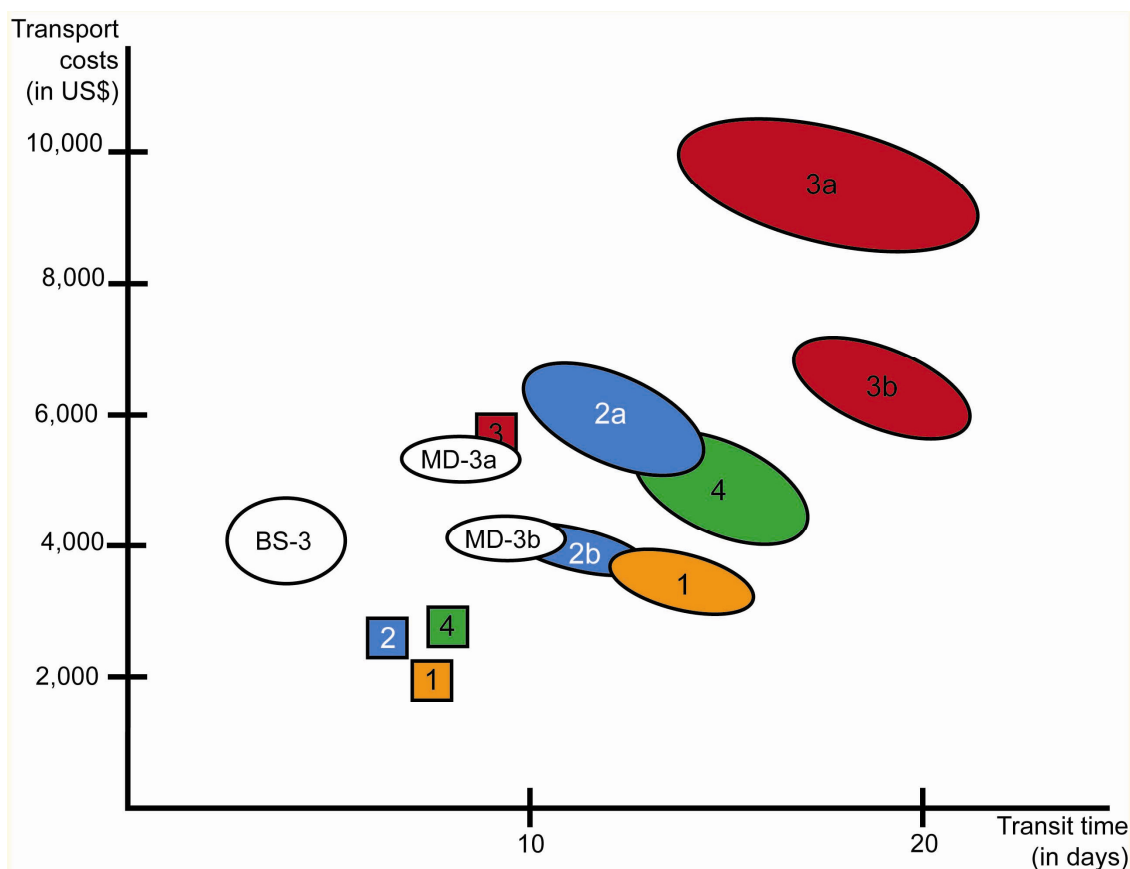
Figures 1 and 2 compare the actual transport costs and transit times for shipments by road and rail between Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan, on the one hand, and selected countries outside the region, on the other, with the corresponding transport costs and transit times in an "ideal world" with balanced transport flows, competitive markets for transport services, smooth border crossing, low transit fees and no visa problems and unofficial payments.

The figures show that the actual transport costs are much higher and actual transit times are much longer for shipments to and from the countries in the region than those in the "ideal world".¹ Moreover, transit times for international shipments by road for longer distances (e.g. shipment from the Benelux countries) vary more than those for shorter distances (e.g. shipments from Istanbul). This indicates that transit times for international shipments become increasingly unpredictable, as the distances involved increase.

Figures 1 and 2 also demonstrate the significant transport cost and transit time disadvantage faced by a number of CAREC countries compared with the Baltic States and Moldova. Transport costs for shipment by road between the selected CAREC countries and the Benelux countries are 1.5-2.5 times as high as those for road shipments between the Baltic States and Moldova, on the one hand, and the Benelux countries, on the other, while transit times are 2.0-3.0 times as long.

Even for shipments by rail between these countries and Moscow, transport costs are generally higher and transit times are significantly longer than those for rail shipments between the Baltic States and Moldova, on the one hand, and Moscow, on the other.

Figure 1: Transport Costs and Transit Times for Shipments by Road between Central Asian Republics (Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan) and Selected Countries, Spring 2005



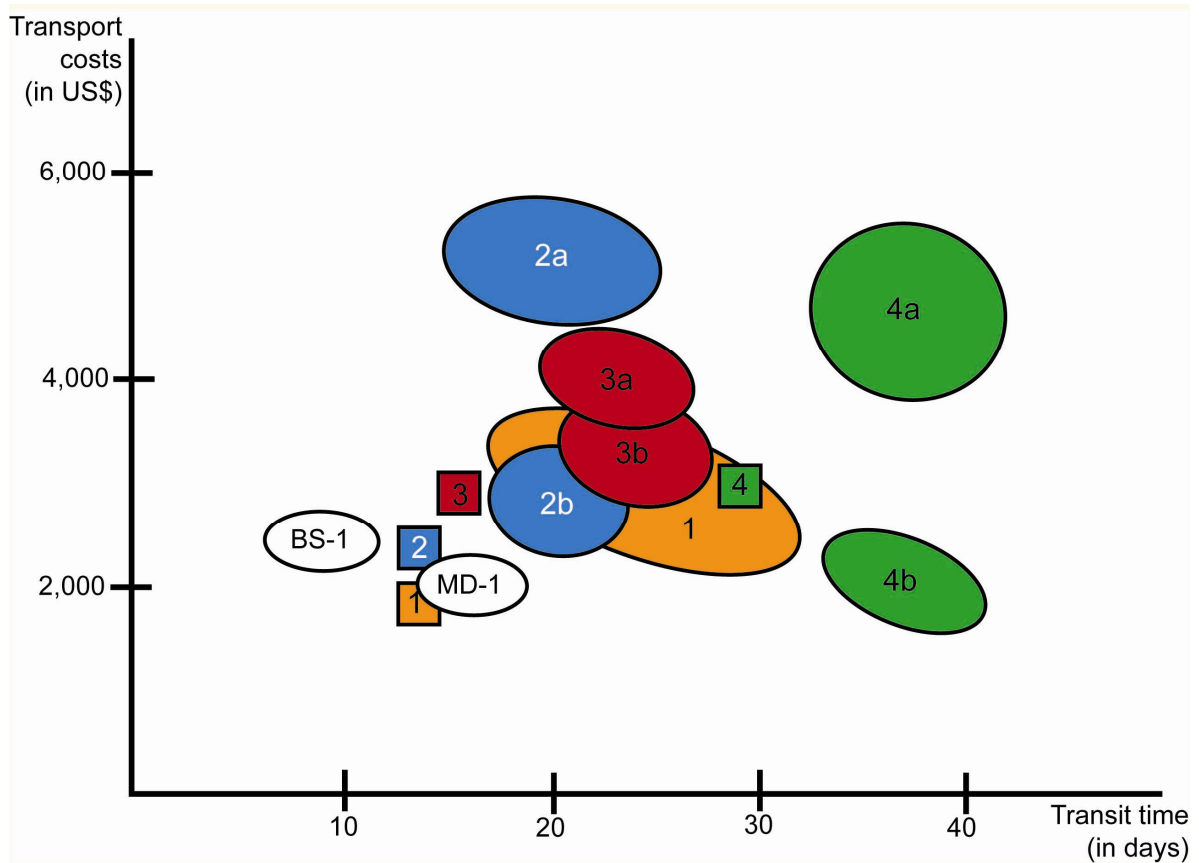
- Legends:
- Actual transport costs and transit time
 - Transport costs and transit time in an “ideal world” with balanced transport flows, competitive markets for transport services, smooth border crossing, low transit fees and no visa problems and unofficial payments.
- 1 For a shipment by a local truck to Moscow;
 - 2 For a shipment by a Turkish truck (a) from Istanbul and (b) to Istanbul;
 - 3 For a shipment by a European truck (a) from the Benelux countries (Belgium, Netherlands, and Luxemburg) and (b) to the Benelux countries;
 - 4 For a shipment by a local truck to and from Finnish border;
 - BS-3 For shipments between the Baltic States and the Benelux countries;
 - MD-3 For shipments (a) from the Benelux countries to Moldova and (b) from Moldova to the Benelux countries.

Source: Data collected by author.

Figures 1 and 2 show that there is an asymmetry in transport costs for international shipments between Central Asia and Europe. For example, it costs \$8,500-10,500 to ship a truckload of cargo from the Benelux countries to Central Asia, and only \$6,000-7,000 to ship in the opposite direction. In the “ideal world”, shipments would cost \$5,500-6000 in either direction. This is due to the particular commodity composition of trade

between Central Asia and Europe, whereby exports from Central Asia to Europe mostly consist of primary commodities transported by rail and through pipelines, while imports from Europe to Central Asia mostly consist of manufactured products transported by road and air.ⁱⁱ

Figure 2: Transport Costs and Transit Times for Shipments by Rail between Central Asian Republics (Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan) and Selected Countries, Spring 2005



- Legends:
- Actual transports cost and transit time
 - Transport costs and transit time in an “ideal world” with balanced transport flows, competitive markets for transport services, smooth border crossing, low transit fees and no visa problems and unofficial payments.
- 1 For a shipment of a full wagon or a 40’container from and to Moscow by rail;
 - 2 For a shipment of a 40’ container (a) from Istanbul and (b) to Istanbul by rail and sea;
 - 3 For a shipment of a 40’container (a) from the Benelux countries and (b) to the Benelux countries by rail;
 - 4 For a shipment of a 40’ container (a) from China (East Coast) by rail over land and (b) to China (East Coast) by rail and sea via Bandar Abbas;
 - BS-1 For shipment between the Baltic States and Moscow;
 - MD-1 For shipments between Moldova and Moscow.

Source: Data collected by author.

Table 1 presents estimates of transport costs of merchandise exports and imports of the selected CAREC countries in 2003. According to these estimates, transport costs in the value of exports ranged from 8.0% in Azerbaijan to 14.0% in Tajikistan, and the share of transport costs in the value of imports ranged from 7.0% in Azerbaijan to 10.0% in the Kyrgyz Republic and Tajikistan. Using reference values for similar countries, it is estimated that total logistics cost made up 16-19% of the total value of exports and imports in these countries.

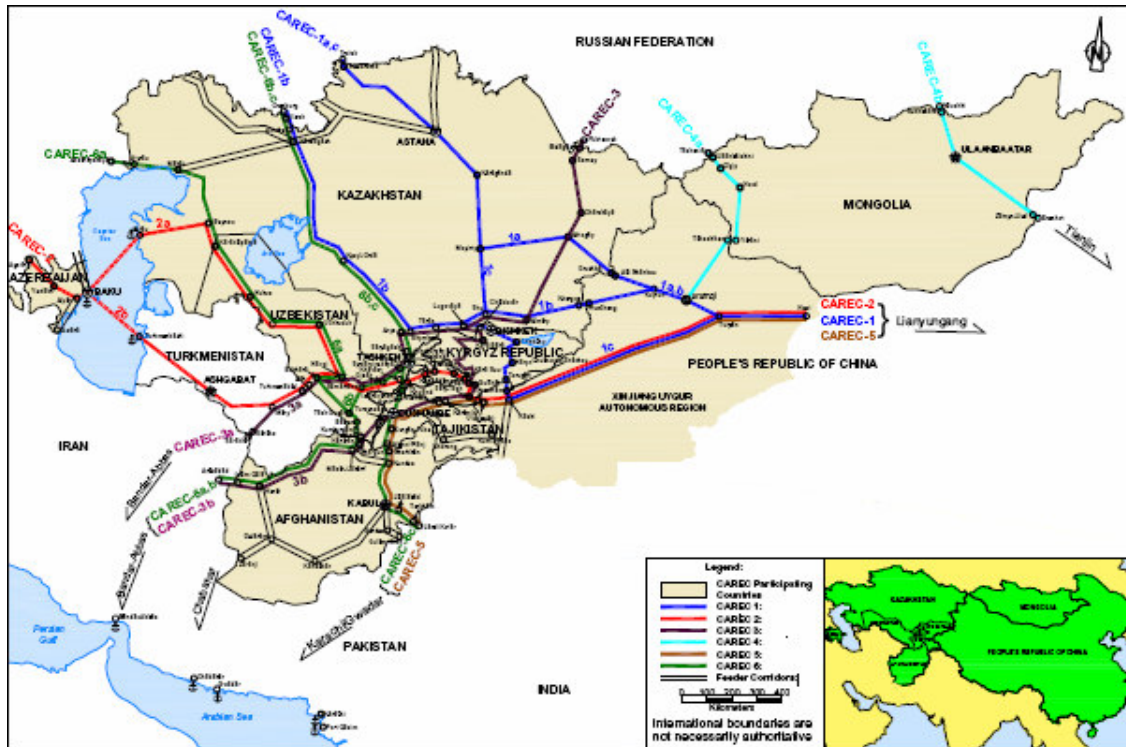
By comparison, transport costs accounted for 8.4% of the value of imports in Asia as a whole and 6.1% of the value of imports in the world at large in 2001. In EU countries, logistics costs in manufacturing generally comprise less than 10% of the value of products and transport costs are only 1/3 of logistics costs.

Table 1: Estimated Transport Costs in Merchandise Exports and Imports of Central Asian Republics, 2003

	Transport Costs of Exports		Transport Costs of Imports	
	In % of exports	In million US dollars	In % of imports	In million US dollars
Azerbaijan	8.0	207.4	7.0	183.8
Kazakhstan	10.0	1292.7	8.0	583.0
Kyrgyz Republic	13.0	75.6	10.0	72.0
Tajikistan	14.0	111.6	10.0	88.0
Uzbekistan	12.0	382.8	8.0	206.0

Source: Faye et al. (2004), Ojala et al. (2004) and authors' estimates.

Figure 3: CAREC Corridors



CAREC Corridors in Figure 3 are the following:

- **CAREC 1: Europe – East Asia**
- **CAREC 2: Mediterranean – East Asia**
- **CAREC 3: Russian Federation – Middle East and South Asia**
- **CAREC 4: Russian Federation – Xinjiang Uygur Autonomous Region**
- **CAREC 5: East Asia – Middle East and South Asia**
- **CAREC 6: Europe – Middle East and South Asia**

2 Performance measurement – measures or indicators relevant to CAREC corridor performance

The outline of CAREC corridor set-up is shown in Figure 3. The corridors typically traverse two or more CAREC countries, and extend further to e.g. Russia, Middle East, Europe and/or East Asia (China).

This means that effective measurement has to be implemented internationally within the region. Performance measures reflect the efficiency or quality of the CAREC transport and trade corridor's along three dimensions as follows:

- physical infrastructure,
- logistics services, and
- Customs and other regulations comprehensively.

Performance can be measured by outcome indicators of time and cost:

- the amount of time taken to complete the movement of the good from the beginning to the end of the route
- Costs related to the movement of the good and transport vehicle
- Performance is also measured in terms of complexity
- Additional indicators for landlocked economies
 - Waiting time at border crossings
 - Inland freight cost (through transit country)
 - Harmonization of documents with transit country
 - Number of transit countries crossed
 - Number of borders crossed
 - Whether there is free transit access for vehicles across borders

3 Approaches to performance monitoring –methods for use in CAREC

Approaches to retrieve data can involve at least the following stakeholders or objects

- Truck driver actually moving along the corridor(s)
- Transport company arranging transport along the corridor(s)
- Freight forwarding firms (or, in some case Customs brokers)
- Border crossing officials
- Shippers (exporters/importers) using transport/logistics services

Approaches used to collect data vary from one stakeholder group to another.

Truck drivers can be used as informants in surveys, interviews or case studies, when concrete and pragmatic information on bottlenecks and impediments in border crossing or along the corridors is needed. They can provide good data on these, but the data may be anecdotal in nature.

Transport and freight forwarding firms are more fruitful in getting more comprehensive information on overall transport and transit performance, and bottlenecks and impediments related to these.

Border crossing authorities (including the Customs), and the data gathered by them is also very useful, and it is typical that data gathering is organised in border crossing points.

Shipper surveys are useful, when e.g. the overall transport and logistics costs and needs are to be addressed. Methodologically, these need to be performed either as personal interviews using a (mostly closed-question and quantitative) questionnaire rather than an open, qualitative questionnaire.

In general, web-based surveys cannot yet be used in a large scale in CAREC region.

Conducting international surveys, it is important to double-check carefully the language version(s) used so that each question and/or formulation corresponds to the actual issue at hand. This can be a difficult task, if the issues studied are complex or unfamiliar (such as, for example, the concept of logistics costs).

The general knowledge of management or logistics terminology can be rather limited, which means that the questionnaires or other means of data collection need to be simple, self-explanatory and where multiple or confusing interpretations are kept to the absolute minimum.

It is better to have a smaller sample of reliable data from a limited set of clearly defined issues, than a lot of data from ambiguous, ill-defined and ill-understood ones.

4 Implementing a performance monitoring system

A successful implementation of a performance monitoring system needs to be backed up by relevant trade, transport and border crossing authorities in the region as well as the main rail and road transport operators or associations representing these.

Models and approaches with well-developed methodologies are, for example, the following:

General business environment:

Doing Business surveys by The World bank/ IFC (ongoing and annual operations)

BEEPS by EBRD (ongoing and annual operations)

Trade Logistics Performance

Logistics Performance Index work by The World Bank (a new round of data collection is initiated in 2008)

This new LPI data collection is extremely useful to highlight the trade logistics issues worldwide, and a more active participation from CAREC freight forwarders and logistics professional would be much needed.

Logistics costs and development needs of traders (exporters and importers)

The methodology refined in the LogOn Baltic project in the Baltic Sea Region (www.logonbaltic.info)

Currently, no comprehensive and standardized data collection of traders' logistics issues is organized in the CAREC region. It would be extremely important to have this type

Border crossing activities

TTFSE in 1999-2003; Trade and Transport Facilitation in South East Europe by a number of international bodies. (see e.g. Global Facilitation Program of Transport and Trade; www.gfptt.org)

World Customs Organization (WCO) initiative to activate e.g. their Kolumbus programme in the CAREC region. Currently, some Donor countries are contemplating this possibility to be extended to the CAREC region.

Road transport bottlenecks in border crossings

Extending the International Road Transport Union (IRU) data gathering procedures into CAREC, requiring active participation of the national road transport associations, and the IRU.

ⁱ Only for shipments by rail and sea from Central Asia to the East coast of China through Bandar Abbas, Iran, the actual transport cost is lower than that the transport cost in the “ideal world”. The reason is that transport flows from China to Middle East, most of which goes through Bandar Abbas, exceed transport flows in the opposite direction and transport costs for shipments from Bandar Abbas to China are relatively low.

ⁱⁱ According to freight forwarders, only one or two of trucks carrying goods from the EU to Central Asia return with cargo despite the relatively low costs of shipments from Central Asia to Europe. This is not only due to the relatively small amount of exports from Central Asia to the EU that need to be transported by road, but also because many road transporters refuse to carry a less-than-truckload of consolidated cargo to avoid excessive and cumbersome border crossing and transit procedures. As a result, a lot of cargo capacity is wasted. The total loss due to this problem is estimated at around \$300 million per year.

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