



TRANSPORT AND TRADE FACILITATION ISSUES IN THE CIS 7, KAZAKHSTAN AND TURKMENISTAN

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Abbreviations and acronyms

ASYCUDA	Automated SYstem of CUstoms Data management developed by UNCTAD
CACO	Central Asian Cooperation Organization: Uzbekistan, Kazakhstan, the Kyrgyz Republic and Tajikistan.
CAF	Central Asian Forum: Uzbekistan, Kazakhstan, the Kyrgyz Republic and Tajikistan.
CEC	Central European Countries
CIM	International Consignment Note for rail transport under COTIF
CIS	Commonwealth of Independent States
CIS 7	Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova, Tajikistan, Uzbekistan
COTIF	Convention Concerning the International Transport of Goods by Rail, 1980
EBRD	European Bank for Reconstruction and Development
ECA	Europe and Central Asia, a World Bank region
ECE	Economic Commission for Europe of the UN
ECMT	European Conference of Ministers of Transport (Part of OECD)
ECO	Economic Cooperation Organization Pakistan, Turkey, Iran, Azerbaijan, and CA countries
EEC	Eurasian Economic Community (former CIS Customs Union)
EDI	Electronic Data Interchange
EIB	European Investment Bank
EU	European Union
FDI	Foreign Direct Investment
FIATA	International association of freight forwarders
FSU	Former Soviet Union Republics
FTL	Full truck load (cf. LTL and FCL for Full container load)
GFP	Global Facilitation Partnership for Transport and Trade by the World Bank
GUUAM	A trade treaty with Georgia, Ukraine, Uzbekistan, Azerbaijan, and Moldova
HIPC	Heavily Indebted Poor Countries, IMF classification for the poorest countries
IBRD	International Bank for Reconstruction and Development; World Bank Group
IDA	International Development Agency, part of the World Bank Group
INOGATE	Interstate Oil and Gas Transport to Europe initiative
IRU	International Road Transport Union
JSC	Joint-stock company
MOT	Ministry of Transport
MOTC	Ministry of Transport and Communications
OECD	Organization of Economic Co-operation and Development
OSJD	Organization for Railways Cooperation, comprises CIS countries
SMGS	Agreement on International Railway Freight Communications, used in OSJD
PRGF	Poverty Reduction and Growth Facility of the IMF
SCC	State Customs Committee (e.g. in Armenia and Azerbaijan)
SCO	Shanghai Cooperation Organization, also known as Shanghai Six
SOE	State-owned enterprise
SPECA	UN Special Program for the Economies of Central Asia
SME	Small and medium-sized enterprises
TACIS	EU's development program for CIS countries
TEU	Twenty feet equivalent unit, a measurement for unitized cargo
TIR	International convention for road transport in transit traffic; TIR carnets issued by IRU
TRACECA	EU-funded Inter-Governmental Group TRANsport Corridor Europe Caucasus Asia
TTFSC	Trade and Transport Facilitation in South Caucasus
TTFSE	Trade and Transport Facilitation in South East Europe
TTFCA	Trade and Transport Facilitation in Central Asia
UNCTAD	United Nations Conference for Trade and Development
WCO	World Customs Organization
WTO	World Trade Organization

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Executive Summary

This paper covers Trade and Transport Facilitation (TTF) issues in Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova, Tajikistan and Uzbekistan (as the CIS 7), as well as Kazakhstan and Turkmenistan since they are part of the Central Asia region and play a critical role in facilitation solutions. They all share similar constraints of international trade and transport, and their foreign trade is characterized by distant export markets dominated by few commodities. They all need to build the institutional and legal foundations of a market economy, attract foreign investment, and make better use of their natural resources. The resolution of these issues is critical for their economic development.

The goal of the paper is to (i) sensitize politicians, business leaders and donors that TTF is key for economic development and consequently for sustainable poverty reduction; (ii) demonstrate that TTF is a multi-sectoral challenge with political, economic, administrative, technical and technological issues, and to (iii) ask for patience, consistency and long term commitment for TTF reforms on all levels as required by their complexity. The paper will be presented at the CIS 7 Conference to be held in Lucerne, in January 2003.

Worldwide, transport costs in foreign trade are at least three times the rate of customs tariffs. In the CIS 7 + 2 transport costs are at least three times higher than in the developed countries. Unofficial payments further exacerbate this situation and deteriorate their international competitiveness (For example, truckers that transit Caucasus or Central Asian countries typically have to pay up to USD 1,500-2,000 in unofficial payments or for semi-compulsory guard services.) Depending on the world market prices of the commodities, total transportation costs (official and informal) in these countries may amount up to 50 percent of the value of the goods, which far exceeds the comparable costs of the main competitors outside the CIS 7+2.

The costs on the different transport corridors show a great variation, e.g. the USD per km costs from Almaty to Moscow, Baku, Tehran or Urumqi routes can be between 0.76-1.90 for road and 0.27-0.76 for rail transportation. Small and medium sized enterprises (SMEs) with little international experience suffer the most.

There is a long list of barriers to trade and transport that drive the costs high and make them unpredictable. The CIS - 7 countries have small and fragmented transport markets (this is not the case for Kazakhstan or Turkmenistan) that seldom can enjoy scale economies in their operations. When a country is landlocked the problem is even worse, as it is detached from the major transport and trade flows. Therefore closer regional cooperation could lead to better utilization of the scale economies also in transport. The serious regional issues that currently constrain trade and economic growth in CIS 7+2 countries can only be effectively addressed through improved cooperation among the countries.

Among the more specific barriers, traders and transport operators consider corruption as the most serious one. The business community needs better access to reliable information with regard to international trade and transport. Gradually, they become partners to the authorities in improving governance and facilitating international economic cooperation. The role of the state is critical in bargaining for better conditions and more access rights to international markets, but also in becoming the engine for further reforms and facilitation measures in customs, as well as transport. The currently under-developed logistics services, as well as the low performance of

transport operators and the lack of the conducive environment for the development of multi-modal transport are as much a barrier to international transport as the physical infrastructure impediments. Customs Administrations in all the CIS 7+2 have launched modernization programs. Further efforts are needed, however to improve cooperation among all the border agencies within and among the countries..

Since the value of foreign trade is above 70 percent in most CIS 7+2 countries, trade and transport facilitation would benefit a large number of economic players. According to the UN, TTF interventions can produce savings between 2-3% of the total trade value. In case of the CIS 7+2, the potential savings due to TTF can be around US\$1 billion in a year. The distribution of the savings would most likely benefit first of all the SME sector as they are the most vulnerable to the current barriers.

It is recommended that all the CIS 7 + 2 prepare (or revise) their **National Trade and Transport Facilitation Reform Package** with a realistic and revolving action plan over the next 5 to 10 years and discuss it with the neighbors, the countries along the key transport corridors, as well as with the business community as they represent the main stakeholders' interest. The World Congress of the Land-locked countries to be organized in Almaty in August 2003 can be an important Forum in addition to the regional and sub-regional workshops to be held in the next 6 months for follow-up discussions and agreements. In the meantime, the following specific recommendations already appear feasible on the short to medium term:

1. For all CIS 7+2:
 - a) Adhering to and implementing the TIR Convention to make it more secure and reliable and abolishing of customs escorts of normal, non-suspicious cargo.
 - b) Harmonizing transit fees by taking into account the interest of both the transit and transiting countries (see on-going work within TRACECA).
 - c) Harmonizing border procedures on road and rail across the countries.
 - d) Introducing of performance indicators that are systematically followed up on the main international transport corridors and on both sides of the border.
 - e) Strengthening the public-private dialogue and cooperation (pro-committees etc.).
 - f) Publishing up-to-date border crossing rules and their interpretation.
2. For the South Caucasus countries: discussing the Trade and Transport Facilitation Policy Notes and agreement on the proposed strategy and recommended actions.
3. For Moldova: deciding on the direction of the customs modernization and reforms is a condition to their joining the TTFSE investment program.
4. For Central Asia:
 - a) ECMT is called upon to consider the membership of the CAR and their participation in the ECMT Multilateral road quota system.

- b) The World Bank initiated TTF Audits could be discussed and used as support material at the Tashkent Regional Meeting organized by UN at the end of February in preparation for the World Congress on Land-Locked countries.
- c) The World Bank in cooperation with ADB and other donors will also prepare Policy Notes with specific strategy proposals and recommended short and medium term actions.

To the extent these countries move forward resolutely on their varying agendas for adjustment and structural reform, as well as for trade and transport facilitation, the international community can and should do more to help through technical assistance, grants and other financial support.

The burden for change lies mostly with the CIS-7 + 2; at the same time a great deal of TTF progress depends on the neighboring countries, on the more developed trading partners, and on donors' support.

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*“Trade Facilitation is more important than tariff reduction.....
Transparency and speed at international borders (are) essential
to compete effectively in the global economy”*

(UN ECE/TRADE/2002/2)

1. Introduction

This paper covers Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova, Tajikistan and Uzbekistan as they are the poorest countries in the ECA region. As such they belong to the group of CIS 7, i.e. the least developed countries under stress. Their transition to market-based economies over the past decade has been extremely difficult¹. In many cases, the economic disruptions created by the break-up of the former Soviet Union were compounded by diverse shocks, including armed conflicts and massive changes in terms of trade. These changes have adversely affected international trade as the number of borders to be crossed and “facilitated” had increased, the earlier unified transit rules had become different for each country (and often not transparent enough for shippers to safely plan their transactions) and, finally, access to markets and transit rights is cumbersome and costly. Overall, the high cost of transport diminishes international competitiveness of goods from the CIS 7 countries and makes their imports often prohibitively expensive.

The paper also includes Kazakhstan and Turkmenistan (hereafter we will include them in the reference to CIS 7 + 2), though they have a Gross National Income (GNI) 5 to 7.5 times that of Tajikistan, respectively, and 4 to 5 times that of the Kyrgyz Republic. Turkmenistan and Kazakhstan have natural resources and trade potential that far exceeds that of the CIS 7 countries. Despite the relative advantages, Kazakhstan and Turkmenistan also suffer from many unnecessary barriers to trade. Because of the high transport costs, a ton of grain from the US delivered to Novorossiysk is cheaper than a ton of grain from Kazakhstan. Not many products can bear the added cost of around US\$4,500-5,000 for road freight transport from Ashgabat to Moscow, which is mostly due to the high amount of rents. So, their export is either stalled or eventually subsidized at the cost of other products.

At the same time, Kazakhstan and Turkmenistan are critical transit routes for the rest of Central Asia, as are other countries, like Russia, China, Iran, Pakistan and Afghanistan. For Moldova the natural transit route to its main trading partner, Russia, is Ukraine. Without aiming at a full picture in the whole expanded region, to illustrate that trade and transport facilitation is beneficial not only to the CIS 7, but also to the more developed neighbors, we shall also touch on the key issues along some selected transit corridors.

This paper strives to address the participants of the CIS 7 meeting to be held in January, whose understanding of the impediments to international trade and transport and whose commitment for and support to a long term trade and transport facilitation reform package is crucial. The paper is also a twin to the ADB paper on the same subject. Our conclusions and recommendations are jointly discussed and supported.

¹ Main source: Poverty Reduction, Growth and Debt Sustainability in Low-Income CIS Countries, Joint IMF and World Bank report

The goal of the paper is to (i) sensitize politicians, business leaders and donors that TTF is key for economic development and consequently for sustainable poverty reduction; (ii) demonstrate that TTF is a multi-sectoral challenge with political, economic, administrative, technical and technological issues, and to (iii) ask for patience, consistency and long term commitment for TTF reforms on all levels as required by their complexity.

The authors recognize that trade facilitation has been on the agenda for a relatively long time and results are either limited or have not yet surfaced either because earlier programs have been over-ambitious, or they have failed to address barriers to international trade and transport with a holistic approach, or because progress has not been measured in a systemic way.

What the paper does not attempt to achieve: making country specific analyses and drafting regional or national action plans are beyond the scope of this paper. Nonetheless, these will be important follow up activities to the CIS 7 meeting where the countries will take the lead to develop, tailor and eventually implement their TTF strategy, while donors, including the World Bank will be available to assist in this process.

2. The costs of barriers to trade and transport

With independence, the nine countries have become increasingly insular. Conflicts, closing of borders, numerous customs points, tariff and non-tariff barriers have caused high transport costs on the one hand, and low predictability in terms of total costs and delivery time on the other hand. This undermined regional trade and also handicapped foreign trade development and the growth of foreign investments. Efforts to diversify or promote trade have brought mixed results. Corruption, security problems, drug and weapon trafficking have markedly restricted regional cooperation. The attempts to foster regional trade and economic cooperation have at best had modest success.

In terms of trade and transport facilitation the CIS 7 + 2 countries do not constitute a single region. Central Asia and the South Caucasus are along a mutual transport and trade corridor (like the Silk Road or its 20th century re-incarnation, the TRACECA route). Nevertheless, there are several common features of the international trade and transport barriers, e.g. most of the countries are land locked and highly dependant on the neighbor countries to get to their trading partners.

While customs tariffs in the major developed markets (USA, Canada, European Union, and Japan) since the post-Uruguay Round are about 3.7 per cent, the average cost of transport for developing countries exports, as a group, is about 8.6 per cent. The cost of transport of exports from landlocked developing countries is approximately 14.1 per cent (based on FOB rates and not considering the total costs including the most costly land transport leg). It is three times the rate of tariffs, and three times the cost of transport in developed countries. Unofficial payments made by truck drivers between Kyrgyzstan and Siberia amount to US\$1,500 on average. The FOB based transport and insurance payments² for Kyrgyzstan and Turkmenistan as a proportion

² These are not total transport costs!

of total exports of goods and services were 15.1 and 15.8 per cent respectively, in 1997³. Despite several analysis and anecdotal information, the costs of Trade and Transport Facilitation (further TTF) impediments are difficult to assess, because of the lack of transparency in prices and tariffs. Nevertheless, we shall rely on survey results to indicate at least the magnitude of costs in international transport.

The unresolved security issues impose a heavy cost on the three South Caucasus states in terms of forgone or diverted trade. Significant differences in agricultural prices between the three South Caucasus states suggest considerable potential for regional trade. According to a recent World Bank study (Polyakov 2001), Armenia could double its exports and halve its trade deficit, and Azerbaijan could increase its exports by about 11 per cent, if the economic blockade were to be lifted. When the peace agreement is signed, Armenia will likely become again an important transit country for the rest of the South Caucasus region, and also for Central Asia and Turkey. Georgia could face some reduction in transit fees in the short term, but would eventually gain from increased cooperation and stability in the region and in the longer run it could benefit from the increased volume of transit.

Given the virtual blockade of Armenian borders with Azerbaijan and Turkey, as well as geographic and political factors affecting transit through Iran, Georgia remains the only transit route for a significant part of trade flows from and to Armenia. Ample anecdotal evidence confirms that Armenian traders experience numerous difficulties and excess costs using transit routes through Georgia.

Depending on the world market prices of the commodities, transportation costs in these countries may amount up to 50 percent of the value of the goods. Especially for low value commodities, such as agriculture products, transport to international markets becomes virtually impossible. This is illustrated in Box 1.

The total costs of impediments depend on the geographic position of the country, its economic power and the location in the transport chain, in which, especially in relation to reaching the Russian markets, Kyrgyz Republic, Tajikistan and Moldova have unfavorable positions. Origin of the cargo and the flag under which the goods are transported influence the delays and charges incurred. It also depends on the value of the goods and the mode of transport, where more expensive goods and road transport is charged more than goods in bulk, transported by rail. Containerized goods perform better, both in terms of speed and additional charges. Their level of development however is still low in these nine countries.

Large international enterprises seem to be more able to manage with most of the customs problems as they often have interrelated interests. As a result, small and medium sized enterprises with little international experience suffer the most.

³ UNCTAD, 2001. Transit Systems of Landlocked and transit Developing Countries: Recent Developments and Proposals for Future Action.

Box 1: Example of logistics barriers for apple juice concentrate export from Georgia

Agricultural production in Georgia has recovered significantly from its decline following independence, and it can produce high quality apple juice concentrate that can be sold to the European market. European fruit juice processing is dominated by specialized firms that package the products for main retail chains or distributors. A growing share of juice is sold as retail chains' own brands. The largest producers operate on a Just-in-time principle processing several billion liters of juice annually. Delivery schedules to retailers are very tight, and the packaging lines handle tens of fruit juice varieties, which requires careful production planning and strict quality control. Since the processing firms keep practically no inventory, they rely heavily on dependable transport both in incoming goods and in their distribution.

Apple juice concentrate is self-preserving when sugar content is over 65 per cent. It is usually transported in drums of 100 to 200 liters that are filled with to ordinary ISO containers, with 13 to 14 tons in each TEU. Tank containers are not used because of risk of contamination. As the sugar content of the end-product is 10 per cent or less, one TEU of concentrate is equivalent to 100,000 liters of juice with a consumer price of US\$50,000 including taxes in the EU. The Ex Works commercial value of the concentrate is estimated at US\$5,000. According to data gathered in 2002, the total cost of transporting one TEU from Georgia to a European port is at least US\$3,000, one third or more of it coming from unofficial fees. Total transport cost is more than half of the Ex Works value of the goods. Consequently, the CIF cost of the goods in Northern Europe is around US\$8,000 per TEU.

Apple juice is a commodity and its price is determined in the world market. China is the largest export-oriented producer with an annual production of over 20 billion liters of good quality apple juice. Total transport cost of one TEU from China to Europe is around US\$1,500 with highly dependable schedules. The Chinese may sell the product at a higher price than US\$5,000, and still remain competitive. Thanks to economies of scale and low production costs, their profit margin may be substantial.

To compete against the Chinese, Georgian producers would need to sell at US\$3,500 Ex Works. This may not even cover production costs, and trade may be diverted. Also the transport arrangement is less dependable than that from China. Without unofficial payments, the Georgian producers could compete with their concentrate at US\$ 4,500 to 5,000 per one TEU (Ex Works).

Source: Background material gathered for the South-Caucasus report (Ojala 2002)

Logistics costs comprising a large group of direct and indirect costs, as well as costs that are related to certain functions or that can be regarded as overhead costs are overall high in the CIS 7 +2 (see Figure 2.1.).

Figure 2.1. A typology of total direct and indirect logistics costs

Overhead or alternative costs	Inventory carrying costs Value of time Operational IT costs	Cost of lost sales Customer service level costs Obsolescence costs IT maintenance
	Transport cost (freight) Cargo handling Warehouse/storage Fairway fees Documentation Telecom costs	Packaging IT costs (personnel) Cost of capital in logistics equipment Administration
Function-related		
	Direct Logistics Costs	Indirect Logistics Costs

In a well functioning market economy with a highly developed transport and distribution network, measurable logistics costs are usually less than 10 percent of sales in manufacturing firms. Their true importance is much higher than this. In manufacturing, the value of purchased direct materials is between 50 and 75 percent of sales. Their price is often fixed, but much of logistics costs can be affected within the firms. Logistics involves a number of purchasing, production, distribution and marketing considerations, and feasible logistics solution is often their trade-off. Seen this way, there is seldom only one way to organize a firm's logistics and transport operations. To integrate logistics activities between suppliers and buyers to shorten the response time from customer orders to deliveries along the chain (See also Box 1), the introduction of Supply Chain Management can further reduce costs and rationalize trade and transport services.

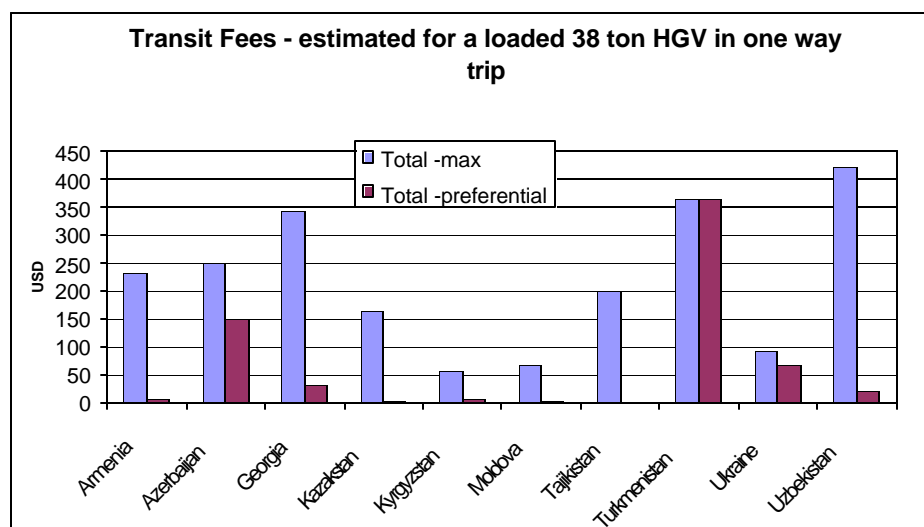
Freight paid to transport operators (carriers) is usually the largest component of transport costs. For high-valued merchandise, the freight costs may only correspond to one per cent of sales or less, whereas some other logistics costs are more significant. For low-valued commodities such as raw materials transported over long distances, freight alone can make up to 50 percent of the sales price. However, this is not at all the case in our focus countries, where transport or the broader logistic costs can easily double or triple.

2.1. Level of costs in international land transport

Armenia and Georgia levy high transit fees on foreign road vehicles. By contrast, there are no formal transit fees in Azerbaijan, Iran or Turkey. However, all countries apply road transport quotas, i.e. the number of vehicles per year allowed to enter and/or to pass through the country's territory, by nation, is restricted. The level of official transit and entry fees often becomes the main item on the negotiating agenda (see figure 2.2.). The most expensive countries in this comparison are Tajikistan (\$1.3 per km), Georgia (\$0.86 per km), Uzbekistan (\$0.7 per km) and Turkmenistan (\$0.61 per km). Even the charges per km in these countries are much lower than the ones applied in the SEE and Central European countries⁴. Despite the fact that these fees are not so high by international comparison, they are significant as they occur more often in the CIS 7 + 2 than in the CEC or SEE countries, as (i) un-loaded trucks have to pay close to as much as loaded vehicles; (ii) there are limited opportunities for backhauls (less than 50 percent of return journeys have loads). So, the costs are to be born by one shipper only rather than shared between two or more.

⁴ If we compare them, however with some Central (CEC) or South-east European (SEE) practices, they are not at all high. The non-preferential transit fees in Turkey amount to 790\$/truck, while this figure is \$634 and \$1319 in Bulgaria and Romania, respectively. In case of Hungary, any permits issued outside the reciprocity based quota may evoke as much as \$1600 in one way. These fees are usually explained as charges for the use of the road network, which would be a legitimate justification provided they are actually allocated for road maintenance and are non-discriminatory among foreign trucks based on their nationality, or among foreign and local trucks. (TRACECA, Ian Jenkins and Scott Wilson)

Figure 2.2: TRACECA consultant estimate of transit fees



Source: Draft Report: Unified Policy on Transit Fees and Tariffs

According to Polyakov (2001) a truck with a capacity of 10-20 tons transiting Georgia was to pay an equivalent of US\$245 in local currency in October 2000. A similar vehicle transiting the Armenian territory was to pay US\$197 equivalent in local currency. For cargo bound to Georgia the fee was US\$80 higher. In addition to official fees, transit shipments currently face pervasive informal fees. According to data gathered in early 2002, a truck transporting a 20 feet container from Yerevan to the Port of Poti incurs ordinary transport costs of around US\$800. These include the drivers' remuneration, terminal handling cost at the port of Poti and customs related fees. Transport of a container (TEU) by road from Baku to Bandar Abbas (2,800km/US\$1,500) costs only slightly more than the same transport from Baku to Poti (950 km/US\$1,300), despite a distance three times higher. Transport of a container (TEU) by road from Poti to Yerevan costs US\$1,845 for only 650 km compared to US\$1,700 for 2,800 km from Yerevan to Bandar Abbas (TTFSC Policy Note).

Almost prohibitive additional costs are incurred, if the truck will go from Yerevan through Georgia to Russia or other CIS countries. Typically, the driver has to pay US\$1,800 – 2,000 for the so-called “02 guard service” provided by the Ministry of National Security. Unless this “02 service” is taken, the driver meets difficulties with the road police and/or organized local gangs, and he is likely to face costs amounting to US\$1,500 – US\$2,000.

On the rail mode, the unofficial fees from Armenia to Georgia amount to between 6-13 percent of the total cost, but the time expenditures for the land-based legs increase markedly. In reality delay of border crossing averages 4-5 days, requiring a Customs official at the border to send a telex to the regional customs house to confirm cargo and delivery time.

Box 2.: Cotton Trade, World Markets and Uzbekistan

The top eight cotton producers -- China, United States, India, Pakistan, Uzbekistan, the Franco Zone African countries, Turkey, and Australia -- supply over 80 percent of the total cotton used in the world. Over the last 20 years, China and the United States have been supplying roughly 40 percent. The combined share of India, Pakistan, Turkey, Australia, and the Franc Zone African countries has steadily grown from around 20 percent in the early 1980s to 35 percent for 1999/2000. Uzbekistan's share has eroded from around 10 per cent in 1988/89 to about 4.7 per cent in 2002. In November 2002, worldwide production is expected to increase in China with one million bales but to decline in Pakistan (400,000 bales), the United States (250,000), Uzbekistan, and Ghana (200,000 bales each).

World consumption estimates hit a record 26.8 million bales in November 2002. The demand for Chinese cotton increased by 500,000 bales, spurred on by growing yarn production and the exports of finished products. Offsetting the growth in Chinese mill use, consumption estimates were reduced in the United States (200,000 bales) and in Egypt, Uzbekistan, and Indonesia (100,000 bales each). With production lower than consumption, ending stocks (excluding China) are forecast to slip to 30.4 million bales. Given the decline in consumption, the stocks-to-use ratio remains at around 44 percent. In Uzbekistan, this development hits especially the Fergana Valley district, which hosts much of Uzbekistan's cotton production and processing. The demand by Fergana Valley processing plants is today higher than the local production, making the region a net buyer of raw cotton.

The price of cotton is determined at world markets, and in Autumn 2002 was 44-48 US cents per pound, which is slightly less than one US\$ per kilo. Cotton is transported in bales, and it is well suited for containerized trades as well as break-bulk shipments. One railway wagon can accommodate approximately 20 tons of cotton with a trade value at around US\$20,000. According to anecdotal evidence in Spring 2002, the transport cost of one rail wagon of cotton from Uzbekistan to Moscow can reach US\$5,000, or 25 per cent of the cargo value.

The extremely high unofficial fees in transport and customs arrangements and unreliable transports in addition to the draught, have almost certainly caused much of Uzbekistan's loss in its market share and contributed to the trade diversion notably to China. The same applies also for Turkmenistan, which accounted for 0.7 per cent of the world's output in November 2002, down from approximately 3 percent in 1988/89.

Sources: <http://www.fas.usda.gov/cotton/circular/1999/9912/cover.pdf>;

U.S. COTTON MARKET, Monthly Economic Letter, Cotton Incorporated, November 12, 2002, The World Bank reports; NEA (2002) Synthesis report

Freight rates in the CIS 7+2 are relatively competitive when one considers only official monetary tariffs. When taking the standpoint of a shipper and integrating all unofficial monetary expenditures and the delays mostly on the borders, the costs are relatively high.

Direct transport costs for similar shipments to and from the Central Asian countries are considerably higher than the costs presented for the South Caucasus countries due to more complicated transport routes, high transit and border crossing fees, limited competition and prohibitive unofficial expenditures. (NEA draft Report on Tajikistan, 2002).

The different costs of the different transport corridors are of particular importance to the Central Asian countries (and as later we shall see will likely determine future investment plans, too). The North Corridor via Russia is the most competitive even when the second leg to the port is added. At the same time the costs, particularly the average costs per km on the TRACECA corridor show that this route could become highly competitive, if impediments to international transport are abolished. Similarly, the road corridor via Iran has considerable potentials as deregulation of international road transport services is gaining pace (Table 2.1).

Table 2.1.: Transport costs along the main corridors from CAR
Source: NEA Draft Synthesis Report

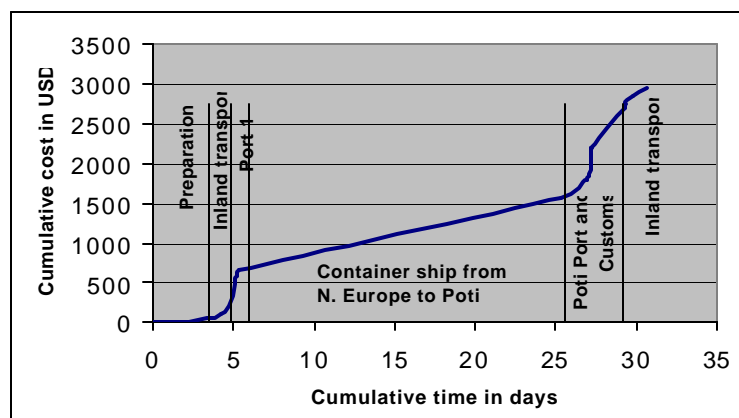
Corridors	Rail			Road		
	Total cost (USD)	Cost (USD/km)	Time (days)	Total cost (USD)	Cost (USD/km)	Time (days)
First Leg of North Corridor (Almaty-Moscow)	1100	0.27	17	3350	0.76	10
First Leg of West Corridor (Amaty-Baku)	1800	0.46	18	5300	1.30	13
First Leg of South Corridor (Almaty – Tehran)	1200	0.37	16	4650	1.49	16
First Leg of East Corridor (Almaty – Urumqi)	1016	0.76	8	2150	1.90	5

Shippers indicate (survey in 2002), that even if unofficial costs indeed appear low particularly in rail transport, the actual freight rates can happen to be extremely high, and often set according to the “what the cargo can bear”- principle. The freight rate for a rail wagon from Central Asia to Moscow with cotton and aluminum, for example, was quoted at US\$5,000. On the other hand, a 20 ft container from Tajikistan with household goods to Moscow was quoted at US\$400 for a Tajik shipper, whereas a foreign shipper had to pay US\$3,000 (NEA draft Report on Tajikistan, 2002).

2.2. Level of costs in international maritime transport

The total transport cost for a generic containerized consignment from Northern Europe to Tbilisi can reach US\$4,500. The Georgian road leg accounts for nearly 46 percent of the total costs, while the leg between Poti and Northern Europe accounts for the remaining 54 percent. The unofficial fees, based on interviews, vary between 7 and 40 percent of the total costs on the road mode, and 6 and 35 percent using the rail mode. The most significant element is the unofficial payment to Customs at clearance (Figure 2.3-4).

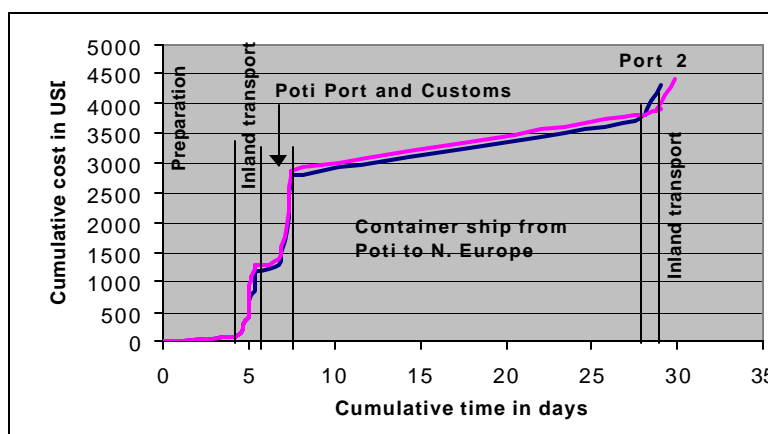
Figure 2.3: Cost in US\$ and time in days for one TEU shipped from Yerevan (Armenia) or Baku (Azerbaijan) to a major port in Northern Europe in 2002.



Source: Data from Draft TTF Policy Notes for Armenia and Azerbaijan, 2002; Halcrow 2002

Similarly, the cost and time of transporting a TEU from a Northern European location to Tbilisi in Georgia (TTFSC Policy Note, 2002) underlines the high official and unofficial costs in Georgian territory (Figure 2.3 -4.).

Figure 2.4: Cost in USD and time in days for one TEU shipped from a major port in Northern Europe to Tbilisi, Georgia in 2002.



Source: Data from Draft TTF Policy Notes for Georgia, 2002; based on Halcrow 2002

2.3. Level of costs in international air transport⁵

The aviation industry in the CIS 7 +2 has had to deal with the legacy of the collapsed Soviet air transport system even more than other modes of transport. Despite the currently modest volumes of passengers and freight both within the region and on long-distance international routes, air transport has a large potential in these countries. Much of this potential is dependent on the travel demand that currently relates to industrial or construction projects or to aid programs in these countries or in their immediate neighborhood.

Most of air cargo is so-called belly air freight, since few dedicated cargo aircraft are in scheduled traffic⁶. Air cargo from Western Europe can reach their destinations in 2-7 days depending on the actual routing and schedule. Both CIS, Turkish and Western European carriers are offering these

⁵ Air links with Russia (Moscow, St Petersburg, Jekaterinburg), Ukraine (Kiev) and Turkey (Istanbul) are relatively frequent from practically all of these countries. Carriers of Georgia, Kazakhstan, Turkmenistan and Uzbekistan have also opened direct flights to many European destinations, such as Frankfurt, Vienna, London or Paris. Destinations such as Abu Dhabi, Tehran, Tel Aviv, Karachi and Delhi are also offered by many Central Asian airlines. Uzbekistan Airways has also direct flights to New York, Kuala Lumpur, Beijing and Seoul. European carriers such as British Airways, Lufthansa and Austrian Airlines have also direct flights to capitals of most of CIS 7+2 countries. Regional or local routes are often operated by small turboprop aircraft, with an effective cargo capacity from a few hundred kilos to a few tons depending on the route, type of aircraft and loading situation. Mail shipments have preference over commercial cargo, and the actual availability of cargo space for a particular destination and date is difficult to predict. All CIS 7+2 countries are serviced by at least two of the major express freight operators (UPS, DHL or TNT).

⁶ The exception is the Luxemburg-based Cargolux, that is serving Baku in Azerbaijan with scheduled cargo aircraft.

services with connections through Moscow, St. Petersburg, Frankfurt, London, Vienna or Istanbul.

Air freight for a single shipment from western Europe to Caucasus or Central Asia is typically US\$3 per kilo for a 100 kilo parcel and around US\$2.5 per kilo for a 300 to 500 kilo parcel. Additional costs may include fuel surcharge, documentation fees, war insurance etc., but these are less than one euro per kilo. When routed via Russian airports, the air freight starts from 2 euros per kilo. If the point of origin is on the US East Coast, the additional air freight for this leg is at US\$1-2 per kilo⁷.

Air freight is a fast transport mode, but the unit cost per kilo is roughly 15 times higher than in container shipping, excluding the inland transport, documentation and customs duties (Figure 2.3 and 2.4).

An indicative tariff for a parcel of 100 kilos and 0.02 m³ from London to any Central Asian capital is about US\$1,200, i.e. approximately US\$12 per kilo. The delivery takes typically two working days. However, regular customers using these operators' services receive substantial rebates (from 50 up to 75 percent) of the published tariffs.

3. The Cost Drivers

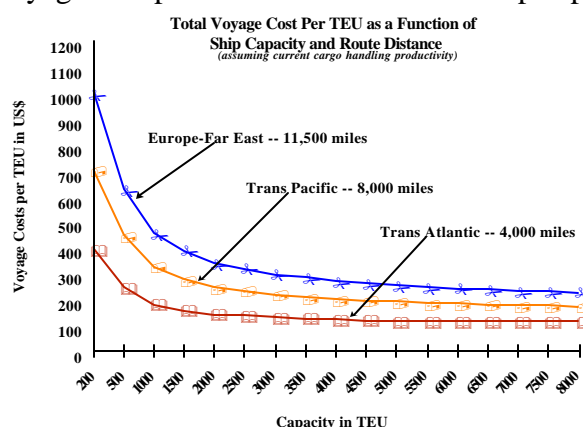
Freight rates determined by the balance between supply and demand are often distorted due to inefficiencies in the system, but even more due to the pervasive informal payment practices.

The supply - demand balance is subject to rapid changes itself. There is also often considerable imbalance in the direction of trade. As a consequence, a freight rate from A to B can be much higher than the rate from B to A. If there is no backhaul freight available, the shipper (i.e. the one paying the freight) usually pays the empty movement of the vehicle or the cargo unit in case of unitized transport. This phenomenon especially affects peripheral regions and countries, like Kyrgyz Republic, Tajikistan which are extremely remote from their markets. The high cost of remoteness is particularly highlighted when the "distance" is further increased through TTF barriers both in time and in costs.

On the other hand, unit rates typically taper over distance, i.e. one pays relatively less for longer distances than for shorter. The delivery time also affects the costs considerably.

⁷ Air Freight rates as quoted from industry sources in November 2002.

Figure 3.1. Total voyage cost per TEU as a function of ship capacity and route distance.



Source: K. Cullinane and M. Khanna, "Economies of Scale in Large Containerships," *Journal of Transport Economics and Policy*, Vol. 33, p. 201

Source: Marc Juhel, Port Development Toolkit, The World Bank; op.cit. Cullinane and Khanna

Scale economies have a major impact on transport costs. In road haulage, most of the economies of scale can be reached with one vehicle, but in liner shipping, for example, there are considerable scale economies both in ports and at sea. As a consequence, the unit cost of container shipping has dropped dramatically over the past decades as ships and terminal facilities have grown in size in trans-ocean trade. This is also a development area of the transport systems of the CIS 7 +2 countries serving first of all their overseas exports, as containerization would offer higher quality service along the whole route in the long run with decreasing costs. This is illustrated in Figure 3.1. Even if the data concerns liner shipping, the same phenomenon occurs also in other transport modes.

Most CIS-7 have small and fragmented transport markets that seldom can enjoy scale economies in their operations. This is not the case for Kazakhstan or Turkmenistan. This is an additional burden on the landlocked countries as they are detached from the major transport and trade flows. Therefore closer regional cooperation could lead to better utilization of the scale economies also in transport.

Especially in trades that can be containerized, the CIS 7 + 2 countries have a substantial relative disadvantage to most East Asian countries, for example, that have a much easier and cheaper access to major shipping routes. While many East Asian exporters of manufactured goods or agricultural products can enjoy comparatively few connections before they reach the large ports and ships, the CIS 7 + 2 have additional costs to bear before reaching these ports. Land-based transport by road or rail to seaports is – often prohibitively - expensive and unreliable mostly due to the limited competition among the alternative routes.

3.1. Barriers to international trade and transport

The list of direct and indirect barriers to trade and transport is very long. In this chapter, we shall elaborate only those that have surfaced in the different recent surveys. The indicated barriers include:

1. Corruption
2. Transparency and access to information
3. Role of the state and international agreements: regional cooperation, multilateral conventions and bilateral arrangements
4. Customs and other border agencies
5. Efficiency of transport operators
6. Under-developed logistics services
7. Multi-modal transport still to be developed
8. Physical infrastructure impediments.

While the first seven categories of trade and transport barriers, which are mostly of an institutional nature determine the basis for trade and transport facilitation, the physical shortcomings of the transport infrastructure are not negligible.

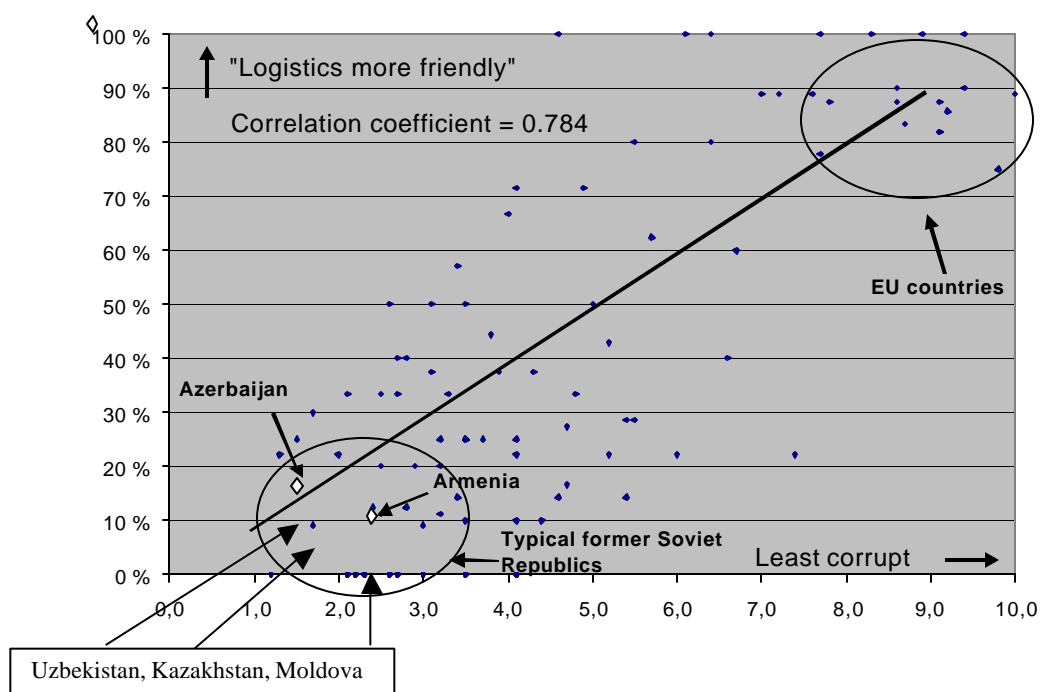
3.2. Indicators on corruption in the region and its linkage to TTF

Corruption is reported to be pervasive. This has an impact on the amount of state revenues collected in the form of customs duties, but also on the overall business, as well as transit environment in the country.

A survey was conducted in 1999/2000 among international freight forwarders in order to illustrate how “easy” or “difficult” individual countries are perceived to be from a logistical point of view (Ojala and Queiroz, 2001). The concept of “Logistics friendliness” was adopted following its introduction by Murphy and Daley (1999). Logistical friendliness (unfriendliness) refers to the ease (difficulty) of arranging international freight operations to/from a particular country. These responses and the corruption perception as indicated in the findings of Transparency International show a close correlation.

Since corruption greatly impedes economic growth there is also a correlation between logistical friendliness and the GDP per capita. This is a strong indication that the less perceived corruption there is in a country, the easier it is to trade and arrange the logistical practicalities with that country. This is no surprise as such, but the relatively strong correlation between the logistical friendliness and CPI (0.845); and GNP/capita (0.784, respectively) is noteworthy (Country-by-country data and more information about the methodology is shown in Attachment 4).

Figure 3.2. The ranking of countries in the logistics friendliness survey against their Corruption Perception Index in 2000 with indicative positions.



In most of these countries the linkages between the economy and the governing elite are particularly close. Corruption and cronyism is a pervasive problem. At the same time, corruption is a taboo. Survey interviewees as a rule do not report corruption cases and even try to avoid addressing the issue. The only clear exemption is Georgia, where senior government officials recognize the problem, which is the first sign of commitment for fighting it. Some progress has been achieved as the EBRD's Transition report (released on November 25, 2002) indicates that the situation with crime and corruption has improved throughout the CIS.

The unsettled status of the breakaway territories, like for example Transnistria in Moldova or Ossetia in Georgia (to mention only these two) poses serious threats to growth and stability, and make it impossible to control and manage a well sealed customs territory. The status of the breakaway territories undermines the endeavors for an integrated customs territory, exacerbates the ability to collect the customs revenues and undermines the utilization of the transit opportunities through the country. Progress in achieving a solution has been slow and hampered by political developments, as well as by corruption and vested interests on both sides of the internal borders that capitalize on the existing impasse. Such an environment has reportedly become a conduit for smuggling, drug and arms trafficking.

The effects of corruption on transport cost and time are dealt with in more detail in the earlier section. Nevertheless, it is inevitable to highlight also here that unofficial fees along a transport route are often collected not only in connection with crossing the border, but they also appear during transit within the transit country (e.g. in Kazakhstan on the "borders" of the regions). Traffic police can be of particular impediment as international trucks are often considered to be their cash cows. The internal borders within these countries are not always controlled by

appropriate authorities. In some cases, crossing the borders to breakaway regions within the countries, such as in Moldova and Georgia, are problematic. Transit traffic by road is forced by the customs to use convoys, which is costly and time-consuming (mandatory use of parking lots and services, escort etc.).

3.2. Access to information and the voice of the private sector

Rent seeking behavior of the border agencies (not only customs!) is often based on lack of adequate or clear information which entrepreneurs need to be aware of when organizing international transport. No wonder therefore, that such shortcomings reportedly occur in user surveys.

Since public-private cooperation in this field has just started in some of the CIS 7 +2 countries, there is still a long way to go before tangible results are felt. Pro-Committees in the South Caucasus countries have been created only recently. In Uzbekistan there is a strong business club in Tashkent that has gained respect and has become a partner in discussing issues kin to the business community. These are however not focused on TTF only. The set up of pro-committees (such as ARMPRO, AZERPRO and GEOPRO) in other CIS 7 +2 countries would be beneficial to help leap frog changes which develop in this area.

Engaging the business community and NGOs in monitoring trade barriers and advising the authorities on trade facilitation leads to sustainable results. It is also the most efficient way to make the system more transparent. Since one of the main concerns of shippers, forwarders and carriers is the lack of clarity of the rules in force and consequently the rent seeking behavior of the border agency officials, publishing information and explanation of the rules is an important facilitation tool. Its impact on reducing corruption opportunities is also huge. Joint publications (traditional brochures, web-sites), surveys, setting and monitoring of performance indicators of borders and international routes etc. can be the tangible results of such a public-private cooperation. In the longer run, the results would benefit all players as fewer delays at the borders and at transport nodes, more reliable services and overall lower transport costs would occur.

Box 3: Examples of TTF interest groups

Countries in transition face an imminent need to facilitate trade and transport through public and private sector initiatives. Public administrations both at national and regional levels are expected to launch projects to facilitate trade and transport.

There are many different ways, that business communities have developed the operating environment in these areas. Some countries (e.g. Austria) historically have continued to rely heavily on their Chambers of Commerce as nearly their exclusive forum. This can happen thanks to their historic roots to represent the interest of their “craftsmen”. In countries where the chamber of commerce has a legacy strongly associated with the previous planned economy, the confidence of the private sector may not be behind this institution. The strictly industry organizations, like the road hauliers’ association, the freight forwarders association etc. may be therefore a more sound basis for long term PPP dialogue. This is also true when there are particularly decentralized interest groups that go for ad hoc collaboration when needed (e.g. in Hungary there are more than one interest groups for road transport operators and also for other industries).

The UN ECE¹ promotes the set up of pro-committees that focus specifically on TTF. Pro-committees are thus also given a framework through CEFAC (1997), the multilateral cooperation on Facilitation of Procedures and Policies in Administration of Commerce and Transport (hence originally the word “pro” started to refer to the simplification of procedures, but by now it has become the synonym of “for”, i.e. expert committees for trade and transport). As this type of public-private cooperation enjoys the support of UN ECE and UNCTAD, their possibilities to cooperate with other similar organizations add further value to their existence. Some national pro-committees are particularly strong and have a good balance of representatives from the private and public, like the ones in Turkey, Greece or Bulgaria.

3.3. Role of the State

The role of the State is weak in several CIS 7+2 countries. As a consequence, the rule of law and law enforcement are weak and their application arbitrary. This is notably the case in Armenia and Uzbekistan, with scores less than the CIS average according to the EBRD Transition Indicators (Poverty Reduction, Growth and Debt Sustainability, 2002, 24).

The organization of Ministries relevant to TTF issues and their subordinate agencies is inefficient and the delegation of authority is often confusing. Co-operation between Ministries and Agencies is typically very limited or even non-existent. It has been only recently that the set up of the Transport Ministry has been decided and a minister appointed in Azerbaijan. The functional overlap between the different border agencies is high. Recognizing their complementarities and that enhanced security and trade facilitation are the two sides of the same package could lead to rewarding solutions also in the near term.

Capacity building of the relevant line ministries (e.g. MOT, MOF) and the sector administrations (e.g. customs) is required to be complemented with horizontal institutions for Trade and Transport Facilitation. Therefore, the set-up of an inter-ministerial and inter-agency TTF committee and the designation of a national TTF coordinator is warranted for building up the necessary political commitment.

International agreements and conventions

All nine countries have joined the World Customs Organization (WCO), and they have all received the MFN status from the EU through Partnership and Co-operation Agreements (PCA). All Central Asian and Caucasus countries are also members of TRACECA, whereas Moldova – being on the periphery of South East Europe – joined the Stability Pact. CIS 7 +2 countries except Turkmenistan have entered WTO either as members or observers (Attachment 2).

To foster regional trade and economic cooperation, there have been several attempts at re - integration by the CIS countries, including the Eurasian Economic Community (EEC; formerly the CIS Customs Union); the Central Asian Cooperation Organization (CACO); the Economic Cooperation Organization (ECO); the Shanghai Cooperation Organization (SCO); and GUUAM (Georgia, Ukraine, Uzbekistan, Azerbaijan, and Moldova). These agreements have had modest success. Bilateral trade agreements are widely used in trade among the CIS 7 +2, as well as in trade with Russia, Ukraine and Belarus.

All nine governments are signatory states of the International Civil Aviation Organization (ICAO). Five of them have joined the International Maritime Organization (IMO), the United Nations' specialized agency responsible for improving maritime safety and preventing pollution from ships. Only Azerbaijan, Georgia and Moldova are members of the European Conference of Ministers of Transport (ECMT). For the time being Armenia has an observer status in ECMT. On the other hand, Armenia is a full member of the European Conference of Civil Aviation (ECAC), where Azerbaijan has an observer status only. Agreements in principle have been reached that both countries soon will become members in these important international “clubs” as they will no longer veto the other’s joining. None of the Central Asia countries managed to become a member in ECMT as the current members of the organization are afraid that expanding too fast may slow down their own integration.

The CIS 7 + 2 have started to adhere to the international transport agreements maintained under UN ECE (there is a total of 55 international transport agreements and conventions under seven categories mainly within road, rail and inland waterway transport). These are shown in Attachment 3 with the exception of inland waterway agreements and conventions, since only Moldova has ratified some of these.

As of February 15, 2002, Georgia had ratified thirteen and was a signatory party to one of the 48 remaining conventions. Uzbekistan had ratified twelve, Kazakhstan eight, Azerbaijan and Kyrgyz Republic seven, Moldova nine, Tajikistan four, Turkmenistan six and Armenia only two. (UNECE 2002). The number of conventions ratified is modest in Georgia and Uzbekistan, and almost non-existent in Armenia. The relevant ministries and authorities need to consider a rapid improvement in adhering to the central international framework in traffic safety and movement of goods.

This work is closely associated with the institutional strengthening of the public administration in the transport sector. The case in point is to build up sufficient capability and resources within the Ministries of Transport and the subordinated administrations and authorities. A successful ratification of conventions means also that they become effective through adequate control and enforcement. This requires close cooperation both internationally and nationally between, for example, the transport authorities, the customs and the law enforcement authorities.

Some multilateral conventions are of higher TTF priority as they demonstrate the commitment of the participating countries to enforce the qualitative conditions of international transport (e.g. safety, fair competition etc.). The market access side is mostly governed through bilateral agreements (where the negotiating role of governments is crucial) and to some extent by the ECMT road authorizations. Countries, that are excluded from this “club” have more limitations in their market access to international road freight transport, than those who are in.

Less state interventions make the government stronger

Nearly all CIS 7 + 2 countries have highly interventionist governments and authorities (particularly Turkmenistan). This creates an environment that is hardly conducive to entrepreneurs, investors or traders⁸. Therefore continued deregulation of international trade and transport services, more liberal market entry conditions and attracting private operators will require the revision of the role of the governments and government agencies. This means they should move away from being service and infrastructure operators and managers to becoming negotiators of international agreements and cooperation, to facilitators of foreign economic relations by stable, transparent and enforced legal and regulatory framework (particularly with regard to border crossing) and last, but not least to becoming enforcers of fair, corruption free business environments. This way the predictability both in time and costs of foreign trade and transport will be improved and the countries will become more attractive trading partners and places to invest.

⁸ See also *Economic Development and Private Sector Growth in the Low-income CIS-7 Countries: Challenges and Policy Implications* by Vandycke.

3.4. Crossing the borders – by road or rail, customs and overall border management is in need of modernization

Rail transit issues: Crossing the borders by rail is a complex issue throughout Europe and Central Asia. Thus some of the impediments are not specific to the CIS 7 +2, but typical also in other countries. Rail customers expect reliability and punctuality, and the cost, while important usually comes after the first two decision-making factors. The objectives with regard to rail transit should be shortening the travel time, making the date of arrival predictable and preserving the cargo in the same quality as it was dispatched. Since the customer is served by as many railways as there are countries to enter, TTF on the rail is not an easy undertaking.

As a rule a lot of activities take place on the border: change of the locomotives, crews and track gauge. Some of it is partly necessitated by the monopoly of the national railways, and partly by technological incompatibilities (e.g. various traction power supply systems and signaling systems) and lack of inter-operability. The crossing over to a different track gauge is either solved by the use of more advanced technologies (e.g. changing the bogies only) or the cargo will have to be re-loaded to the wagons of the other railways. Swapping bogies or using variable gauge bogies is considered to be cost effective only for a small part (5-10 percent) of future traffic (ECMT). Therefore the development of container terminals should be of higher priority also in the CIS 7 +2.

The different train types⁹ have different travel time and need for interventions from the railways. On average, freight trains spend 30-40 minutes on the border in the EU countries, while the locomotives and the crew are changed. In the CIS 7 + 2 the time is often measured in days and very rarely in hours¹⁰. Rationalization of wagon sorting operations through regionally coordinated marshalling, and potentially away from the borders could make a difference in international traffic.

In addition to technological differences, border crossing rail freight in the CIS 7 + 2 (as in other non-EU countries) undergoes customs, veterinary and phyto-sanitary inspections. The rail documentation to be checked is particularly complex on the outer frontiers of the CIS countries, where CIM and SMGS legal regimes meet (See Box 4). These give the legal framework for the liability for goods and wagons.

Box 4: What does it mean in practice to operate under CIM or SMGS?

Many countries in Europe and some in Asia are parties to the *Convention Concerning the International Transport of Goods by Rail (COTIF)*, Bern 1980, and amended in 1999 in Vilnius, which replaces the traditional national customs document with the International Consignment Note (*CIM*) established under COTIF. The COTIF Convention is valid in most European countries, as well as in the states of the Middle East and Africa, which are connected with the European railway network via rail or via ferry. The Islamic Republic of Iran is also a party to the COTIF Convention.

Meanwhile, the former COMECON Organization for Railways Cooperation (*OSJD*), including among others all the CIS 7 +2, as well as the Russian Federation and several other countries having an interest in rail traffic between Europe and Asia, have developed and are using the system known as the *Agreement on International Railway Freight Communications (SMGS)* for the same purpose.

At border points separating neighboring railway organizations which are signatory to either the above convention or agreement, the waybill is rewritten from one format to the other. Recognizing the impact of this situation on the efficiency of international movements by rail, both organizations are seeking ways to harmonize the existing procedures. In this respect, it is interesting to note that the Russian Federation has spearheaded efforts to define a new transit document, the so-called GPBRT bill of lading, relating to the operation of container block-trains between Germany and the Russian Federation through Belarus and Poland under the 'Ostwind' container services running between Berlin and Moscow. Such an arrangement can also benefit the CIS 7 +2 rail container movements.

Container transport is vastly under-developed. The lack of containers is only the physical sign of the problem, while the lack of common through-tariffs for container traffic constitutes to the major institutional barrier to its wider application.

In many countries nomenclature of goods used by the railways is different from that of the customs, requiring a “translation” of the documents accompanying the goods.

To accelerate rail border crossings with a rather immediate impact the CIS 7 +2 countries and also their neighbors should consider (i) monitoring the actual border stopping time as long as they cannot be eliminated; (ii) eliminating shunting and marshalling as far as possible at all points on the international corridors, including the borders; (iii) introducing interface connections of the information systems of the railways and the border agencies (particularly customs) not only within one country, but along the main international corridors (TRACECA is already a good example); (iv) streamlining border procedures both for the railways and the border agencies; (v) harmonizing technical specifications for future rail infrastructure development (particularly with regard to equipment).

Road transit issues¹¹: Impediments are the most obvious in international road transport. They can be measured in the time lost in delays and the increased costs of transport. Corruption is reported to be the biggest cost item, but truckers are usually shy to be specific. Divergent procedures that keep changing on a constant basis are considered to be a concern partly because information is not shared on a regular basis with the business community and partly because these also invite divergent interpretation and application when the truck arrives at the border. An overwhelming concern for the peripheral countries is getting access to the road transport market, as well as to transit rights of the other countries. Bilateral agreements cannot keep pace with the changing demand and the strict application of reciprocity is not favoring the CIS 7 countries. The restriction of the permit quotas, particularly that of the transit permits, is a broadly shared impediment for them all. Other and equally important problems are the informal payments, often connected to the more specific impediments, like regular examination of cargoes even if they travel under TIR guarantee system and abuse with convoying.

There have been irregularities in international road transport to, from and through certain CIS countries. Consequently, the IRU has been considering to treat some of the CIS countries as high-risk countries when issuing TIR Carnets¹². If those considerations materialize, the operators from the high-risk countries would have to pay close to double for the company-specific TIR

¹¹ The number of possible inspections/checks related to international road freight transport is huge. They are usually grouped like the ones with regard to the transported cargo; the vehicle and the driver. The procedures related to vehicles can be: fuel taxation of vehicles and checking the amount of fuel, that is allowed free into the country (ie. Fuel in the tank of the vehicle as built by the manufacturer); vehicle tax, road charge, transit fee; Green Card for vehicle insurance or national insurance; transport authorization (bilateral, transit, third country; multilateral – ECMT); payments for special permits; weights and dimensions; vehicle certificate; road worthiness of vehicles; its compliance with ADR and ATP provisions; customs security of transport vehicles; statistical data etc. Procedures related to the driver: provisions concerning the driving and rest periods; driving license; passport and visa.

¹² TIR Carnet is a guarantee facility that the cargo on board the truck is actually identical to the one included in the documents (since only bona fide transport operators are allowed to participate in the TIR system) and that the customs duties and taxes will be paid. Therefore there is no need for physical inspection in transit countries, unless fraud or crime is suspected. The TIR system has been managed by IRU since 1952 and based on the UN ECE TIR Convention. [TIR – Transport Internationaux Routiers]

guarantee. Since using a TIR Carnet facilitates international transit, it is in the interest of the participating countries to minimize the risks to fraud on either the operator's or the customs' side. Therefore the IRU has launched also the *safe TIR* initiative, where electronic notification advances the paper-based procedure.

Technical provisions with regard to gross weight and axle load of vehicles, or different insurance schemes often lead to cumbersome inspections by the Traffic Inspectorate. This may also impose additional taxes and rent, as well as further delays at the borders. Therefore, the forthcoming modification of the UN Convention on Frontier Control of Goods is most welcome to set the framework for further harmonization of weight and load standards, as well as for the mutually recognized weight certificates. The recent decision of the CIS Ministers of Transport to introduce such a certificate among the CIS countries would at least solve this issue within the CIS border.

None of the CIS 7+2 participate in the European Green-card insurance system. This is the reason why additional measures are required from the truck drivers when they want to enter the country. Instead of these local solutions, the countries may want to consider joining the Green-card system.

Border Crossing management and the Clearance procedures¹³: The existing border procedures are not compatible with all the principles of the Revised Kyoto Convention nor do they meet the obligations contained in many of the multilateral or bilateral agreements that have been signed, including the TRACECA Multilateral Agreement (MLA). Although most of these agreements present commitments to simplify and harmonize border procedures, these procedures have not changed significantly over the last ten years. As traffic increases, the border delays will become more severe. Therefore border procedures and layout of border facilities need to be improved already now.

Customs procedures based on the FSU can be characterized as over-reliance on physical inspection. They also often change, leaving room for arbitrary interpretation and application. Besides, customs rules are being interpreted in many different ways and there is evidence that the procedures themselves are not fully understood by those who have to administer them. Modern transit procedures are largely absent. Some Customs organizations have adopted a policy of regular breaking of seals because they doubt the integrity of the previous Customs organization. This is often in breach of international conventions and makes effective control of transit traffic more difficult.

Three main impediments for a smooth border crossing exist concerning the immigration services. First, at most border crossings passengers/drivers have to leave their vehicles to have their passports checked slowing the border crossing process. Second, there is lack of equipment at most border crossings and most checks are manually based. Third, visa requirements tend to increase while few borders are able to issue full or transit visa. Visa arrangements among the CIS 7 +2 countries are either based on bilateral agreements or they are covered by CIS agreements. Visa arrangements for professional drivers are cumbersome and time consuming. It may take so

¹³ Possible inspection/check procedures related to the cargo on the road: normal customs formalities (guarantee documents like CMR, T1, TIR), import/export permits, seals; detailed customs controls (origin, quantity, value, goods inspection, sampling, payment of duties); veterinary and phyto-sanitary inspections etc.

long, that by the time the visa is issued the cargo is taken by a foreign hauler. Any West European or even Central European countries, as well as Iran, Turkey, China or Afghanistan are reported to be a concern. A special visa regime with multiple entry rights and specifically for professional drivers in the framework of international road transport is called for by IRU. In the case of China, foreign drivers are not even allowed to enter the country.

Due to unpredictable transit times companies have to increase their stocks to levels that exceed the size required for the production process.

Trade and transport still suffer from corrupt practices within the customs services, lack of modern and transparent border procedures based on interagency cooperation, and insufficient cross-border and regional cooperation and information sharing.

Box 5: An example of good practice in the customs services – Single Window System in Moldova

The Customs Administration of Moldova pioneered introducing the single window system in 2000. Several other customs organizations learnt about it in the framework of the Regional Steering Committee Meeting of the Trade and Transport Facilitation Program in South-East Europe and followed the example of Moldova.

While in this specific facilitation area Moldova sets the standards, there is still a lot to be done to implement the Customs modernization Strategy of the government and improve both the collection rate and the overall efficiency of the Administration.

3.3. Efficiency of transport operators

The efficiency of transport operators is in need of improvement.

With regard to *railways*, comparable data is available for Kazakhstan, Georgia, Armenia and Uzbekistan (Table 3.1.). The volume of rail operations is very large in Kazakhstan and very small in Armenia. A direct comparison between the countries under study is therefore difficult. However, the restructuring of the railway operators to improve efficiency is needed – and is already under way in Kazakhstan, Uzbekistan and Armenia.

Table 3.1. Selected rail transport data and productivity indicators in 1999 for Kazakhstan, Georgia, Armenia and Uzbekistan. Data for Ukraine is given as reference.

	Ukraine	Kazakhstan	Georgia	Armenia	Uzbekistan
Staff	367,900	122,500	12,404	4,345	61,000
Total locomotives	4,828	2,161	446	57	792
Passenger coaches	8,859	2,236	953	..	1,119
Freight wagons	185,738	87,415	16,623	1,250	30,979
Average Lead, Freight (km)	467	686	339	233	294
Average Lead, Passenger (km)	89	469	187	35	128
Freight ton-km per Wagon (000)	842	1,049	194	259	448
Employee Productivity	554	821	288	85	259
Employee per km of Line			5.3	5.1	
Traffic Density (000 of TU per km)			2,269	437	
Coach Productivity (000 of Pkm per Coach +MU)	4,448	3,690	337	1,657	1,635
Locomotive Productivity (000 of TU per Loco + MU/MU Factor)	40,318	46,094	7,791	6,110	
Wagon Productivity (000 of ton-km per Wagon)	842	1,049	194	259	448

Source: The World Bank's Railways Database, November 2001

In *road haulage* the industry structure comprises predominantly micro firms and SMEs. These tend to lack professional competence that would raise the level of service in the domestic markets. Competence is also a pre-condition to get access to international markets. The firms in road transport in all CIS 7 + 2 have difficulties in expanding their business because of the lack of international experience and professionalism, their poor financial situation, and the fact that they suffer the most of corruption and protective policies from neighboring countries. Access to professional training schemes such as the IRU Academy are vital for development. Training institutions accredited by the IRU Academy already exist in Kazakhstan, Moldova and Uzbekistan (www.iru.org). The number of trainees and diplomas issued annually however is low mostly due to the lack of enforcement of regulations¹⁴.

The institutional or legal barriers for road transport operators to enter the domestic market are generally low. Entering the market for international haulage is difficult due to the incumbents' strong positions and also due to the shortage of road permits. Operators from Turkey and Iran have a strong position in the market, and they practically dominate the international road haulage of, for example, Uzbekistan and Tajikistan. German operators (mostly the Betz co. that also bought Europe's largest road transport operator, the Bulgarian SOMAT) are significantly present in the South Caucasus countries and offer modern logistics technology. Their presence however can become rather dominant unless locally start up operators are able to strengthen their market position in the future.

The lack of finance is also a pervasive problem. The legal framework for leasing finance is usually not in place, or it is forbidden. Uzbekistan is an exception, where a leasing company to be specialized in buses is being set up with the support of a World Bank project. The experience will hopefully be replicated in the trucking industry and also in other countries.

Reliable data was not available for the performance, efficiency or profitability of airlines in the CIS 7 +2. The gradual opening of new international destinations to and from most of these countries is an indication that air transport demand is picking up. The old Soviet-era aircraft used on international routes have been gradually replaced with western equipment, which is either bought or leased second hand. Commercialization and even privatization have taken place in some countries, like Georgia or Moldova. The viability of these start-up ventures is challenged however not only by the market, but also by the government's political interventions (see recent "re-nationalization" trend in Moldova).

3.5. Under developed logistic services

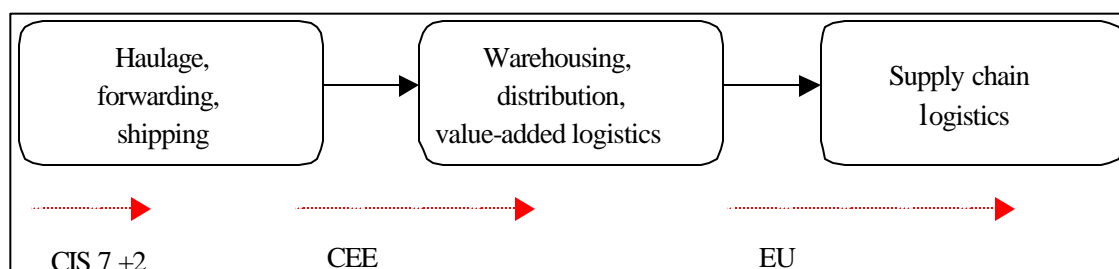
The demand for transport and other logistics services is always derived from the demand generated by trading partners, who are in the business of accommodating the needs of their customers.

International transport markets have been profoundly transformed through deregulation, privatization, and technological development (notably in information and communications

¹⁴ First of all licensing regulations.

technologies), as well as through adaptation to the customers' changing logistical needs. This has brought about new types of logistical operators and markets. In many cases the physical handling and transportation of materials is subordinated to the management of supply chains.

Figure 3.3. Trends in logistics (Based on: International Road Transport Union 2001, 4)



While transport operators and freight forwarders have to cope with the difficulties of a relatively infant industry in the CIS 7+2, their Central European competitors have managed to strengthen their fragile market position that was pervasive in the early nineties and embarked on a more comprehensive logistics service provision. The West European supply chain managers have gone already beyond this and established strategic partnerships with their main clients. The trend is similar in other transition economies – only following with a certain time lag as Figure 3.3. suggests. There is a clear time and adjustment lag also behind the CEE countries that managed to start market consolidation and international cooperation much earlier.

Higher standard operations, e.g. refrigerated traffic are also hampered by mis-targeted tariff settings, when higher transit fees are imposed on them. Such practices hamper the development of services and have dire consequences on the marketability of products from the CIS 7+2.

Freight forwarding, warehousing and other logistics-related services have been privatized almost entirely in these countries. Compared to international standards the supply of these services is poor, and the quality of the services is often low. The freight forwarding industry's own associations are weak, if they exist at all. In Kyrgyz Republic, Turkmenistan and Tajikistan, for example, FIATA recognized associations do not exist. Forwarders lack international experience and the sector has not yet grown mature. This leads to forwarding companies that do not take their responsibility and act as soon as cargoes are lost or damaged. Only a few forwarders are able to offer a full and global service to their clients. As a result, shippers have to enter into a contract with forwarders in each country along the transport corridor. This causes unclear responsibilities and liabilities. Besides, advance payment is often required. Due to lack of competition among freight forwarders, their fees are often higher in the CIS 7+2 than in a Western European country. The legal framework is also weak and international standards are not yet incorporated.

Many of the international logistics companies complain that reliable and cost-efficient logistics solutions are difficult to arrange due to unpredictable public administration procedures and often corrupt practices. Some indication of shippers' expectations can be seen in Box 6 below.

Box 6: Container trade issues and Trans Asian Railways' potential

Current trends in the way shippers operate and their future strategies in buying capacity from freight operators were indicated in a recent survey of 1000 shippers world-wide relying on containerized transport.

Among the most significant findings is that 50 percent of shippers ship on terms which allow them the choice of carriers and another 37 percent ship on a combination of terms giving them partial control of carrier choice. Meanwhile, when arranging inland haulage, shippers favor ocean carriers (30 percent) over freight forwarders (19 percent), a trend confirmed by shippers' preferences in the provision of total supply chain logistics services. Ocean carriers scored 23 percent with freight forwarders scoring only 12 percent and specialist logistics providers 13 percent. The preference for distribution requirements still went to in-house logistics departments (36 percent). With 88 percent of shippers indicating that global freight contracts are likely to be important to them in the future, this confirms the need for integrated services by shippers. Regarding their priorities in ranking carriers' services, schedule reliability has first with 43 percent of responses while transit times only scored 12 percent.

This demonstrates that between competing carriers, the reliability of advertised schedules will be a greater determinant than transit times in the choice of one carrier over its competitors. In the current cost-sensitive times, 38 percent of shippers designated freight rates as their most important consideration. Surprisingly, other elements of service such as cargo tracking and tracing, Electronic-commerce and reliable booking and documentation received very low priority (4 percent), if any.

As far as Trans Asian Railways Northern Corridor services are concerned, the above indications call for the following comments:

- reliability and rates remain among the "all-time, top-scoring" determinants for shippers in their selection of a transport mode;
- the fact that transit times are receiving fairly low priority is misleading. In the minds of shippers the comparison is of transit times *between ocean carriers*, which means that any difference in this area between competing ocean carriers would be in most cases for one or two days only, that is to say not significant enough to change the focus of shippers away from rates. If shippers were confronted with a possible reduction in transit times of 7 days or more as TAR-NC services are likely to offer, they would probably think differently;
- cargo tracking and tracing is today a standard element in container trades. However, in trades where there is uncertainty on reliable and timely transport, the ability to track and trace units is very important for shippers, even if it is not actually exercised.

Survey results: Containerization International, November 1999 "CI poll shows shipper priority"; TAR – NC comments: Development of Asia-Europe Rail Container Transport Through Block-Trains: Northern Corridor of the Trans-Asian Railway; UN/ESCAP, 199

3.6. Multi-modal transport services are also in need of development

Multi-modal transport in the CIS 7 +2 is still in its infancy. Typically, there is no specific legislation or framework for multi-modal transport. Rules and regulations follow those of the individual modes, e.g. liability regimes are different.

The position of the Multi-modal Transport Operator is not recognized, and Multi-modal transport under one contract is not possible. Separate contracts need to be concluded with each specific

mode. Similarly, the use of a combined Bill of Lading is not possible in most of the countries. Railways in most CIS 7 + 2 countries have the ambition to set up a specialized multi-modal transport organization, but this is only in the planning phase. In Uzbekistan, for example, there is a rough plan for the development of multi-modal terminals throughout the country including those in Tashkent, Bukhara and Termez.

There have been initial attempts to establish multi-modal logistics centers in, for example, Georgia or in Uzbekistan. The development of such centers requires reliable and versatile logistics services, which are not yet available in these countries. Such centers usually benefit from the existence of free trade zones in their vicinity or on their territory. Such free trade areas or custom zones would enable the interim storage of semi-finished goods for manufacturing or merchandise for domestic or regional markets. As long as governance in customs administrations is low, the benefits of free trade zones remain limited and even off-set by becoming the hot bed of illegal trade.

3.7. Infrastructure issues¹⁵

In all CIS 7 + 2, poor road and rail transport infrastructure is a major impediment to trade. However, this is not so much due to the road and rail coverage, but to the poor quality of the network as a result of the maintenance backlogs. Together with deteriorating vehicle fleets and rolling stock, the transport and traffic safety record is rather bad. Air transport infrastructure is also in need of continuous upgrading.

The transport network is relatively extensive, but it was developed to meet the industrial and military needs of the FSU. During the Soviet times internal borders among the republics were of no importance. The railways and pipelines, in particular, were designed to take raw materials to specific and distant processing plants, and not to local destinations. The road network was designed with a strategic focus on connecting the Republics with Moscow and through the capitals with the immediate neighboring Republic. As a result, there are often no straightforward connections between locations in the same country. In Central Asia, for example road and rail links often criss-cross existing borders, aggravated by newly introduced cumbersome immigration procedures. Even local traffic may need to cross borders. As a result a number of political enclaves exist in Central Asia and breakaway territories in the South Caucasus and Moldova. These are pockets of isolation lacking the necessary transport connections with their natural markets. Despite the generally impressive quantities of infrastructure, the quality of the stock is rather poor. The weak structure of road pavements is aggravated by inadequate maintenance. The transport fleet (trucks, buses, railways rolling stock, and aircraft) is also relatively old and of obsolete technology.

Several reports indicate that traffic levels have fallen in recent years while traffic on many international routes is growing (especially on roads) and this is straining the existing road transport infrastructure and border-crossing facilities¹⁶. While total traffic levels are decreasing,

¹⁵ Since the ADB paper covers this in details, here we limit ourselves to the most prominent infrastructure issues.

¹⁶ Regional Economic Cooperation in Central Asia, ADB. August 2000. Between 1994 and 1998, the volume of freight transported by road fell by about 75 percent in Kazakhstan, 80 percent in Kyrgyz Republic, 90 percent in Tajikistan, and 70 percent in Uzbekistan.

the remaining traffic is becoming concentrated on a few international routes. Most railways of the CIS 7 +2 have not adapted so well to the new circumstances, and they have been broken-up along national lines. In Central Asia, although railways have lost much of their cross-border traffic, they still account for more than 75 percent of all freight transport. In Georgia and Azerbaijan their traffic is growing, but this is mostly due to the oil field investments in Azerbaijan. Contrary to the high importance of railways in Central Asia, roads and road transport is of particular significance for Moldova, and under the current isolated circumstances, also for Armenia.

In addition to changes in the use of existing infrastructure, the reorientation of infrastructure through new investments has also been initiated. Some are focused at present on national infrastructure, mostly roads, though often these are also important from a regional perspective (e.g. the Osh-Bishkek road, that is also part of the trans-national route linking with the Fergana Valley), some are to offer alternative routes to the main foreign markets (e.g. Moldova is considering a major port investment to offer an alternative route to transit through Transnistria).

The transport infrastructure within the countries constitutes the first barrier to trade and transport. Road and rail conditions are in need of improvement for both international and local traffic.

The lack of other ancillary infrastructure, such as adequate warehousing facilities especially for perishable goods, is also a major problem as indicated in Box 7.

Box 7. Uzbekistan: Waiting on Logistics for Economic Development

Outside Tashkent, the capital, a large cannery is receiving tomatoes on a hot August day from the current harvest, but receiving them slowly. The air smells like tomato soup, but too rich and too thick. A line of vehicles stretches five miles from the cannery, and includes pick up trucks, long trucks, 18-wheelers, donkey carts and everything in between. The vehicle drivers, regardless of their mode of transportation, drink water copiously, wipe sweat from their brows, and wait.

The cannery produces canned tomatoes in one size, the institutional 3-liter can, a package unsuited to most European markets. When the cannery opened, Uzbekistan was still part of the Soviet Union. Local leaders proclaimed it to be the largest in Central Asia. So it was and still is, but despite its monstrous size it still needs space—logistics space. The receiving dock is too narrow. It has too few unloading docks and too few shipping docks. So the drivers wait in the heat and the sun while their loads spoil. This is a common problem in Uzbekistan.

The country produces huge crops of vegetables, fruits, grains, and nuts, but more than 50 percent of the value is lost before the goods reach the market. The reason is simple: the country lacks a sound logistics infrastructure. A few modern, divided highways course through the deserts and semi-deserts, tying Tashkent, a city of two million, to the second largest city, Samarkand, and to cities in neighboring Kazakhstan, following the ancient spice routes from the Middle East into China. Uzbekistan also has sound rail services with strong links to Northern and Eastern Europe, but with only limited coverage inside the country. Domestic air service will haul people and small shipments, including the livestock that often travel with their owners in the passenger cabin.

Transport Sector Review, Kazakhstan. 1996. In Kazakhstan, freight transport declined to 34 percent and passenger transport to 51 percent of their respective 1990 peak levels. Numbers supporting the increase in traffic are not readily available.

Uzbekistan's productive agricultural land, much of it planted in cotton, is limited in area by the need for irrigation. Consequently, Uzbek farmers must make good use of the irrigated land, but find their productivity frustrated by the lack of transportation, storage, and temperature controlled storage facilities. This means Uzbek farmers can reach only limited markets, receive less for their goods, and profit less from their work. It also means, on the other side, that they have access to fewer goods. The weak infrastructure not only limits their income, it restricts the number of companies either willing or able to consider Uzbekistan a viable potential market.

One Uzbek economist said, "Everyone knows what the problems are and what we lack, but no one wants to make the investment because that kind of investment won't make them rich right away. We need more roads, more warehouses, more distribution centers, and better security for the freight. We could reach markets all over Europe by rail, but first we have to put the goods in better packages, store them so they don't spoil, and then keep them from being stolen."

The lack of infrastructure also affects the availability of consumer goods. While the Uzbek national web site brags of having modern department stores, these stores hold fewer goods than the typical branch of a drugstore chain in a small U.S. town. Again, the source of the problem is storage and distribution facilities. Companies have difficulty reaching markets in Uzbekistan, just as Uzbek producers have trouble reaching other markets. As the Uzbek economist summarized their situation: "Until we get modern logistics facilities, it will be hard to become a modern economy."

Source: Adapted from The Council of Logistics Management Toolbox, 2002 at www.clm1.org

Lack of funding even for maintenance is another common problem. An important source of revenues both for the general budget and also for the road sector is the fuel tax¹⁷. But, the very different level of fuel prices, as well as the tax amount therein, make fuels a target of smuggling. While fighting corruption will help the reduction of smuggling, regional harmonization of fuel prices and taxes could have more immediate impact on the revenues, the maintenance budget for road infrastructure, the magnitude of smuggling and also on more transparent and unified costs to international road haulage. One cannot fail to recognize the strong correlation between road financing reforms and access to and cost of road transit!

Access to markets through the immediate neighbors: The unresolved political issues severely hamper the effective use of transit routes in South-Caucasus and in Moldova. A ceasefire has been in force since 1994 between Azerbaijan and Armenia, but their border remains closed, as does Armenia's border with Turkey, leaving Armenia only two trade corridors—through Iran and Georgia. In the latter case, the conflict between the central government and its constituent republics of Abkhazia and South Ossetia has led to disruptions in domestic and international trade flows. The war in Chechnya has made regional trade to the North more difficult and expensive for all parties. These conflicts are politically sensitive and involve a number of countries in the region, but they have severely undermined prospects for trade and private investment in the region. For goods delivery between Moldova and Russia, Transnistria creates constraints before actually starting international transit through Ukraine.

¹⁷ Fuel tax continues to be the best proxy for the actual use of the roads and as such is widely recognized as the key road user charge.

Exiting the region: Transit conditions and access to the trans-continental routes and to sea ports

Exiting the region first assumes transiting through one or more neighbor countries within the region. While this is the first impediment, the long haul corridors are not without concerns either. The emerging corridors by now offer competing options for shippers i.e. via Russia, China, Iran, Pakistan and Afghanistan.

With regard to the main corridors, there are several new corridor initiatives that are not yet harmonized. In addition, transit via and access to Russia continues to be of great importance to the CARs and Moldova. The alternative routes, like the Silk road has received a lot of support from TRACECA and managed to attract some transit through the South Caucasus countries. Due to TTF impediments, however, the volume of transit falls short of expectations. At the same time the route via the Iranian Bandar Abbas has successfully increased its traffic thanks to the more competitive services in the Iranian port and further on the route. Connections with China (with facilities for changing the track gauge) have been under-utilized therefore one could imagine a growth in traffic, (not through new infrastructure, the cost of which would be beyond affordability), but through TTF measures. More information about the different corridors can be found in Attachment 7.

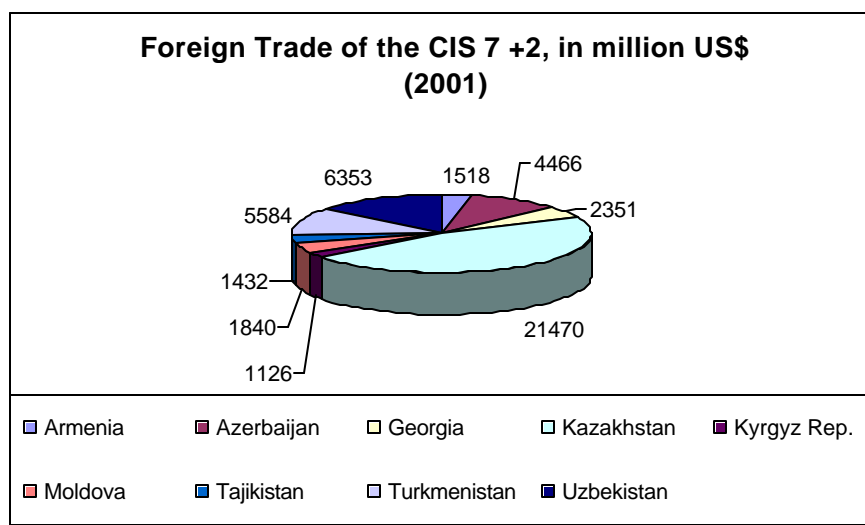
It needs to be recognized that the interest of transit countries to facilitate traffic through their territories can be achieved and mutual benefits realized only if the infrastructure user charges cover the cost of at least their maintenance. It is also possible to reap even more attractive benefits if the transit countries offer value added services and they can become the gateway for the transiting countries.

Infrastructure needs are huge and the available resources are limited. This means rehabilitating existing networks which are already in demand should be a priority along with careful selectivity, not only within the framework of one country, but also regionally – particularly in Central Asia. Regional planning therefore is warranted to examine the major transport options. The TRACECA example could be expanded to other corridors, as has happened in Central and South East Europe, where efforts are being made to identify transport investment needs with regard to priority projects for sub-regional and regional integration. A broader geographic approach is also warranted in favor of an all-European transport network. The positive lessons of the EU candidate countries and the Transport Investment Needs Assessment (TINA), or a more recent experience with the Transport Infrastructure Requirement Study (TIRS) in South-East Europe are worth studying as an example. In both cases the European Commission played the leading role both politically and financially.

4. The Search for a Solution

Which modes of transport, which corridors and which type of services are to be developed first, largely depend on the composition and direction of foreign trade, as well as on the type of foreign direct investments. Accepting foreign trade trends as the basis for transport policy formation is further justified by the high openness of the CIS 7 + 2 economies. More than 70 percent of GDP is realized through foreign trade in most of the countries in our focus (see data in Attachment 1). The only exception here is Uzbekistan, where foreign trade is 46 percent of their

GDP (2000). On the other hand, the value of foreign trade exceeds the GDP of Kazakhstan, Turkmenistan and Tajikistan. The importance of foreign trade is likely to be even bigger if we think also of the un-recorded trade, that is common in several CIS 7 +2, and may be one third, and in some cases even more, of official statistics. Good understanding and close monitoring of foreign trade and FDI trends should be the basis for transport policy considerations. The extremely high dependence on foreign trade also underlines the importance of TTF interventions.



In the case of the nine countries TTF impediments affect trade worth US\$46 billion, in the case of the CIS 7 only the trade suffering from lack of time and cost predictability is US\$19 billion.

4.1. Changing demand in terms of transport mode¹⁸

The main export commodities for Kazakhstan, Azerbaijan and Turkmenistan are crude oil, natural gas and petroleum products. The main modes of transport for these are pipelines and rail. The ports used for crude oil shipments are either in the Black Sea or in the Baltic Sea. In the latter case, the transport distance to the ports is approx. 4,000 kilometers. The pipeline carrying most of Kazakhstan's oil is the 2,896-kilometer pipeline in western Kazakhstan, which runs from Uzen to Samara via Atyrau. An oil pipeline to Ceyhan (Turkey) will eventually connect Azerbaijan also to Mediterranean ports.

¹⁸ More data can be found in the Annexes. Attachment 1, Table A shows the volumes of the 10 mostly traded product groups of Central Asian countries. Crude oil shipments from Kazakhstan dominate the table, but it also shows that intra-regional trade volumes are rather modest. Trade volume of Armenia, Azerbaijan and Georgia is shown in Table B. Except for substantial shipments of oil and petroleum products from Azerbaijan, the trade volumes are rather modest and the volume of intra-region trade is small.

Comparable trade data for Moldova was not available at the time of writing, but the data presented by Paczynski (Trade profile, 2001) show that 42 percent of exports are food products. These are often suited for door-to-door road transportation. (Table C.)

The overwhelming volume of oil transport in some railways' traffic (both as originating and as transit) can easily lead to mono-culture type dependence on the oil suppliers. On the other hand, due to the monopolistic position of the railways in every oil transporting country, the suppliers can be also vulnerable to "rail capture" both in terms of oil, and even more in terms of transport of equipment and facilities destined for the oil fields. The expected growth of production in the Azeri and Kazakh oil fields can also lead to over-sized investment decisions in the railways unless pipeline development plans are duly considered.

Metals and other mining products are the main commodities for Tajikistan (aluminum; 61 percent of total exports), Armenia (diamonds for re-export, gold and other precious metals; 36 percent), Uzbekistan (gold; 28 percent). Ferrous metals count for 11 percent of Kazakhstan's exports by value. Kazakhstan is also a major exporter of coal. Over 25 million tons of coal was transported mainly to Russia and Asia in 2000. Most of these cargo warrant low cost rail transportation. However, with gold and diamond air cargo services are also called upon.

Agricultural and food products are of growing importance, but their share of trade by value is generally smaller than their share by volume. They call for better road freight conditions in terms of reliability, costs and the whole range of logistics (farmer community based warehousing, refrigerator trucks etc.). Cotton fiber accounted for 25 percent of Uzbekistan's export revenues in 2001. Calculated by volume (tons), cotton's share was 13.5 percent of exports in 2000. Cotton is also an important export item for Tajikistan with 11 percent of export revenues in 2001 and 15.4 percent of exported tons in 2000. Poor railway services and logistical shortcomings both in the dispatching countries, but also at the main gateways (like the Poti port) hinder the ability of exporting countries to maximize their revenues.

Manufactured products accounted for 8 to 38 percent of these countries' exports by value in 2001. The highest share was shown in Armenia and the lowest in Uzbekistan. This group comprise a wide variety of goods that generally require unitized transport. They are often packaged items that are handled in relatively small shipments and thus call for trucking.

The impact of foreign trade composition of CIS 7 +2 (comprised mainly of raw materials, fuels and food) on the choice of transport mode makes railways in the Central Asian and the South Caucasus countries an important partner. Over 95 percent of the trade volume (by weight) is estimated to be transported as bulk cargo or through pipeline. The remainder is transported in break-bulk fashion, and as unitized cargoes such as containers or trailers. Around 10-25 per cent of trade by value is estimated to be transported as unitized cargoes¹⁹. Apart from pipelines, the main transport modes are rail and road. While railways and rail services are state-owned, road transport services are mostly provided by the private sector in all CIS 7 +2.

There is high dependence on rail services in the CAR and the South Caucasus, which is prone to abuse its monopoly powers. Road transport is much more crucial for Moldova. Currently, air transport is seldom used. Its share is less than one percent of trade measured by value. Still countries like Armenia and Kyrgyz Republic started to rely on air cargo services more than their neighbors due to the otherwise limited access out of the country and thanks to some low volume higher value cargo. At least in principle, air transport has large potential in all CIS 7 +2.

¹⁹ In industrialized countries, the unitized cargoes account for 60-80 per cent of trade value (Juhel 2001).

Nevertheless, the low frequency, limited and unpredictable capacity and transport costs effectively limit the actual demand.

4.2. Changing demand in terms of transport routes

For the CIS 7 +2 direction of trade has increased towards the EU, USA and China, whereas intra-regional trade and trade with Russia has been declining. (This is highlighted in Table 4.1. for 1995-2000.) These changes are relatively incremental and Russia continues to be the major trading partner for most CIS 7+2 countries. Moldova for example heavily depends on trade with Russia (45 percent of exports by value). Trade with other CIS countries is also important practically for all CIS 7 +2 countries. This indicates the importance of the Russian corridor both for bilateral trade and for transit.

Increase of trade with Western Europe (e.g. Tajik imports from Europe have grown four-fold) shows how important the TRACECA corridor is and better transit possibilities through Azerbaijan and Georgia are called for. Similarly, the increased trade between Moldova and the EU members and candidates require smooth connections to the West (22 percent of exports and 26 percent of imports of Moldova are with the EU).

Table: 4.1. Trends in trade between 1995-2000 measured as shares of foreign trade.

	China	Russia	Europe	USA	Central Asia	Caucasus ⁴
Kazakhstan ^{1,2}						
Imports	-	-	-	-	-	-
Exports	-	-	-	-	-	-
Kyrgyz Rep						
Imports	-	-	-	-	-	-
Exports	-	-	-	-	-	-
Turkmenistan ¹						
Imports	-	-	-	-	-	-
Exports	-	-	-	-	-	-
Moldova ⁵						
Imports		-	-		-	-
Exports		-	-		-	-
Armenia ⁵						
Imports		-	-	No change	-	-
Exports		-	-	-	-	-
Azerbaijan ⁵						
Imports		-	-	-	-	-
Exports		-	-	-	-	-
Georgia ⁵						
Imports		-	-	-	-	-
Exports		-	-	-	-	-

Notes:

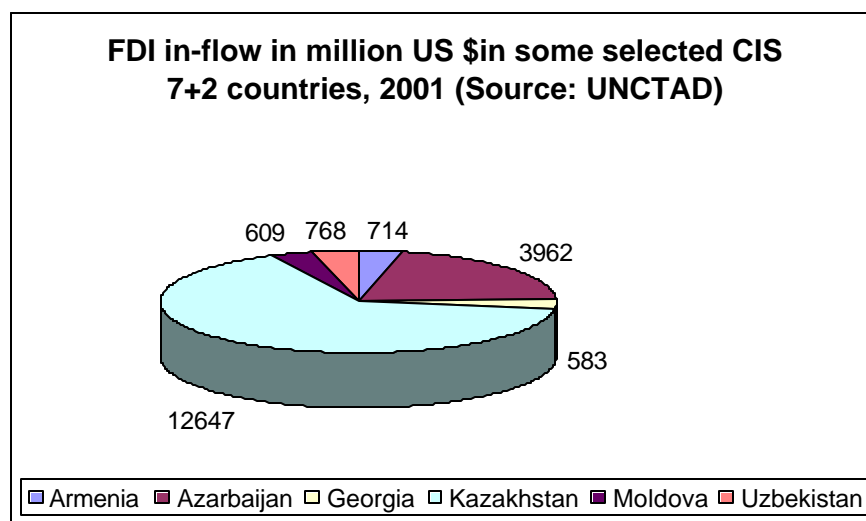
1. Biggest increase in exports is to China and Iran, and for imports, USA. Biggest partner, by value: Russia and Europe
2. Biggest increase in imports to Russia, and for exports, USA. Biggest partners by value: Russia, Kazakhstan
3. Biggest increase in imports from Europe, biggest partner by value: Russia
4. Poor unreliable data; the volume of trade is very small.
5. Based on Paczynski 2001, TTF Policy Notes and other WB material

Source: Extended Concept Note on TTF in Central Asia, original source: UN COMTRADE; IMF Direction of Trade Statistics, and World Bank reports and drafts.

The importance of alternative routes is crucial not only because of the changes in trade directions, but also to make these routes compete with each other and eventually offer better services and lower costs to shippers. The trading routes of Uzbek cotton illustrate this well. Uzbekistan is one of the largest producers of cotton (see Box 2). A detailed study²⁰ of cotton logistics commissioned by TRACECA, 1997, highlighted the inefficiencies along the corridors that have exacerbated the supply problem for Uzbekistan cotton. The key growth markets for cotton in Portugal, Italy and Turkey were expected to be served through the TRACECA corridor. At present the dependence of the Uzbek exporters on transit and trans-shipment services in Riga, Poti, Ilyechovsk and Bandar Abbas is very high. Riga is the traditional cotton port established several hundreds of years ago. The inadequate infrastructure services (e.g. poor storage/warehousing, security issues at Poti; capacity of ferry service across the Caspian Sea or the long distance and the additional facilitation constraints on the way to Riga) adversely affect transport costs, time and quality of shipments and, ultimately, the competitiveness of the Uzbek cotton in its main markets. Competition among these routes recently favored Bandar Abbas, where services are reportedly better and at more reasonable total costs. Since the 1997 study, the international competition has only grown fiercer, in this case mainly from China. Also the drawbacks experienced already in the mid-1990s have become more serious. This has in part deteriorated Uzbekistan's position in the world cotton markets.

4.3. Changing demand in terms of complexity of services

It is difficult to attract Foreign Direct Investments (FDI) to countries or regions with poor logistic services, unless some exceptional natural resources are in question. Multinational companies increasingly rely on Just-in-Time and door-to-door services, where the main feature is reliability. Due to the un-certainties on the total route (out of which the transit length is often huge) this condition is not yet met in the CIS 7 +2.



Most of the FDI in the CIS 7 + 2 has concentrated on the energy sector in Kazakhstan and Azerbaijan. The interest towards other countries or sectors has been rather modest (Attachment

²⁰ Transportation of Uzbekistan Cotton Project, Final Report, September 1997, TACIS, TRACECA Trade Facilitation, Customs Procedures and Freight Forwarding Project.

1, Table E.). Despite the low absolute levels of FDI in our focus countries - bar Uzbekistan – they have relatively high Inward FDI Performance Rank and Index ratios. The outward FDI has been extremely small, perhaps with the exception of Azerbaijan. It is also worth noting that some FDI flow from Kazakhstan to Kyrgyzstan has started, and it can create a new basis for joint interest in international transit and logistic services.

TTF is an increasingly important factor in attracting foreign investments, particularly in supply chain related areas (UN), therefore trade and transport facilitation should be looked upon not only as cost and time saving vehicle, but also as a new area of business development.

5. Trade and Transport Facilitation is not an easy solution

Remoteness and being land-locked continues to be an economic handicap and a barrier to growth²¹. Redding and Venable²² found that more than 70 percent of the variation in per capita income can be explained by the proximity of a country to key markets. Those countries, which are remote from their key markets, incur greater transport costs, consequently to remain competitive the wage rates are kept lower.

Based on shipping company data on the costs of transporting a standardized 40 feet container around the world, they find that a land-locked country's shipping costs are more than 50 percent higher than those of a coastal country. According to their estimate access to the coast and openness yields predicted increases in per capita income of over 60 percent. If the country's distance to the coast is halved, all of its trade partners yield an increase of over 70 percent.

The geographic distance is given. The economic distance however is the cost and predictability of reaching the markets. The CIS 7 + 2 are not only land-locked and remote, but their economic distance from their main markets is longer than the geographic proximity, as demonstrated in the previous chapters from the high transport costs and the multitude of barriers.

Trade and Transport Facilitation aims at reducing the economic distance in a way that benefits all the participating parties.

It is true that more empirical evidence has been gathered on the costs of the barriers than on the TTF benefits. Their measurement could be based on the savings in transaction costs plus the business opportunities generated by the TTF measures (see UN recommendation²³). Such a calculation has not been carried out for the CIS 7+2. An APEC estimate however suggests, that TTF measures would bring twice as much of benefits than tariff removals²⁴. According to an

²¹ See: Adam Smith: Wealth of Nations; Gallup, Sachs, Mellinger: Geography and Economic Growth, 1998; Stephen Redding and Anthony J. Venables, London School of Economics and CEPR: Economic Geography and International Inequality, 2001, Krugman, Is Geography a Destiny, 1998; Raballand, The Determinants of the Negative Impact of Land-lockedness on Trade: An Empirical Investigation through the Central Asian Case

²² Redding and Venables based their estimates on a structural model of economic geography, using cross-country data on per capita income, bilateral trade, and the relative price of manufacturing goods.

²³ UN ECE TRADE/2002/21

²⁴ In monetary terms, the APEC estimate shows that trade facilitation measures already committed would add 0.25 per cent to real GDP (or about \$46 billion in 1997 prices) compared to gains of 0.16 per cent of real GDP from trade liberalization, tariff removal – Wilson, John S and Yuen Pau Woo, Cutting Through Red Tape: New Directions for APEC's trade facilitation agenda, 2000.

OECD estimate the total savings resulting from TTF measures can be between 2-15 percent of trade transaction costs in general. Due to the magnitude of TTF barriers in the CIS7 +2, the potential savings for them are likely to be on the higher end. According to the UN, **the savings in relations to the total trade value can be between 2-3 per cent. In the case of the CIS 7 + 2, this means that potential savings due to TTF interventions can be around US\$1 billion.** The distribution of the savings would first of all most likely benefit the SME sector as they are the most vulnerable to the current barriers. At the same time, governments could increase their credibility and mobilize more support for their development program, when their commitment for improved international trade environment is demonstrated by actions.

Countries with un-favorable geographic location and/or with poorly developed physical, institutional and electronic infrastructure, need to make extra efforts to reduce costs to trade and transport, to shorten the *economic distance* to the key markets, i.e. to become part of global logistics systems, attract foreign and local investors and benefit from increasing world trade. A failure to address these issues would mean that they risk being marginalized and deprived of the opportunity for sustainable growth and increased wealth. Countries can take measures in support of their economic integration on global (WTO, multilateral conventions etc.), macro (trade diagnostics, foreign exchange regimes, foreign trade policies etc.) meso (structural reforms of key TTF related sectors, like customs, transport and other specific TTF measures as discussed below), as well as on micro levels (improved business climate).

On the **global level, WTO** membership and the preparation for it stand out as the most overarching challenge. In addition to the traditional trade liberalization, deregulation of trade in services has been also put on the agenda. Though the GATS treaty has covered transportation rather broadly, it is expected that in the future aviation, maritime and also land transport will gear up on the priority list of WTO. References to the Article V of GATT concerning the freedom of transit have been renewed signaling the high expectations towards WTO to improve transit conditions. These views however put their hopes into solving transit issues out of power while they fail to recognize that all participating countries should also be able to benefit from the solution. Throughout the post-war decades this strive for reciprocity was the reason that bilateral transport agreements proliferated. Looking at reciprocity in the broader context, however it is likely that WTO will be the main forum and facilitator of progress. In the meantime, bilateral agreements will continue to provide the framework for access to international transport markets and governments are expected to do everything possible to pave the way for a more transit friendly business environment.

In the CIS 7 +2 this will entail a holistic **Trade and Transport Facilitation Reform Package** with a realistic and revolving action plan over the next 5 to 10 years to be discussed and agreed on with neighboring countries, the countries along the key transport corridors, as well as with the business community as they represent the main stakeholders' interest.

As in the CIS 7 +2 countries, the high cost of trade is caused by the high costs of transport, and (i) since this is partly because of the informal payments and rent-seeking practices, **improved governance** could be one objective of the TTF Reform Package; and (ii) because some of the costs are caused by inefficiencies and other shortcomings in the transport systems either on behalf of the service provider or by the infrastructure deficiencies, **more competitive transport sectors** connected to the broader international market and networks could be the other one.

Without pre-empting the concrete substance of these strategies – that will naturally vary according to the local conditions – the following broad-based institutional reforms and procedural changes are likely to be considered by the CIS 7 +2:

Broad based customs modernization and reforms (started or continued subject to the specific country situation), that would include inter-agency cooperation, particularly integrated border management within countries (where one of the agencies, possibly customs is the border manager, i.e. being responsible for the overall performance of the border crossing), and across borders; Management Information Systems²⁵ (where border agencies are electronically connected to inland terminals and headquarters) and also regional and multi-sectoral harmonization of IT technology introduction and up-grade; simplification of procedures and introduction of selectivity and risk analysis; on a procedural level the introduction and application of one window shop; moving as much of clearance to inland terminals as possible; enforced respect to cargo traveling under a guarantee scheme (e.g. TIR); phasing out of obligatory convoying; cross country cooperation among customs administrations with the immediate neighbors and also with all the countries on the corridor both on the higher political level and on the working level at the border sites.

Deepening transport sector reforms and targeting modernization, including set up and/or strengthening of Transport Ministries; elaboration of multi-annual national transport investment plans (in the CIS 7 in conjunction with the national poverty reduction and economic growth strategies); accelerated reform of road financing systems (increased fuel taxes as the main Road User Charge; internationally compatible vehicle taxation; improved allocation of funds among the different road categories etc.); reforming the road administrations so that they would be able to manage the improvement of the road network according to market economy conditions; continued railway modernization and reforms to make them more efficient and customer oriented; reforming the international railway relations (e.g. through tariffs for container transport) and rail border crossing conditions [e.g. (i) monitoring the actual border stopping time should be reduced; (ii) eliminating shunting and marshalling as far as possible at all points on the international corridors, including the borders; (iii) introducing interface connections of the information systems of the railways and the border agencies (particularly customs) not only within one country, but along the main international corridors (TRACECA is already a good example); (iv) streamlining border procedures both for the railways and the border agencies; (v) harmonizing technical specifications for future rail infrastructure development (particularly with regard to equipment)]; improving the competitiveness and efficiency of the road transport operators through the enforcement of licensing regulations and promotion of professional training (Certificate of Professional Competence (CPC) regulations to be in place and enforced; training centers to seek IRU accreditation); harmonization of gross weight and axle load of road vehicles and the introduction of jointly acceptable weight certificates; negotiating new bilateral road transport agreements; introducing a more conducive environment for logistic services.

²⁵ A multi-sectoral approach was characteristic of the trade facilitation network in Singapore, which included customs MIS as well. This allows traders to make declarations electronically and directly. Savings are reported to be around 1 per cent of Singapore's GDP. The Chilean customs modernization program, that introduced the Electronic Data Interchange (EDI) systems is reported to have generated savings over US \$1 million per month, while the investment cost was around US\$ 5million in total.

Planned transport investments are huge and costly. Close cooperation among all the countries on the corridors and **strict prioritization of investments** based on economic evaluation and reliable traffic census and forecast **are warranted** in order to best use scarce resources. To this end the Trans- and Inter-Continental Transport Corridors should be reviewed and made part of the transport planning and the Trans-European Transport Network (TEN+TINA+TIRs etc.) should be extended to the rest of Europe to establish a coherent and consistent system without discrimination of countries as to their status in European integration and connected with the Euro-Asian network (to be identified) focusing on connecting markets in Europe-Central Asia-Middle East – Far East and South Asia.

Promoting Public-Private Partnership (e.g. pro-committee), that enables the users of the border services (shippers, manufacturers, transport operators, freight forwarders) to voice their concerns and forces the authorities (the government at large, but particularly the customs and other border agencies, as well as the Transport Ministry and agencies) to respond to the needs of the private sector. Empowering the business community by offering them a forum to represent their interest in decision-making relevant to international trade can lead to better and more sustainable results.

Regular TTF information to be regularly shared with the key stakeholders (e.g. through TTF web sites), in which the PPPs, i.e. pro-committees can play the role of a catalyst in close cooperation with the already existing industry associations, like the national road transport associations and their international “institutions” like the IRU’s CIS Liaison Committee, the BSEC Union of Road Transport Associations.

Training of all participants in the TTF-chain, including customs officials, brokers, forwarders, shippers, transport operators etc. is required to bring about the necessary changes in business ethics, border crossing management, attitude and mentality.

Impediments and the progress in their abolishment should **be made more transparent**. For monitoring and evaluation of the results **performance indicators** should be introduced first along the most frequent international corridors. **Monitoring and Measuring** the changes in the border agencies’ performance and at the same time introducing benchmarking mechanism among all the CIS 7 +2 offers a regional approach, that has further the benefit of introducing peer pressure among the countries. This can lead to better cooperation and overall to economic prosperity.

Box 9.: TTF is a big challenge, but not impossible

TTFSE¹: This is the first regional investment program of the World Bank to support TTF reforms. Currently seven countries participate as borrowers: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Federal Republic of Yugoslavia, Macedonia and Romania. Soon after joining the Stability Pact, **Moldova** also expressed an interest in participating in the TTFSE and the project is ready for negotiations. As the countries of Southeast Europe seek to achieve regional stability and economic recovery, long-term strategies are often being stalled by short-term realities. The high costs of trade and transport in the region are not only disincentives to foreign investment but also result in excessively high costs for consumer goods. Associated with these costs are backed-up lines at border crossing points that may range from hours to days and often require “facilitation payments” in addition to standard fees. Users are highly frustrated and have little or no access to redressing their concerns and problems. The TTFSE Program seeks to approach these problems on a regional basis, maximizing effectiveness by addressing commonly shared problems. The program is the result of a collaborative effort between the national governments in the region, the World Bank, the European Union, the US (that is co-financing the projects) and other bilateral donors, like France, the Netherlands etc.

The above actions can and should be undertaken by the CIS 7 +2 countries. . In addition, there are several actions or areas that pose significant market barriers for these countries but are beyond their control, such as the visa obstacles for professional drivers to enter most European countries. Another impediment may be that the Central Asian countries do not have a seat at the international table of ECMT where transport ministers discuss future transport policies, including TTF related resolutions. They also face a lack of interest on behalf of the Western and Central European countries when a bilateral road transport agreement is initiated.

All the above policy items are however, too complex to be pursued without prioritization. While the authors of this paper would like to leave that choice to the countries and to the follow up dialogue, here are some specific recommendations that already appear feasible in the short to medium term:

1. For all CIS 7+2:
 - a. Adhering to and implementing the TIR Convention to make it more secure and reliable and abolishing of customs escorts of normal, non-suspicious cargo.
 - b. Harmonizing transit fees by taking into account the interest of both the transit and transiting countries (see on-going work within TRACECA).
 - c. Harmonizing border procedures on road and rail across the countries.
 - d. Introducing of performance indicators that are systematically followed up on the main international transport corridors and on both sides of the border.
 - e. Strengthening the public-private dialogue and cooperation (pro-committees etc.).
 - f. Publishing up-to-date border crossing rules and their interpretation.
2. For the South Caucasus countries: discussing the Trade and Transport Facilitation Policy Notes and agreement on the proposed strategy and recommended actions.
3. For Moldova: deciding on the direction of the customs modernization and reforms is a condition to their joining the TTFSE investment program.
4. For Central Asia:
 - a. ECMT is called upon to consider the membership of the CAR and their participation in the ECMT Multilateral road quota system.
 - b. The World Bank initiated TTF Audits could be discussed and used as support material at the Tashkent Regional Meeting organized by UN at the end of February in preparation for the World Congress on Land-Locked countries.
 - c. The World Bank in cooperation with ADB and other donors will also prepare Policy Notes with specific strategy proposals and recommended short and medium term actions.

In summary, reducing waiting times at the border, which is one of the key indicators of improved TTF is hardly possible, if the Customs administrations and other border agencies are not up to modern standards, if they prefer control over fighting illegal trade, and if their organizational, operational structure or their technical facilities are not well equipped for smooth and fast processing of legal trade while detecting illegal trade. The effectiveness of donors' support in TTF depends on their close cooperation. While some overlaps can always happen, a close coordination can ensure that the distinctive assistance programs are built on each other in the most complementary way possible. No matter how well targeted the TTF interventions are and how closely they are coordinated among the donors, results will be modest and likely not sustainable if the governments' commitment for the reforms is not high.

The burden for change lies mostly with the CIS-7 +2, but at the same time a great deal of TTF progress depends on the neighboring countries, on the more developed trading partners, and on donors' support.

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ATTACHMENT 1. TRADE and FDI DATA

Table A. 2001 Aggregate Foreign Trade Data the CIS 7 +2 Source: The World bank, Country at a glance tables

	Armenia	Azerbaijan	Georgia	Kazakhstan	Kyrgyz Rep.	Moldova	Tajikistan	Turkmenistan	Uzbekistan	CIS-7 + 2
Export of Goods and Services	540	2,336	999	10,393	561	739	652	tbd	3,201	19,421
Import of Goods and Services	978	2,130	1,352	11,077	565	1,101	780	tbd	3,152	21,135
Foreign trade, US\$ millions	1,518	4,466	2,351	21,470	1,126	1,840	1,432	4,969	6,353	40,556
Population, millions	3.8	8.1	5.4	14.8	4.9	4.3	6.2	5.5	25	78
Foreign trade per capita, US\$	399	551	435	1451	230	428	231	903	254	520
GNI per capita, US\$ *)	570	660	580	1350	280	400	180	950	550	
Total exports (fob), US\$ mill.	342	2,046	496	9,101	480	569	652	2,526	2,740	18,952
Crude oil and petroleum prod.		1,841		4,733				751		
Natural gas					47			1,398		
Gold, precious stones	123				225				776	
Aluminium							398			
Ferrous metals			30	1,009						
Cotton fibre							72		699	
Manufactures	132	205	150	1,490	106	115	..	311	209	
Total imports (cif), US\$ mill.	877	1,465	954	8,554	472	882	773	2,201	2,814	18,992
Food	211	..	143	836	36	38	..	154	339	
Fuel and energy	187	..	176	790	121	201	198	0	60	
Capital goods	62	138	183	2,837	58	120	..	814	1,292	

*) Atlas method

Table B. Trade volumes of the 10 most important product groups in 2000 (1999 for Tajikistan) in 1000 tons. Source: NEA reports; original data from TRACECA

export to/ import from	Kazakh export	Kyrgyz export	Kyrgyz import	Tajik export	Tajik import	Turkmen export	Turkmen import	Uzbek export	Uzbek import
Kazakhstan		191	1,126	5	460	2	33	1,191	1,695
Kyrgyzstan	1,804			9	22	31	3	367	1,260
Russia-Asia	44,497	105	179	157	212		192	821	471
Tadjikistan	435	13	1			63	18	808	96
Turkmenistan	64	5	76	16	85			674	144
Uzbekistan	1,391	864	193	203	318	126	325		
Ukraine					158		91	937	183
Europe-W&S	8,196			227	297	123		532	
China	4,019	89	33						
Iran						123	101		
Afganistan		26				123			
North America			108						137
Sub total	60,362	1,296	1,716	666	1,552	592	762	5,330	3,987
Total export to all c	82,009	1,366	1,781	712	1,703	770	1,037	6,200	4,647

Table C. Trade volumes of Armenia, Azerbaijan and Georgia in 2000 in 1000 tons. Source: World Bank draft Policy Notes on TTF in the South Caucasus, 2002

	Armenia		Azerbaijan		Georgia	
	Export	Import	Export	Import	Export	Import
Turkey		31	444	156	565	288
Europe West,South,East	68	480	5,840	176	283	247
Russia	21	1,050	143	908	146	115
Armenia					105	51
Azerbaijan					66	190
Georgia	35	100	376	38		
Kazakhstan			18	441		50
Tajikistan			193	193		
Turkmenistan				95	26	10
Uzbekistan						15
Middle East			670	29	51	51
Iran	35	112		130	31	76
Americas	70	200	37	160		119
Ukraine			97	84		
Africa				1,000		
Sub total	229	1,973	7,818	3,416		
Rest of the World	13	137	339	..	346	170
Total export or import	242	2,110	8,157	3,416	1,619	1,382

Table D. Aggregate data on Moldova's foreign trade in 2000 (Paczynski 2001)

	Export per cent	Import per cent		Exports per cent	Imports per cent
Food products, beverages, tobacco	42		CIS	59	37
Textiles	18	10	<i>of which Russia</i>	45	13
Vegetable products	14		<i>of which Ukraine</i>	9	15
Machinery and eq.	5	12	EU	22	26
Chemicals		9	Romania	8	18
Mineral products		31			

Table E. Foreign Direct Investment stocks in US\$ million in 2001

	Inward FDI stock 2001 mUS\$	Outward FDI stock 2001 mUS\$	Inward FDI Performance Rank 1)	Inward FDI Performance Index 2)	Inward FDI Potential Rank 1)	Inward FDI Potential Index 4)
Armenia	714	44	15	2.5	123	0.170
Azerbaijan	3,962	632	8	3.3	121	0.174
Georgia	583	..	36	1.4	134	0.140
Kazakhstan	12,647	..	21	2.0	82	0.260
Kyrgyzstan	459	44	55	1.0	135	0.139
Moldova	609	19	29	1.7	109	0.194
Uzbekistan	768	..	100	0.4	92	0.233

1) Ranked by the Performance or Potential Index for 1998-2000 among countries in the UNCTAD database

2) The Inward FDI Performance Index is the ratio of a country's share in global FDI flows to its share in global GDP, average of 19

3) The Inward FDI Potential Index is an unweighted average of the scores of eight normalized economic and social variables, average of 19
For details, see Chapter II in World Investment Report 2002, UNCTAD

Source: UNCTAD: World Investment Report 2002, at www.unctad.org

ATTACHMENT 2. MEMBERSHIP IN INTERNATIONAL and REGIONAL ORGANIZATIONS AND TRANSPORT AGREEMENTS

A. Membership of the region's countries in major international or regional organizations relevant to TTF

	WTO 1) Status and date of membership	IMF trade rating 2)	ECO 3)	EEC 4)	GUUAM 5)	SCO 6)	CACO 7)	SPE CA 8)	CAF
Armenia	Observer	1.							
Azerbaijan	Observer	2.	Yes		X				
Georgia	June 2000	2.			X				
Kazakhstan	Observer	..	Yes	Yes		Yes	Yes	Yes	Yes
Kyrgyz Rep.	Dec.1998	1.	Yes	Yes		Yes	Yes	Yes	Yes
Moldova	July 2001	1.		3)	X				
Tajikistan	Observer	1.	Yes	Yes		Yes	Yes	Yes	Yes
Turkmenistan	Yes					Yes	
Uzbekistan	Observer	9.	Yes		X	Yes	Yes	Yes	Yes

Note: 1) WTO membership data: www.wto.org, read Nov. 11, 2002
2) IMF rating = 1. Is the most liberal category; 10. The least liberal category; source IMF
3) ECO members also include Pakistan, Iran and Turkey
4) Members of the Euroasian Economic Community also include Russia and Belarus.
5) Ukraine is the fifth member
6) China and Russia are also members
7) Formerly Central Asian Economic Community
8) Kazakhstan is leading the Project Working Group on Transport of SPECA

B. Membership of the countries in major international transport organizations and transport industry associations

	ICAO 1)	ECAC	IMO 2)	ECMT 3)	IATA 4)	UIC 5)	FIATA 6)	IRU 7)
Armenia	X	X			X	X	X	X
Azerbaijan	X		X	X	X	X	X	X
Georgia	X		X	X		X	X	X
Kazakhstan	X		X		X		X	X
Kyrgyz Rep.	X							X
Moldova	X		X	X	X	X	X	X
Tajikistan	X							AS
Turkmenistan	X		X		X	X		X
Uzbekistan	X						X	X

Note: 1) Membership data: www.icao.org read Nov.22, 2002
2) Membership data: www.imo.org read Nov.22, 2002
3) Membership data: www.ecmt.org read Nov.22, 2002
4) The national flag carriers as members: www.iata.org read Nov.22, 2002
5) The national railways as members: www.uic.org read Nov.22, 2002
6) National Freight Forwarding Association as member: www.fiata.org read Nov.22, 2002
7) Road haulage Associations (or equivalent) as member: www.iru.org read Nov.22, 2002
Tajikistan is an Associate Member (AS)

C. The main international road and rail transport agreements and conventions ratified by CIS 7, Kazakhstan and Turkmenistan as per February 15, 2002

Category (No. of conventions)	Convention or agreement with the year of establishment	Armenia	Azerbaijan	Georgia	Kazakhstan	Kyrgyz Rep.	Moldova	Tajikistan	Turkmenistan	Uzbekistan
Infrastructure networks (6)	European Road network (AGR), 1975		X	X	X					
	European Rail Networks (AGC), 1985						X			
	European Rail Networks (AGC), 1985			X						
Road Traffic (11)	Road Traffic, 1949 and 1968			X	X	X	X	X	X	X
	Road Signs & signals, 1968, with 1971 Supplements			X		X		X	X	X
	Protocol Road Markings, 1973			X						
Vehicles (3)	Technical inspection of vehicles, 1997			X						
Road transport (9)	Work of Crews Int. Road Transport (AETR) 1970		X		X		X		X	X
	Contract Road Goods transport (CMR), 1956, with Protocol to CMR, 1978			X	X	X	X	X	X	X
Border crossing facilitation (14)	TIR Convention, 1975	X	X	X	X	X	X	X	X	X
	Temporary imported commercial vehicles, 1956		X			X				
	Customs Container convention, 1972			X						X
	Harmonization of Frontier Control of Goods, 1982	X	X	X		X				X
Dangerous goods and special cargoes (5)	Dangerous goods by roads (ADR), 1957		X		X		X			
	Perishable Foodstuffs (ATP), 1970		X	X	X					X

Source: UNECE 2002

ATTACHMENT 3

BUSINESS CLIMATE IN THE CAUCASUS, CENTRAL ASIA, RUSSIA, UKRAINE, BELARUS AND MOLDOVA

Obstacles to doing business; Caucasus, Central Asian, and the Slavic Republics' Ratings Among 22 World Regions
(1 = lowest; 22 = highest obstacle rating)

The Region's ranking out of 22 world regions in Brunetti et. al. 2001	The Caucasus Region	The Central Asian Region	Russia, Ukraine, Belarus and Moldova
Total obstacles	8	19	21
Labor, price and environmental regulations and regulations for starting a business	2	3	5
Inflation and Financing related obstacles	5	16	14
Trade and exchange rate related obstacles	11	20	21
Public Revenue and Expenditure Policies Related	11	20	18
Uncertainty Related Obstacles (Policy instability, costs)	16	21	22
Crime Related Obstacles	11	14	18

Source: A. Brunetti , G. Kisunko, A. Weder, IMF Discussion Paper 33

ATTACHMENT 4

TRANSPARENCY INTERNATIONAL'S INDICATORS OF PERCEIVED CORRUPTION IN SELECTED COUNTRIES IN 2002

Transparency International (TPI) is an NGO that annually ranks countries as to their level of perceived corruption. The latest data from 2002 comprises summaries of studies conducted in 102 countries. The CIS 7 countries that were included in the study ranked among countries with most perceived corruption with country ranks ranging from 68 of Uzbekistan to 95 of Azerbaijan.

Country Rank	Country	CPI 2002 score	Surveys Used	Standard deviation	High-low Range
1	Finland	9.7	8	0.4	8.9 - 10.0
2	Denmark	9.5	8	0.3	8.9 - 9.9
	New Zealand	9.5	8	0.2	8.9 - 9.6
29	Estonia	5.6	8	0.6	5.2 - 6.6
	Taiwan	5.6	12	0.8	3.9 - 6.6
36	Belarus	4.8	3	1.3	3.3 - 5.8
	Lithuania	4.8	7	1.9	3.4 - 7.6
	South Africa	4.8	11	0.5	3.9 - 5.5
	Tunisia	4.8	5	0.8	3.6 - 5.6
45	Brazil	4.0	10	0.4	3.4 - 4.8
	Bulgaria	4.0	7	0.9	3.3 - 5.7
	Jamaica	4.0	3	0.4	3.6 - 4.3
	Peru	4.0	7	0.6	3.2 - 5.0
	Poland	4.0	11	1.1	2.6 - 5.5
52	Czech Republic	3.7	10	0.8	2.6 - 5.5
	Latvia	3.7	4	0.2	3.5 - 3.9
	Morocco	3.7	4	1.8	1.7 - 5.5
	Slovak Republic	3.7	8	0.6	3.0 - 4.6
	Sri Lanka	3.7	4	0.4	3.3 - 4.3
68	Malawi	2.9	4	0.9	2.0 - 4.0
	Uzbekistan	2.9	4	1.0	2.0 - 4.1
71	Cote d'Ivoire	2.7	4	0.8	2.0 - 3.4
	Honduras	2.7	5	0.6	2.0 - 3.4
	India	2.7	12	0.4	2.4 - 3.6
	Russia	2.7	12	1.0	1.5 - 5.0
	Tanzania	2.7	4	0.7	2.0 - 3.4
	Zimbabwe	2.7	6	0.5	2.0 - 3.3
85	Georgia	2.4	3	0.7	1.7 - 2.9
	Ukraine	2.4	6	0.7	1.7 - 3.8
	Vietnam	2.4	7	0.8	1.5 - 3.6
88	Kazakhstan	2.3	4	1.1	1.7 - 3.9
93	Moldova	2.1	4	0.6	1.7 - 3.0
	Uganda	2.1	4	0.3	1.9 - 2.6
95	Azerbaijan	2.0	4	0.3	1.7 - 2.4
101	Nigeria	1.6	6	0.6	0.9 - 2.5
102	Bangladesh	1.2	5	0.7	0.3 - 2.0

Explanatory notes

A more detailed description of the CPI 2002 methodology is available at <http://www.transparency.org/cpi/index.html#cpi> or at www.gwdg.de/~uwwv/2002.html

CPI 2002 Score

relates to perceptions of the degree of corruption as seen by business people and risk analysts, and ranges between 10 (highly clean) and 0 (highly corrupt).

Surveys Used

refers to the number of surveys that assessed a country's performance. A total of 15 surveys were used from nine independent institutions, and at least three surveys were required for a country to be included in the CPI.

Standard Deviation

indicates differences in the values of the sources: the greater the standard deviation, the greater the differences of perceptions of a country among the sources.

High-Low Range

provides the highest and lowest values of the different sources.

Source: Transparency International, at: www.transparency.org, Read 8 November, 2002

ATTACHMENT 5. **COUNTRY-BY-COUNTRY DATA ON LOGISTICS FRIENDLINESS**

No. of countries	COUNTRY	GNP 1999 (USD billions)	GNP per capita in 1999	Econ. freedom score 1999	CPI RANKING 2000	Logistics friendliness in %
1	Sweden	221,8	25 040	7,91	9,4	100
2	Netherlands	384,3	24 320	8,39	8,9	100
3	Australia	380,8	20 050	8,52	8,3	100
4	Austria	210,0	25 970	8,04	7,7	100
5	Japan	4 078,9	32 230	7,91	6,4	100
6	Belgium	250,6	24 510	7,92	6,1	100
7	Italy	1 136,0	19 710	7,82	4,6	100
8	New Zealand	52,7	13 780	8,91	9,4	90
9	Luxembourg		30 000	8,44	8,6	90
10	Finland	122,9	23 780	8,10	10,0	89
11	Germany	2 079,2	25 350	8,00	7,6	89
12	Ireland	71,4	19 160	8,53	7,2	89
13	Spain	551,6	14 000	7,64	7,0	89
14	Norway	146,4	32 880	7,84	9,1	88
15	Switzerland	273,1	38 350	8,46	8,6	88
16	USA	8 351,0	30 600	8,73	7,8	88
17	Canada	591,4	19 320	8,17	9,2	86
18	United Kingdom	1 338,1	22 640	8,81	8,7	83
19	Singapore	95,4	29 610	9,28	9,1	82
20	Iceland		25 000	7,99	9,1	82
21	Portugal	105,9	10 600	7,77	6,4	80
22	Taiwan		12 000	7,32	5,5	80
23	Hong Kong	161,7	23 520	9,38	7,7	78
24	Denmark	170,3	32 030	7,98	9,8	75
25	Greece	124,0	11 770	7,30	4,9	71
26	Lithuania	9,7	2 620	6,48	4,1	71
27	South Korea	397,9	13 000	7,13	4,0	67
28	Estonia	5,0	3 480	7,45	5,7	63
29	France	1 427,2	23 480	7,51	6,7	60
30	Latvia	6,0	2 470	6,95	3,4	57
31	South Africa	133,2	3 160	7,02	5,0	50
32	Slovak Republic	19,4	3 590	6,30	3,5	50
33	Egypt	87,5	1 400	6,82	3,1	50
34	Ecuador	16,2	1 310	6,41	2,6	50
35	Turkey	186,3	2 900	6,16	3,8	44
36	Hungary	46,8	4 650	7,11	5,2	43
37	Israel		18 000	6,73	6,6	40
38	India	442,2	450	5,31	2,8	40
39	Venezuela	87,0	3 670	6,15	2,7	40
40	Czech Republic	52,0	5 060	6,56	4,3	38
41	Brazil	742,8	4 420	5,12	3,9	38
42	China	980,2	780	5,85	3,1	38
43	Malaysia	77,3	3 400	6,71	4,8	33
44	Mexico	428,8	4 400	6,51	3,3	33
No. of countries	COUNTRY	GNP 1999 (USD billions)	GNP per capita in 1999	Econ. freedom score 1999	CPI RANKING 2000	Logistics friendliness in %
45	Cote d'Ivoire	10,4	710	5,50	2,7	33
46	Tanzania	8,0	240	5,82	2,5	33
47	Kenya	10,6	360	6,32	2,1	33
48	Indonesia	119,5	580	6,24	1,7	30
49	Slovenia	19,6	9 890	6,15	5,5	29
50	Namibia	3,2	1 890	6,87	5,4	29
51	Morocco	33,8	1 200	6,20	4,7	27
52	Poland	153,1	3 960	5,70	4,1	25
53	Croatia	20,4	4 580	5,21	3,7	25
54	Bulgaria	11,3	1 380	5,87	3,5	25
55	Argentina	277,9	7 600	8,34	3,5	25
56	Ethiopia	6,6	100		3,2	25
57	Ukraine	37,5	750	4,57	1,5	25
58	Chile	71,1	4 740	8,01	7,4	22
59	Botswana	5,1	3 240	6,88	6,0	22
60	Tunisia	19,9	2 100	6,01	5,2	22
61	El Salvador	11,8	1 900	7,90	4,1	22
62	Cameroon	8,5	580	4,93	2,0	22
63	Thailand	121,0	1 960	6,80	3,2	20
64	Romania	34,2	1 520	3,82	2,9	20
65	Vietnam	28,2	370		2,5	20
66	Azerbaijan	4,4	550		1,5	17
67	Costa Rica	9,8	2 740	7,79	5,4	14
68	Jordan	7,0	1 500	6,76	4,6	14
69	Zambia	3,2	320	6,29	3,4	14
70	Philippines	78,0	1 020	7,58	2,8	13
71	Uzbekistan	17,6	720		2,4	13
72	Colombia	93,6	2 250	5,84	3,2	11
73	Armenia	1,9	490		2,5	11
74	Peru	60,3	2 390	7,57	4,4	10
75	Belarus	26,8	2 630		4,1	10
76	Ghana	7,4	390	5,62	3,5	10
77	Kazakhstan	18,9	1 230		3,0	9
78	Angola	2,7	220		1,7	9
79	Malawi	2,0	190	4,40	4,1	0
80	Senegal	4,7	510	4,79	3,5	0
81	Zimbabwe	6,1	520	5,41	3,0	0
82	Burkina Faso	2,6	240		3,0	0
83	Bolivia	8,2	1 010	8,26	2,7	0
84	Moldova	1,6	370		2,6	0
85	Uganda	6,8	320	7,13	2,3	0
86	Mozambique	3,9	230		2,2	0
87	Russia	332,5	2 270	3,86	2,1	0
88	Nigeria	37,9	310	4,52	1,2	0

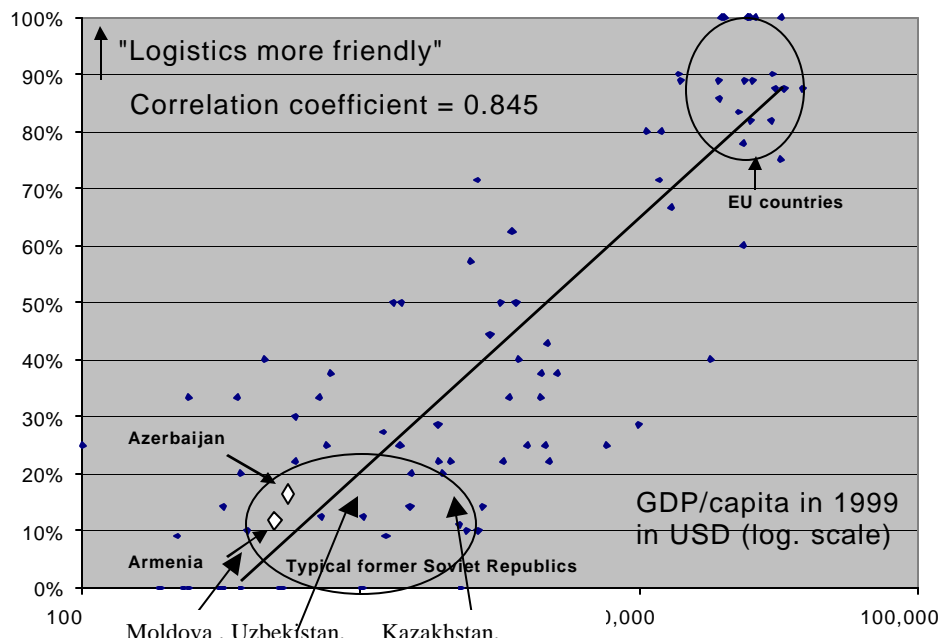
Source: Ojala and Queiroz (eds. 2001) Transport Sector restructuring in the Baltic States. The World Bank – the survey collecting these data was conducted by The Turku School of Economics, Finland

ATTACHMENT 6.

More information on the combined results of logistic friendliness, corruption and economic growth

The survey was conducted in November-December 2000 by contacting 60 different freight forwarders through e-mail. Among other questions, each respondent was asked to rate a set of pre-determined countries as to what extent he/she perceived the country as logistically “friendly” or “unfriendly”. The countries included in the e-mail questionnaire were based on the 90 countries included in the 2000 Corruption Perception Index (CPI) collected by Transparency International. Countries with the lowest level of perceived corruption were assigned 10, whereas countries with highest level of perceived corruption were assigned 1. For each country included in the CPI, the Gross Domestic Product (GDP) per capita figure for 1999 was collected using World Bank statistics. Between 7 and 12 independent respondents who were professional freight forwarding agents evaluated each country. For practical reasons, an individual respondent did not evaluate all the 90 countries in the CPI list. About 65 percent of the respondents were from EU countries, some 20 percent from the US, 10 percent from Latin America and the rest from other parts of the world. There are, however, no respondents from the former Soviet republics, so the information here reveals the perception of the CIS 7 countries by the non-CIS transport operators.

Figure 2.2. The ranking of countries in the logistics friendliness survey against their GDP/capita 1999, with the positions of CIS 7 countries in the study.



The combined indicator for logistical friendliness in the survey is the percentage of the responses, which stated that a given country was either logistically “friendly” or “unfriendly”. The results are only indicative and somewhat anecdotal, since they are based on a small number of responses, all of which are highly subjective assessments based on hands-on experience.

ATTACHMENT 7

Relevant transport corridors and maps

Transiting through Russia: Transit through Russia is close to being the lifeline for the CAR shippers. Therefore any impediments and their abolishment can have a huge impact on the survivability of the CAR businesses. The route via Russia has several advantages: once the Russian border is passed there are no more borders till the North Baltic seaports or only one to the Baltic ports. An important corridor out of Central Asia towards Europe is Almaty-Karaganda-Astana-Petropavlovsk-Ekaterinburg-Niznij Novgorod-Moscow-Minsk-Warsaw-Berlin. Transiting through Ukraine would cut the distance between Central Asia and Western Europe, but the security on this corridor however is reported to be the main concern. For overseas cargo the Baltic ports (Klaipeda, Riga, St. Petersburg) play an important role. Rail transit in Russia however can cost more if it is “international”, i.e. if the shipment will have to exit at a rail border crossing when heading towards a port in a Baltic country. On the other hand if the cargo transits to a Russian port, the rail freight is “domestic” and hence lower. In this case customs procedures are reported to be “lighter and faster”. “What you gain on the customs, lose on the ferry” – as the old proverb says, since the handling costs at the Russian ports are said to be higher. Still the overall costs are lower. Russia is also important for traffic towards Japan. The Trans-Siberian railway line has the advantage also of the same track gauge. As most of the route goes on flat land via Russia where infrastructure is considered to be acceptable, impediments are nearly exclusively institutional. The continued high share of foreign trade of some Central Asian countries suggests that access to routes to Russia and the barriers to trade on these routes are an important element in any strategy attempting to improve inter-regional trade from this region.

For Moldova, transit through Ukraine is also important, even though that route has reportedly high unofficial fees.

Shippers are particularly concerned with the customs practices when going through Russia. The recent IRU decision to suspend the application of the TIR system for Russia also underlines these concerns. The Russian federal government has recognized the importance of modern customs administration that facilitates trade rather than hampers it. The will to take actions is particularly strong in light of the WTO accession. The Customs development program of the federal government²⁶ is going to address issues, such as (1) Customs Control and Clearance; (2) Trade Facilitation; (3) Tax Policy; (4) Improving Legal Framework; (5) Organizational Structure and Operational Management; (6) Financial Management; (7) Human Resource Management and Training; (8) Improving Integrity; (9) Information Technologies; and (10) Project Management.

The **North-South Corridor** is to establish a more direct route between Russia-Iran and India. An Inter-governmental Agreement on an International North-South Transport Corridor signed in Saint Petersburg in September 2000 encompasses the common desire of the four signatories – India, Islamic Republic of Iran, Sultanate of Oman and Russian Federation – to develop transport linkages and services. However, the agreement only covers the route from India and Oman by

²⁶ To be supported by a World Bank loan/project (US\$ 140 million loan)

sea to and through the Islamic Republic of Iran and further on through the Caspian Sea and the Russian Federation.

Trans-Asian Railway North-South Corridor: In recent years there has been an upsurge of interest in the feasibility of rail container transport as a possible alternative to shipping between Northern Europe and the Persian Gulf with shipping connections to South and South-East Asia. This corridor initiative is an expanded – and earlier – version of the North-South link discussed above. It aims to serve a broader catchment area, too. In order to assess this corridor, ESCAP (2001) conducted a study to identify (i) all feasible rail and land-cum-sea routes connecting Northern Europe with the Persian Gulf through the Caucasus region, Central Asia and/or the Caspian Sea; (ii) The characteristics of these routes in terms of their lengths and the transit times they can offer, with due attention to average operating speeds as well as typical dwell times at border stations and transshipment points; and (iii) the possible presence of operational restrictions which might impede the smooth flow of goods along the routes. The ESCAP estimates showed a distinct transit time advantage for rail over shipping, reflecting the actual differences in distances. However, these estimates have been calculated on a series of optimistic assumptions. For example, as regards shipping, the 2-day dwell time in ports used in the calculation may be shorter than is actually the case. As regards rail, the times indicated consider unimpeded movements between countries, especially between the Islamic Republic of Iran and Pakistan, and between Pakistan and India. Meanwhile, land-cum-sea transit times suffer from the absence of regular, direct services from Bandar Abbas to ports in South and South-East Asia. While there is no doubt that the rail and land-cum-sea options are likely to offer attractive transit times in future, much will have to be done to capitalize on this advantage in the fields of tariffs, services and facilitation.

China: Potentially, China could offer an effective route for the CAR countries to reach the Chinese market, and to offer a transit route to ports and shipping connections available in East Asia. The China corridor is in competition with the Trans-Siberian rail corridor. The costs at the Russian part however are considered by shippers higher and services along the Northern corridor less reliable than what the Chinese route can offer.

The main concern for the Central Asian countries to use the land-based connections through China is the cumbersome border crossing. Traffic volumes are rather low and as such do not call for new investments. Discussions have been held with the Kyrgyz Republic, China and Uzbekistan for a rail connection through the Fergana Valley. A recent study²⁷ concluded that even anticipated volumes around 10 million tons would not make the new railway line, in a very difficult terrain, economically feasible. In stead, the development of a “Multi-Modal South Kyrgyzstan Transport Corridor” would have a considerably lower cost and greater development benefits. According to the consultants’ report, “the concept would be to develop a rail-road-rail corridor between the Fergana Valley and the Western PRC, using rail to Osh, road to Kashgar and rail for the remainder of the distance to Urumqi and points beyond.”²⁸ This would require container handling equipment facilities in Osh and Kashgar for transshipment between railcars and trucks. In any case, one transshipment would be required in the rail option because of the

²⁷ ADB, Technical Assistance Project No 5818-REG: Regional Economic Cooperation in Central Asia – Phase II (Post Buckley International, Inc., July 2000).

²⁸ Ibid.

different gauges of the Chinese and CIS railways. The estimated cost of improving transshipment facilities at Osh and Kashgar is US\$2 million. While this is a small cost, a detailed feasibility study of the minimum road improvements needed would be necessary prior to committing any investment.

China is not yet a member of IRU²⁹. Therefore, TIR trucks from other countries are not allowed to enter. For example goods to China through Kazakhstan should be shipped using Cost Insurance and Freight clauses (CIF) up to SINATRANS warehouses located close to the border, but they cannot continue further inland. Chinese trucks may enter into Kazakhstan and deliver goods up to warehouses in the border zone (currently there are three licensed terminals), in special cases Chinese trucks may follow until Almaty or other cities that are located close to the border.

Chinese goods in transit through Kazakhstan have to be unloaded and reloaded at the Kazakh - Chinese border to domestic vehicles. This is a cumbersome and time-consuming process, during which customs control is also carried out. This procedure could be compared with similar processes, which are followed for railway transportation, where the major reason for the change of wagons is the difference in gauge between the railway networks of China and Kazakhstan.

The **Indus Basin corridor** from Almaty to Karachi³⁰ is the shortest route on the map, however the cost of its development is huge and questions the immediate rationale.

Pakistan: Geographically, Pakistan is difficult to reach from the CAR or Caucasus countries, since practically all routes need to pass either Afghanistan or Iran, respectively. The quality of transport infrastructure in Iran is modest to poor, and that of Afghanistan is practically not in use. The distances are also an issue: a straight line from Tbilisi (Georgia) to Karachi is about 2,800 kilometers mainly over Iran and that from Dushanbe (Tajikistan) is about 1,500 kilometers mainly over Afghanistan. In 1998-1999, Kazakhstan, Kyrgyzstan, China and Pakistan concluded an agreement to develop the road corridor to the ports in Pakistan. The road is good but entails various mountain passes of 4,500 meter. So far the agreement has not been implemented. Land-based connections from Kyrgyzstan and Kazakhstan (as well as those from Uzbekistan and Tajikistan) require a transit through Afghanistan, which is currently hardly possible.

China has a 50-kilometer border with Afghanistan at elevations above 3,000 meters. The land connection on the Afghan side is a thin and has a 200 km long corridor at similar altitudes, with very a low-quality road connection. Despite their medium to long term potential, land-based connections from Central Asia to Pakistani ports cannot be utilized in the short term. Border crossing problems and restrictive trade and transport policies together with cumbersome or non-

²⁹ After the first Euro-Asian Road Congress China has also applied and is expected to join the system soon.

³⁰ Almaty-Bishkek-Kashgar-Islamabad via the Karakoram highway Karachi and Gwadar sea ports. Its further extension is also considered to link other Afghanistan-Pakistan routes surrounding Bolan, Gomal, the Khyber Pass and Pakistan's Northern areas. This extension would offer more connections to Turkmenistan, Uzbekistan and Tajikistan with the Arabian sea.

existent transit routes effectively limit current traffic flows. Apart from problems with accessibility, transport and trade facilitation issues³¹ need to be resolved in Pakistan, too.

Afghanistan: Border crossing to Afghanistan is currently very problematic from the Central Asian countries, yet there are high expectations in the TRACECA countries to see growing trade, initially in emergency shipments.

Due to the increased importance of the road corridor to Tajikistan and the expected increase in traffic following the road improvements, the construction of a 4-500 meter bridge across the river at Shirkhan Bandar, the upgrading of the important Herat-Chaghcharan-Bamian-Kabul link and the missing link on the national ring road, the Herat – Meymaneh – Sheberghan Road are considered by the government³².

The main road from Turkmenistan into Afghanistan from Atamurad is in very poor condition. On the Turkmenistan side road works are underway, but 30-40 kilometers are still to be done.

The development of the route towards Afghanistan is important for the CARs. The southern city of Termez is one of the few entry points into Afghanistan together with a few other ones in Turkmenistan. ADB supports the improvement of the road between Turkmenistan and Afghanistan. Once the infrastructure on the Afghanistan territory is available again, the route Termez-Mazaar i Sharif (Afghanistan)-Herat-Qandahar-Karachi (Pakistan) becomes a very attractive alternative for Uzbekistan, and potentially also for transit traffic through Kazakhstan and Russia.

Afghanistan's airspace is currently controlled by the US-led Regional Air Movement Control Center (RAMCC). Its mission is to ensure safe and efficient air transport operations by assigning arrival and departure times for all civil, military and coalition aircraft involved in military, humanitarian and commercial air operations at selected Afghanistan and Pakistan airfields. All flights to and from the airspace controlled by RAMCC need their permission, which is relatively easy to get for humanitarian and commercial flights.

Iran: In terms of logistics the ports of Iran are a promising option for shipments to South-East Asia. Experience in Iran varies from country to country, depending on the underlying political bilateral relationships. The corridor suffers serious capacity constraints, both in the Caspian and Persian Gulf ports and in the cross border operations by rail. On the Turkmenistan-Iranian rail border (Sarakhs) there is a need for gauge change and the current throughput capacity is constrained by the growing traffic (1 m t/year). At present this leads to costly re-loading and also to business sharing.

³¹ During the past two years, UNCTAD has pursued a TTF project in Pakistan (TTFP). Project meetings in early 2002 have included stakeholders at the Pakistan Federation of Chambers of Commerce and Industry (PFCCI) and important Customs representation. Among the key issues were: the coordination and compatibility of systems and electronic programs at Karachi Port and Customs facilities; Karachi port performance and potential for improvement; Customs House performance; need for ratification of the TIR Convention; need for a seamless logistic multi-modal mechanism to facilitate perishable exports, in particular from Punjab/through Karachi port and alternative airports; dwell-time at Karachi port for incoming cargo; Customs House sampling and examination of export cargo; etc.

³² The preparation of a US\$ 60 million Emergency Transport Rehabilitation IDA project has started, however the Afghan government has not yet confirmed its interest to borrow.

Under the current conditions, shippers from Kazakhstan and Kyrgyz Republic tend to send their cargoes through China because they consider the south corridor route unreliable, both in terms of expected costs and transit times. Especially Uzbekistan, Tajikistan and Turkmenistan face fewer problems on this route and use Iranian ports, such as Bandar Abbas.

A major barrier in international road transport is that local hauliers are preferred in operating transit transport. Iranian customs requires additional documentation, making the operations virtually impossible. At the same time Iranian hauliers may obtain transit permits to enter, for example, Kazakhstan.

The enclave of Nakhichevan, forming Azerbaijan's secondary border, is located to the west of Southern Armenia. It is accessible only by air or by road through Iran. As a result, domestic traffic from one point of Azerbaijan to another should go through Iranian territory and as such it is subject to the rules of international road transport (e.g. road permits).

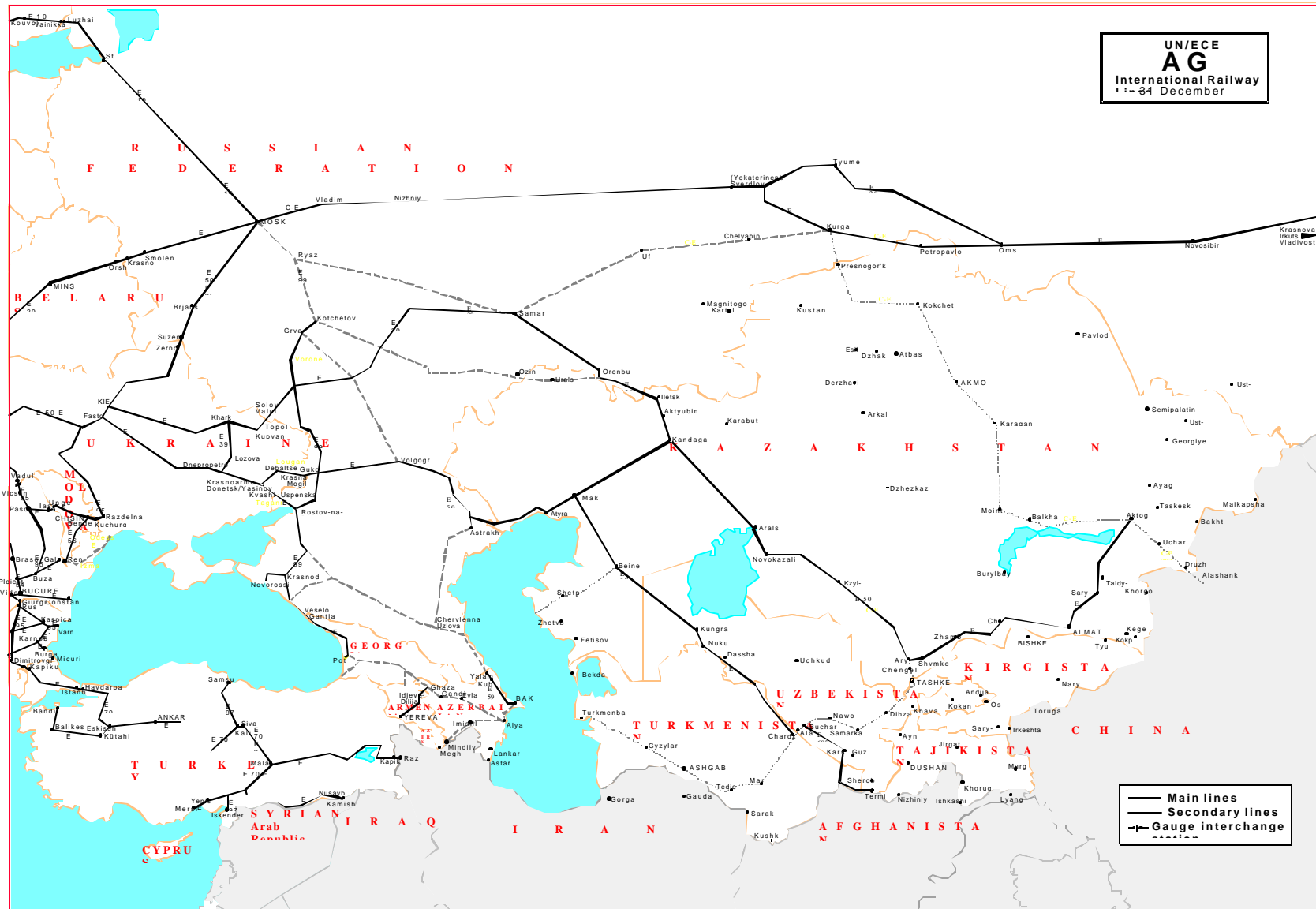
Turkey is both an important trading partner to CIS-7 countries and an important transit route especially for the Caucasus countries. Time sensitive goods also tend to be transported to Caucasus through Georgia by road from Turkey. A large volume of either unofficial or "suitcase" traffic is also very active at the border crossing point between Turkey and Georgia (Sarpi).

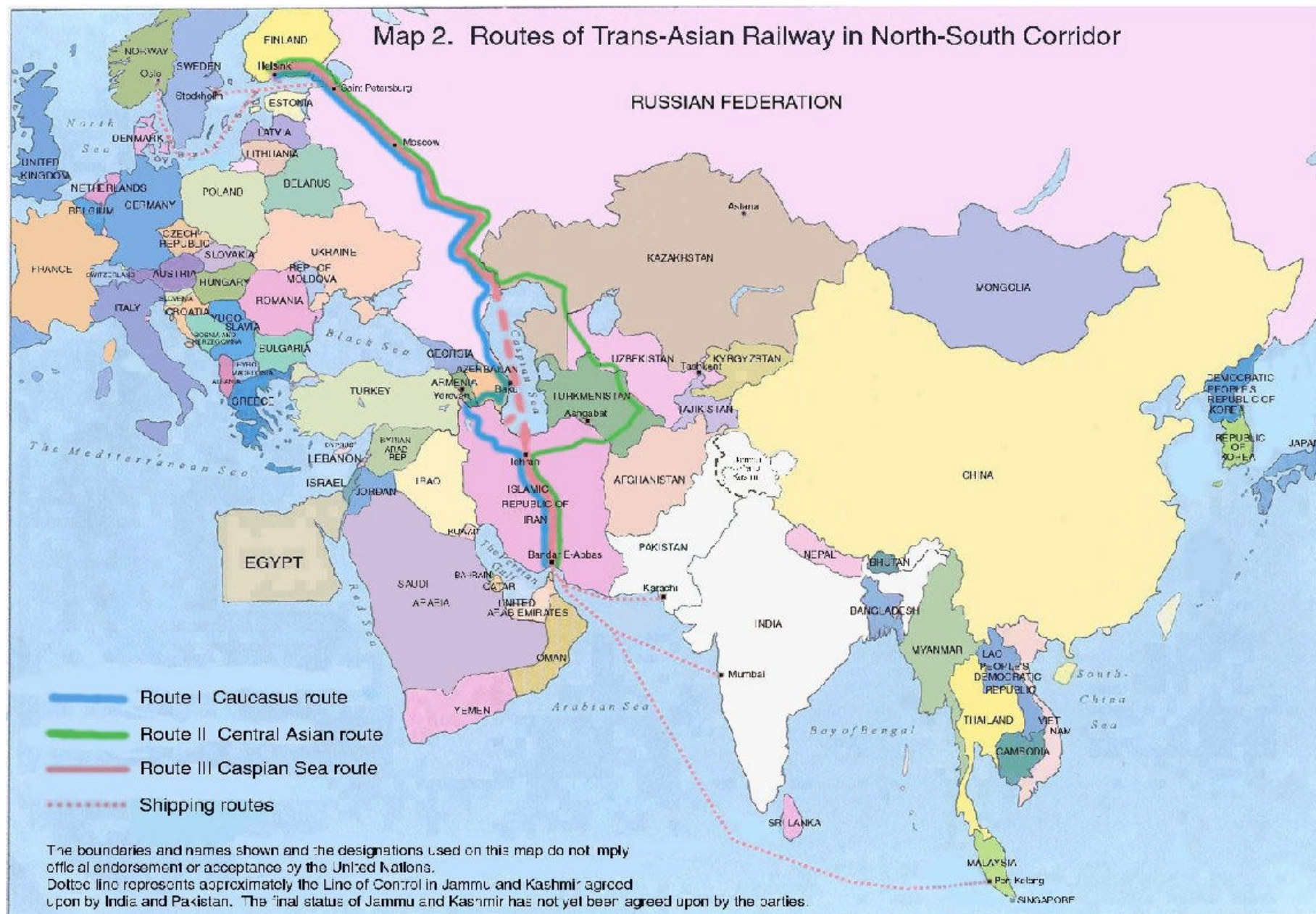
In rail transport, a new line is planned by the Georgian Railways between Tbilisi and northern Turkey, but the engineering obstacles, the low subsequent line speeds and the concomitant cost are likely to undermine the viability of this route.

Armenia's land border to Turkey is closed, as a result the only access to the foreign markets of Armenia can be either through Georgia or Iran.

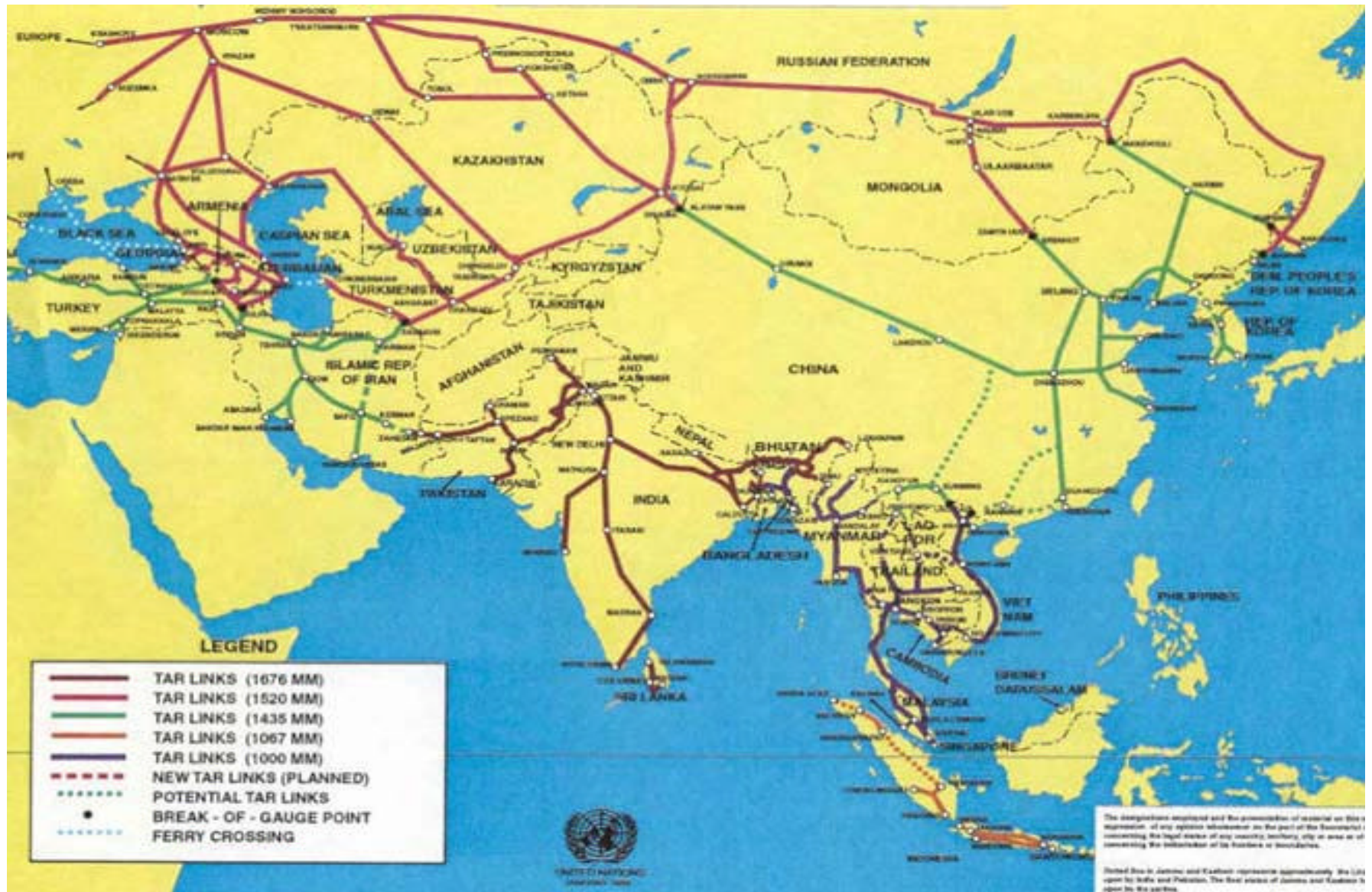


UN ECE: International Railways Network of the CIS countries





The Trans-Asian Railway Network



The railway line between Armenia and Turkey is closed (see the red line starting in Kars)

