ADB

CENTRAL ASIA

Increasing Gains from Trade Through Regional Cooperation in Trade Policy, Transport, and Customs Transit

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Preface

This report is one of the outputs of the Asian Development Bank (ADB) study on Central Asia regional cooperation in trade, transport, and transit.[1] The study was conducted under the overall supervision of Adrian Ruthenberg, Director, ECOC, by a team comprised of Bahodir Ganiev (team leader and main author of the report), Akmal Abdurazakov, Anthony Bayley, Sevinj Hasanova, Meruert Makhmutova, Roman Mogilevsky, Lauri Ojala, Richard Pomfret, David Roland-Holst, and Khodjamakhmad Umarov in collaboration with the Public Policy Research Center (Kazakhstan), the Center for Social and Economic Research CASE-Kyrgyzstan (Kyrgyz Republic), and the Institute of Economic Research (Tajikistan). Carmela Espina and Aziz Hayat provided research assistance; Cholpon Mambetova provided valuable inputs; Emmalou Guillarte provided secretarial assistance; and Ramelita Raymundo prepared the map and charts for the report. Durbek Akhmedov, Oraz Jandosov, Johannes Linn, and Sun Zhuangzhi served as peer reviewers of the report and provided useful comments on its earlier drafts. Useful comments on the earlier drafts were also provided by Hans-Peter Brunner, Bayanjargal Byambasaikhan, Natasha Davis, Dennis Ellingson, Masahiro Kawai, Mukhtor Khamudkhanov, David McCauley, Aashish Mehta, Indira Simbolon, Pradeep Sivastava, Craig Steffensen, Donneth Walton, Hong Wang, Clay Wescott, Xianbin Yao, and Fan Zhai.

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[1] The other outputs of the study are (i) country background notes on trade, transport, and transit in Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan; (ii) computable general equilibrium models of Kazakhstan and the Kyrgyz Republic; (iii) a background paper on barriers to trade in Central Asia for the April 2005 meeting of the Trade Policy Coordinating Committee of the Central Asian Regional Economic Cooperation Program; (iv) a background paper on barriers to transit trade in Central Asia for the October 2005 meeting of the TPCC; and (v) inputs on trade, transport, and transit to United Nations Development Programme (2005).

Abbreviations

ADB	Asian Development Bank
AH	Asian Highway
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CACO	Central Asian Cooperation Organization
CAEC	Central Asian Economic Community
CAREC	Central Asia Regional Economic Cooperation
CAR	Central Asian republic
CES	constant elasticity of substitution
CETS	common external tariff schedule
CGE	computable general equilibrium
CIS	Commonwealth of Independent States
EAEC	Eurasian Economic Community
EBRD	European Bank for Reconstruction and Development
ECO	Economic Cooperation Organization
ECOTA	Economic Cooperation Organization Trade Agreement
ELES	extended linear expenditure system
ERP	effective rate of protection
EU	European Union
FDI	foreign direct investment
FSU	former Soviet Union
FTA	free trade area
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GNP	gross national product
GPN	global production network
ITC	International Trade Center
MFN	most favored nation
NAFTA	North American Free Trade Agreement
PPP	purchasing power parity
PRC	People's Republic of China
PTA	preferential trade agreement
RTA	regional trade agreement
SES	Single Economic Space
TAR	Trans-Asian Railway
TIR	Transport International Routier
TRACECA	Transport Corridor Europe Caucasus Asia
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UAE	United Arab Emirates
UK	United Kingdom
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UN ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
US	United States
VAT	value-added tax
WTO	World Trade Organization

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Executive Summary

1. Purpose and Scope of the Report

This report seeks to show how Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan—five member countries of the Central Asia Regional Economic Cooperation (CAREC) Program referred to in the report as the Central Asian republics (CARs)—can increase the gains from participation in international trade through regional cooperation in trade policy, transport, and customs transit.

The CARs are all relatively small economies. Therefore, they need to promote trade and closely integrate into the international trading system to achieve sustainable economic development. Regional cooperation in trade policy can help them do this. In particular, reciprocal trade liberalization under regional trade agreements (RTAs) can help the CARs liberalize trade policy at relatively low costs, reduce the risks of protectionist measures by trading partners, create new trade, and improve social welfare. However, it can also divert existing trade and worsen social welfare in the CARs and hinder their full integration into the international trading system, depending on the design of the RTAs and the context in which they are implemented.

In contrast, regional cooperation in transport and customs transit is unambiguously beneficial for the CARs. Moreover, it is essential if the CARs are to overcome disadvantages and exploit advantages of their location, fully integrate into the international trading system, and achieve sustainable development.

Given their landlocked status, the liberalization of trade policy and regional cooperation in transport and customs transit are closely interlinked for the CARs. Progress in any of these areas will have a limited positive impact on trade if there is no progress in the others. For example, liberalization of trade policy by a CAR and its nonadjacent trading partner will not boost their bilateral trade much if movements of transport equipment and goods through connecting countries remain difficult or impossible due to deficiencies of transport infrastructure or restrictive transit systems in those countries.[1] Likewise, improvements in transport infrastructure and transit systems in neighboring countries will do little to closely integrate a CAR into the international trading system if its trade policy remains restrictive. If combined, however, regional cooperation in trade policy, transport, and customs transit can make a major contribution to the expansion of trade and economic development in the CARs.

Taking into account the importance of and the synergy between regional cooperation in trade policy, transport, and customs transit for the CARs, the report treats regional cooperation in Central Asia in these areas in a holistic manner. It attempts to quantify costs of the lack of cooperation and potential benefits of improved regional cooperation

[1] This is evidenced by the experience of the Kyrgyz Republic, which significantly liberalized its trade policy in the first half of the 1990s and gained better access to markets in many nonadjacent countries through its accession to the World Trade Organization in 1998, but was not able to expand its trade with those countries considerably due to poor transport links with non-former Soviet Union countries and difficulties with transit of goods and transport equipment through neighboring countries.

in the three areas for the CARs. The report is intended to inform policymakers in the region and contribute to the ongoing dialogue on regional economic cooperation in Central Asia.

2. Recent Trade Performance of the Central Asian Republics

The recent merchandise trade performance of the CARs has been characterized by (i) rapid expansion of trade; (ii) continuing dominance of a few primary commodities in exports; and (iii) concentration of trade in a small number of countries.

Following sharp fluctuations in the late 1990s caused by swings in world commodity prices and the 1998 Russian financial crisis, both merchandise exports and imports expanded considerably in all of the CARs in 2000–2004. By 2004, the overall level of trade—as measured by the ratio of merchandise exports plus imports to gross domestic product (GDP)—in all the CARs was higher than what one would expect given their size, location, and per capita GDP.

However, a handful of primary commodities (such as crude oil, metals, and cotton fiber) continued to dominate the CARs' exports. Indeed, the rise in world prices for these commodities was a major factor that contributed to the rapid growth of the CARs' exports in 2000–2004. At the same time, the participation of the CARs in global production networks (GPNs) and related trade in manufactured products remained very limited.

Furthermore, exports and, to a lesser extent, imports of the CARs were concentrated in a small number of countries. These are mostly large countries with which the CARs have close historical and cultural links and/or that are located closely to them (e.g., the People's Republic of China (PRC), Russian Federation, and Turkey). Others are distant countries to which most exports of primary commodities from the CARs go often to be reexported to other countries (e.g., Bermuda, Switzerland, and the United Arab Emirates). Still, others are developed countries from which the CARs import large quantities of machinery and equipment (e.g., Germany, South Korea, and the US). An analysis based on the gravity model suggests that there is a significant unrealized potential for trade between the CARs and most East and South Asian and Western European countries.

Heavy reliance on exports of a few primary commodities makes the CARs vulnerable to abrupt swings in volatile world prices for these commodities and complicates economic management. Their limited participation in GPNs and related trade in manufactured products means that the CARs derive relatively little benefits from trade in terms of attracting foreign direct investment, gaining access to advanced technologies, and fostering sustained economic development. The concentration of trade in a small number of countries makes the CARs vulnerable to changes in import demand in, and possible trade sanctions by, those countries.

3. Barriers to Trade in Central Asia

The recent merchandise trade performance of the CARs has been adversely affected by the presence of trade barriers pertaining to trade policy, transport, and transit systems in the CARs, their trading partners, and transit countries. Some of these trade barriers (such as additional transport costs and transit times needed for international shipments to and from the CARs due to their landlocked location and difficult topography) are beyond their control

while others (e.g., policy barriers created by the CARs and their trading partners) can be reduced by the CARs through unilateral or collective action.

The CARs had very similar trade policy regimes at the time of their independence, but these have diverged significantly since then. Today, trade policy regimes in the CARs vary widely from the very liberal in the Kyrgyz Republic to fairly liberal in Azerbaijan, Kazakhstan, and Tajikistan, to quite restrictive in Uzbekistan.

Tariffs are fairly low and uniform in Azerbaijan, Kyrgyz Republic, and Tajikistan. Kazakhstan has a rather complex tariff schedule with a large number of tariff bands and a high maximum tariff rate although its nonweighted average tariff rate is not high. Uzbekistan has a complex tariff schedule and a relatively high nonweighted average tariff rate. A serious problem with tariffs in Azerbaijan, Kazakhstan, Tajikistan, and Uzbekistan is that changes in tariff schedules are rather frequent and unpredictable. Also, there is an escalation of tariffs—i.e., a rise in tariff rates with a degree of processing—in all the CARs.

In addition to explicit tariffs, some imports to Azerbaijan, Kazakhstan, and Uzbekistan are subject to implicit tariffs in the form of taxes levied on imported goods but not on domestically produced goods or have higher rates for imported goods than for domestically produced goods. Azerbaijan and Kazakhstan also impose explicit taxes on exports of certain commodities.

All the CARs prohibit or license exports and/or imports of certain goods to protect national security, public health, and environment. Azerbaijan, Kazakhstan, and Uzbekistan do the same also to ensure the availability of certain goods in the domestic market at relatively low prices.

There are significant barriers to trade in Central Asia induced by trade policy of countries outside the region. In particular, exports of agricultural products from the CARs to developed countries face relatively high tariffs. Large subsidies that developed countries provide to their farmers further impede exports of agricultural products from the CARs.

Other significant barriers to trade in Central Asia are high transport costs and long and unpredictable transit times for international shipments to and from the CARs. This is not only due to the landlocked and remote location of the CARs and their difficult topography but also to deficiencies of the CARs' transport networks, and high costs and low quality of transport and logistics services in the region. In addition, there are difficulties with movements of goods and transport equipment across borders and through the territories of the CARs and neighboring countries. For example, the actual transport costs for shipments by road from Istanbul, Turkey to the CARs are about 2.0–3.0 times as expensive, while the actual transit time is 1.5–2.0 times as long as those in the "ideal world" (i.e., a world with balanced transport flows, competitive markets for transport services, smooth border crossing, low transit fees, and no visa problems and unofficial payments).

The costs of these trade barriers for the CARs are quite high. Notably, they have adversely affected the recent trade performance of the CARs in several ways. First, they have constrained the growth of trade in Central Asia and deprived the CARs of the benefits of foregone trade. Second, they have hindered the reorientation of trade in Central Asia from FSU to non-FSU countries. Third, they have limited the participation of the CARs in GPNs and related trade in manufacture products, and skewed the structure of their exports towards primary commodities.

4. Regionalism and Multilateralism in Central Asia

In an effort to expand trade and closely integrate into the global economy, the CARs have been pursuing both memberships in RTAs (regionalism) and accession to the World Trade Organization (WTO) (multilateralism). Since 1991, they have joined several regional organizations that involve or seek to reach a multilateral RTA. In addition, they have entered into numerous bilateral RTAs with other member countries of the Commonwealth of Independent States. The Kyrgyz Republic has also joined the WTO while the other CARs are at different stages of the accession process.

The RTAs involving the CARs generally have a narrow coverage and complex rules of origin and most of them have remained agreements on paper only. Consequently, their impact on the trade policy regime and the pattern of trade in the CARs has so far been limited. If fully implemented, however, the concluded and planned RTAs involving the CARs, such as the customs union of the Eurasian Economic Community (EAEC), may cause considerable trade diversion and have significant adverse effects on the CARs.

An analysis based on a computable general equilibrium (CGE) model of Kazakhstan suggests that implementing the EAEC customs union with a rise in Kazakhstan's external tariffs would substantially slow down the growth of real GDP in Kazakhstan. The cumulative shortfall in real GDP over ten years would exceed 31% of GDP in the base year. Implementing the EAEC customs union even with a reduction in Kazakhstan's external tariffs would slow down the growth of real GDP. However, its adverse effects on economic growth would be much smaller than in the previous scenario.

In contrast, the potential benefits of WTO membership for the CARs are considerable. First, accession to the WTO can help the CARs liberalize trade policy at relatively low costs and expand trade rapidly due to improved access to markets in a large number of countries that are already WTO members. Second, since many countries with which CARs "under-trade" (including most developed countries and emerging market economies in East and South Asia) are WTO members, accession to the WTO can also help the CARs fully realize their bilateral trade potential vis-à-vis these countries and diversify trade in terms of geographical distribution. Third, WTO membership can help the CARs reduce their vulnerability to possible protectionist measures by trading partners and make trade liberalization irreversible. This in turn makes the policy environment more predictable and conducive to trade, investment, and growth. Fourth, accession to the WTO also strengthens the CARs' bargaining power in trade negotiations, especially with countries seeking WTO membership. Finally, WTO accession can help the CARs strengthen their capacity for policy management and improve the quality of institutions.

WTO membership does not preclude regional cooperation in trade policy. In fact, there are several options for such cooperation that the CARs can pursue within the multilateral framework. First, the CARs may want to liberalize trade policy in a coordinated manner and on a nondiscriminatory basis. Second, the CARs that are not yet WTO members may want to coordinate their negotiating positions in the accession process with each other and with other countries seeking WTO membership. Third, once they become WTO members, the CARs may want to join issue-specific coalitions within the WTO, such as the groups of developing countries pressuring for changes in WTO rules on agriculture and elimination of agricultural subsidies in developed countries.

The potential benefits of WTO membership for the CARs have increased significantly with the accession of the PRC in 2001. They will increase further as more of their neighbors (including the Russian Federation) join the organization. Acceding to the WTO is, however, not enough for the CARs to realize the benefits of WTO membership. As the experience of the Kyrgyz Republic shows, good transport links with other WTO member countries and easy transit through neighboring countries are also necessary.

5. Transport Sector in Central Asia

The CARs inherited highly integrated transport networks from the former Soviet Union (FSU), which were built with little regard for their then administrative borders and mostly oriented towards the Russian Federation. At the same time, their transport links with non-FSU neighboring countries—such as Afghanistan, PRC, India, Iran, Pakistan, and Turkey—were poorly developed. Since the break-up of the FSU, the CARs have sought to improve their transport links with non-FSU countries. Yet, a lack of financial resources and poor coordination of national transport infrastructure projects have been slowing down progress in integrating their transport networks into international transport networks.

Simultaneously, the CARs have built a number of new roads and railways primarily to avoid transit through a neighboring country. While these new roads and railways have had certain positive impact on the development of the CARs that built them, it is not obvious that their construction would have been justifiable if the use of existing transport networks had not been beset by difficulties with cross-border movements of people, transport equipment, and goods. A better use of limited financial resources would have been the development of international transport corridors and the rehabilitation and maintenance of existing networks. The CARs possess extensive transport networks but many of them are in poor condition and require rehabilitation. Other elements of transport infrastructure—with the exception of air transport infrastructure in Azerbaijan, Kazakhstan, and Uzbekistan—are also underdeveloped and in poor condition.

Although the CARs have made considerable progress in establishing a legal and regulatory framework for the transport sector since independence, much remains to be done. The existing frameworks are weak and nontransparent. National transport legislation and regulations of the CARs differ significantly and create serious obstacles to cross-border and transit traffic.

The availability, quality, and costs of transport services in the CARs compare unfavorably with many other countries. Lack of competition is one of the main reasons for the low quality and high costs of rail, air, and international road transport services. Competition is stiff in the market for domestic road transport services. The cost of these services is relatively low, but the quality is not high either. The availability of multimodal transport operations is limited and the costs of international transport services for small cargo are relatively high due largely to the underdevelopment of logistics infrastructure and services.

There have been a number of regional cooperation initiatives aimed at removing the deficiencies of transport infrastructure and services and facilitating cross-border and transit traffic in the CARs and neighboring countries. Notably, the CAREC member countries have recently agreed on the Regional Transport Sector Road Map, which formulates the strategic priorities for regional cooperation in the transport sector and addresses most of the deficiencies of road and rail transport in Central Asia. The CARs and other CAREC member countries now need to develop and

carry out a detailed time-bound action plan to implement the Road Map. They should also consider extending the Road Map to address deficiencies of air transport in Central Asia.

6. Road Transit Systems in Central Asia

Since the CARS are all landlocked and, in various degrees, serve each other as transit countries, the transit systems in place in the CARs have a significant effect on international trade in Central Asia. Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan's transit systems also affect domestic trade in at least one neighboring CAR. Indeed, certain aspects of the transit systems in the CARs do impose constraints on cross-border movements of goods by rail and road. These are, however, not crucial for cross-border movements of goods by rail for which transport-related factors are a binding constraint. In contrast, inadequacies of the road transit systems impose a binding constraint on trade in Central Asia.

The main deficiency of the national road transit systems of the CARs is that they cover only one country and do not provide a "chain guarantee." Hence, a transport operator undertaking customs transit under the national transit systems has to submit separate transit documents and provide separate guarantees in the country of origin, the country of destination, and each of the transit countries. This can be time-consuming and costly. In addition, there are difficulties in providing a guarantee in any form. In the absence of a guarantee, customs transit under the national transit systems usually requires convoying which also can increase transport costs and transit time substantially. That is why the variable costs of the national road transit systems in the CARs are quite high.

The most important international road transit system used in the CARs is the Transport International Routier (TIR) system—that is, the international transit system based on the TIR Convention. Created more than 50 years ago, the TIR system has proven to be very effective in facilitating customs transit by road, especially when it involves crossing multiple borders. However, the fixed costs of the system (i.e., the cost of transport equipment that meets the requirements of the TIR Convention and the cost of insurance guarantee that the TIR system provides) are too high for most transport operators from the CARs. Moreover, the benefits of the system are not always realized in the CARs due to border infrastructure problems, noncompliance by customs, and corruption. Even if the benefits of the TIR transit system had fully been realized, it would have not been suitable for short-distance customs transit due to its high fixed costs.

The CARs have been trying to establish regional transit systems that could be used for intraregional customs transit by road and would be less costly than the TIR and the national road transit systems. To this end, they have signed numerous transit agreements with each other as well as with other countries. These agreements have, however, had a very limited effect on customs transit in the CARs for a variety of reasons. Some of them have not entered into force while those that have entered into force have not been implemented or have not reduced the costs of customs transit significantly due to an inadequate design.

Consequently, the need remains for the CARs and their neighbors to develop an effective and relatively inexpensive regional transit system for short-distance customs transit by road. Given the success of the TIR system, it could serve as a blueprint for the regional transit system. But the design of the TIR system would have to be modified to reduce its fixed costs. Since negotiating multiparty agreements is relatively difficult, several bilateral

transit systems could initially be set up as an intermediate step towards the regional transit system. However, these bilateral transit systems would have to be compatible and similar to the TIR system in order for them to become stepping stones for the regional transit system.

Parallel to developing the regional transit system, the CARs need to ensure full implementation of the TIR Convention on their territories. Although the TIR Convention is a multilateral agreement, the CARs could use regional cooperation mechanisms to put peer pressure on those countries which have signed the Convention but do not fully adhere to it. They could also use regional cooperation mechanisms to encourage the PRC to join the TIR Convention as soon as possible.

7. General Equilibrium Analysis of the Effects of Regional Cooperation in Trade Policy, Transport, and Customs Transit on the Kyrgyz Republic

Quantitative estimates based on a CGE model of the Kyrgyz Republic suggest that the CARs would reap considerable benefits from regional cooperation in trade policy within the multilateral framework and increased regional cooperation in transport and customs transit. A reduction in cotton subsidies and a resulting rise in world cotton prices (that regional cooperation in trade policy within the multilateral framework could bring about) and reductions in transport costs (resulting from increased regional cooperation in transport and customs transit) would substantially accelerate economic growth in the Kyrgyz Republic. If world cotton prices rose by 35% in 2006, the cumulative growth of real GDP in 2006–2015 relative to 2005 would be 33.4% higher than in the baseline scenario. If the estimated reductions in transport costs due to increased regional cooperation in transport and customs transit took place in 2006, the cumulative growth of real GDP would be 112.3% higher than in the baseline scenario. If both events occurred in 2006, the cumulative growth of real GDP would be 150.2% higher than in the baseline scenario. By comparison, a 50% unilateral, nondiscriminatory, and uniform (across products) reduction in tariffs would speed up the cumulative growth in real GDP over the decade by a relatively modest 27.6%.

While similar estimates for the other CARs are not yet available, some general qualitative assessments can be made. In particular, one can expect unilateral nondiscriminatory trade liberalization to have greater positive effects on Azerbaijan, Kazakhstan, Tajikistan, and especially, Uzbekistan because their tariffs are, on the average, higher than those of the Kyrgyz Republic. Tajikistan is likely to benefit even more than the Kyrgyz Republic from increased regional cooperation in transport and customs transit. The reason is that high transport costs and long and unpredictable transit times are a particularly serious trade barrier for Tajikistan. Although the benefits of increased regional cooperation in transport and customs transit for Azerbaijan, Kazakhstan, and Uzbekistan are likely to be smaller than those for the Kyrgyz Republic and Tajikistan, one can still expect them to be considerable. Finally, Tajikistan and Uzbekistan are likely to gain more from a reduction in cotton subsidies in developed countries than the Kyrgyz Republic since cotton accounts for a larger share of their exports and GDP than those of the Kyrgyz Republic.

8. Overall Conclusions

Although the CARs have been able to expand trade considerably in recent years, they derive relatively little benefits from, and pay relatively high costs for, participation in international trade. This is because their exports are dominated by a handful of primary commodities; they take very limited part in GPNs and related trade in manufactured products; and their trade is concentrated in a small number of countries.

The presence of numerous trade barriers pertaining to trade policy, transport, and transit systems in the CARs, their trading partners, and transit countries have constrained the growth of trade in the CARs. It has also limited their participation in GPNs and related trade in manufactured products, skewed the structure of their exports towards primary commodities, and hindered reorientation of their trade from FSU to non-FSU countries. Hence, regional cooperation in trade policy, transport, and customs transit can help the CARs increase the gains from participation in international trade and reduce the associated costs inasmuch as it reduces these trade barriers.

However, regional cooperation in trade policy in the form of preferential trade liberalization under RTAs is unlikely to do so in itself. The numerous RTAs that the CARs have signed since independence have not been effective in reducing the barriers to trade in Central Asia in part because many of them have not been implemented. Moreover, some of them may have significant adverse effects on the CARs if they are fully implemented with their current design. Therefore, the CARs need to prioritize accession to the WTO and pursue regional cooperation in trade policy within the multilateral framework. To fully realize the benefits of WTO membership, they also need to improve regional cooperation in transport and customs transit.

Increased regional cooperation in transport and customs transit would help the CARs reduce transport costs and make transport times shorter and more predictable for international shipments. This would in turn help the CARs expand trade, especially with distant countries; take more active part in GPNs and related trade in manufactured products; and diversify trade in terms of both geographical distribution and commodity composition. Facilitation of cross-border movements of goods and transport equipment would also help the CARs avoid the construction of new bypass railways and roads; allocate more resources for the rehabilitation and maintenance of existing transport networks; their closer integration with international transport networks; and become a land bridge for rapidly expanding trade between East and South Asia and Europe.

Accordingly, deep regional economic integration that involves not only preferential trade liberalization but also increased regional cooperation in transport, customs transit, and other areas of trade facilitation can be beneficial for the CARs. The positive effects of increased regional cooperation in transport and trade facilitation can more than offset the negative effects of preferential trade liberalization. This is more likely to be the case when preferential trade liberalization is accompanied by broad-based trade liberalization resulting in fairly low nonpreferential policy barriers to trade.

1
Introduction

1.1 Benefits of International Trade

International trade generally improves social welfare and stimulates economic growth.[1] Trade enables countries to specialize in line with their comparative advantages and achieve economies of scale that would not be possible without specialization. This improves the allocation of resources and social welfare in the short to medium term. Trade also improves social welfare in the short to medium term by increasing the variety and improving the quality of goods available to consumers. In the medium to long term, trade leads to higher rates of economic growth and sustained improvements in social welfare by enhancing competition, disciplining policy makers, and increasing investment in both physical and human capital. In developing countries, trade fosters economic growth and improves social welfare also by helping them attract foreign direct investment (FDI) and acquire modern technologies available in developed countries through imports, FDI inflows, and participation in global production networks (GPNs).[2] Economic growth and improvements in social welfare in turn reduce poverty inasmuch as they raise income and improve the welfare of the poor and increase resources available for social security, primary health care, education, water supply, and other basic services. Accordingly, openness to international trade is widely regarded as a necessary, albeit not sufficient, condition for any country—particularly a small one—to achieve sustainable economic development.

There are, however, three caveats to this general rule. First, participation in international trade has certain costs. Most notably, it makes a country vulnerable to fluctuations in world prices and possible protectionist measures by trading partners. This vulnerability is

[1] Theoretically, the impact of trade on social welfare is always positive in the absence of market failures and policy-induced distortions, but may or may not be negative in the presence of market failures or policy-induced distortions (see, for example, Bhagwati, Panagariya, and Srinivasan [1998]). Likewise, there are theoretical models in which the impact of trade on economic growth is positive and models in which it is negative. Empirically, a large body of evidence suggests that trade stimulates economic growth, although there are several conceptual and technical difficulties in establishing a link between trade and growth. See Berg and Kruger (2003) and Winters (2004) for a survey of the recent empirical literature on the relationship between trade and economic growth.

[2] Participation in global production networks (GPNs) requires participation in international trade. It also increases the gains from trade for developing countries by enabling them to specialize in the labor-intensive stages of manufacturing processes (which, overall, might be technology or capital intensive) and helping them gain better access to markets in developed countries, attract foreign direct investment (FDI), acquire modern technologies, boost manufactured exports, and climb the value-added ladder. At the same time, participation in GPNs poses certain risks for developing countries. See ADB (2003) and Memedovic (2004) for a more detailed discussion of opportunities and challenges GPNs represent for developing countries.

particularly high when a country's exports and/or imports are dominated by primary commodities, the prices of which tend to be more volatile than those for manufactured products, and when its trade is concentrated in a small number of large trading partners, for which trade with the country concerned is relatively insignificant.

Second, in the presence of market failures and policy-induced distortions, trade may have an adverse impact on social welfare and economic growth. For example, trade between two countries generated by imposing artificial specialization on them with little regard for their comparative advantages—as was the case with inter-republican trade in the former Soviet Union (FSU)—can worsen social welfare and hinder economic growth in both countries. Exports of products that are kept competitive in international markets through neglect of negative effects of their production on environment, use of forced cheap labor or mandatory procurement at low domestic prices—as is the case with cotton in some FSU countries—are likely to have a negative impact on social welfare in the exporting country. Similarly, an increase in the volume of exports through a reduction in the export price may result in "immiserizing growth," that is, output growth accompanied by a worsening of social welfare.[3] If there is a so-called "infant" industry—i.e., an industry that is not competitive at present but will become such if protected from foreign competition for a certain period—temporary protection of this industry from foreign competition may improve social welfare compared with free trade.[4]

Third, to be able to participate in and benefit from international trade, a country must have policies, institutions, and infrastructure that support and promote trade. These include liberal trade policy, sound macroeconomic and competition policies, favorable foreign exchange and tax regimes, rule of law, well-functioning financial and marketing institutions, good transport and communication infrastructure, efficient transport and logistics services, and customs administration and border management that facilitate, rather than obstruct, trade.[5] Adopting some of the trade-conducive policies is, however, not costless; building trade-supporting institutions is a relatively long process; and developing good infrastructure requires substantial financial resources. Notably, liberalizing trade policy leads to painful reallocation of resources with output declines, lower wages, and layoffs in previously protected import-competing sectors. This may increase poverty in the short term, depending on which sectors the poor are mostly employed in, how these sectors are affected by trade liberalization and several other factors.[6] In addition, trade liberalization usually increases imports more than exports in the short term. This creates/increases the trade deficit and often necessitates a depreciation of the real exchange rate with negative consequences for inflation, macroeconomic stability, output growth, and poverty.[7]

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3 Bhagwati (1968).

4 It is worth noting, however, that protecting an "infant" industry from foreign competition improves social welfare compared with free trade only under certain circumstances. And even when it does so, it is a second-best policy intervention compared with targeted subsidization aimed at enhancing the competitiveness of the "infant" industry. Furthermore, for "infant" industry protection to improve social welfare compared with free trade, it must be set at the correct level for the correct period and applied only to those industries that need temporary protection to become competitive. This is almost impossible to do in practice, which largely explains the failure of import-substitution strategies in many countries. Baldwin (1969) shows that trade policy is not an appropriate tool to support an "infant" industry. Bhagwati (1978) and Krueger (1978, 1995, and 1997), among others, discuss reasons for the failure of import substitution strategies.

5 See World Trade Organization (WTO) (2004) for a discussion of the relationship between international trade, on the one hand, and macroeconomic policies, infrastructure, market structure, and institutions, on the other; and World Bank (2006a) for an analysis of the effects of the trade regime, trade facilitation infrastructure and institutions, domestic competition, and governance in the group of 27 countries of Eastern Europe and the former Soviet Union on their recent trade performance.

6 See Winters, McCulloch, and McKay (2004) for a discussion of channels through which trade liberalization affects the poor and for a survey of evidence on the impact of trade liberalization on poverty.

7 Using panel data and times series/cross section analysis for a sample of 22 developing countries, Santos-Paulino and Thirlwall (2004) find that trade liberalization stimulates export growth but raises import growth more, leading to a worsening of the balance of trade and the balance of payments.

1.2 Role of Regional Cooperation in Trade Policy, Transport, and Customs Transit in Increasing Gains from Trade[8]

Regional economic cooperation can help countries adopt policies, build institutions, and develop infrastructure they need to expand trade. It can also help increase the gains from participation in international trade and reduce the associated costs. In particular, regional cooperation in trade policy in the form of reciprocal preferential trade liberalization under a regional trade agreement (RTA) can help the participating countries liberalize trade policy at relatively low costs, reduce the risk of possible protectionist measures by trading partners, boost intra-regional trade, and overcome domestic political resistance to broader trade liberalization. Insofar as it leads to broad-based trade liberalization in individual countries, an RTA contributes to multilateral trade liberalization and complements the multilateral trading system that the World Trade Organization (WTO) represents.

However, an RTA not only creates trade between member countries but also diverts trade between member and nonmember countries. Consequently, its net effect on social welfare in member countries and the world as a whole is theoretically ambiguous. Moreover, an RTA can give rise to vested interests in partial trade liberalization, which will oppose broader trade liberalization and make it politically more difficult to carry out. Because of its discriminatory nature, an RTA can also weaken the multilateral trading system, which is based on the principle of nondiscrimination. Whether a particular RTA improves or worsens social welfare, facilitates or hinders broad-based trade liberalization, and complements or weakens the multilateral trading system depends on a number of factors, including the design of the RTA and the context in which it is implemented (see Box 1.1).

Yet, regional cooperation in trade policy need not involve an RTA. Instead, it can focus on a policy dialogue aimed at promoting nondiscriminatory unilateral trade liberalization—as has been the case with the Asia-Pacific Economic Cooperation (APEC)—or coordination of positions in multilateral trade negotiations—as is being done by the group of 20 developing countries (referred to as G-20) in the ongoing Doha Round of multilateral trade negotiations under the auspices of the WTO. Such forms of regional cooperation in trade policy can help reduce policy-induced trade barriers and distortions not only in the participating countries but also in their nonparticipating trading partners.

Other important areas in which regional economic cooperation can help countries expand trade, increase the gains from participation in trade and reduce the associated costs are transport and customs transit. Regional cooperation in these areas in the form of coordinated development and closer integration of national transport networks with each other and with international networks, reciprocal liberalization of trade in transport services, harmonization of transport regulations, facilitation of customs transit, etc. can substantially reduce transport costs, make transit times shorter and more predictable and boost not only intra-regional, but also inter-

[8] Here and in the rest of the report, the term "regional cooperation" refers to coordinated or joint actions by a group of countries, which are not necessarily located in the same geographical region. "Trade policy" refers to taxes as well as quantitative and administrative restrictions directly aimed at affecting levels, commodity composition, and/or geographical distribution of trade. These include tariffs and other taxes on imports, export taxes and subsidies, quantitative restrictions on imports and exports, restrictions on access to foreign exchange for imports, and antidumping measures. Taxes and restrictions (such as taxes on domestic consumption that are equally levied on both imported and domestically produced goods and restrictions on domestic distribution of exportable and imported goods–the primary objective of which is not to affect trade–are not considered as instruments of trade policy though they may affect trade. "Transport" refers to transport infrastructure and services as well as legal and regulatory framework for the transport sector. "Customs transit" refers to transportation of goods without paying duties and taxes due on domestic consumption. A distinction is made between external and internal customs transit. "External customs transit" refers to transportation of goods through a transit country. "Internal customs transit" refers to transportation of goods from the point of customs clearance to the point of border crossing in the exporting country or from the point of border crossing to the point of customs clearance in the importing country. A set of rules and procedures under which customs transit is carried out is referred to as a "transit system."

Box 1.1: Regional Trade Agreements

A regional trade agreement (RTA) is an agreement among several countries (not necessarily belonging to the same geographical region), whereby they give each other trade preferences on a reciprocal basis. An RTA can be bilateral (involving two countries) or multilateral (involving more than two countries). Regional integration arrangements involving an RTA are commonly divided into the following five basic categories according to the degree of integration they provide:

1. A Preferential Trade Agreement (PTA), whereby the member countries lower, but not fully eliminate, policy barriers to trade with other member countries;
2. A Free Trade Area (FTA), in which member countries fully eliminate policy barriers to trade with other member countries, but are free to maintain different policy barriers to trade with nonmember countries;
3. A Customs Union, in which member countries fully eliminate policy barriers to trade with other member countries and adopt common tariffs on imports from nonmember countries;[9]
4. A Common Market, in which member countries set up a customs union and remove policy barriers to movements of factors of production, including labor and capital; and
5. An Economic Union, in which member countries set up a common market, adopt a single currency, and conduct common macroeconomic policies.

The greater the degree of integration an RTA provides, the more difficult it is to negotiate. In particular, custom unions are more difficult to negotiate than PTAs and FTAs because a customs union requires agreements on common external tariffs and on how tariff revenue is to be divided among the members. PTAs and FTAs do not require such agreements, but must be supported by rules of origin to prevent deflection of trade, i.e., the routing of imports from a nonmember country to a member country through another member country, which has lower tariffs on imports from the nonmember country.

Three important issues concerning an RTA are:

(i) whether it improves or worsens social welfare in the member countries and the world as a whole;
(ii) whether it facilitates or hinders broad-based trade liberalization in the member countries; and
(iii) whether it is a "building block" or a "stumbling block" of the multilateral trading system.[10]

As first pointed out by Viner (1950) in the case of a custom union, the net effect on an RTA on social welfare in the member countries and the world at large is theoretically ambiguous. On the one hand, an RTA creates trade between member countries by displacing relatively inefficient production in one member country by more efficient imports from another member country. This improves social welfare in both member countries and has no impact on social welfare in nonmember countries. On the other hand, an RTA is likely to divert trade between member and nonmember countries by displacing relatively efficient imports from a nonmember country by less efficient imports from a member country. This worsens social welfare in the importing member country and the nonmember country imports from which are displaced. Therefore, with competitive markets and other things being equal, preferential trade liberalization under an RTA is inferior to nondiscriminatory broad-based trade liberalization, at least as far is its effect on social welfare is concerned.

The net effect of an RTA on the political feasibility of broad-based trade liberalization in the member countries is also theoretically ambiguous. On the one hand, an RTA can help a member country liberalize trade policy at relatively low costs and overcome domestic political resistance to broad-based trade liberalization by gaining better access to markets in the other member countries (in return for giving them better access to its markets) and liberalizing trade policy gradually. On the other hand, an RTA can give rise to vested interests in partial trade liberalization that will oppose broad-based trade liberalization and make it politically more difficult to carry out.

Despite their discriminatory nature, RTAs are legal under the World Trade Organization (WTO) rules. Article XXIV of the General Agreement on Tariffs and Trade (GATT) permits free trade areas and customs unions in merchandise trade. Article V of the General Agreement on Trade in Services permits RTAs in services. The 1979 Decision on Differential and More Favorable Treatment, Reciprocity, and Fuller Participation of Developing Countries ("Enabling Clause") allows for the special treatment of

[9] In practice, countries rarely fully eliminate policy barriers to trade even within free trade areas and Customs Unions. They usually maintain policy barriers to trade in certain products.

[10] The terms "building blocks" and "stumbling blocks" are due to Bhagwati (1991).

developing countries. RTAs are, however, contrary to the principle of nondiscrimination, which is fundamental to the multilateral trading system that the WTO represents. The principle requires that countries do not discriminate between their trading partners.

The ambiguity of the net effect of an RTA on social welfare and the political feasibility of broad-based trade liberalization in the member countries and the contradiction between the discriminatory nature of an RTA and the principle of nondiscrimination on which the multilateral trading system is based, have led to a big debate in economics literature. Proponents of RTAs argue that RTAs generally improve social welfare, facilitate broad-based trade liberalization, and complement the multilateral trading system.[11] Opponents of RTAs argue that RTAs generally worsen social welfare, hinder broad-based trade liberalization, and undermine the multilateral trading system.[12]

International experience with RTAs suggests that a particular RTA is more likely to improve (rather than worsen) social welfare, facilitate (rather than hinder) broad-based trade liberalization, and complement (rather than weaken) the multilateral trading system under the following conditions:

- The member countries are not involved in many, possibly, overlapping and inconsistent RTAs;
- The RTA has a broad product coverage, and is effectively implemented and open to new members;
- Preferential trade liberalization under the RTA is undertaken in conjunction with comprehensive structural reforms aimed at promoting trade and enhancing the competitiveness of the economy, and is accompanied by broad-based trade liberalization resulting in fairly low nonpreferential policy barriers to trade;
- The rules of origin are nonrestrictive if the RTA is a PTA or an FTA and, especially, if member countries are involved in several such RTAs; and
- Preferential trade liberalization under the RTA is part of efforts by the member countries to lower not only policy-related but also institutional, technical, and other barriers to intra-regional trade and achieve deep regional economic integration.

Sources: Devlin and Giordano (2004), Pal (2004), Schiff and Winters (2003), World Bank (2005a), and the authors.

regional trade.[13] In doing so, regional cooperation in transport and customs transit can help the participating countries diversify their trade in terms of geographical distribution. It can also help the countries attract FDI, increase their participation in GPNs and related trade in manufactured products, and diversify their exports in terms of commodity composition.

Regional cooperation in transport and customs transit aimed at reducing trade costs is particularly important for landlocked countries. This is because landlocked countries heavily rely on transportation by land through the territories of neighboring countries for international trade.[14] Poor transport infrastructure and restrictive transport and customs transit regulations in neighboring countries can increase transport costs considerably and make transit times long and unpredictable for landlocked countries. Goods can lose a substantial proportion of their value during transportation if transit times are long.[15] This is especially true of perishable goods (such

11 See, for example, Ethier (1998), Krugman (1991), and Summers (1991).

12 See, for example, Bhagwati (1995), Bhagwati and Panagariya (1996), Krishna (1998), Krueger (1993), Levy (1997), and Panagariya (1996).

13 Nordas and Piermartini (2004) conclude that the quality of infrastructure in two countries has a significant and relatively large impact on their bilateral trade. Wilson, Mann, and Otsuki (2003) find that raising the quality of seaport and airport infrastructure and improving the customs environment in the below-average Asia-Pacific Economic Cooperation (APEC) member countries to the APEC average would increase intra-APEC trade by about US$128 billion or 11.5%. World Bank (2006a) estimates that if the group of 16 countries of Eastern Europe and the FSU improve their customs regimes and port efficiency halfway to the average of the EU-15 (i.e., the 15 countries that comprised the European Union until its expansion in 2004), their trade with each other would increase by almost US$45 billion and trade with the rest of the world would expand by about US$81 billion.

14 See Faye et.al (2004) and United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) (2003) for a discussion of difficulties that landlocked countries face in accessing world markets and integrating into the global economy.

15 Hummels (2001) finds that each day in travel is worth an average of 0.8% of the value of a product for United States (US) trade in manufactured products.

as fresh fruits and vegetables) or those subject to frequent changes in consumer preferences (such as high fashion apparel). Unpredictable transit times necessitate larger precautionary inventory holdings and thus increase costs of production.[16] Consequently, unpredictable transit times preclude "just-in-time" business practices, which reduce costs of production by minimizing inventory holdings and require timely delivery.

High transport costs and long and unpredictable transit times undermine competitiveness of exports of landlocked countries in world markets, make their imports more expensive and limit their participation in international trade. Landlocked countries find it particularly difficult to export time-sensitive products, such as perishable goods, to compete with coastal countries in manufactured export activities, where imported inputs account for a large proportion of the value of output and profit margins are small, and to participate in GPNs, which often employ "just-in-time" business practices.[17] In turn, small volumes of trade make it more difficult for landlocked countries to exploit economies of scale in transport and reduce transport costs. Many developing landlocked countries are, therefore, trapped in the vicious cycle of small trade volumes keeping transport costs high and high transport costs constraining trade, economic growth, and development.[18] Regional cooperation in transport and customs transit can help landlocked countries break this vicious cycle and overcome the disadvantage of their location.[19]

Moreover, liberalization of trade policy and regional cooperation in transport and customs transit are closely interlinked for landlocked countries. Progress in any of these areas will have a limited positive impact on trade if there is no progress in the others. For example, reciprocal trade liberalization by a landlocked country and its nonadjacent trading partner will not boost their bilateral trade much if movements of transport equipment and goods through connecting countries remain difficult or impossible due to deficiencies of transport infrastructure or restrictive transit systems in those countries. Likewise, improvements in transport infrastructure and transit systems in neighboring countries will do little to integrate a landlocked country into the international trading system if its trade policy remains restrictive. If combined, however, regional cooperation in trade policy, transport, and customs transit can make a major contribution to the expansion of trade and economic development in landlocked countries (see Figure 1.1).

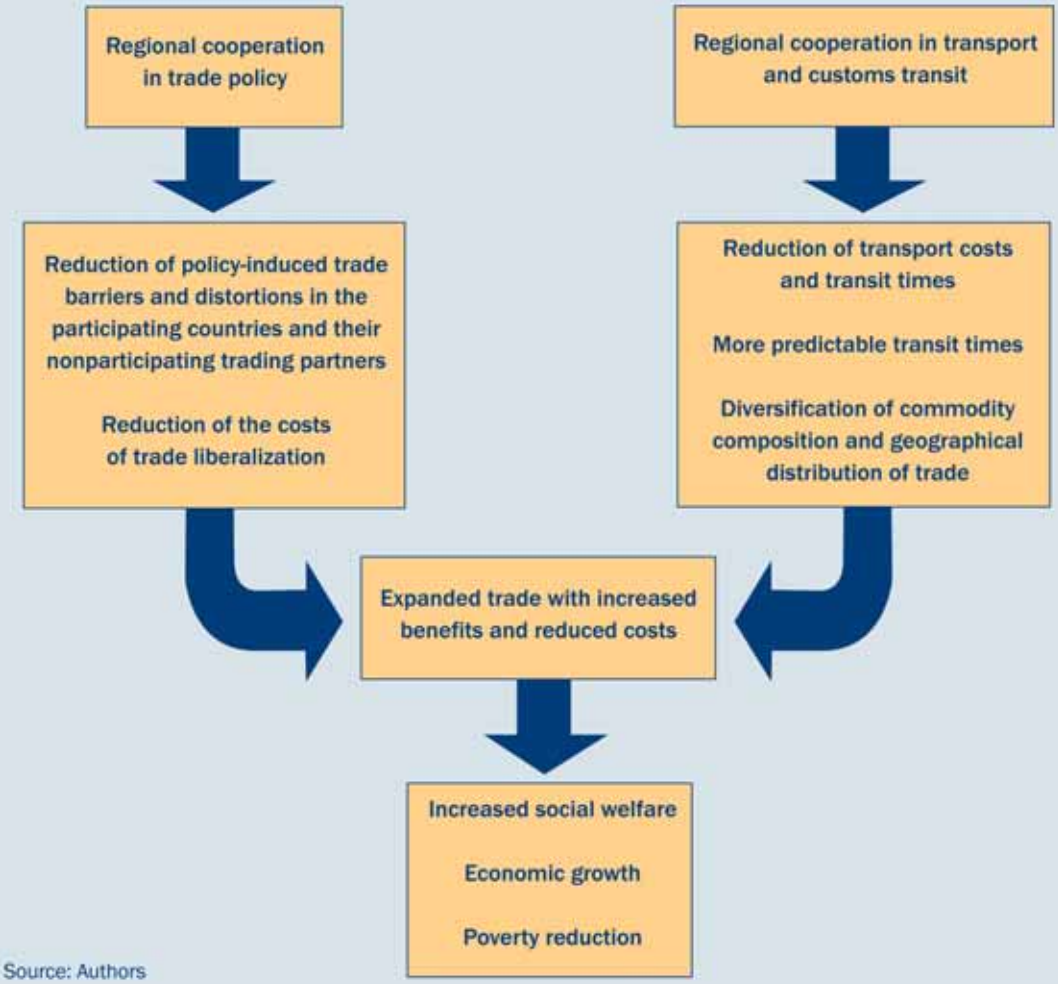
[16] Gaush and Kogan (2001) find that inventory holdings in the manufacturing sector in developing countries are two to five times higher than in the US, and estimate that cutting inventory levels in half would reduce the unit cost of production by over 20%.

[17] Djankov, Freund, and Pham (2006) find that, on average, each additional day spent on moving containerized products from a factory gate to a ship reduces trade by at least 1%. Delays have an even greater impact on exports by developing countries and exports of time-sensitive goods, such as perishable agricultural products. In particular, a one-day delay reduces a country's relative exports of time-sensitive to time-insensitive agricultural products by 7%. Hummels (2001) estimates that each additional day in ocean transit reduces the probability that a country will export to the US by 1.0% for all products and 1.5% for manufactured products. Limao and Venables (2001) find that a representative landlocked country has transport costs 46–55% higher and trade volumes about 60% lower than a representative coastal country.

[18] Radelet and Sachs (1998) find a strong relationship between shipping costs and economic growth. Their results imply that doubling shipping costs is associated with slower annual growth of more than 0.5%. Other things being equal, a landlocked country with shipping costs 50% higher than a similar coastal country grows at a rate 0.3% lower than the coastal country. Overman, Redding, and Venables (2001) find that access to foreign markets [which landlocked countries have difficulties with] explains some 35% percent of cross-country variation in per capita income. United Nations Development Programme (UNDP) (2004) classifies 12 out of 30 developing landlocked countries as "low human development," with 9 of the 14 countries with the lowest human development index being landlocked.

[19] Limao and Venables (2001) estimate that, if a representative landlocked country and its neighbors all improve their infrastructure—as measured by the lengths of roads, paved roads and rail per square kilometer of the country area, and the length of telephone lines per person—from the median level to the level of the 75% percentile in the corresponding group, the transport cost penalty for the landlocked country falls from 46–55% to 31–33%. APEC (2002) finds that customs-related trade facilitation would reduce trade transactions costs by 2.9–7.4% in industrialized APEC economies, 5.3–10.7% in newly industrialized APEC economies, and 6.6–14.8% in industrializing APEC economies.

Figure 1.1: How Regional Cooperation in Trade Policy, Transport, and Customs Transit Can Contribute to Economic Development in Landlocked Countries



Source: Authors

1.3 Purpose, Scope, Approach, and Structure of the Report

This report seeks to show how Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan—five member countries of the Central Asia Regional Economic Cooperation (CAREC) Program referred to in the report as the Central Asian republics (CARs)—can increase the gains from participation in international trade and reduce the associated costs through regional cooperation in trade policy, transport, and customs transit among themselves and with other countries—in particular, the other CAREC member countries.[20] The CARs are all relatively small economies and need to promote trade and closely integrate into the international trading system to achieve sustainable economic development (see Table 1.1). It is this consideration that partly motivated the CARs to conclude numerous RTAs and seek new

[20] The other member countries of the Central Asia Regional Economic Cooperation (CAREC) Program are Afghanistan, People's Republic of China (PRC), and Mongolia. More information about the CAREC Program can be found at http://www.adb.org/carec/ .

Table 1.1: Population and Gross Domestic Product of the Central Asian Republics, 2005

	Population	GDP at Current Prices	GDP at PPP-Based Valuation	Share of World's GDP at PPP-Based Valuation
	(In millions)	(In billion US dollars)	(In billion US dollars)	(In percent)
Azerbaijan	8.4	12.1	37.8	0.06
Kazakhstan	15.0	54.0	124.0	0.21
Kyrgyz Republic	5.2	2.3	10.6	0.02
Tajikistan	6.3	2.3	8.7	0.02
Uzbekistan	26.2	11.0	48.1	0.08

Note:
GDP – gross domestic product
PPP – purchasing power parity

Source: International Monetary Fund's World Economic Outlook Database. Available at http://www. imf.org/.

RTAs among themselves and with other countries. As noted above, involvement in RTAs can improve or worsen social welfare in the CARs. Further, it can help the CARs closely integrate into the international trading system or prevent them from doing so. Despite the importance of the issue, few studies analyze the consequences for CARs of involvement in an existing RTA or a proposed new RTA.[21]

Unlike regional cooperation in trade policy, regional cooperation in transport and customs transit is unambiguously beneficial for the CARs. Moreover, it is essential if the CARs are to overcome disadvantages and harness advantages of their location, fully integrate into the international trading system, and achieve sustainable development. On the one hand, the CARs are all landlocked and situated far from seaports and developed countries. This constrains their trade with developed and other distant countries. On the other hand, the CARs are located at the crossroads between East and South Asia and Europe and close to some of the world's largest and fastest growing emerging markets, such as the People's Republic of China (PRC), India, and Russian Federation. Furthermore, the CARs have inherited highly integrated transport networks from the FSU, which crisscross their national borders but are not yet fully integrated into international transport networks. Moreover, Tajikistan, Kyrgyz Republic, and Uzbekistan each have exclaves in the territory of the other two.[22] Movements of people, transport equipment, and goods from the exclaves to the other parts of the country they belong to inevitably involve transit through another country. In varying degrees, the CARs also serve each other as transit countries in international trade.

Regional cooperation in transport and customs transit is needed for the CARs to utilize their existing transport networks effectively and closely integrate them with

[21] To our knowledge, the only published study on the subject is Tumbarello (2005), which analyzes how the implementation of the customs union of the Eurasian Economic Community (EAEC) (then consisting of Belarus, Kazakhstan, Kyrgyz Republic, Russian Federation, and Tajikistan) would affect the accession of Belarus, Kazakhstan, Russian Federation, and Tajikistan to the WTO. Using a partial equilibrium analysis, it also estimates the welfare effects of the implementation of the customs union before and after the accession to the WTO.

[22] Exclave or enclave is a piece of the territory of one country within the territory of another country. The piece is an exclave for the country to which it belongs and an enclave for the country within which it is located.

international transport networks. Combined with measures to gain better access to their markets, regional cooperation in transport and customs transit would enable the CARs to take advantage of rapid economic growth and concomitant increases in import demand in the neighboring countries and boost exports to those countries. It would also help the CARs expand trade with more distant countries and become, once again, a land-bridge for trade between East and South Asia and Europe, which the region used to be during the period of the Silk Road. Moreover, the Kyrgyz Republic, Tajikistan, and Uzbekistan need to cooperate with each other in transport and customs transit to facilitate movements of people, transport equipment and goods between their exclaves and the other parts of the country.

A number of recent studies have looked into trade barriers pertaining to transport, customs administration and border management in CARs and neighboring countries and their effects on trade in the region. Raballand, Kunth, and Auty (2005) examine the impact of transport costs on trade between Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan, on the one hand, and the European Union, on the other. World Bank has commissioned audits of trade and transport facilitation in Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan and prepared a Tajikistan trade diagnostic study and a policy note on trade and transport facilitation in Azerbaijan.[23] World Bank has also prepared a report on trade and transport facilitation in Central Asia, which analyzes land transport, customs operations, and border management in Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan and their impact on trade and transport facilitation in the region.[24] World Bank (2006a) discusses issues in the transport sector and trade facilitation in a group of 27 countries of Eastern Europe and the FSU, including the CARs, and estimates potential gains from the strengthening of capacity for trade facilitation in a subgroup of these countries. These studies, however, do not analyze how regional cooperation can help the CARs reduce trade barriers relating to transport and customs transit—two areas in which regional cooperation is crucial for trade and transport facilitation in the CARs.

This report differs from the other studies on regional economic cooperation in Central Asia and trade and transport facilitation in CARs on two essential aspects. First, it treats regional cooperation in Central Asia in the areas of trade policy, transport, and customs transit in a holistic manner, taking into account the importance of and the synergy between regional cooperation in these areas for the CARs.[25] Second, the report attempts to quantify the costs of the lack of cooperation and the potential benefits of improved regional cooperation in the three areas for the CARs. At the same time, the report builds on and, to some extent, synthesizes earlier studies on this and related topics conducted or commissioned by the Asian Development Bank (ADB) as part of its efforts to promote regional economic cooperation in Central Asia.

Some of the findings of the ADB study on Central Asia regional cooperation in trade, transport, and transit presented in this report are also presented in the United Nations Development Programme (UNDP) (2005). The report, therefore, overlaps with UNDP (2005) to a certain extent. At the same time, it adds depth, detail, and new data to UNDP (2005) with respect to regional cooperation in trade policy, transport, and customs transit. In particular, it provides a more in-depth analysis of the recent merchandise trade performance of the CARs and presents more rigorous estimates of the effects of regional cooperation in these areas on the Kyrgyz Republic. Like UNDP (2005), the report is intended to inform policymakers in

[23] NEA Transport Research and Training (2003a, 2003b, 2003c, and 2003d) and World Bank (2003 and 2006b).

[24] World Bank (2005b).

[25] The report does not, however, discuss other areas of policy management, institutional building, and infrastructure development (such as macroeconomic management, financial sector reform, and development of communication infrastructure) that are also essential for promoting trade in Central Asia and where there is room and need for regional economic cooperation. UNDP (2005) discusses regional cooperation in some of these areas.

the region and contribute to the ongoing dialogue on regional economic cooperation in Central Asia.

The rest of the report is organized as follows. Chapter 2 reviews the recent trade performance of the CARs in terms of levels, commodity composition, and geographical distribution of merchandise exports and imports. Chapter 3 identifies the more important barriers to trade in Central Asia that can potentially be reduced through regional cooperation in trade policy, transport, and customs transit.[26] It also highlights the costs of these trade barriers, including their negative effects on the recent trade performance of the CARs. Chapter 4 reviews RTAs involving CARs and assesses their effects on the CARs. In particular, it presents estimates of the effects of implementing the customs union of the Eurasian Economic Community (EAEC) on Kazakhstan, based on Kazakhstan's computable general equilibrium (CGE) model. The chapter then reviews the status of the CARs' accession to the WTO and discusses the benefits and costs of WTO membership for the CARs and options for regional cooperation in trade policy that the CARs can pursue within the multilateral framework. Chapter 5 reviews the transport sector in Central Asia, identifies inadequacies of transport infrastructure, the legal and regulatory framework for the transport sector, and transport and logistics services in the CARs. It then discusses the benefits of regional cooperation in transport for the CARs and reviews recent initiatives in this area. Chapter 6 reviews the road transit systems in place in the CARs; identifies their inadequacies; and discusses how the CARs can facilitate customs transit through regional cooperation in this area among themselves and with neighboring countries. Chapter 7 presents estimates of the effects of regional cooperation in trade policy, transport, and customs transit on the Kyrgyz Republic, based on its CGE model. Chapter 8 summarizes key messages of the report and presents its recommendations.

[26] Henceforth in the report, Central Asia refers to the region comprised of Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan.

2

Recent Merchandise Trade Performance of the Central Asian Republics

When they were a part of the FSU, the CARs traded extensively with other FSU countries but little with the rest of the world. Moreover, their trade with other FSU countries was directed by central planners and conducted at administered prices. It therefore contributed little to improving social welfare and fostering sustainable economic growth in the CARs and other FSU countries. Following the breakup of the FSU in 1991, the CARs embarked on transition from a centrally planned to a market-based economy. As part of this process, they started introducing market-based principles in trade with FSU countries and opening up to trade with non-FSU countries. Their trade levels declined sharply in the early 1990s, reflecting the breakdown of trade links and payment mechanisms among the FSU countries and difficulties in engaging in trade with non-FSU countries. Since then, the CARs have made considerable progress in expanding market-based trade with both FSU and non-FSU countries and integrating into the global economy.

This chapter reviews the trade performance of the CARs in 2000–2004 in terms of levels, commodity composition, and geographical distribution of merchandise exports and imports.[1] While doing so, the chapter compares the trade performance of the CARs with that of the PRC and Mongolia, other two CAREC member countries, as appropriate.[2] The chapter also compares actual trade in the CARs with estimated potential trade in terms of the overall level of trade and bilateral trade between the CARs and their selected trading partners.

2.1 Levels of Trade

Following sharp fluctuations in the late 1990s caused by swings in world commodity prices and the 1998 Russian financial crisis, absolute levels of trade rose considerably in all of the CARs in 2000–2004 (see Tables A1.1–A1.2 in Appendix 1). In Azerbaijan and Kazakhstan, exports grew at an impressive 289% and 242%, respectively, in 2000–2004, boosted by an increase in the volume of oil exports and a rise in world oil prices. Imports soared by 238% and 250%, respectively, driven by an increase in imports of capital goods for oil sector development. In the Kyrgyz Republic, exports grew by 58% due largely to an increase in the volume of gold exports, a rise in the world price of gold and reexports of kerosene for the refueling of foreign military aircraft on the territory of the country. Imports grew by 57%, with increases in imports of a wide

[1] Preliminary data suggest that the merchandise trade performance of the Central Asian republics (CARs) in 2005 was similar to that in 2000–2004.

[2] Comparisons with Afghanistan, another member country of the CAREC Program, are not made because of the lack of reliable trade statistics on Afghanistan.

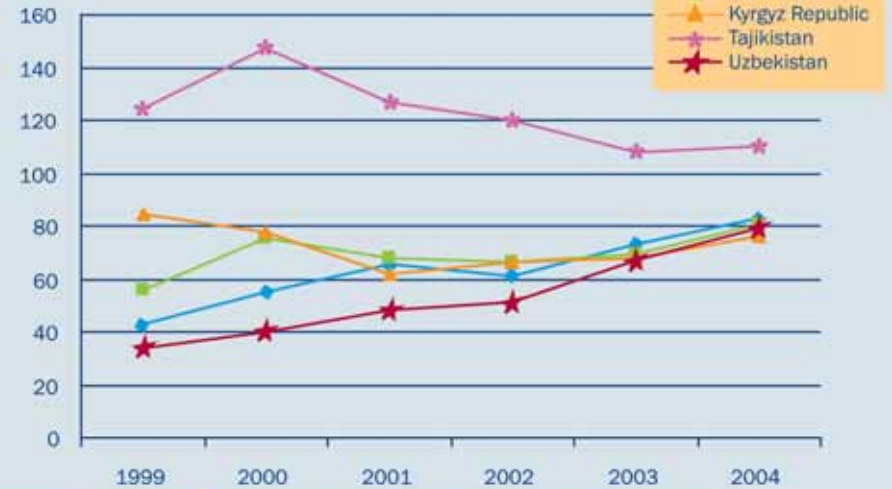
range of products. In Tajikistan, exports grew by 33% mostly on account of an increase in the volumes of aluminum and cotton exports and a rise in world prices for these commodities. Imports grew by 107%, driven by an expansion of imports of capital goods. In Uzbekistan, exports continued to decline in 2000–2002, but rebounded in 2003 and 2004, supported by devaluation of the national currency, a rise in world commodity prices, and an expansion of exports of energy products and transportation equipment. Imports also increased substantially in 2003 and 2004, reflecting the introduction of current account convertibility in late 2003 and significant increases in imports of capital goods for state-supported investment projects. In 2000–2004, exports grew by 46% while imports grew by 19%.

Since the growth of exports and imports outpaced the growth of GDP, the ratio of exports plus imports to GDP at current prices—a relative overall level of trade and a widely used measure of openness to international trade—rose considerably in Azerbaijan and Kazakhstan (see Figure 2.1). It more than doubled in Uzbekistan due to a combination of an increase in exports and imports and a decline in GDP in US dollars resulting from a devaluation of the national currency. In contrast, the ratio fell slightly in the Kyrgyz Republic and Tajikistan, as GDP in US dollars increased more than the sum of exports and imports in these countries. Nonetheless, Tajikistan remained the most open among the CARs by this criterion.

2.2 Commodity Composition of Trade

In terms of commodity composition, the CARs' exports remained highly concentrated in a handful of primary commodities (see Tables A1.3–A1.22 in Appendix 1). Crude oil accounted for 62.7% of Azerbaijan's exports in 2004, up from 42.6% in 1999 (see Figure 2.2). Likewise, the share of crude oil in Kazakhstan's exports rose to 56.8% in 2004 from 39.3% in 1999. Gold and cotton fiber comprised 46.2% of the Kyrgyz Republic's exports in 2004, compared with 45.4% in 1999. The combined share of aluminum and cotton fiber in Tajikistan's exports rose to 80.3% in 2004 from 57.4% in 1999. Although Uzbekistan has actively been trying to promote exports of manufactured products, primary commodities continued to dominate its exports. Gold, cotton fiber, and natural gas made up 64.1% of its exports in 2004, only slightly down from 67.7% in 1999.

Figure 2.1: Ratio of Merchandise Exports and Imports to GDP at Current Prices in the Central Asian Republics, 1999–2004
(In percent)



Source: Governments of the Central Asian republics and the authors' estimates.

Figure 2.2: Composition of Merchandise Exports of the Central Asian Republics, 1999 and 2004

Source: Governments of the Central Asian republics and the authors' estimates.

Indeed, the rise in world prices for primary commodities was a major factor that contributed to the rapid growth of exports in the CARs in 2000–2004. It is estimated that 128 percentage points of the 289% increase in Azerbaijan's exports and 102 percentage points of the 242% increase in Kazakhstan's exports were due to the rise in world prices for crude oil; 20 percentage points of the 58% increase in the Kyrgyz Republic's exports were due to the rise in world prices for gold; 17 percentage points of the 33% increase in Tajikistan's exports were due to the rise in world prices for aluminum and cotton fiber; and 18 percentage points of the 46% increase in Uzbekistan's exports were due to the rise in world prices for gold and cotton fiber.

On the import side, machinery and equipment made up a significant proportion of imports in all of the CARs. This is especially true of Azerbaijan and Kazakhstan—imports of which are dominated by capital goods for oil sector development—and Uzbekistan whose imports are dominated by capital goods for state-supported investment projects. Another major item in Azerbaijan, Kyrgyz Republic, and Tajikistan's imports is energy resources. Azerbaijan considerably increased imports of natural gas and electricity in 2000–2004, while the Kyrgyz Republic started importing large quantities of kerosene for refueling of foreign military aircraft on its territory. Consequently, the share of energy resources in imports of the two countries rose substantially in 2000–2004. In contrast, Tajikistan was able to reduce imports of energy resources in both absolute and relative terms due to the expansion of the domestic production of natural gas and the increased use of domestically produced electricity. Mineral and chemical products remained major items in the Kyrgyz Republic and Tajikistan's imports, even though Tajikistan sharply reduced imports of mineral products in 2000–2004.

At the same time, the participation of the CARs in GPNs and related international trade in manufactured products remained very limited. One indication of this is the relatively low degree of involvement of the CARs in intra-industry trade. Figure 2.3 presents the Grubel-Lloyd index for selected CAREC member countries.[3] It indicates that Azerbaijan, Kazakhstan, Kyrgyz Republic, and Tajikistan were involved in intra-industry trade to a much lesser degree than the PRC in 2000–2004. The degree of participation of the CARs in intra-industry trade was relatively high for resource-based, unskilled labor-intensive products, but low for skilled-labor and technology-intensive products.

2.3 Geographical Distribution of Trade

With respect to the geographical distribution of trade, exports and, to a lesser extent, imports of the CARs were concentrated in a few countries (see Table 2.1). These are mostly large countries with which the CARs have close historical and cultural links and/or that are located closely to them (e.g., the PRC, Russian Federation, and Turkey). Others are distant countries to which most exports of primary commodities from the CARs go often to be reexported to other countries (e.g., Bermuda, Switzerland, and United Arab Emirates). Still, others are developed countries from which the CARs import large quantities of machinery and equipment (e.g., Germany, South Korea, and US). It is worth noting that the Russian Federation remains both a major export and import market for all of the CARs, and the PRC became an important trading partner for most of them.

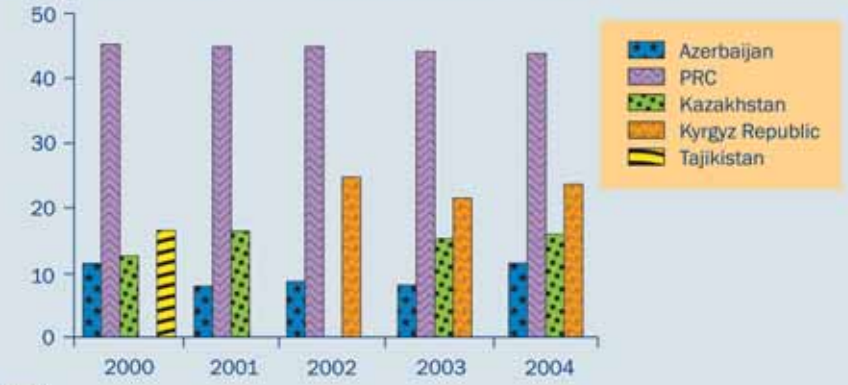
The share of the CIS in exports continued to decline in the CARs in 2000–2004 though the value of exports to

[3] The Grubel-Lloyd Index measures the extent of intra-industry trade in a particular industry or an economy as a whole. The Grubel-Lloyd Index, *I,* for industry *k* is equal to:

$$I = \left[1 - \left|x^k - m^k\right| \Big/ \left(x^k + m^k\right)\right] * 100\%$$

where x^k and m^k are exports and imports, respectively, by industry *k*. The Grubel-Lloyd Index for an economy, as a whole, is an arithmetic average of the index for individual sectors weighted by their share in the economy's total trade. The index ranges from 0% to 100%, with 0% meaning no intra-industry trade and 100% meaning maximum intra-industry trade (Grubel and Lloyd, 1975).

Figure 2.3: Grubel-Lloyd Index for Selected Member Countries of the Central Asia Regional Economic Cooperation Program, 2000–2004
(In percent, based on the 3-digit Standard International Trade Classification)



Note:
PRC – People's Republic of China

Source: Authors' estimates based on the International Trade Center's trade database.

Table 2.1: Principal Trading Partners of the Central Asian Republics, 2004
(In percent)

Azerbaijan		Kazakhstan		Kyrgyz Republic		Tajikistan		Uzbekistan	
Country	Share	Country	Share	Country	Share	Country	Share	Country	Share
				Exports					
Italy	44.7	Switzerland	18.7	UAE	26.3	Netherlands	41.4	Russian Federation	12.6
Israel	9.0	Italy	15.5	Russian Federation	19.2	Turkey	15.3	UK	7.9
Russian Federation	5.8	Russian Federation	14.1	Switzerland	14.2	Uzbekistan	7.2	Iran	7.6
Georgia	5.2	PRC	9.8	Kazakhstan	12.1	Latvia	7.1	Turkey	4.8
Turkey	5.1	France	7.3	PRC	5.5	Switzerland	6.9	Kazakhstan	3.7
Total	**69.8**	**Total**	**65.4**	**Total**	**77.3**	**Total**	**77.9**	**Total**	**36.6**
				Imports					
Russian Federation	16.2	Russian Federation	37.7	Russian Federation	31.2	Russian Federation	24.2	Russian Federation	25.4
UK	12.0	Germany	8.2	Kazakhstan	21.6	Kazak hstan	15.2	Korea, South	10.1
Kazakhstan	6.7	PRC	5.9	PRC	8.5	Uzbekistan	12.3	US	9.2
Turkey	6.4	Ukraine	5.7	Germany	5.6	Azerbaijan	6.3	PRC	7.4
Germany	5.7	US	4.4	Uzbekistan	5.5	US	5.8	Germany	7.1
Total	**47.0**	**Total**	**61.9**	**Total**	**72.4**	**Total**	**63.8**	**Total**	**59.2**

Note:
PRC – People's Republic of China
UAE – United Arab Emirates
UK – United Kingdom
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

the other CIS counties increased substantially (see Tables A1.23–A1.42 in Appendix 1). At the same time, imports from the other CIS countries increased in both absolute and relative terms in all the CARs with the exception of Tajikistan whose imports from other CIS countries increased in absolute terms but declined as a proportion of total imports. The reason is that the devaluation of the Russian ruble and the national currencies of many other CIS countries in 1998–1999 made exports to non-CIS countries more profitable and imports from the CIS countries cheaper. Accordingly, the share of the CIS in the total exports of the CARs fell from 28.5% in 1999 to 21.6% in 2004, while its share in the total imports rose from 39.2% to 46.4%.

Intra-regional trade among the CARs remained relatively small. Although it increased in absolute terms from US$1.6 billion in 1999 to US$3.4 billion in 2004, its share in total trade of the CARs fell from 8.4% to 6.6%.[4] Intra-regional trade is quite important for the Kyrgyz Republic, Tajikistan and, to a lesser extent, Uzbekistan, but rather insignificant for Azerbaijan and Kazakhstan. Trade between state-owned companies often conducted under intergovernmental agreements accounts for a significant proportion of intra-regional trade. For example, exports of electricity to Kazakhstan and imports of coal from Kazakhstan under an intergovernmental agreement accounted for 9.7% and 7.9%, respectively, of the Kyrgyz Republics' total export to and imports from Kazakhstan in 2004. Imports of natural gas from Uzbekistan under a similar intergovernmental agreement accounted for 16.2% of the Kyrgyz Republic's total imports from Uzbekistan. The sharp increase in trade between Azerbaijan and Uzbekistan in 2004 was largely due to the sale of natural gas by Uzbekistan's state-owned oil and gas company to Azerbaijan's state-owned oil and gas company under an intergovernmental agreement.

One reason for the small intra-regional trade among the CARs is that the degree of their trade complementarity is low.[5] As Tables 2.2 and 2.3 show, the Kyrgyz Republic and Tajikistan can potentially absorb only small fractions of Azerbaijan's exports and potentially supply small fractions of its imports, given the value and structure of exports and imports of the three countries.[6] Although Kazakhstan can potentially absorb a relatively large proportion of Azerbaijan, Kyrgyz Republic, and Tajikistan's exports and supply a substantial proportion of their imports, the latter can potentially absorb small fractions of Kazakhstan's exports and supply small fractions of its imports. Further, there is a little overlapping between the profile of the Kyrgyz Republic's imports and the profile of Tajikistan's exports.

Tables 2.2 and 2.3 further show that the degree of trade complementarity between Azerbaijan, Kazakhstan, Kyrgyz Republic, and Tajikistan, on the one hand, and Mongolia, on the other, is also low, whereas the degree of trade complementarity between these countries and the PRC is high. It should not therefore be surprising that trade between the CARs and Mongolia remained small in 2000–2004, while trade between the CARs and the PRC continued to grow rapidly. Total recorded trade between the CARs and the PRC increased from US$0.7 billion

[4] Since a relatively large proportion of intra-regional trade goes unrecorded due to smuggling and under-invoicing, the amount and the share of the intra-regional trade in total trade of the CARs were most likely greater than the above numbers. However, even if the unrecorded trade had been included, intra-regional trade would have remained relatively small.

[5] Another reason is the existence of numerous trade barriers, some of which are discussed in the next chapter of this report.

[6] The export absorption capacity of (importing) country j with respect to (exporting) country k, C^x_{jk} , has been computed as follows:

$$C^x_{jk} = 100\% - \sum_{i=1}^{n} \max\left\{\left(x^i_k - m^i_j\right) / X_k, 0\right\} * 100\%$$

where x^i_k is exports of product *i* by country *k*, m^i_j is imports of product *i* by country *j* and X_k is total exports of country *k*. Similarly, the import supply capacity of (exporting) country j with respect to (importing) country k, C^m_{jk} , has been computed as follows:

$$C^m_{jk} = 100\% - \sum_{i=1}^{n} \max\left\{\left(m^i_k - x^i_j\right) / M_k, 0\right\} * 100\%$$

where m^i_k is imports of product *i* by country *k*, x^i_j is exports of product *i* by country *j* and M_k is total imports of country *k*.

Table 2.2: Bilateral Export Absorption Capacity of Selected Member Countries of the Central Asia Regional Economic Cooperation Program, 2004
(In percent)

Exporter	Importer: Azerbaijan	PRC	Kazakhstan	Kyrgyz Republic	Mongolia	Tajikistan
Azerbaijan		100.0[a]	38.1[a]	9.1[a]	9.6[b]	5.5[c]
PRC	0.6[a]		2.0[a]	0.2[a]	0.2[b]	0.2[c]
Kazakhstan	6.3[a]	95.1[a]		2.9[a]	3.5[b]	2.9[c]
Kyrgyz Republic	38.6[a]	59.9[a]	46.9[a]		27.3[b]	23.9[c]
Mongolia[1]	8.8[b]	77.2[b]	17.6[b]	9.1[b]		1.7[c]
Tajikistan[2]	13.1[c]	95.5[c]	21.2[c]	4.5[c]	7.3[c]	

Note:
[a] The number is for 2004.
[b] The number is for 2003
[c] The number is for 2000
PRC – People's Republic of China

Source: Authors' estimates based on the International Trade Center's trade database.

Table 2.3: Bilateral Import Supply Capacity of Selected Member Countries of the Central Asia Regional Economic Cooperation Program, 2004
(In percent)

Importer	Exporter: Azerbaijan	PRC	Kazakhstan	Kyrgyz Republic	Mongolia	Tajikistan
Azerbaijan		94.5[a]	35.8[a]	7.9[a]	2.1[b]	7.7[c]
PRC	0.6[a]		3.4[a]	0.1[a]	0.1[b]	0.3[c]
Kazakhstan	10.9[a]	94.8[a]		2.7[a]	1.3[b]	2.9[c]
Kyrgyz Republic	35.1[a]	100.0[a]	61.9[a]		7.8[b]	5.2[c]
Mongolia[1]	31.2[b]	100.0[b]	57.1[b]	19.8[b]		8.3[c]
Tajikistan[2]	15.0[c]	17.2[c]	40.1[c]	16.9[c]	1.2[c]	

Note:
[a] The number is for 2004.
[b] The number is for 2003
[c] The number is for 2000
PRC – People's Republic of China

Source: Authors' estimates based on the International Trade Center's trade database.

in 1999 to US$3.4 billion in 2004. If unrecorded trade is taken into account, trade between the CARs and the PRC was most likely much larger. One indication of this is that the amounts of trade with the PRC reported by the CARs are much smaller than the corresponding amounts reported by the PRC. For example, the Kyrgyz Republic reported that its exports to the PRC at f.o.b. prices amounted to US$39.3 million in 2004, while the PRC reported that its imports from the Kyrgyz Republic at c.i.f. prices amounted to 109.5 million in the same year (see

Table 2.4). The difference between the two numbers is much larger than the difference between f.o.b. and c.i.f. prices in trade between the Kyrgyz Republic and the PRC that one would expect given the proximity of the two countries. Similarly, Kazakhstan reported that its imports from the PRC at c.i.f. prices amounted to US$758.3 million in 2004, whereas the PRC reported that its exports to Kazakhstan at f.o.b. prices amounted to US$2,211.9 million in the same year. There are similar discrepancies in the mirror statistics on trade between the CARs and Mongolia, but these are relatively small.

Despite their geographical proximity, trade between the CARs and South Asian countries remained quite small. Exports to Afghanistan increased considerably but from a very low base and remained small relative to total exports. Exports to India remained or declined to less than 1% of total exports in all of the CARs, with the exception of Uzbekistan whose exports to that country increased from US$0.5 million (less than 0.1% of total exports) in 1999 to US$113.4 million (2.7% of total exports) in 2004 due largely to the sale of four airplanes. Imports from the South Asian countries remained tiny relative to total imports in all the CARs, even though they increased in absolute terms in Azerbaijan and Kazakhstan.

Trade between the CARs and Western Europe was concentrated in a small number of countries that are major importers of primary commodities from, or major suppliers of machinery and equipment to, the CARs. Notably, Italy imports large amounts of crude oil from Azerbaijan for refining; Switzerland is a major intermediate destination for exports of crude oil from Kazakhstan, and gold from the Kyrgyz Republic and Uzbekistan; the Netherlands imports large amounts of aluminum from Tajikistan; and Germany is a major supplier of machinery and equipment to all of the CARs. Yet, the Kyrgyz Republic, Tajikistan, and Uzbekistan's imports from the EU-15 (i.e., the 15 countries that comprised the European Union until its expansion in 2004) declined in 2000–2004 as depreciation of their currencies vis-à-vis the major European currencies made imports from Western European countries more expensive for them. At the same time, Azerbaijan and Kazakhstan's imports from the EU-15 expanded considerably. This was due largely to increased imports of machinery and equipment for oil sector development, which are relatively inelastic with respect to exchange rate movements.

2.4 Actual versus Potential Trade

A number of studies estimate potential trade in CARs in the late 1990s and the early 2000s and compare it with actual trade. They find that Azerbaijan, Kyrgyz

Table 2.4: Trade between the Central Asian Republics and the People's Republic of China, 2004
(In million US dollars)

	Exports to the PRC		Imports from the PRC	
	As reported by the CARs at f.o.b. prices	As reported by the PRC at c.i.f. prices	As reported by the CARs at c.i.f. prices	As reported by the PRC at f.o.b. prices
Azerbaijan	31.7	40.2	145.5	143.7
Kazakhstan	1,967.3	2,286.3	758.2	2,211.9
Kyrgyz Republic	39.3	109.5	80.1	492.7
Tajikistan	6.1	15.4	57.0	53.6
Uzbekistan	87.8	403.1	252.4	172.4

Note:
CARs – Central Asian republics
PRC – People's Republic of China

Source: Governments of the Central Asian republics and the People's Republic of China

Republic, and Uzbekistan "under-traded," whereas Tajikistan "overtraded" given their size, location, and other characteristics. Actual trade in Kazakhstan was less or greater than potential trade depending on how the latter is estimated. Notably, Babetskii, Babetskaia-Kukharchuk, and Raiser (2003) estimate the gravity model, using data for 82 countries (including the CARs) and six years (1997–2002).[7] They find that Azerbaijan, Kazakhstan, Kyrgyz Republic, and Uzbekistan traded less than, while Tajikistan traded as much as, the EU-15 given their size, GDP at purchasing power parity-based valuation, distance from trading partners, and exchange rate volatility. The European Bank for Reconstruction and Development (EBRD) (2003) compares the actual level of trade in the transition countries with the level predicted by the gravity model estimated by Babetskii, Babetskaia-Kukharchuk, and Raiser (2003). It finds that the actual level of trade in Azerbaijan, Kyrgyz Republic, and Uzbekistan was lower than the predicted level; whereas, the actual level of trade in Kazakhstan was greater than, and that in Tajikistan equal to the predicted level.

Following Rodrik (1998) and using data for 149 countries (including the CARs) and the averages for 1994–2001, Freinkman, Polyakov, and Revenco (2004) estimate several equations with the ratio of exports of goods and services to GDP and the ratio of exports plus imports of goods and services to GDP as dependent variables and the population size, GDP per capita and regional dummies as explanatory variables. They find that in 2001 the actual ratio of exports plus imports to GDP at current prices in Azerbaijan, Kyrgyz Republic, and Uzbekistan was lower and that in Tajikistan was higher than the ratios predicted by the models both with and without the regional dummies. The actual ratio in Kazakhstan was higher than the ratio predicted by the model without the regional dummies, but lower than the ratio predicted by the model with the regional dummies.

With the rapid expansion of trade in the CARs in 2003–2004, the question arises: How does actual trade in the CARs now compare with potential trade? We estimated two equations that express the ratio of merchandise exports plus imports to GDP as a function of the population size, per capita GDP and regional dummy variables, using cross-section data for 173 countries and averages for 1995–2004.[8] We then compared the actual ratios of exports plus imports to GDP in the CARs in 1999, 2002, and 2004 with the corresponding ratios predicted by these equations. We found that while the actual ratios of exports plus imports to GDP were indeed below the predicted ratios in some of the CARs in 1999 and 2002, they were above the predicted levels in all the CARs in 2004 (see Table 2.5). The realization ratios were particularly high in Tajikistan and Uzbekistan because of relatively low per capita GDP and thus low predicted ratios of exports plus imports to GDP in these countries.[9] Hence, all of the CARs appear to have fully realized their trade potential in 2004 as far as the overall level of trade relative to GDP is concerned.

[7] The gravity model is an equation that expresses the level of bilateral trade between two countries as a function of their size, the distance between them, and other factors that affect their bilateral trade. Although the choice of explanatory variables included in the equation often appears ad hoc, the model has been quite successful in explaining levels and directions of actual trade and is widely used in estimating levels and directions of potential trade.

[8] The equations we have estimated are similar to those estimated by Rodrik (1998) and Freinkman, Polyakov, and Revenco (2004). The theory underlying these equations is that, other things being equal, large countries trade less than small countries, rich countries trade more than poor countries, and countries in certain regions tend to trade more than countries in other regions.

[9] One reason the ratio of exports plus imports to gross domestic product (GDP) in Tajikistan is the highest of the CARs and the actual levels of trade in Tajikistan are consistently higher than the estimated potential levels is the difficulties the country faces in exporting electricity directly. Tajikistan circumvents these difficulties by exporting electricity indirectly through the production and exports of energy-intensive aluminum, which comprises the bulk of its exports. To be able to do so, Tajikistan also imports large quantities of alumina, which accounts for a considerable proportion of its imports (World Bank, 2005b).

Table 2.5: Actual and Predicted Ratios of Merchandise Exports Plus Imports to GDP in the Central Asian Republics in 1999, 2002, and 2004

	Ratio of Exports Plus Imports to GDP at Current Prices			Ratio of Exports Plus Imports to GDP at PPP-Based Valuation		
	1999	2002	2004	1999	2002	2004
			Actual (in percent)			
Azerbaijan	42.9	61.5	83.4	10.8	14.6	21.5
Kazakhstan	56.2	66.2	80.7	15.5	18.2	29.5
Kyrgyz Republic	84.8	66.7	76.6	14.8	12.7	16.8
Tajikistan	124.5	120.2	110.5	30.1	23.4	29.1
Uzbekistan	33.9	51.1	78.9	16.1	11.7	16.8
			Predicted (in percent)			
Azerbaijan	68.9	70.3	72.0	14.2	17.1	19.4
Kazakhstan	66.4	68.6	71.5	18.1	22.5	25.3
Kyrgyz Republic	69.4	70.5	72.0	11.9	12.8	13.9
Tajikistan	64.7	65.2	68.1	7.6	9.2	10.4
Uzbekistan	59.0	55.7	55.4	9.2	9.9	10.2
			Realization Ratios			
Azerbaijan	0.6	0.9	1.2	0.8	0.9	1.1
Kazakhstan	0.8	1.0	1.1	0.9	0.8	1.2
Kyrgyz Republic	1.2	0.9	1.1	1.2	1.0	1.2
Tajikistan	1.9	1.8	1.6	3.9	2.5	2.8
Uzbekistan	0.6	0.9	1.4	1.7	1.2	1.6

Note:
GDP – gross domestic product
PPP – purchasing power parity

Source: Authors' calculations based on the models presented in Appendix 2.

This does not, however, mean that the CARs have fully realized their bilateral trade potential vis-à-vis all their trading partners in 2004. Following Freinkman, Polyakov, and Revenco (2004) and World Bank (2006a), we used the gravity model from Frankel (1997) to estimate potential bilateral trade between the CARs

[10] The gravity model that Frankel (1997) has estimated and Freinkman, Polyakov, and Revenco (2004), World Bank (2006a), and we have used is given by:

$$\text{Log}(T_{ij}) = \underset{(0.469)}{-12.146} + \underset{(0.018)}{0.930}*\log(Y_i * Y_j) + \underset{(0.019)}{0.128}*\log(Y_i/N_i * Y_j/N_j)$$

$$\underset{(0.038)}{-0.770}*\log(Dist_{ij}) + \underset{(0.157)}{0.445}*(Adj_{ij}) + \underset{(0.090)}{0.768}*(Lang_{ij}) + k*(Block_{ij}) + u_{ij}$$

where T_{ij} is the trade turnover between countries i and j, Y is gross national product (GNP) at current prices, Y/N is GNP at current prices per capita, *Dist* is the distance between the main commercial centers (the countries' capitals with a few exceptions), *Adj* is the dummy variable for adjacency (equal to one if the countries are adjacent and zero otherwise), *Lang* is the dummy variable for the common language (equal to one if the countries share the same language and zero otherwise), *Block* is the dummy variable for the trade blocks (equal to one if the countries belong to the same trade block and zero otherwise), u is an error term, and k varies from insignificantly different from zero for the EU to 1.766 for the North American Free Trade Agreement.

and their selected trading partners in 2004 and determine to what extent the former realize their bilateral trade potential vis-à-vis individual countries or groups of countries.[10] Given the high sensitivity of estimates of potential bilateral trade to the underlying assumptions, we made two sets of estimates. While making the first set of estimates, we assumed that the CARs did not belong to any regional trading block but shared a common language with the other countries of the CIS.[11] While making the second set of estimates, we assumed that the CIS and Economic Cooperation Organization (ECO) were as effective trading blocks as the North American Free Trade Agreement, Azerbaijan, Tajikistan, and Uzbekistan shared a common language with Iran; and all of the CARs shared a common language with the other CIS countries as well as the PRC and Turkey.[12] We then compared our estimates of potential bilateral trade between the CARs and their selected trading partners with the corresponding actual bilateral trade flows.

We found that in 2004 the CARs "overtraded" with most other CIS countries and several Western European countries but "under-traded" with most East and South Asian and Western European countries as well as the US (see Table 2.6). Azerbaijan and Kazakhstan "overtraded" with the EU-15 on aggregate due to "overtrading" with several EU member countries by considerable margins. Actual bilateral trade between the CARs and the PRC, Iran, and Turkey was in most cases greater than the estimated potential trade if the first set of estimates of potential trade is used, but less than potential trade if the second set of estimates of potential trade is used.[13]

2.5 Conclusions

The recent trade performance of the CARs has been mixed. Their exports and imports expanded considerably in 2000–2004 and they all appear to have fully realized their trade potential in 2004 in terms of the overall level of trade. At the same time, a handful of primary commodities continued to dominate the CARs' exports and their participation in GPNs and related trade in manufacture products remain limited. Heavy reliance on exports of a few primary commodities makes the CARs vulnerable to abrupt swings in volatile world prices for these commodities and complicates economic management. The limited participation of the CARs in GPNs and related trade in manufactured products means that they derive relatively little benefits from trade in terms of attracting FDI, gaining access to advanced technologies, and fostering sustainable economic development.

Furthermore, exports and, to a lesser extent, imports of the CARs have been concentrated in a small number of countries.

[11] The reason for assuming that the CARs do not belong to any trading blocks is that, as discussed in Chapter 4, the regional trading agreements (RTAs) involving CARs have not been effective. The reason for assuming that the CARs share a common language with the other countries of the Commonwealth of Independent States (CIS) is that most people in the CIS countries speak Russian.

[12] The reason for assuming that Azerbaijan, Tajikistan, and Uzbekistan share a common language with Iran is that Iran has a large Azeri minority, Tajik is very similar to Farsi, and a substantial proportion of the population of Uzbekistan speaks Tajik. The reason for assuming that the CARs share a common language with Turkey is that Azeri, Kazakh, Kyrgyz, and Uzbek and similar to Turkish and many people in Tajikistan speak Uzbek. The reason for assuming that the CARs share a common language with the PRC is that many people in the Xinjiang Autonomous Region of the PRC, which plays a leading role in trade between the CARs and the PRC, speak Uygur, which is similar to Azeri, Kazakh, Kyrgyz, and Uzbek.

[13] These findings are broadly consistent with those of other studies that examine bilateral trade potential of the CARs. In particular, Elborgh-Woytek (2003) finds bilateral trade between the CIS countries, including the CARs, and the EU-15 to be below its potential. Freinkman, Polyakov, and Revenco (2004) find that actual trade between the CARs and other CIS-countries was, in most cases, above its potential in 2001. The comparisons of actual and potential bilateral trade among a large group of countries made by the International Trade Center suggest that Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan "overtrade" with the Russian Federation but "under-trade" with most developed countries in North America, East Asia, and Western Europe as well as many emerging markets in South and East Asia.

Table 2.6: Ratios of Actual to Estimated Potential Bilateral Trade between the Central Asian Republics and their Selected Trading Partners, 2004

	With the first set of estimates of potential bilateral trade					With the second set of estimates of potential bilateral trade				
	Azerbaijan	Kazakhstan	Kyrgyz Republic	Tajikistan	Uzbekistan	Azerbaijan	Kazakhstan	Kyrgyz Republic	Tajikistan	Uzbekistan
CIS	**2.49**	**4.48**	**6.48**	**11.15**	**5.20**	**0.43**	**0.77**	**1.11**	**1.91**	**0.89**
Azerbaijan		9.61	3.04	78.49	1.58		1.64	0.52	13.42	0.27
Armenia	0.00	0.81	60.84	0.00	1.15	0.00	0.14	10.41	0.00	0.20
Belarus	1.10	3.69	5.24	11.76	4.63	0.19	0.63	0.90	2.01	0.79
Georgia	13.03	2.14	2.10	6.85	0.99	2.23	0.37	0.36	1.17	0.17
Kazakhstan	9.61		6.23	17.42	3.60	1.64		1.07	2.98	0.62
Kyrgyz Republic	3.04	6.23		25.79	12.46	0.52	1.07		4.41	2.13
Moldova	0.99	17.83	11.84	0.33	3.46	0.17	3.05	2.02	0.06	0.59
Tajikistan	78.50	17.42	25.79		31.95	13.42	2.98	4.41		5.46
Russian Federation	1.47	4.09	5.78	5.22	4.33	0.25	0.70	0.99	0.89	0.74
Turkmenistan	12.70	3.82	6.05	28.68	6.90	2.17	0.65	1.03	4.91	1.18
Ukraine	6.42	11.22	5.18	15.12	13.61	1.10	1.92	0.89	2.59	2.33
Uzbekistan	1.58	3.60	12.46	31.27		0.27	0.62	2.13	5.35	
East and South Asia										
PRC	1.58	1.08	2.43	0.55	1.63	0.73	0.50	1.13	0.26	0.76
India	0.30	0.17	1.76	0.21	0.33	0.30	0.17	1.76	0.21	0.33
Japan	0.23	0.19	0.05	0.05	0.25	0.23	0.19	0.05	0.05	0.25
Korea, South	0.24	0.86	1.25	0.42	4.81	0.24	0.86	1.25	0.42	4.81
Malaysia	10.74	0.27	0.21	0.34	0.38	10.74	0.27	0.21	0.34	0.38
Mongolia	0.00	16.83	16.49	1.00	0.54	0.00	16.83	16.49	1.00	0.54
Pakistan	0.17	0.07	0.76	0.37	0.25	0.03	0.01	0.13	0.06	0.04
Thailand	0.83	0.88	0.09	0.13	0.18	0.83	0.88	0.09	0.13	0.18
EU-15	**1.31**	**1.57**	**0.33**	**0.98**	**0.50**	**1.31**	**1.57**	**0.33**	**0.98**	**0.50**
Others										
Iran	0.96	4.19	1.43	6.12	1.79	0.08	0.33	0.11	0.49	0.14
Turkey	7.20	4.26	8.49	13.87	6.09	0.57	0.34	0.67	1.10	0.48
US	0.29	0.26	0.26	0.45	0.39	0.29	0.26	0.26	0.45	0.39

Note:
CIS - Commonwealth of Independent States
EU - European Union
PRC - People's Republic of China
US - United States

Source: Authors' estimates based on the gravity equation from Frankel (1997).

This has both pros and cons for the CARs. On the one hand, it makes multilateral trade negotiations relatively easy for the CARs. On the other hand, it makes the CARs vulnerable to changes in import demand in, and possible trade sanctions by, a few trading partners. This in turn underscores the importance for the CARs to place trade on a solid legal foundation that can protect them from arbitrary sanctions by major trading partners.

Intra-regional trade among the CARs has remained relatively small. One reason for this is that the degree of their trade complementarity is low. In contrast, the degree of trade complementarity between the CARs and the PRC is high. That is why trade between the CARs and the PRC increased substantially in 2000–2004. However, trade between the CARs and South Asian countries remained quite small despite their geographical proximity.

An analysis based on the gravity model suggests that the CARs fully realized their bilateral trade potential vis-à-vis most other CIS countries in 2004. At the same time, their actual bilateral trade with most East and South Asian and Western European countries as well as the US was below the estimated potential trade. Whether the CARs fully realized their bilateral trade potential vis-à-vis the PRC, Iran, and Turkey depends on the assumptions underlying the estimates of the potential bilateral trade.

3
Barriers to Trade in Central Asia

The recent merchandise trade performance of the CARs has been adversely affected by the presence of numerous barriers to trade in Central Asia—that is, factors that obstruct exports from and/or imports to the CARs. Some of these trade barriers (such as relatively weak trade links between the CARs and non-FSU countries) are a legacy of the FSU while others (e.g., barriers to cross-border movements of goods, people, and transport equipment among the CARs) emerged after the breakup of the FSU. Some of them—like additional transport costs and transit times needed for international shipments to and from the CARs due to their landlocked location and difficult topography—are beyond their control. However, others—such as policy barriers created by the CARs and their trading partners—can be reduced by the CARs through unilateral or collective action.

This chapter identifies some of the more important barriers to trade in Central Asia that the CARs can potentially lower through regional cooperation in trade policy, transport, and customs transit.[1] It also highlights costs of these trade barriers, including their adverse effects on the recent trade merchandise performance of the CARs.

3.1 Barriers Pertaining to Trade Policy

The CARs had very similar trade policy regimes at the time of their independence, but these have diverged significantly since then. The Kyrgyz Republic liberalized its trade policy rapidly in the first half of the 1990s (see Figure 3.1). Kazakhstan also made considerable progress in trade liberalization in the first half of the 1990s, but this was partly reversed in the late 1990s. Azerbaijan liberalized its trade policy fairly fast after concluding a ceasefire agreement with Armenia in 1994, as did Tajikistan after the end of the civil war in 1997. Uzbekistan has made relatively limited headway in trade liberalization, with a significant reversal in the mid-1990s. Consequently, trade policy regimes in the CARs vary widely today from very liberal in the Kyrgyz Republic to fairly liberal in Azerbaijan, Kazakhstan, and Tajikistan, to quite restrictive in Uzbekistan.

Tariffs are fairly low and uniform in Azerbaijan, Kyrgyz Republic, and Tajikistan (see Table 3.1). Kazakhstan has a rather complex tariff schedule with a large number of tariff bands and a high maximum tariff rate, although its nonweighted average tariff rate is not high. Uzbekistan has a complex tariff

[1] The chapter does not discuss the barriers to trade in Central Asia (such as difficulties with customs clearance of goods being exported from or imported to the CARs and restrictions on domestic marketing of exportable and imported goods) that cannot be reduced through regional cooperation in trade policy, transport, and customs transit.

Figure 3.1: European Bank for Reconstruction and Development's Index of Foreign Exchange and Trade Liberalization for the Central Asian Republics, 1991–2005

European Bank for Reconstruction and Development's (EBRD's) Index of Foreign Exchange and Trade Liberalization ranges from 1.0 to 4.3, with 1.0 denoting widespread import and/or export controls or very limited access to foreign exchange and 4.3 denoting standards and performance norms of advanced industrial economies.

Source: EBRD (2001 and 2005)

Table 3.1: Tariffs in the Central Asian Republics[a]
(As of 1 January 2006)

	Azerbaijan[b]	Kazakhstan[b]	Kyrgyz Republic	Tajikistan	Uzbekistan[b]
Number of tariff bands	6	10	5	4	4
Maximum rate (%)	15.0	100.0	15.0[c]	15.0	30.0
Nonweighted average rate (%)	5.7	7.4	5.1	7.5	14.5

Note:
[a] These tariffs apply to imports from the countries to which the Central Asian republic concerned has given the most favored nation status but with which it does not have a preferential trade agreement.
[b] Ad valorem tariffs and ad valorem components of combined tariffs. There are also specific tariffs.
[c] Excluding a 30% seasonal tariff on refined sugar.

Source: Authors' estimates based on the tariff schedules of the Central Asian republics.

schedule and a relatively high nonweighted average tariff rate.[2] A serious problem with tariffs in Azerbaijan, Kazakhstan, Tajikistan, and Uzbekistan is that changes in tariff schedules are rather frequent and unpredictable. Also, there is an escalation of tariffs—i.e., a rise in tariff rates with a degree of processing—in all the CARs. This is more pronounced in Azerbaijan, Kazakhstan, and Uzbekistan than in the Kyrgyz Republic and Tajikistan.

[2] In Uzbekistan, tariffs, the value-added tax, and excise taxes are levied on imports by legal entities only. Imports by individuals are subject to a unified tax on imports, the rate of which is 26% for flour, 40% for other food products, and 70% for nonfood products. The rate of the unified tax is lower than the combined rate of the tariff, the value-added tax, and the excise tax for most food products, but higher than that for most nonfood products.

In addition to explicit tariffs, some of the CARs impose other taxes on imports that are not levied on domestically produced goods or have higher rates for imported goods than for domestically produced goods.[3] In Azerbaijan and Kazakhstan, the coverage of excise taxes on imported and domestically produced goods are identical, but the rates of the former are considerably higher than those of the latter for some commodities. In Uzbekistan, excise taxes are levied on a wide range of imported, but not domestically produced, consumer products. These include ice cream (subject to a 200% excise tax), mineral water (100%), most types of juices (70%), poultry meat (70%), cheese (50%), yogurt (50%), plastic tableware and kitchenware (50%), and soap (20%).[4] Certain commodities, such as construction materials, are subject to the value-added tax (VAT) when imported, but exempt from this tax when produced domestically.[5] Furthermore, nonfood products brought to Uzbekistan for commercial purposes from neighboring countries without a certificate of origin, but not necessarily originating in those countries, are subject to a 20% surcharge.

Explicit taxes on exports are less common in Central Asia than taxes on imports. In Azerbaijan, exports of metals and articles of nonferrous metals (with the exception of aluminum products) are subject to an export tax. Further, 25% of the difference between the export price and the domestic wholesale price of products with regulated domestic prices is to be transferred to the state budget. Kazakhstan levies export taxes on a limited number of commodities when they are exported to non-EAEC countries.[6]

While all the CARs prohibit or license exports and/or imports of certain goods to protect national security, public health, and environment, some of them do so also for economic purposes. In particular, Azerbaijan prohibits exports of scrap metals to ensure their availability for domestic consumption. Uzbekistan prohibits imports of packed tea in an effort to increase demand for domestically produced packed tea. Uzbekistan also prohibits exports of flour, meat, sugar, vegetable oil, and a number of other—mostly consumer—products to ensure their availability in the domestic market at relatively low prices. For the same reason, Kazakhstan temporarily prohibits exports of diesel fuel and fuel oil during harvesting and heating seasons, respectively. Licensing of certain exports and imports—such as imports of tobacco and alcoholic beverages to Azerbaijan and Tajikistan, exports of scrap of nonferrous metals from the Kyrgyz Republic, and exports of precious metals and their scrap from Uzbekistan—appears to be primarily intended to preserve the existing monopolies.

In addition to taxes and quantitative restrictions on imports and exports, some CARs use other policy tools as an instrument of trade policy. Notably, Uzbekistan appears to continue using restrictions on access to foreign exchange in regulating imports even though it *de jure* introduced full convertibility of its national currency for current international transactions in October 2003. It is not always possible to purchase foreign exchange through official channels even for bona fide imports. And it is generally more so for imports of consumer goods than for imports of capital goods. Uzbekistan also uses restrictions on cross-border movements of people and transport equipment to restrict imports. In 2002, for example, it tightened rules and procedures for movements of people and vehicles across Kazakh-Uzbek and Kyrgyz-Uzbek borders in an apparent effort to restrict imports of consumer goods from Kazakhstan and the Kyrgyz Republic.

[3] The difference between the rates of these taxes on imported and domestically produced goods constitutes an implicit tariff.

[4] In what appears to be a policy inconsistency, Uzbekistan tries to lower the domestic price for poultry meat by prohibiting its exports and simultaneously attempts to raise its domestic price by levying a 50% excise tax on imported poultry meat.

[5] In Azerbaijan and Uzbekistan, some commodities are exempt from the VAT when they are imported, but subject to it when produced domestically. This constitutes a negative implicit tariff on these commodities.

[6] These include scraps of ferrous metals, whose exports to the European Union (EU) are also exempt from the export tax.

Besides the trade barriers relating to trade policy in the CARs, there are also significant barriers to trade in Central Asia induced by trade policy of countries outside the region. Most notably, exports of agricultural products from the CARs to developed countries face relatively high tariffs. Large export and other subsidies that developed countries provide to their farmers further impede imports of agricultural products to these countries. Cline (2005) estimates that when both tariff and the tariff-equivalent of domestic subsidies are taken into account, agricultural protection amount to about 20% in the US, 50% in Canada and EU, and 80% in Japan. Furthermore, countries outside the region occasionally impose or threaten to impose antidumping duties on imports from the CARs. The US, for example, charges antidumping duties on imports of silicomanganese from Kazakhstan and the EU imposes quotas on imports of steel from Kazakhstan. All of the CARs, with the exception of Kazakhstan, have a nonmarket economy status in developed countries, which exposes their exports to those countries to relatively restrictive anti-dumping measures.

3.2 Barriers Pertaining to Transport and Customs Transit

All the CARs are landlocked and situated far from major international seaports and developed country markets. In addition, the CARs have a difficult topography that complicates their transport links with the other parts of the world, particularly South Asia. The situation is exacerbated by deficiencies of the CARs' transport networks, high costs and low quality of transport and logistics services in the region, and difficulties with movements of goods and transport equipment across borders and through the territories of the CARs and neighboring countries. The result is generally high transport costs and long and unpredictable transit times for international shipments to and from the CARs.

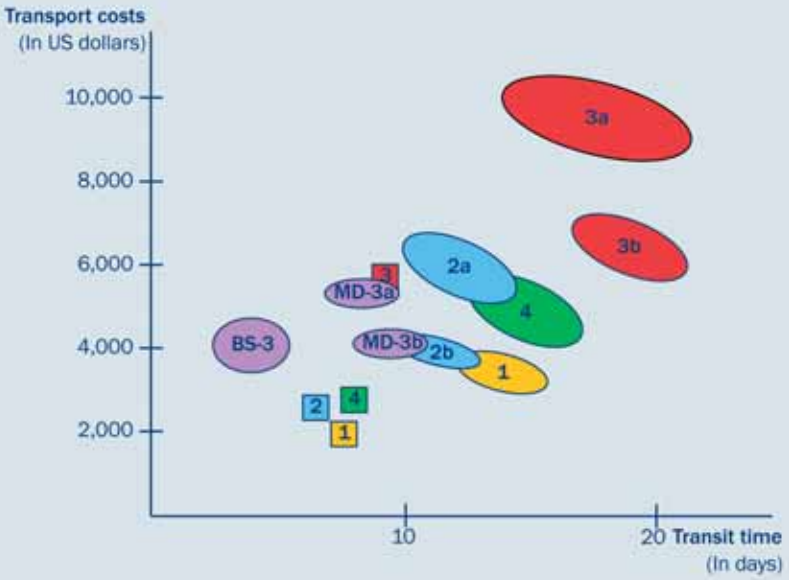
Figures 3.2 and 3.3 compare the actual transport costs and transit times for shipments by road and by rail between the four CARs (Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan) and selected countries outside the region with the corresponding transport costs and transit times in the "ideal world" (i.e., a world with balanced transport flows, competitive markets for transport services, smooth border crossing, low transit fees, and no visa problems and unofficial payments). The figures show that the actual transport costs are much higher and the actual transit times are much longer for shipments to and from the CARs than those in the "ideal world."[7] Moreover, transit times for international shipments by road for longer distances (e.g., shipments from the Benelux countries) vary more than those for shorter distances (e.g., shipments from Istanbul). This indicates that transit times for international shipments become increasingly unpredictable as the distances involved increase.

Figures 3.2 and 3.3 also demonstrate the significant transport costs and transit time disadvantage faced by the CARs compared with the Baltic States and Moldova. Transport costs for shipment by road between the CARs and the Benelux countries are 1.5–2.5 times as high as those for road shipments between the Baltic States and Moldova, on the one hand, and the Benelux countries, on the other, while transit times are 2.0–3.0 times as long. Even for shipments by rail between the CARs and Moscow, transport costs are generally higher and transit times are significantly longer than those for rail shipments between the Baltic States and Moldova, on the one hand, and Moscow, on the other.

Finally, Figures 3.2 and 3.3 show that there is an asymmetry in transport costs for international shipments between Central Asia and Europe. For example, it costs $8,500–$10,500 to ship a truckload of cargo from the Benelux countries to Central Asia, and only $6,000–$7,000

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

Figure 3.2: Transport Costs and Transit Times for Shipments by Road between the Central Asian Republics (Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan) and Selected Countries, Spring 2005



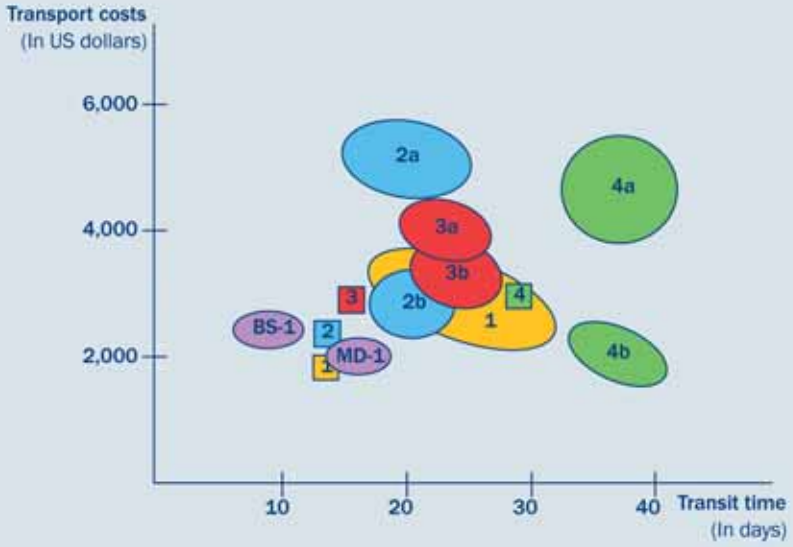
Legends:	Actual transport costs and transit time
	Transport costs and transit time in the "ideal world" (i.e. a world with balanced transport flows, competitive markets for transport services, smooth border crossing, low transit fees, and no visa problems and unofficial payments).
1	For a shipment by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

Source: Data collected by the authors.

to ship in the opposite direction. In the "ideal world," shipments would cost $5,500–$6,000 in either direction. This is due to the particular commodity composition of trade between Central Asia and Europe. Exports from Central Asia to Europe consist mostly of primary commodities transported by rail and through pipelines, while imports from Europe to Central Asia consist mostly of manufactured products transported by road and by air.[8]

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

Figure 3.3: Transport Costs and Transit Times for Shipments by Rail between the Central Asian Republics (Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan) and Selected Countries, Spring 2005



Legends:

- Actual transport costs and transit time
- Transport costs and transit time in the "ideal world" (i.e. a world with balanced transport flows, competitive markets for transport services, smooth border crossing, low transit fees, and no visa problems and unofficial payments).
- 1 — For a shipment of a full wagon or a 40-foot container from and to Moscow by rail;
- 2 — For a shipment of a 40-foot container (a) from Istanbul and (b) to Istanbul by rail and by sea;
- 3 — For a shipment of a 40-foot container (a) from the Benelux countries and (b) to the Benelux countries by rail;
- 4 — For a shipment of a 40-foot container (a) the East coast of the People's Republic of China (PRC) by rail over land and (b) to the East coast of the PRC by rail and sea via Bandar Abbas;
- BS-1 — For shipment between the Baltic States and Moscow;
- MD-1 — For shipments between Moldova and Moscow.

Source: Data collected by the authors.

Table 3.2 presents estimates of transport costs of merchandise exports and imports of the CARs in 2003. According to these estimates, transport costs in the value of exports ranged from 8.0% in Azerbaijan to 14.0% in Tajikistan, and the share of transport costs in the value of imports ranged from 7.0% in Azerbaijan to 10.0% in the Kyrgyz Republic and Tajikistan. Using reference values for similar countries, it is estimated that total logistics cost made up 16–19% of the total value of exports and imports in the CARs. Excluding exports of primary commodities and imports of heavy machinery and equipment, for which transport costs are relatively low, transport costs comprised an estimated 11–16% and logistics costs accounted for more than 20% of the total value of exports and imports in the CARs. By comparison, transport costs made up 8.4% of the value of imports in Asia as a whole and 6.1% of the value of imports in the world at large in 2001. In EU countries, logistics costs in manufacturing generally

Table 3.2: Estimated Transport Costs in Merchandise Exports and Imports of the Central Asian Republics, 2003

	Transport Costs of Exports		Transport Costs of Imports	
	In percent of exports	In million US dollars	In percent of imports	In million US dollars
Azerbaijan	8.0	207.4	7.0	183.8
Kazakhstan	10.0	1,292.7	8.0	583.0
Kyrgyz Republic	13.0	75.6	10.0	72.0
Tajikistan	14.0	111.6	10.0	88.0
Uzbekistan	12.0	382.8	8.0	206.0

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

comprise less than 10% of the value of products and transport costs are only 1/3 of logistics costs.

3.3 Costs of Trade Barriers

The presence of the above trade barriers has adversely affected the recent merchandise trade performance of the CARs in several ways. First, they have constrained growth of trade. Although in all the CARs exports and imports expanded considerably in 2000–2004 and the actual ratio of exports plus imports to GDP exceeded the estimated potential level in 2004, cumulative growth of exports in the Kyrgyz Republic, Tajikistan, and Uzbekistan and the cumulative growth of imports in the Kyrgyz Republic and Uzbekistan were lower than those in many other countries, including the PRC and Mongolia (two other CAREC member countries), and the world as a whole (see Figure 3.4). Excluding exports of crude oil and oil products and imports of capital goods for oil sector development, growth of exports and imports in Azerbaijan and Kazakhstan were also relatively modest.

Second, trade barriers have adversely impacted on the direction of trade in the CARs. In particular, relatively high transport costs and long and unpredictable transit times for international shipments to and from the CARs have hindered reorientation of their trade from FSU to non-FSU countries, which partly explains why the CARs generally "overtrade" with other CIS countries but "under-trade" with most East and South Asian and Western European countries.

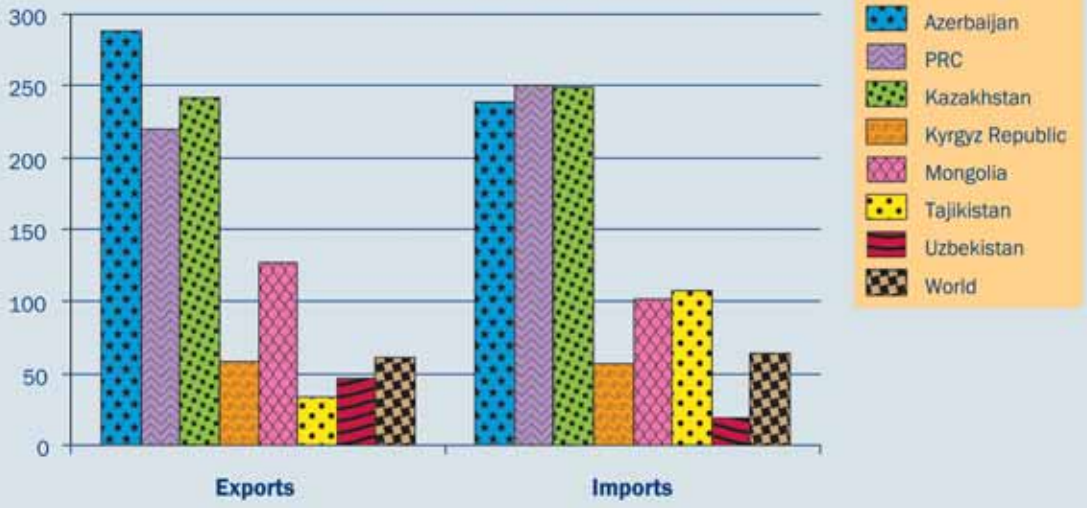
Third, trade barriers have had an adverse impact on the composition of trade in the CARs. Notably, long and unpredictable transit times have constrained exports of time-sensitive goods and manufactured products with relatively low profit margins more than exports of primary commodities, which are not time-sensitive and can be transported in bulk at relatively low costs. This is one reason for the limited participation of the CARs in GPNs and related international trade in manufactured products, and for the domination of their exports by a handful of primary commodities, such as crude oil, cotton fiber, and metals.[9]

In addition to the adverse impacts on the trade performance of the CARs, trade barriers have other negative effects. In particular, they encourage illegal trade. Faced with high trade taxes or restrictions, traders often resort to illegal ways of conducting trade, such as smuggling

[9] Raballand, Kunth, and Auty (2005) argue that high transport costs play a critical role in causing Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan to generate more trade with other countries of the CIS and less trade with the EU than their relative location would suggest. In addition, high transport costs partly explain why exports of these countries are compressed onto a handful of primary commodities.

Figure 3.4: Cumulative Growth of Merchandise Exports and Imports in Selected Member Countries of the Central Asia Regional Economic Cooperation Program and the World, 2000–2004

(In percent)



Note:
PRC – People's Republic of China

Source: Governments of the Central Asian republics, International Monetary Fund's Direction of Trade Statistics, and the authors' estimates.

and under-invoicing.[10] As a result, a substantial proportion of trade in the region goes unrecorded and the governments lose a considerable part of the proceeds from taxes on international trade. It is estimated that unrecorded imports of consumer goods from the PRC and Turkey to the Kyrgyz Republic exceeded US$94 million in 2002 and unrecorded imports of gasoline and diesel fuel from neighboring countries were almost US$31 million. Unrecorded exports of the small-scale sewing industry were estimated at about US$45 million and the value of reexported consumer goods (including the shuttle traders' margins) at around US$70 million. The total value of these unrecorded imports and exports was about US$240 million or around a fifth of the value of recorded trade.

By increasing incentives for smuggling and under-invoicing and creating opportunities for rent-seeking, high-trade taxes and restrictions fuel corruption. Traders sometimes bribe government officials to obtain licenses for lucrative exports and imports. They often bribe border guards and customs officials to turn a blind eye on smuggling or under-invoicing. Not surprisingly, corruption is a particularly serious problem in the CARs when it comes to international trade.

Trade taxes and restrictions lower domestic prices for exportable goods and raise domestic prices for imported goods. This generally worsens social welfare. Notably, import taxes on consumer goods raise the domestic prices for these goods and worsen consumers' welfare. Although they also generate revenue for the government and increase the income of domestic producers, their net effect on social welfare is usually negative. A typical example is the tariffs on colored TVs in Uzbekistan, which raised the domestic price of colored TVs by about 82% and caused a deadweight loss of between US$5.8 million and US$16.6 million in 2004 (see Box 3.1).

[10] There is a large body of theoretical and empirical literature showing that trade taxes and restrictions lead to under-invoicing, smuggling, rent seeking and other forms of directly unproductive profit-seeking activities. See, for example, Anam (1982), Bhagwati (1974), Bhagwati and Hansen (1973), Bhagwati and Srinivasan (1980), Johnson (1974), Krueger (1974), Pitt (1981), and Sheikh (1974).

Box 3.1: Partial Equilibrium Analysis of Welfare Effects of Trade Taxes: The Case of Import Tariffs on Colored TVs in Uzbekistan

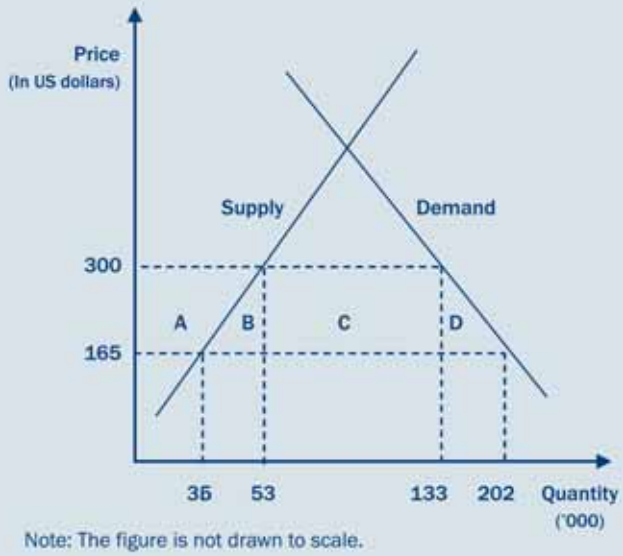
Trade taxes generally have a negative effect on social welfare. A typical example is the tariffs on colored TVs in Uzbekistan.

In 2004, Uzbekistan produced 53,345 units of colored TVs. Additional 70,000 units were imported legally and an estimated 10,000 units imported illegally. Thus, the domestic consumption was 133,345 units. It is estimated that the average domestic retail price was US$300 per unit. The explicit tariff on imported colored TVs was 30% and the implicit tariff—that is, the difference between the rate of the excise tax on imported and domestically produced colored TVs—was 40%. Hence, the average domestic price would have been about US$165 per unit in the absence of the tariffs. Assuming (conservatively) that the price elasticity of demand for a colored TV is -0.5 and that of supply is 0.5, the tariffs reduced the domestic consumption of colored TVs by 68,450 units and increased their domestic production by more than 18,100 units (see Figure B3.1).[11] As a result, domestic consumers lost US$22.6 million (sum of areas A, B, C, and D on Figure B3.1), while domestic producers gained US$6.0 million (area A on Figure B3.1). A total of US$10.8 million (area C on Figure B3.1) went to the government (in the form of tariff revenues), corrupt border guards, customs and tax officials, police officers, etc. (in the form of bribes) and illegal importers (in the form of extra profit), and was at least partly lost due to inefficiencies inherent in smuggling. The net effect of the tariffs on social welfare was somewhere between minus US$5.8 million and minus US$16.6 million depending on how much of US$10.8 million was lost due to inefficiencies in illegal imports of colored TVs. This deadweight welfare loss was larger if the absolute values of the price elasticity of demand for and supply of colored TVs were greater than 0.5.

Accordingly, a reduction in the tariffs on colored TVs would lower their domestic price, increase domestic consumption and imports, and improve social welfare. Policymakers may worry that it would also reduce government revenue and cause a decline in domestic production, which would increase unemployment. In addition, the increase in imports of colored TVs may lead to exchange rate depreciation. These are valid concerns. However, international evidence suggests that indirect effects of reducing tariffs are on balance positive rather than negative. Apart from direct gains in consumers' welfare, reducing tariffs increase the variety of goods and enhance competition in domestic markets. This in turn stimulates domestic producers to improve their own efficiency. As for the loss of government revenue, taxes on income or general consumption are less distortionary than taxes which discriminate against imports.

Source: Authors

Figure B3.1 Market for Colored TVs in Uzbekistan



Note: The figure is not drawn to scale.

By lowering domestic prices for exportable goods and raising domestic prices for imported goods, trade barriers distort domestic relative prices vis-à-vis international relative prices. A good measure of domestic relative price distortions resulting from taxes on international trade are levels of and the variation in effective rates of protection (ERP).[12] Table 3.3 presents the estimated ERPs for selected products in Kazakhstan,

[11] Although demand for colored TVs is considered to be relatively price inelastic in high-income countries (with -0.5 being a typical estimate), it is likely to be more price elastic in middle-income countries, like Uzbekistan. Similarly, domestic supply of colored TVs is likely to be more price elastic than 0.5.

[12] The effective rates of protection for a particular product is the difference between value added (per unit of the product) at domestic prices and value added at international prices expressed as a percentage of the latter.

Table 3.3: Tariffs and Estimated Effective Rates of Protection for Selected Products in Kazakhstan, Kyrgyz Republic, and Uzbekistan, 2005

	Tariff Rate	Effective Rate of Protection
Kazakhstan		
Packed juice	15	46
Sausage	35	44
Dairy products	15	15
Waffles	15	14
Kyrgyz Republic		
Towel	10	33
Butter	10	18
Cotton yarn	0	(3)
Ice cream	0	(11)
Uzbekistan		
Cigarettes	30[a]	124
Daewoo Nexia	30[a]	103
Chocolate	30	77
Men's suit	30	36

Note:
[a] The ad valorem component of the combined tariff.

Source: Authors' estimates. The estimates for the Kyrgyz Republic are partly based on World Bank (2005c).

Kyrgyz Republic, and Uzbekistan. It indicates that there are considerable variations in the ERPs and thus price distortions in all three countries. Moreover, both levels of and the variation in the ERPs in Uzbekistan are much larger than those in Kazakhstan and the Kyrgyz Republic, suggesting that price distortions in the former are more severe than in the latter.

Price distortions resulting from trade barriers in turn have many negative consequences. First, they often afford import-competing products a much higher degree of effective protection than the corresponding tariffs suggest. As shown in Table 3.3, the estimated ERPs for cigarettes and a Daewoo Nexia car in Uzbekistan are more than three times as high as the ad valorem components of the combined tariffs on these products. Second, relative prices distorted in favor of import-competing sectors shift resources from export-oriented to import-competing sectors and redistribute income from the general public and export-oriented sectors to import-competing sectors. Since agriculture is a major export-oriented sector in all the CARs, the majority of the poor live in rural areas, and import-competing sectors are mostly located in urban areas, the price distortions effectively redistribute income from rural to urban population and from the poor to the rich. Third, distorted relative prices result in sub-optimal allocation of resources and inefficient utilization of scarce factors of production. Fourth, price distortions may lead to welfare-reducing economic growth, which occurs when output growth is generated by inefficient import-competing sectors that take away resources from efficient export-oriented sectors.[13] In the case of severe price distortions, highly protected import-competing sectors may produce positive value added at domestic prices but negative value added at international prices.[14] Growth generated by these sectors would be spurious and reduce social welfare.

[13] See Johnson (1967) for a discussion of the possibility of aggregate income losses from output growth in protected import-competing sectors.

[14] See McKinnon (1993) for an exposition of how a firm producing positive value added at distorted domestic prices may actually be producing negative value added at international prices.

Restrictions imposed by Uzbekistan on cross-border movements of people and transport equipment in an effort to restrict imports from neighboring countries obstruct movements of people for purposes not relating to trade, often forcing them to use more costly alternative routes. The Tashkent-Samarkand highway offers a good example. It is one of Uzbekistan's key motor roads used extensively in both domestic and international transportation. It was built during the period of the Soviet Union and passes through Kazakhstan. During the first 11 years after the breakup of the FSU, Uzbek vehicles could, more or less, freely pass through the Kazakh territory along the highway. In 2002, however, Uzbekistan closed the Kazakh section of the road for Uzbek vehicles.[15] As a result, most Uzbek vehicles now have to take a detour around the Kazakh territory, which is 56 km longer than the direct route. Moreover, the bypass is narrower and in worse condition than the Tashkent-Samarkand highway.

According to a study commissioned by ADB, some 15,500 vehicles took the detour daily in December 2004. With the detour, the vehicles spent 1.0–1.5 hours more to get to the destination than if they had been allowed to use the direct route. This is partly due to the stopping of many of the vehicles at numerous stationary and mobile traffic police posts along the bypass. In addition, each vehicle spent 5–23 liters of fuel more than what it would have spent if it had used the direct route. The total cost of extra fuel spent by all vehicles taking the detour was estimated at about 45.6 million soums or US$44,000 a day at December 2004 prices. This means that the closure of transit through Kazakhstan costs Uzbek drivers and transport operators around 17 billion soums or US$16 million a year in terms of extra fuel needed to get from Tashkent to Samarkand or vice versa.

The barriers to trade in Central Asia created by countries outside the region also entails high costs for the CARs. Most notably, farm subsidies in developed countries cause an oversupply of agricultural products in these countries, which are then dumped in the world markets. This lowers world prices for agricultural products and adversely affects exports of these products from the CARs. It is estimated that without cotton subsidies in the EU and the US, world cotton prices would have been 71% higher. With higher world cotton prices, the gain in export revenue would have added 6% to Tajikistan's GDP and 3% to Uzbekistan's GDP. These substantial benefits would accrue every year after abolition of the subsidies. Moreover, with more attractive world prices, the quantity of cotton exported would increase (by an estimated 5.8% in Uzbekistan), adding to the potential benefits.[16]

3.4 Conclusions

There are significant barriers to trade in Central Asia pertaining to trade policy, transport, and transit systems in the CARs, their neighbors, and trading partners. The more significant trade barriers pertaining to trade policy in the CARs include a complex tariff schedule and relatively high tariffs (Kazakhstan and Uzbekistan); escalation of tariffs (all the CARs); frequent and unpredictable changes in the tariff schedule (Azerbaijan, Kazakhstan, Tajikistan, and Uzbekistan); high implicit tariffs in the form of taxes that are levied on imported goods but not on domestically produced goods or have higher rates for imported goods than for domestically produced goods (Azerbaijan, Kazakhstan, and Uzbekistan); explicit export taxes (Azerbaijan and Kazakhstan); and prohibition and licensing of exports and imports of certain commodities (all the CARs). Uzbekistan appears to continue using

[15] The restriction does not apply to trucks transporting goods under a Transport International Routier (TIR) Carnet and vehicles with foreign and diplomatic license plates.

[16] The estimated subsidies, their impact on world prices and Uzbekistan's supply response are from Baffes (2004). The increases in GDP for Uzbekistan and Tajikistan even without any change in output are based on export volumes and GDP in 2000, reported in Pomfret (2005).

restrictions on access to foreign exchange in regulating imports and imposes relatively tight restrictions on cross-border movements of people and transport equipment in an apparent effort to restrict imports from neighboring countries. Large agricultural subsidies that developed countries provide to their farmers also constitute a significant barrier to trade in Central Asia.

Other significant barriers to trade in Central Asia are high transport costs and long and unpredictable transport times for international shipments to and from the CARs. This is not only because of the landlocked and remote location of the CARs and their difficult topography, but also due to deficiencies of their transport networks, high costs and low quality of transport and logistics services in the region, and difficulties with movements of goods and transport equipment across borders and through the territories of the CARs and neighboring countries.

The costs of these trade barriers for the CARs are quite high. They have constrained growth of trade in Central Asia and deprived the CARs of the benefits of forgone trade. They have also limited the participation of the CARs in GPNs and related trade in manufactured products, skewed the structure of their exports towards primary commodities, and hindered the reorientation of their trade from FSU countries to the rest of the world. In addition, trade barriers have encouraged illegal trade, fueled corruption, caused deadweight welfare losses, and distorted domestic relative prices. Distorted relative prices in turn have provided a high degree of effective protection to import-competing sectors and may have generated welfare-reducing and spurious economic growth. They have also shifted resources from export-oriented to import-competing sectors and redistributed income from the general public and export-oriented sectors to import-competing sectors and from the poor to the rich. The restrictions on border crossing imposed by Uzbekistan—in an effort to restrict imports from neighboring countries—have obstructed the movements of people and transport equipment for purposes not relating to trade. This has resulted in considerable losses for drivers and transport operators.

Improved regional cooperation in trade policy, transport, and customs transit could help the CARs lower the trade barriers, expand trade, increase the gains from participation in international trade and reduce the associated risks. Specifically, regional cooperation in trade policy could help the CARs reduce trade barriers pertaining to trade policy in the CARs and their trading partners at relatively low costs, and expand trade considerably. It could also help the CARs reduce the risk of protectionist measures by trading partners. Regional cooperation in transport and customs transit would help the CARs reduce transport costs and transit times for international shipments and make transit times for such shipments more predictable. This would in turn help them boost trade, especially with more distant countries, take more active part in GPNs and related international trade in manufacture products, and diversify trade both in terms of geographical distribution and commodity composition.

4
Regionalism and Multilateralism in Central Asia

As noted in Chapter 3, there are significant policy-related barriers to trade in Central Asia, which have adversely affected the recent trade performance of the CARs and prevented them from fully realizing the gains from participation in international trade. And as noted in Chapter 1, regional cooperation in trade policy in the form of reciprocal trade liberalization under an RTA can help the CARs reduce these trade barriers at relatively low costs, boost intra-regional trade, and facilitate broad-based trade liberalization. However, an RTA not only creates trade between member countries but also diverts trade between member and nonmember countries. Therefore, its net effect on social welfare in member countries and the world at large is theoretically ambiguous. It can also give rise to vested interests in partial trade liberalization and make broad-based trade liberalization politically more difficult to carry out.

Another way for the CARs to reduce the policy-related trade barriers at relatively low costs and expand trade rapidly is to join the WTO. Since accession to the WTO brings improved access to markets in other WTO member countries, it enables a new member country to boost exports and mitigate the initial adverse effects of trade liberalization on employment and the balance of payments. And since membership in the WTO requires according the most favored nation (MFN) status to all member countries, liberalization of trade policy in the process of the WTO accession leads to little trade diversion and is likely to improve social welfare in both the new member country and the world as a whole. However, accession to the WTO is a relatively long process since it involves negotiations with a large number of member countries and requires the implementation of a broad range of policy and institutional reforms.

In an effort to expand trade and closely integrate into the international trading system, the CARs have been pursuing both membership in RTAs (regionalism) and accession to the WTO (multilateralism). As noted in Chapter 1, an RTA complements the multilateral trading system represented by the WTO insofar as it promotes broad-based liberalization in the member countries. In fact, RTAs are legal under the WTO rules. However, their discriminatory nature is contrary to the principle of nondiscrimination on which the multilateral trading system is based. Under certain circumstances, an RTA can even weaken the multilateral trading system. How a particular RTA affects trade, social welfare, and political feasibility of broad-based trade liberalization in the member countries and the multilateral trading system depends on a number of factors listed in Box 1.1.

This chapter analyses regionalism and multilateralism in Central Asia. Specifically, it reviews RTAs involving CARs and assesses their effects on the CARs. It then reviews the status of the CARs' accession to the WTO and discusses the benefits and costs of WTO

regional cooperation that the CARs can pursue within the multilateral framework.

4.1 The "Spaghetti Bowl" of the Regional Trade Agreements

The CARs have joined several regional organizations that involve or seek to reach a multilateral RTA. In addition, they have entered into numerous bilateral RTAs. A combination of these—often overlapping, multilateral, and bilateral RTAs—has resulted in what the trade literature aptly calls the "spaghetti bowl effect" (see Figure 4.1).[1]

The CARs are all members of the CIS, which was established by Belarus, Russian Federation, and Ukraine in 1991 and is comprised of all FSU countries, except Estonia, Latvia, and Lithuania. The overall objective of the CIS is to contribute to "further development and strengthening of the relations of friendship, good neighbourhood, inter-ethnic harmony, trust, mutual understanding and mutually advantageous cooperation" among the member countries.[2] In 1994, the CIS countries signed an Agreement on the Establishment of a Free Trade Area, but were not able to agree on a common list of exemptions from the free trade regime. In 1999, they amended the agreement, whereby the list of exemptions could be agreed upon on a bilateral basis. However, not all CIS countries were able to agree on the list of exemptions even on a bilateral basis. Thus, the agreement has not been fully implemented.

In 1992, the CARs—along with Afghanistan and Turkmenistan—joined the ECO, which was set up by Iran, Pakistan, and Turkey in 1985 to promote economic, technical, and cultural cooperation among the member countries. In 2003, Afghanistan, Iran, Pakistan, Tajikistan, and Turkey signed an ECO Trade Agreement (ECOTA), which envisages a reduction of tariffs to a maximum of 15% for at least 80% of the traded goods within eight years after its entry into force. Almost three years since it was signed, the ECOTA has not yet entered into force.

In 1994, Kazakhstan, Kyrgyz Republic, and Uzbekistan set up the Central Asian Economic Union, ostensibly modeled after the EU. The organization was renamed the Central Asian Economic Community (CAEC) when Tajikistan joined in 1998. The presidents of the four countries proclaimed the Central Asian Cooperation Organization (CACO) as the successor to the CAEC in 2002. At the CACO summit in Astana, Kazakhstan in May 2004, the Russian Federation joined the organization and Uzbekistan proposed to set up a Central Asian common market within the CACO framework. However, at their meeting in St. Petersburg, Russian Federation in October 2005, the presidents of the CACO member countries decided to merge the organization with the EAEC.

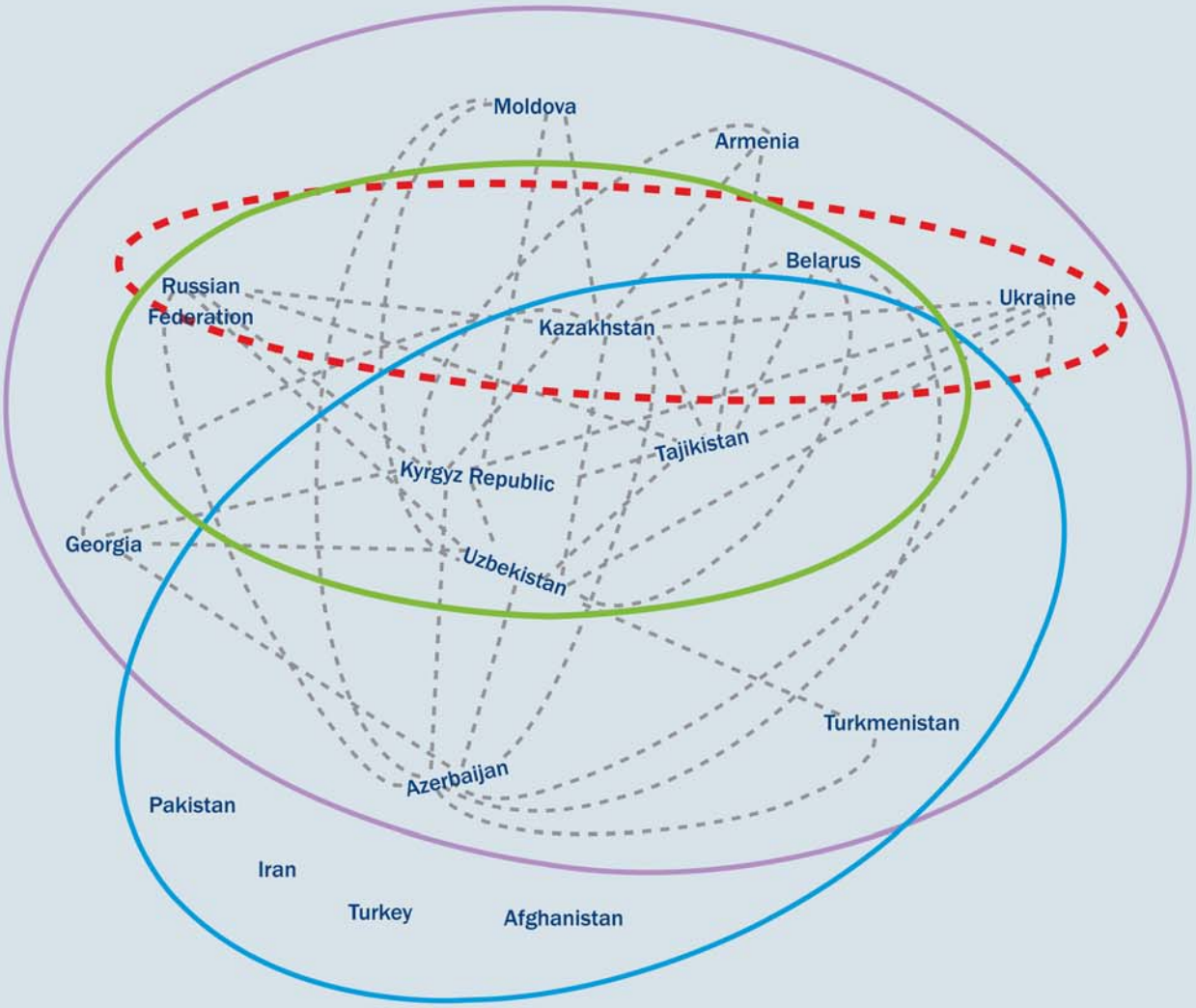
In late 1995, Kazakhstan joined the agreement on the establishment of a customs union, signed by Belarus and Russian Federation in early 1995. The Kyrgyz Republic followed suit in 1996 and Tajikistan in 1999. In February 2000, the five countries signed an agreement on a common external tariff schedule (CETS), whereby they committed themselves to adopt a CETS within five years after the entry into force of the agreement.[3] In October 2000, they signed a treaty establishing the EAEC, a regional organization aimed at facilitating the creation of a customs union and a common economic space of the member countries. The EAEC treaty entered into force in May 2001 and superseded the customs union agreement between its member countries. Following the decision of the presidents of the CACO member countries to merge it with the EAEC, Uzbekistan acceded to the EAEC in January 2006.

[1] Figure 4.1 does not include regional organizations, such as the Shanghai Cooperation Organization, which at least some of the CARs are members of but which do not involve and do not seek to reach an RTA.

[2] Source: http://www.cis.minsk.by.

[3] The agreement entered into force in 2000 for Belarus, Kyrgyz Republic, Russian Federation, and Tajikistan and in 2001 for Kazakhstan.

Figure 4.1 The "Spaghetti Bowl" of Regional Trade Agreements Involving Central Asian Republics
(As of 31 January 2006)



Note: In August 2005, Turkmenistan downgraded its membership in the CIS to the status of an "associated member."
CIS – Commonwealth of Independent States
EAEC – Eurasian Economic Community
ECO – Economic Cooperation Organization
RTAs – regional trade agreements
SES – Single Economic Space

Source: Information gathered by the authors.

with the EAEC, Uzbekistan acceded to the EAEC in January 2006.

Although Belarus, Kazakhstan, Kyrgyz Republic, Russian Federation, and Tajikistan agreed in 2000 to adopt a CETS by 2006, they were not able to do so. By the end of 2005, they were able to agree on a CETS that consisted of external tariffs common to Belarus, Kazakhstan, and Russian Federation and which covered only 63% of the lines in the EAEC commodity classification. The Kyrgyz Republic and Tajikistan have not yet adopted even this incomplete CETS of the EAEC. As of end-2005, only 18% of tariffs in the Kyrgyz Republic and 49% of tariffs in Tajikistan were harmonized with the CETS of the EAEC.[4]

An alternative grouping among the CIS countries emerged in September 2003 when Belarus, Kazakhstan, Russian Federation, and Ukraine signed an agreement on the creation of a Single Economic Space (SES).[5] The agreement envisages the establishment of supranational institutions and a free trade zone with the ultimate goal of creating an economic union of the member countries. However, the future of the SES became uncertain following the 2004 presidential election in Ukraine, which brought to power a pro-Western government. In August 2005, Belarus, Kazakhstan, and Russian Federation pledged to sign a package of 29 statutory documents of the SES by December 2005 and an additional 15 documents by March 2006. Ukraine, however, indicated it would not sign any SES document that envisions the establishment of a supranational institution. The parties were not able to agree on the 29 documents that were to be signed by December 2005. They postponed the signing to March 2006.

In addition to joining the regional institutions that involve or aim to reach a multilateral RTA, the CARs have signed a large number of bilateral preferential and free trade agreements. But some of these bilateral RTAs have never entered into force because they have not been ratified by at least one signatory country. At the same time, the effectiveness of those that have formally entered into force has been limited due to a narrow coverage, complex rules of origin, and less-than-full implementation. Often, exemptions include goods that account for a significant proportion of bilateral trade between the signatory countries and the rules of origin are so complex that, for importers, preferential tariffs envisaged in the RTAs are not worth claming.

The main reason many bilateral RTAs that have formally entered into force are not fully implemented is that, like multilateral RTAs, they lack effective enforcement and dispute settlement mechanisms. Consequently, they cannot prevent the signatory countries from taking actions that are inconsistent with the agreements, and do not help settle trade disputes that may arise from such actions. Indeed, the free trade agreements that Kazakhstan signed with the Kyrgyz Republic in 1995, Russian Federation in 1992, and Uzbekistan in 1997 did not prevent it from introducing a temporary ban and a 200% tariff on certain imports from those countries in the late 1990s. Similarly, the free trade agreements that Uzbekistan signed with many other CIS countries have not prevented it from imposing high implicit tariffs on imports from those countries in the form of excise taxes that are levied on imported but not on domestically produced goods or have higher rates for imported than domestically produced goods.

Despite their poor track record in implementing RTAs, proposals for new RTAs involving CARs continue unabated. At the eighth summit of the ECO held in Dushanbe, Tajikistan in September 2004, Iran proposed establishing a free trade zone within the ECO framework by 2015. In March 2005, the Presidents of Uzbekistan and Kazakhstan set up a working group on the creation of a free trade zone between the two countries. However, there is no reason to expect that the design of the proposed new RTAs will be significantly different from that of the existing RTAs and that, unlike the latter, they will be fully implemented.

[4] The Kyrgyz Republic will need to renegotiate the commitments it made while acceding to the WTO to be able to adopt the common external tariff schedule (CETS) of the EAEC, as many tariffs in the CETS of the EAEC are higher than the corresponding tariff bindings with which the Kyrgyz Republic joined the WTO.

[5] The Single Economic Space is also referred to as the Common Economic Space.

4.2 Effects of the Regional Trade Agreements

Since the RTAs involving CARs generally have a narrow coverage and complex rules of origin and most of them have remained agreements on paper only, their impact on the trade policy regime and the pattern of trade in the CARs has so far been limited. In part because of the multilateral and bilateral RTAs signed by the CIS countries, trade among them tends to be freer than trade between CIS and non-CIS countries. And in part, for this reason, the CARs "overtrade" with most other CIS countries, as noted in Chapter 2. Likewise, trade among the EAEC countries is freer than trade between them and the other countries, although there is no indication that they "overtrade" with each other more than with the other CIS countries.

The EAEC customs union, however, may have significant adverse effects on Kazakhstan, Kyrgyz Republic, and Tajikistan if it is fully implemented. Table 4.1 compares the actual shares of selected EAEC countries in Kazakhstan, Kyrgyz Republic, and Tajikistan's merchandise imports with estimates of the corresponding bilateral import supply capacity. It shows that Kazakhstan, Kyrgyz Republic, and Tajikistan could have imported a much larger share of their merchandise imports from each other and the Russian Federation in 2004 (2000 in the case of Tajikistan) than they actually did. This suggests that considerable trade diversion is likely to occur and social welfare is likely to worsen in Kazakhstan, Kyrgyz Republic, and Tajikistan if these countries raise their external tariffs in an effort to implement the customs union of the EAEC.

Using partial equilibrium analysis, Tumbarello (2005) assesses welfare effects of implementing the customs union of the EAEC on its member countries under two scenarios: (i) prior to and (ii) following their accession to the WTO.[6] She finds that the net welfare effect of implementing the EAEC customs union on Kazakhstan, Kyrgyz Republic, and Tajikistan would be negative under both scenarios (see Table 4.2). The implementation of the EAEC customs union would increase tariff revenues in all

Table 4.1: Actual and Potential Share of Selected Member Countries of the Eurasian Economic Community in Merchandise Imports of Kazakhstan, Kyrgyz Republic, and Tajikistan
(In percent)

			Exporter			
			Kazakhstan	Kyrgyz Republic	Russian Federation	Tajikistan[a]
Importer	Kazakhstan	Actual		0.7	37.7	0.1
		Potential[b]		2.7	87.9	2.9
	Kyrgyz Republic	Actual	21.6		31.2	0.3
		Potential[b]	61.9		99.1	5.2
	Tajikistan[a]	Actual	12.2	1.1	15.6	
		Potential[b]	40.1	16.9	100.0	

Note:
[a] The numbers are for 2000.
[b] Refers to estimated bilateral import supply capacity (see Table 2.4 and footnote 5 in Chapter 2).

Source: Authors' estimates based on the International Trade Center's trade database.

[6] The first scenario assumes that the EAEC countries change their MFN tariffs to match the current CETS of the EAEC, and raise their MFN tariffs on goods not covered by the CETS to the highest levels prevailing in the EAEC countries. The second scenario assumes that the EAEC countries change their MFN tariffs to match the EAEC's current CETS and lower their MFN tariffs on goods not covered by the CETS to the lowest levels prevailing in the EAEC countries.

Table 4.2: Welfare Effects of Implementing the Customs Union of the Eurasian Economic Community on Kazakhstan, Kyrgyz Republic, and Tajikistan
(In million US dollars)

	Kazakhstan	Kyrgyz Republic	Tajikistan
		Prior to the WTO Accession	
Change in tariff revenue	+223.4	+22.8*	+12.1
Change in consumer surplus	(255.2)	(26.3)*	(13.8)
Net welfare effect	(31.8)	(3.5)*	(1.8)
		Following the WTO Accession	
Change in tariff revenue	16.9	–	3.8
Change in consumer surplus	(19.4)	–	(4.5)
Net welfare effect	(2.4)	–	(0.7)

Note:
* Since the Kyrgyz Republic has already joined the WTO, the figure represents the potential benefit/cost of implementing the Eurasian Economic Community customs union.
WTO – World Trade Organization

Source: Tumbarello (2005).

three countries, but this would be more than offset by a decline in consumer surplus. The net negative effect of implementing the EAEC customs union on Kazakhstan and Tajikistan would be much larger under the first scenario than under the second.

The partial equilibrium analysis made by Tumbarello (2005) captures only the direct welfare effects of implementing the EAEC customs union on its member countries. Yet, its indirect effects are likely to be as significant as its direct effects. And if the indirect welfare effects of implementing the EAEC customs union on Kazakhstan, Kyrgyz Republic, and Tajikistan are positive, then they can at least partly offset its negative direct welfare effects on these countries.

For this reason, we reassessed the effects of implementing the EAEC customs union on Kazakhstan by using its CGE model, which enables to capture both direct and indirect effects of policy changes on the economy.[7] In particular, we made a simulation of implementing the EAEC customs union with a rise in Kazakhstan's external tariffs. In this scenario, Kazakhstan abolishes all remaining tariffs on imports from the other EAEC countries (represented by the Kyrgyz Republic and Russian Federation), effective 1 January 2006. At the same time, it retains the current tariffs or adopts the Russian tariffs, whichever are higher, on imports from the non-EAEC countries for the commodities not yet covered by the CETS of the EAEC. The current external tariffs remain unchanged for the commodities already covered by the CETS of the EAEC. As a result, Kazakhstan's nonweighted average MFN ad-valorem tariff rate rises from 7.4% to 10.8%.[8]

Like Tumbarello (2005), we found that implementing the EAEC customs union with a rise in external tariffs would have considerable adverse macroeconomic effects on Kazakhstan. While tariff revenue

[7] The computable general equilibrium model of Kazakhstan has been developed by ADB as part of its study on Central Asia regional cooperation in trade, transport, and transit. The model has a relatively detailed structure, with 25 sectors, 16 regions, 30 household types, government, and five trading partners (the PRC, Kyrgyz Republic, Russian Federation, Uzbekistan, and the rest of the world). It has been implemented in the General Algebraic Modeling System and calibrated to Kazakhstan's social accounting matrix for 2000. A detailed description of the model is given in Appendix 3.

[8] The reason for considering such a scenario is that, if and when the member countries of the EAEC agree on common external tariffs for the commodities not yet covered by its CETS, they are likely to choose the highest existing external tariffs.

would grow much faster than in the baseline ("no-change") scenario, real GDP would grow significantly more slowly. The cumulative shortfall in real GDP at 2002 prices over 2005–2015 would reach almost US$10 billion, an equivalent of 31% of real GDP in 2005 (see Table 4.3). By 2015, real GDP would be 20.8% smaller compared with real GDP in the baseline scenario. Assuming that policy barriers to Kazakhstan's exports to the EAEC countries remain unchanged, exports to both the EAEC and the non-EAEC countries would expand less than in the baseline scenario.[9] Considerable trade diversion would ensue on the import side, with imports from the EAEC countries growing much faster and imports from the non-EAEC countries growing significantly more slowly than in the baseline scenario.

Chapter 1 argued that an RTA is more likely to improve rather than worsen social welfare in member countries if its implementation is accompanied by the lowering of nonpreferential tariffs. To test to what extent this argument applies to the EAEC customs union, we made a CGE model-based simulation of a scenario in which implementing the EAEC customs union is accompanied by a reduction in Kazakhstan's external tariffs. In this scenario, we assumed that Kazakhstan abolishes all remaining tariffs on imports from the other EAEC countries, effective 1 January 2006. Simultaneously, it adopts the external tariffs it would have under the previous scenario reduced uniformly by 50% across all commodities and non-EAEC countries. As a result, its nonweighted average MFN ad-valorem tariff rate falls from 7.4% to 5.4%.

We found that implementing the EAEC customs union, even with a reduction in Kazakhstan's external tariffs, would cause substantial trade diversion and slow down real GDP growth compared with the baseline scenario (see

Table 4.3: Macroeconomic Effects on Kazakhstan of Implementing the Customs Union of the Eurasian Economic Community in 2006 with a Rise in External Tariffs

	Cumulative Change over Baseline Scenario in 2006–2015	Cumulative Change Relative to 2005 in 2006–2015
	(In million US dollars at 2002 prices)	(In percent)
Real GDP	(9,940)	(31.1)
Tariff revenue	5,627	389.8
Exports	(9,416)	(38.6)
EAEC countries*	(2,811)	(40.8)
Non-EAEC countries	(6,605)	(37.7)
Imports	(5,781)	(26.7)
EAEC countries*	12,338	342.0
Non-EAEC countries	(18,120)	(100.5)

Note:
*Represented by the Kyrgyz Republic and the Russian Federation.
EAEC – Eurasian Economic Community
GDP – gross domestic product

Source: Computable general equilibrium model-based simulations made by authors.

[9] The assumption that policy barriers to Kazakhstan's exports to the EAEC countries remain unchanged is not restrictive given that Kazakhstan's exports are dominated by primary commodities, which are generally not covered by its RTAs with the Kyrgyz Republic and the Russian Federation, and policy barriers to Kazakhstan's other exports to the Kyrgyz Republic and the Russian Federation are already fairly low.

Table 4.4). In addition, it would lead to a considerable shortfall in tariff revenue. However, its adverse effects on economic growth would be much smaller than in the previous scenario. Furthermore, unlike in the previous scenario, Kazakhstan's exports to both the EAEC and non-EAEC countries would grow faster than in the baseline scenario.

Implementing the EAEC customs union is likely to have greater adverse macroeconomic effects on the Kyrgyz Republic and Tajikistan than on Kazakhstan. The reason is that, as Table 4.1 suggests, further preferential trade liberalization within the EAEC framework is likely to cause greater trade diversion in these countries than in Kazakhstan. Moreover, implementing the EAEC customs union is more likely to lead to a rise in external tariffs in the Kyrgyz Republic and Tajikistan than in Kazakhstan.

Its effects on Uzbekistan are difficult to predict. Uzbekistan at present imposes relatively high explicit and implicit tariffs on imports from both EAEC and non-EAEC countries. To join the EAEC customs union, it will need to eliminate tariffs on imports from the EAEC countries and, most likely, lower tariffs on imports from non-EAEC countries. This will lead to considerable trade creation and trade diversion, with an a priori ambiguous net effect on social welfare in Uzbekistan.

4.3 Accession to the World Trade Organization and Regional Cooperation in Trade Policy within the Multilateral Framework

In parallel with participation in various RTAs, the CARs have pursued membership in the WTO, albeit with a varying degree of success. While the Kyrgyz Republic joined the WTO in 1998, the other CARs are at different stages of the accession process (see Table 4.5). Kazakhstan has made a considerable headway in revising its national legislation in line with WTO requirements and is at an advanced stage of the accession process, with an active program of Working Party meetings in recent years. Azerbaijan, Tajikistan, and Uzbekistan's accession process are at an earlier stage than Kazakhstan's, although the process has speeded up for all three countries since 2002.

Table 4.4: Macroeconomic Effects on Kazakhstan of Implementing the Customs Union of the Eurasian Economic Community in 2006 with a Reduction in External Tariffs, 2006–2015

	Cumulative Change over Baseline Scenario	Cumulative Change Relative to 2005
	(In million US dollars at 2002 prices)	(In percent)
Real GDP	(2,999)	(9.4)
Tariff revenue	(5,869)	(406.5)
Exports	1,889	7.7
EAEC countries*	1,000	14.5
Non-EAEC countries	889	5.1
Imports	1,395	6.4
EAEC countries*	6,699	185.7
Non-EAEC countries	(5,304)	(29.4)

Note:
* Represented by the Kyrgyz Republic and the Russian Federation.
EAEC– Eurasian Economic Community
GDP – gross domestic product

Source: Computable general equilibrium model-based simulations made by the authors.

Table 4.5: Status of Accession of the Central Asian Republics to the World Trade Organization
(As of 10 February 2006)

	Applied	Working Party Meetings	Member
Azerbaijan	June 1997	3 meetings (June 2002, October 2004, and January 2005)	
Kazakhstan	January 1996	8 meetings (1997–2005)	
Kyrgyz Republic	1993		December 1998
Tajikistan	May 2001	2 meetings (March 2004 and April 2005)	
Uzbekistan	December 1994	3 meetings (July 2002, June 2004, and October 2005)	

Source: http://www.wto.org/.

The potential benefits of the WTO membership for the CARs are considerable. To join the WTO, a country needs to implement a broad range of policy and institutional reforms, including liberalizing trade policy and improving the legal and regulatory framework for international trade. Once it joins WTO, a country must conduct trade with other WTO members in accordance with pre-agreed rules. One of these rules requires that WTO members grant each other an MFN status. The terms on which a country joins the WTO and the rules in accordance with which its members conduct trade with each other are based on consensus and enforced through an effective dispute settlement mechanism. This means that accession to the WTO can help the CARs liberalize trade policy at relatively low costs and expand trade rapidly due to improved access to markets in a large number of countries that are already WTO members.[10] Since many countries with which the CARs "under-trade" (including most developed countries and emerging markets in East and South Asia) are WTO members, accession to the WTO can also help the CARs fully realize their bilateral trade potential vis-à-vis these countries and diversify trade in terms of geographical distribution. Furthermore, WTO membership can help the CARs reduce their vulnerability to possible protectionist measures by trading partners and make trade liberalization irreversible, which makes the policy environment more predictable and conducive to trade, investment, and growth. Accession to the WTO also strengthens the CARs' bargaining power in trade negotiations, especially with countries seeking the WTO membership. Finally, the WTO accession can help the CARs strengthen their capacity for policy management and improve the quality of institutions.[11]

The potential benefits of the WTO membership for the CARs will increase as more of their neighbors and trading partners accede to the organization. One reason the Kyrgyz Republic has not benefited much from its accession to the WTO in 1998 is that none of its immediate neighbors and a few of its key trading partners were WTO members at the time. The Kyrgyz Republic did not coordinate trade policy with its neighbors and

[10] As of 11 December 2005, 149 countries were members of the WTO.

[11] Several empirical studies have concluded that the relatively poor quality of institutions in the CARs has a significant adverse impact on trade in Central Asia, especially trade between the CARs and Western European countries. See, for example, Babetskii, Babetskaia-Kukharchuk and Raser (2003), EBRD (2003), and Elborgh-Woytek (2003).

acceded to the WTO with tariff bindings which were substantially lower than tariffs prevailing in the region. In response, some of its neighbors imposed tight restrictions on imports from the Kyrgyz Republic in an effort to prevent deflection of their trade with other countries through the Kyrgyz Republic. Since those neighboring countries were not WTO members, the Kyrgyz Republic could not use WTO rules and procedures to have the restrictions repelled. However, the situation has changed significantly since 1998. Most notably, the PRC acceded to the WTO in 2001 and the Russian Federation is likely to join the organization in the near future. Continuing rapid economic growth and the attendant increase in import demand in these two large countries will create an opportunity for the CARs to boost exports and economic growth. WTO membership can help the CARs take this opportunity.

Since the WTO members conduct trade with each other in accordance with pre-agreed common rules, an increasingly large share of trade in Central Asia will be governed by those rules, as more CARs accede to the WTO. This will provide a more favorable environment for both intra- and extra-regional trade. Sudden and frequent changes in explicit tariffs and use of implicit tariffs—two major barriers to trade in Central Asia discussed in Chapter 3—will no longer be possible. Customs rules and procedures will, at least, partly be harmonized as they are made consistent with the WTO requirements. Those CARs that will have joined the WTO will be able to use its dispute settlement mechanism to resolve trade disputes with each other, and there will be no need for a separate dispute settlement mechanism for intra-regional trade.

WTO membership also entails costs for the CARs, but these are often exaggerated and misinterpreted. For example, the costs of policy reforms (such as liberalization of trade policy) that a country implements in connection with the accession to the WTO are sometimes interpreted as costs of the membership in the organization. However, the country would need to implement most of these policy reforms anyway if it is to expand trade and integrate into the global economy. WTO membership actually reduces the costs of trade liberalization and makes it more difficult to reverse. Likewise, the constraints that WTO membership imposes on policy autonomy make the policy environment more predictable and conducive to trade, investment, and growth.

The real costs of the WTO membership are those directly associated with the accession process. These include the costs of preparing accession documents, negotiating accession conditions with a large number of existing members, and building institutions that are needed to meet the requirements of the WTO membership but otherwise have little significance for the country.[12] Nonetheless, the costs of WTO accession are most likely to be less than the costs associated with the preparation of the numerous RTAs that have been signed by CARs but not implemented. Moreover, most bilateral and multilateral donors are more willing to provide the CARs with technical assistance in institutional building for the accession to the WTO than for the preparation of an RTA.

WTO membership does not preclude regional cooperation in trade policy. In fact, several options are there for such cooperation, which the CARs can pursue within the multilateral framework. First, the CARs may want to liberalize trade policy in a coordinated manner and on a nondiscriminatory basis, as was done by many APEC member countries. This would help them avoid the bitter experience of the Kyrgyz Republic with

[12] A good example is the cost to Cambodia of adopting and implementing legislation consistent with the Trade-Related Aspects of Intellectual Property Rights (TRIPS) code, which was signed as part of Cambodia's accession to the WTO in 2004. The Government of Cambodia spent much legislative time drafting laws, and lawyers, judges, law enforcement, and customs officials were taken from other duties to be trained in TRIPS compliance. Given the low probability of Cambodia producing intellectual property that can benefit from TRIPS protection, the net benefit from all these activities is unlikely to have outweighed the opportunity cost of scarce human capital. For a more detailed treatment of these compliance costs, including a box on Cambodia's experience, see Hoekman (2005).

uncoordinated trade liberalization, and use of restrictions on cross-border movements of people and transport equipment as a means to regulate imports. Second, the CARs that are not yet WTO members may want to coordinate their negotiating positions in the accession process with each other and other countries seeking WTO membership.[13] This would strengthen their barging power during accession negotiations, but most likely prolong the process. Third, once they become WTO members, the CARs may want to join issue-specific coalitions within the WTO, such as the groups of developing countries pressuring for changes in the WTO rules on agriculture and elimination of agricultural subsidies in developed countries (see Box 4.1).

4.4 Conclusions

Since 1991, the CARs have joined several regional organizations that involve or seek to reach a multilateral RTA. In addition, they have entered into numerous bilateral RTAs with other CIS countries. Many of these RTAs have not entered into force, while most of those that have formally entered into force have not been implemented.

Consequently, their impact on the trade policy regime and

Box 4.1: Coalitions within the World Trade Organization

Several coalitions of member countries acting together and supporting each other on a particular issue have recently emerged within the World Trade Organization (WTO). Given the high costs for the Central Asian republics (CARs) of the barriers to their agricultural exports to developed countries and of trade-distorting subsidies that those countries provide to their farmers, the coalitions of developing countries that seek the reduction of barriers to agricultural imports to developed countries and the elimination of trade-distorting agricultural subsidies in those countries, are of particular importance for the CARs.

In the run-up to the WTO Ministerial Conference held in Cancun in September 2003, a group of 20 developing countries formed a coalition (referred to as the "G-20") with the aim of significant liberalization of trade in agricultural products under the Doha Round of multilateral trade negotiations. To this end, the members of the G-20 adopted a common position on trade in agricultural products, which was circulated as their joint proposal during the Cancun Ministerial Conference and became the platform of the group. The members of the group continued consultations on policy and technical issues relating to trade in agricultural products after the Cancun Ministerial Conference. They also intend to maintain a common position on agriculture during future trade negotiations under the Doha Round.

During the WTO Ministerial Conference in Cancun, a group of West African cotton-producing countries (Benin, Burkina Faso, Chad, and Mali) presented the Sectoral Initiative on Cotton, which highlighted the damage to developing countries caused by cotton subsidies in developed countries—particularly the US—and called for the elimination of these subsidies. In March 2005, Brazil secured a final WTO ruling that most cotton subsidies in the US, including cotton export subsidies, were illegal under the WTO rules. At the WTO Ministerial Conference held in Hong Kong in December 2005, the WTO members agreed to eliminate cotton export subsidies by the end of 2006.

On 1 February 2006, the US Congress approved legislation repealing a cotton support program known as Step 2, effective 1 August 2006. The legislation both implements the WTO ruling on the case filed by Brazil against cotton subsidies in the US and fulfills the commitment made by the US in Hong Kong with respect to cotton export subsidies. It marks a significant change in US agricultural policies, which most likely would have not occurred without the pressure that the West African countries and Brazil put on the US within the WTO. However, even if the US fully eliminates the cotton subsidies found illegal by the WTO and all WTO members eliminate export cotton subsidies, considerable trade-distorting cotton subsidies will remain in developed countries. Cotton-producing CARs could broaden the coalition against these subsidies and help speed up their full elimination.

Source: Authors

[13] In fact, Belarus, Kazakhstan, Tajikistan, and Russian Federation have agreed to pursue a coordinated approach to the accession to the WTO as part of their cooperation in trade policy within the framework of the EAEC.

the pattern of trade in the CARs has so far been limited. If fully implemented, however, the concluded and planned RTAs involving CARs may cause considerable trade diversion and have significant adverse effects on the CARs. In particular, implementing the EAEC customs union is likely to slow down economic growth in Kazakhstan, Kyrgyz Republic, and Tajikistan significantly, unless it is accompanied by substantial reductions in common external tariffs of its member countries.

In parallel with participation in various RTAs, the CARs have pursued membership in the WTO. The Kyrgyz Republic has already joined the WTO. The other CARs are at different stages of the accession process. The potential benefits of the WTO membership for the CARs are considerable. They have increased significantly with the accession of the PRC in 2001, and will increase further as more of the CARs' neighbors (including the Russian Federation) join the organization.

WTO membership also entails costs for the CARs, but these are often exaggerated and misinterpreted. The real costs of the WTO membership are those directly associated with the accession process and not those associated with policy reforms that a country often implements in connection with the WTO accession. Multilateral and bilateral development agencies can provide technical assistance in building institutions and capacity required for the WTO accession.

WTO membership does not preclude regional cooperation in trade policy. In fact, there are several options for such cooperation that the CARs can pursue within the multilateral framework. These include concerted but nondiscriminatory trade liberalization, coordination of negotiating positions in the accession process, and joint efforts with other developing countries to push for the elimination of cotton subsidies in developed countries.

5
Transport Sector in Central Asia

The transport sector plays a relatively marginal role in the CARs in terms of its contribution to aggregate output and employment, accounting for 3–8% of GDP and 2–5% of total employment. Yet, it is crucial for the participation of the CARs in international trade and their integration into the global economy. Moreover, the degree and nature of participation of a CAR in international trade depends not only on its own transport sector but also the transport sector of its neighbors, including the other CARs, as well as on the degree of compatibility and integration of its transport sector with those of the neighbors. This is because all the CARs are landlocked and heavily rely on transporting goods by land through neighboring countries in trade with noncontiguous countries, and—to various degrees—serve each other as transit countries.[1] Deficiencies of the transport sector in one CAR are often compounded by deficiencies of the transport sector in another CAR. This largely explains why transport costs are high and transit times are long and unpredictable for international shipments to and from the CARs.

This chapter reviews the transport sector in Central Asia and identifies deficiencies of transport infrastructure, the legal and regulatory framework for the transport sector, and transport and logistics services in the CARs that contribute to high transport costs and long and unpredictable transit times for international shipments to and from Central Asia. The chapter then discusses the benefits of regional cooperation in transport for the CARs and reviews recent initiatives in this area.

5.1 Transport Infrastructure

The CARs inherited fairly extensive and highly integrated transport networks from the FSU, which were built with little regard for their then administrative borders and mostly oriented towards the Russian Federation. There were many examples of railways and roads crossing back and forth over borders in Central Asia. At the same time, their transport links with non-FSU neighboring countries—such as Afghanistan, PRC, India, Iran, Pakistan, and Turkey—were poorly developed, with a few direct routes, most of which were in very poor condition.

Since the break-up of the FSU, the CARs have sought to improve their transport links with non-FSU

[1] In particular, Azerbaijan serves as a transit country in trade between Kazakhstan and Turkey; Kazakhstan serves as a transit country in trade between Azerbaijan and the PRC and between Kyrgyz Republic, Tajikistan, and Uzbekistan, on the one hand, and the Russian Federation, on the other; the Kyrgyz Republic and Tajikistan serve as transit countries in trade between Uzbekistan and PRC; and Uzbekistan serves as a transit country in trade between Kazakhstan and Iran and between Tajikistan and the Russian Federation.

countries, often with the support of multilateral and bilateral development agencies. Most notably, railway connections between Azerbaijan and Iran and between Kazakhstan and the PRC, and a road connection between Tajikistan and the PRC have been established. Kazakhstan, Russian Federation, and Turkmenistan have reached an agreement to build a railway that would connect Russian Federation with Iran via Kazakhstan and Turkmenistan. Kazakhstan is making efforts to build missing segments of a railway that will link the PRC with Europe via Kazakhstan, Turkmenistan, and Iran. A railway that would connect Uzbekistan with the PRC through the Kyrgyz Republic is under consideration, along with a railroad between Afghanistan and Uzbekistan. With the financial and technical assistance of ADB, the CARs have carried out or are implementing several road projects to improve their transport links with East and South Asia, a step towards reestablishing themselves as a land bridge between Asia and Europe. These projects include the rehabilitation of the Dushanbe-Kyrgyz border, Osh-Irkeshtan, Osh-Bishkek, Bishkek-Almaty, and Almaty-Astana roads. The CARs have also been taking part in the TRACECA (Transport Corridor Europe Caucasus Asia) Programme of the EU and in Asian Highway and Trans-Asian Railway projects of the UN Economic and Social Commission for Asia and the Pacific (UN ESCAP)(see Box 5.1). Overall, however, the lack of financial resources and poor coordination of national transport infrastructure projects have been slowing down progress in integrating Central Asian transport networks into international transport networks.

At the same time, the CARs have built a number of new railways and roads primarily to avoid transit through a neighboring country, as the emergence of national borders increased transit costs and times. In particular, Kazakhstan has built the Kyzylasker-Kirovskiy road to connect the part of South-Kazakhstan Region located south of the Chardara Reservoir with the rest of the country, bypassing Uzbekistan. The Kyrgyz Republic has upgraded the Jalal-Abad-Uzgen road at a cost of about US$12 million to link Osh and Jalal-Abad without passing through Uzbekistan. Uzbekistan has built the Uchkuduk–Misken–Karauzak railway at a cost of more than US$10 million to connect Bukhara with Nukus via Navoi, bypassing Turkmenistan. While these new roads and railways have had certain positive impact on the development of the CARs that built them, it is not obvious that their construction would have been justifiable if the use of existing transport networks had not been beset by difficulties with transit through neighboring countries. Better use of scarce resources could have been the rehabilitation and maintenance of existing transport networks.

The CARs now possess extensive transport networks (see Table 5.1). Several transcontinental railway and road corridors connect them with neighboring countries and the rest of the world (see Figure 5.1). However, many segments

Table 5.1: Transport Networks in the Central Asian Republics, 2004
(1,000 km)

	Railways	Roads
Azerbaijan	2.1	25.0
Kazakhstan	14.3	89.0
Kyrgyz Republic	0.4	18.8
Tajikistan	0.5	12.5
Uzbekistan	4.0	43.5
Total	**21.3**	**188.8**

Source: Governments of the Central Asian republics and the authors' estimates.

Box 5.1: Participation of the Central Asian Republics in Major Regional Transport Infrastructure Projects

TRACECA Programme

The Transport Corridor Europe Caucasus Asia (TRACECA) Programme is a European Union-funded technical assistance program that aims to develop a west-east transport corridor from Europe, across the Black Sea, through the Caucasus and the Caspian Sea to Central Asia. The Programme was launched at a conference in Brussels in May 1993, which brought together trade and transport ministers from the original eight TRACECA countries (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan).

To date, the TRACECA Programme financed 39 technical assistance projects totaling Euro 57.7 million and 14 investment projects totaling Euro 52.3 million. The technical assistance provided through the TRACECA Programme has helped attract large investments to participating countries from international financial institutions. In particular, the European Bank for Reconstruction and Development has extended loans to Kazakhstan (US$65 million) and Uzbekistan (US$40 million) for the rehabilitation of railways on the basis of TRACECA projects, which have identified the condition of the rail systems in Central Asia. The small-scale investment projects financed under the TRACECA Programme include the reconstruction of the rail ferry ramp in Aktau, Kazakhstan; procurement of cargo and container handling equipment for container terminals in Aktau and Chimkent, Kazakhstan, and Bishkek, Kyrgyz Republic; establishment of container services between Baku, Azerbaijan, and Turkmenbashi, Turkmenistan; procurement of mobile equipment for a container terminal in Bukhara, Uzbekistan. In addition, the TRACECA Programme is providing co-financing for the border crossing facilitation component of the Asian Development Bank's loans to Kazakhstan and the Kyrgyz Republic (totaling US$68 million) for the rehabilitation of the Almaty-Bishkek road.

The Asian Highway and Trans-Asian Railway

The Asian Land Transport Infrastructure Development project, which was endorsed by the UN Economic and Social Commission for Asia and the Pacific at its 48th session in 1992, has three pillars: the Asian Highway (AH), Trans-Asian Railway, and facilitation of land transport projects.

The objective of the AH is to promote the development of international road transport in the region. The Intergovernmental Agreement on the AH Network was adopted in November 2003 by the Intergovernmental Meeting and entered into force in July 2005. The Agreement identified 55 AH routes with a total length of approximately 140,000 km, which crisscross the Asian continent and reaches Europe. These include four routes (1,670 km) in Azerbaijan, eleven routes (13,189 km) in Kazakhstan, four routes (1,695 km) in the Kyrgyz Republic, three routes (1,925 km) in Tajikistan, and five routes (2,966 km) in Uzbekistan.

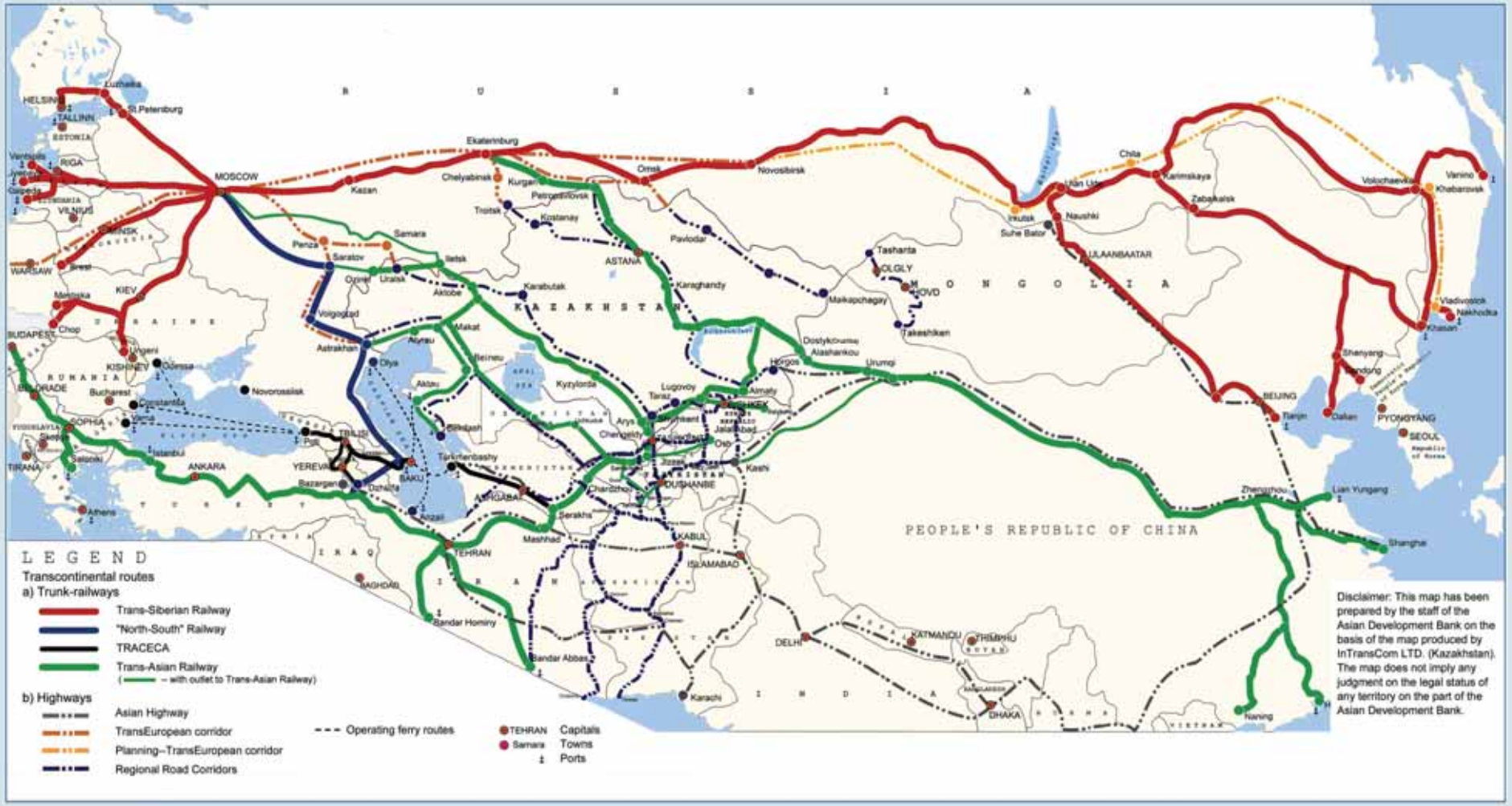
The Trans-Asian Railway (TAR) was initiated in the 1960s with the objective of providing a continuous 14,000-km rail link between Singapore and Istanbul (Turkey), with possible onward connections to Europe and Africa. Given the extent of the territory covered, the differences in standards, and differences in the levels of technical development between railways in the region, UN ESCAP adopted a step-by-step approach to define the TAR network. The network was initially divided into four major components, which were studied separately:

(i) a northern corridor connecting the rail networks of the People's Republic of China, Kazakhstan, Mongolia, Russian Federation, and Korean Peninsula;
(ii) a southern corridor connecting Thailand and the southern Chinese province of Yunnan with Turkey through Myanmar, Bangladesh, India, Pakistan, and Islamic Republic of Iran with Sri Lanka also part of the corridor;
(iii) a network covering the Association of Southeast Asian Nations and Indo-China sub-regions; and
(iv) a north-south corridor linking Northern Europe to the Persian Gulf through the Russian Federation, Central Asia, and South Caucasus.

The next challenge is to move towards joint operationalisation of these corridors in a coordinated manner at financial, operational, and commercial levels. In particular, institutional and technical bottlenecks have to be identified and specific remedial measures have to be defined and implemented. The development of common information technology systems has to be given proper attention as well as the development of efficient access to ports and inland container depots.

Source: http://www.traceca-org.org/ and http://www.unescap.org/

Figure 5.1: Rail and Road Corridors Connecting the Central Asian Republics with the Rest of the World



Source: Asian Development Bank.

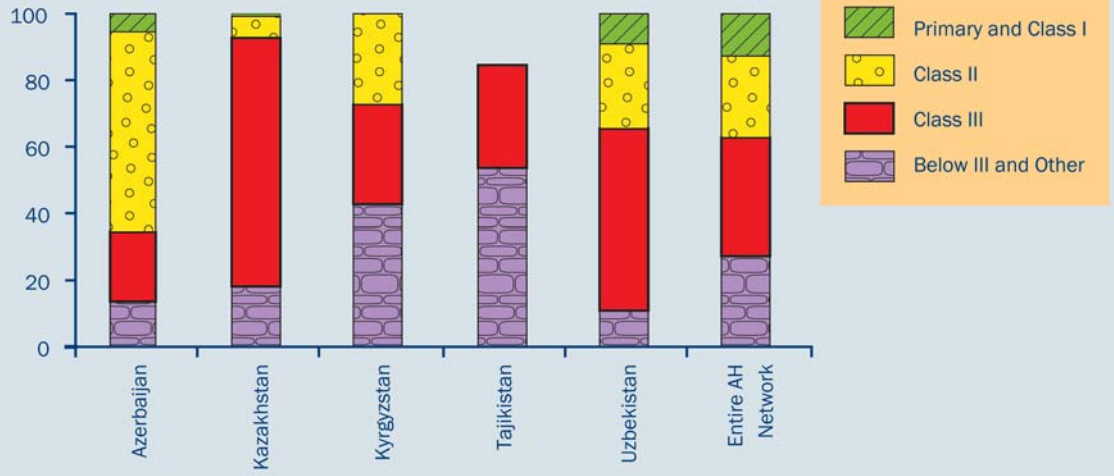
of these corridors are still missing or in poor condition, and many railways and roads the CARs inherited from the FSU have deteriorated. Only a small proportion of Central Asian roads included in the AH Network have been classified by the UN ESCAP as "Primary" or "Class I," while a significant proportion of them have been classified as "Class III" or worse (see Figure 5.2). It is estimated that only 25% of roads in the Kyrgyz Republic and 20% of roads in Tajikistan are in good condition. The reasons are (i) the lack of maintenance due to inadequate financing; (ii) the Soviet standards in accordance with which most of these roads were built and which are inappropriate for the current level of traffic and modern trucks; and (iii) the low quality of maintenance due to corruption and limited use of modern technology and equipment.

Many other elements of transport infrastructure are also underdeveloped and in poor condition. Most notably, multimodal transport infrastructure is underdeveloped. The rolling stock in rail transport is of old technology and has been cannibalized to avoid purchasing new spare parts and units. The lack of locomotives and train paths at border crossing points is a serious obstacle to cross-border movements of trains.[2] There is substantial overcapacity in basic vehicles in road transport, but specialized vehicles—such as temperature-controlled ones—are in short supply. While Azerbaijan, Kazakhstan, and Uzbekistan have recently bought or leased a number of modern airplanes, the air fleets in the Kyrgyz Republic and Tajikistan are mostly obsolete. Many airports need reconstruction.

5.2 Legal and Regulatory Framework

Since independence, the CARs have made considerable progress in establishing a legal and regulatory framework for the transport sector, but much remains to be done. The existing frameworks are weak and less than transparent. In particular, the existing sector-specific legislation on transport safety and security is often too

Figure 5.2: Classification of Asian Highway (AH) Roads, 2004
(In percent)



Source: Authors' estimates based on data from http://www.unescap.org/.

[2] Due largely to these and other transport-related factors (such as the need for technical inspection of the trains and shunting of damaged wagons), border crossing by a cargo train takes from several hours to several days in the CARs, compared with 30–40 minutes in Europe and 60 minutes recommended by the UN Economic and Social Commission for Europe.

manner. Information on changes and amendments is often limited and getting information on all relevant laws and regulations can be quite difficult. Laws and regulations concerning competition in the transport sector are generally weak and in some cases, allow state-owned companies to perform both regulatory and commercial functions.

The CARs have acceded to a number of basic international transport agreements and conventions, but many others are yet to be signed. In 2001, the UN ESCAP identified seven international transport agreements and conventions that it recommended all member countries to sign. Of these, only one has been signed by all of the five CARs (See Appendix 4). Even those international agreements and conventions that the CARs have acceded to are often not respected in practice and overridden by domestic regulations and unofficial practices.

Cross-border and transit traffic are mostly governed by multilateral and bilateral transport agreements that CARs have signed with each other and with neighboring countries.[3] Although these agreements are generally better implemented than international agreements and conventions, they have resulted in a very complex regional regulatory framework for the transport sector and, with a few exceptions, have not been particularly effective in facilitating cross-border and transit traffic. Furthermore, there has been little harmonization of transport legislation and regulations among the CARs.

Consequently, national transport legislation and regulations currently in place in the CARs differ markedly and create serious obstacles to cross-border and transit traffic. A major problem is the availability and cost of transport permits, which foreign transporters generally need to obtain in order for their vehicles to be allowed to enter (and pass through) the territory of a CAR. Such permits are usually issued by government agencies on the basis of a bilateral agreement whereby country A allows a certain number of vehicles from country B to enter (and pass through) its territory free of charge in return for country B allowing the same number of vehicles from country A to enter (and pass through) its territory free of charge. The problem with this standard international arrangement is that the demand in many foreign countries for permits to enter the CARs is often greater than the demand in the CARs for permits to enter those foreign countries. The result is a shortage of permits for foreign vehicles to enter the CARs and a surplus of permits for vehicles from the CARs to enter the foreign countries. Consequently, in order for their vehicles to be allowed to enter the CARs, foreign transport operators often have to purchase nonreciprocal permits at a substantial cost. In addition to the entry (and transit) fees, the CARs levy other charges and fees, such as a road tax and an excess axle load charge, on foreign vehicles (see Table 5.2). Combined with entry (and transit) fees, these additional charges and fees can make the cost of entering (and passing through) the CARs quite high for foreign vehicles.

Another significant regulatory barrier to cross-border and transit traffic is visa requirements for foreign drivers. Citizens of most foreign countries need a visa to enter the CARs. Even among the CARs, citizens of the Kyrgyz Republic and Tajikistan need a visa to enter Uzbekistan and vice-versa. In Azerbaijan, Kazakhstan, Kyrgyz Republic, and Uzbekistan, it is possible to obtain a visa at an airport upon arrival, but even in these CARs countries, it is not possible for foreign truck drivers to obtain a visa at border crossing points. Consequently, if a foreign driver needs a visa to enter a particular CAR, he has to obtain it in advance from an embassy of that country. This can be time consuming and can cause delays, particularly if the CAR concerned does not have an embassy in the country where the driver resides. In addition, the cost of an entry visa in the CARs is relatively high. For example, a single-entry Kazakh visa can cost a citizen of a non-CIS country as much as US$70, a single-entry Kyrgyz or Uzbek visa US$75, and a single-entry Tajik visa US$60. The total cost of visas for the driver and co-driver can increase transport costs significantly if a foreign vehicle needs to pass through several of the CARs and neighboring countries.

[3] See Sims (2005) for a list of multilateral and bilateral regional transport agreements signed by CARs.

Table 5.2: Charges and Fees Levied by the Central Asian Republics on Foreign Trucks
(As of 1 January 2006)

Country	Charges and Fees
Azerbaijan	1. An entry fee of US$100–$150. 2. An exit fee of US$100. 3. A road tax based on the length of stay and number of axles. 4. A charge on heavily-loaded trucks based on the weight of the truck. 5. A charge on trucks carrying dangerous goods.
Kazakhstan	1. A transit fee of US$78. 2. A charge for an excess axle load. 3. A charge for excess dimensions.
Kyrgyz Republic	1. An entry fee of US$50 for trucks from non-CIS countries. Trucks from the CIS countries are exempt from the fee. 2. The tolls to be paid for passing through a tunnel along the Bishkek-Osh road are 5–10 times higher for foreign trucks than for domestic ones.
Tajikistan	1. Entry fee of US$50–$150 for trucks from CIS countries (with the exception of the Kyrgyz Republic and Uzbekistan) and US$100–$200 for trucks from non-CIS countries. Trucks from the Kyrgyz Republic are exempt, and the fee is US$130 for trucks from Uzbekistan. 2. A transit fee of US$90 for trucks from all countries, excluding the Kyrgyz Republic. Trucks from the Kyrgyz Republic are exempt from the fee.
Uzbekistan	1. Entry fee of US$300 for trucks from Kazakhstan and the Kyrgyz Republic, US$130 for trucks from Tajikistan,and US$400 for trucks from non-CIS countries. Trucks from the Kyrgyz Republic going from one part of the Kyrgyz Republic to another through Uzbekistan are exempt from the fee. 2. A charge for an excess axle load. 3. A charge for staying more than 8 days. 4. A charge of US$5–$20 for mandatory civil liability insurance.

Note:
CIS – Commonwealth of Independent States

Source: Sims (2005) and information collected by the authors.

5.3 Transport and Logistics Services

The availability, quality, and costs of transport services in the CARs compare unfavorably with many other countries.[4] In particular, international rail services for small cargo (i.e., cargo of less than one wagonload or five-ton container-load) are either not available or very costly with long booking and transit times. International shipments by road are fairly expensive and unreliable. Inter-modal piggyback operations (e.g., trailers on rail wagons) are nonexistent. Airfreight services are underdeveloped and expensive. Scheduled consolidated services are unpredictable and among the most expensive in the world.[5]

[4] See, for example, Jenkins and Pezant (2003), Molnar and Ojala (2003), and World Bank (2005b) for an in-depth analysis of the state of transport services in Central Asia.

[5] In consolidated (or groupage) services, the capacity of a vehicle is filled with several individual shippers' parcels. The consolidated capacity is offered to a large number of customers typically according to a fixed schedule of departures and arrivals. This is standard practice in international freight forwarding.

Lack of competition is one of the main reasons for the low quality and the high costs of rail and air transport services. State-owned railways maintain monopoly positions in rail transport and continue to perform both regulatory and commercial functions, although restructuring of railways has been underway in Kazakhstan and Uzbekistan and is under consideration in Tajikistan. Likewise, state-owned airlines dominate the market for air transport services in all the CARs, including Kazakhstan, where there are 47 private and only one state-owned air carrier (see Table 5.3). In Azerbaijan, Tajikistan, and Uzbekistan, state-owned airlines also effectively control major airports. The lack of competition has resulted in inefficiencies in transport services, lack of commercial management of operations, and underinvestment in transport infrastructure, especially in rail transport.

Although state-owned enterprises in the road transport have largely been privatized, competition remains limited in the market for international transport services. The need for expensive equipment and difficulties with transit through neighboring countries give large foreign transport operators a competitive edge and make it relatively difficult for local companies to enter this market. The market is therefore dominated by a small number of large transport operators, mostly from Iran and Turkey. In contrast, competition is stiff in the market for domestic road transport services, which is mostly comprised of small and micro firms. The cost of domestic transport services is relatively low—due in part to low wages and operating costs, and oversupply of old equipment not suited for international traffic—but the quality of services is low as well.

The share of own account transport is very high, especially for domestic road transport services. It is estimated that almost 80% of domestic road freight in Uzbekistan and over 50% in the other CARs is carried for own account. This is typical in countries where there is overcapacity and the level of sophistication of transport and logistics markets is low. The high share of own-account transport effectively hinders the development of domestic transport markets. This situation is difficult to change in Central Asia since many shippers prefer their own transport capacity, which is often cheaper and deemed more reliable and flexible than what can be bought in the market.

The limited availability of multi-modal transport operations and relatively high costs of international transport services for small cargo are due largely to the underdevelopment of logistics infrastructure and services. There are no modern logistics centers in any of the countries that could consolidate freight for the international market in sufficient volumes and allocate them to the most efficient transportation mode.[6]

Table 5.3: Estimated Share of State-Owned Companies in the Provision of Transport and Logistics Services in the Central Asian Republics, 2004
(In percent)

	Azerbaijan	Kazakhstan	Kyrgyz Republic	Tajikistan	Uzbekistan
Rail transport services	100	100	100	100	100
Scheduled air transport services	>40	>50	100	100	100
Airport services	100	40	100	100	100
Road transport services	0	20	50	30	25
International freight forwarding	10	10	20	10	10

Source: Authors' estimates

[6] World Bank (2005b).

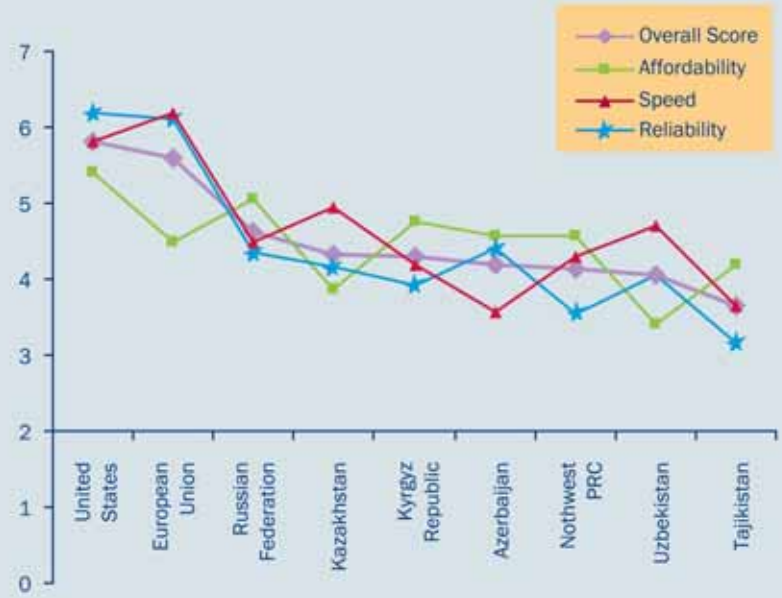
International logistics providers have largely stayed outside the region, citing the small size of the market, unfavorable regulatory environment, and corrupt practices. There has been little FDI in logistics infrastructure and limited transfer of know-how in logistics services. Local logistics companies are mostly small, and lack the facilities and expertise to provide quality services.

As part of the ADB study on Central Asia regional cooperation in trade, transport and transit, a "logistics friendliness" survey was conducted in the CARs in late 2004–early 2005. Companies involved in international transportation and trade were asked to assess the "friendliness" of the CARs and several comparator countries in terms of affordability, speed, and reliability of logistics services. Although the survey covered a relatively small number of companies (about 10 in each CAR) and its results need to be treated with caution, they indicate that the CARs are much less "logistics friendly" than the US and the EU countries, and somewhat less "logistics friendly" than the Russian Federation. As compared with the EU countries and the US, the CARs rank particularly low in terms of reliability of logistics services. Among the CARs, Kazakhstan and the Kyrgyz Republic are most "logistics friendly" while Tajikistan is least "logistics friendly."[7]

5.4 Regional Cooperation in Transport

Increased regional cooperation with each other and neighboring countries in transport in the form of coordinated development of national transport networks,

Figure 5.3: "Logistics Friendliness" of the Central Asian Republics and Selected Comparator Countries



Note: "Logistics friendliness" scores range from 1.0 to 7.0, with a higher score representing greater "friendliness." The scores for the European Union are nonweighted averages for the Benelux countries, Finland, and Germany.
PRC – People's Republic of China

Source: A survey conducted by the authors in the Central Asian republics in late 2004–early 2005.

[7] These results are broadly consistent with the results of a similar survey reported in Ojala, Naula, and Queiroz (2004).

simplification, and harmonization of the legal and regulatory framework, facilitation of entry and transit of foreign vehicles, liberalization of trade in transport services, benchmarking, and exchange of know-how in restructuring of state-owned railways, airlines, etc. would help the CARs reduce transport costs for international shipments and make transit times for such shipments shorter and more predictable. This would, in turn, help the CARs expand trade, especially with distant countries, take more active part in GPN and related trade in manufactured products, diversify trade in terms of both commodity composition and geographical distribution, increase the gains from participation in international trade, and reduce the associated costs.[8] Facilitation of transit of foreign transport equipment would also help the CARs avoid the construction of new bypassing railways and roads, allocate more resources to the rehabilitation and maintenance of existing transport networks and their closer integration with international transport networks, and become a land-bridge for rapidly expanding trade between East and South Asia, on the one hand, and Europe, on the other. Thus, the benefits of regional cooperation in transport for the CARs are substantial.

There have been a number of regional cooperation initiatives pertaining to transport and involving CARs. Apart from the three major regional transport infrastructure projects described in Box 5.1, four other initiatives can be highlighted. First, a Transport Sector Coordinating Committee has been set up under the CAREC Program to develop transport services in the member countries and improve their transport links with each other and the rest of the world. Second, the Central and South Asia Transport and Trade Forum, which involves Afghanistan, Iran, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan, and is also supported by ADB, seeks to facilitate movements of goods and vehicles along two road corridors connecting Tajikistan, Turkmenistan, and Uzbekistan with seaports in the Arabian Sea and the Persian Gulf via Afghanistan. Third, transport is one of the focus areas of the Shanghai Cooperation Organization, which consists of the PRC, Kazakhstan, Kyrgyz Republic, Russian Federation, Tajikistan, and Uzbekistan. Finally, transport is one of the priority areas of regional cooperation among Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan under the UN Special Programme for the Economies of Central Asia.

Nevertheless, regional cooperation among as well as between the CARs and their neighbors in the area of transport, especially transport regulations and services, has been less than satisfactory. The main reasons are: the lack of political will, uncertainty about and unequal distribution of benefits and costs of cooperation among and within the countries concerned; opposition of vested interests that stand to lose from improved regional cooperation in transport; weak implementation capacity overstretched by numerous national and regional initiatives; and security concerns, which often prompt CARs to take measures that obstruct entry and transit of foreign transport equipment.

The CAREC member countries have recently agreed on the Regional Transport Sector Road Map, which formulates the strategic priorities for regional cooperation in the transport sector. The goal is to develop an integrated and efficient transport system that will improve transport links of the CAREC member countries, enhance their access to outside large markets, reduce transport costs, improve transport services, and facilitate cross-border and transit traffic in the region. The five strategic priorities are:

(i) Harmonization and simplification of cross-border transport procedures and documentation among the CAREC member countries to facilitate the movement of passengers and freight across borders;

[8] Moran (2002) finds that the benefits of trade liberalization that is accompanied by the establishment of international supply chain arrangements [which often require inexpensive, fast, and reliable transport services] between developed and developing countries can be 10–20 times larger than those accruing from trade liberalization alone.

(ii) Harmonization of transport regulations among the CAREC member countries to create a level playing field for transport operators, and promote efficiency and better services;

(iii) Development and improvement of regional and international transport corridors to link production centers and markets within the CAREC member countries, and to enhance CAREC member countries' access to neighboring regions and markets;

(iv) Restructuring and modernization of railways to provide quality and efficient services through private sector participation and improved corporate governance; and

(v) Improvement of sector funding and management to ensure that the regional transport network is developed, and maintained properly.

The Road Map addresses most of the deficiencies of the transport sector in Central Asia discussed above. It is, therefore, important that the Road Map be fully implemented. To this end, the CAREC member countries need to develop and carry out a detailed time-bound action plan, which would include specific measures aimed at implementing the Road Map. In addition, they should consider extending the Road Map to address deficiencies of air transport in Central Asia, and developing economic corridors on the basis of selected transport corridors connecting them with each other and the rest of the world.[9] For their part, multilateral institutions need to make adequate technical and financial assistance available to the CAREC member countries for them to be able to implement the Road Map and develop economic corridors that would enable them to expand trade and establish regional production networks along key transport corridors.

5.5 Conclusions

The CARs inherited highly integrated transport networks from the FSU, which were built with little regard for their then administrative borders and mostly oriented towards the Russian Federation. At the same time, their transport links with non-FSU neighboring countries—such as Afghanistan, PRC, India, Iran, Pakistan, and Turkey—were poorly developed. Since the break-up of the FSU, the CARs have sought to improve their transport links with non-FSU countries, but a lack of financial resources and poor coordination of national transport infrastructure projects have been slowing down progress in integrating their transport networks into international transport networks.

Simultaneously, the CARs have built a number of new roads and railways primarily to avoid transit through a neighboring country. While these new roads and railways have had certain positive impact on the development of the CARs that built them, it is not obvious that their construction would have been justifiable if the use of existing transport networks had not been beset by difficulties with cross-border movements of people, transport equipment, and goods. A better use of limited financial resources would have been the development of international transport corridors and rehabilitation and the maintenance of existing networks. Central Asia now possesses an extensive transport network, but much of it is in poor condition and requires rehabilitation. Other elements of transport infrastructure—with the exception of air transport infrastructure in Azerbaijan, Kazakhstan, and Uzbekistan—are also underdeveloped and in poor condition.

Although the CARs have made considerable progress in establishing a legal and regulatory framework for the transport sector since independence, much remains to be done. The existing frameworks are weak and nontransparent. National transport legislation and regulations differ significantly and create serious obstacles

[9] The concept of "economic corridors" expands the concept of transport corridors to include a simultaneous focus on developing associated production, investment, and trade linkages within a well-defined geographic area. For a more detailed explanation of the concept, see Abonyi and Zola (2003).

to cross-border and transit traffic. A major problem is the availability and the cost of transport permits, which foreign transport operators generally need to obtain in order for their vehicles to be allowed to enter (and pass through) the territory of the CARs. There is a shortage of reciprocal (free) transport permits, while the cost of nonreciprocal transport permits is high. In addition to obtaining a transport permit, foreign transport operators need to pay various taxes and charges, such as a road tax and an excess axle load charge, to enter (and pass through) the territory of the CARs. Furthermore, foreign drivers generally need a visa to enter a CAR and have to obtain it in advance at an embassy of that CAR. This often causes delays because the CARs have cumbersome visa procedures and do not have embassies in many countries.

The availability, quality, and costs of transport services in the CARs compare unfavorably with many other countries. Lack of competition is one of the main reasons for the low quality and high costs of rail, air, and international road transport services. Competition is stiff in the market for domestic road transport services. The cost of these services is relatively low, but the quality is not high either. The share of own account transport is very high, which is an impediment to the development of markets for transport services. The availability of multi-modal transport operations is limited and costs of international transport services for small cargo are relatively high due largely to the underdevelopment of logistics infrastructure and services. This is a serious obstacle to the development of small- and medium-sized enterprises, which have been an engine of employment generation, export expansion, and economic growth in many other countries.

There have been a number of regional cooperation initiatives aimed at removing the deficiencies of transport infrastructure and services and facilitating cross-border and transit traffic in the CARs and neighboring countries. Notably, the CAREC member countries have recently agreed on the Regional Transport Sector Road Map, which formulates the strategic priorities for regional cooperation in the transport sector and addresses most of the deficiencies of rail and road transport in Central Asia. The CARs and other CAREC member countries now need to develop and carry out a detailed time-bound action plan to implement the Road Map. They should also consider extending the Road Map to address deficiencies of air transport in Central Asia.

6
Road Transit Systems in Central Asia

A large share of international trade in the CARs involves domestic customs transit—that is, transporting goods from the point of inland customs clearance to the point of exit (in the case of exports) or from the point of entry to the point of inland customs clearance (in the case of imports) without paying the duties and taxes due on domestic consumption in the CAR concerned. This is because goods being exported (imported) often undergo customs clearance in one place but exit (enter) the country in another place. A substantial proportion of international trade in the CARs also involves external customs transit through a neighboring country—that is, transporting goods from the point of entry to the point of exit in the transit country without paying duties and taxes due on domestic consumption in that country. The reason is that the CARs are all landlocked and most of their trade is with noncontiguous countries (see Table 6.1). Moreover—as noted in Chapters 1 and 5—the CARs, to various degrees, serve each other as a transit country in international trade.

Even domestic trade between certain regions of Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan involves customs transit through another CAR. This is because the transport networks these countries inherited from the FSU crisscross their national borders. The shortest route connecting two parts of the same country often passes through a neighboring country. Furthermore, the Kyrgyz Republic, Tajikistan, and Uzbekistan each have exclaves

Table 6.1: Share of Contiguous and Noncontiguous Countries in Merchandise Trade in the Central Asian Republics, 2004
(In percent)

	Contiguous Countries			Noncontiguous Countries		
	Exports	Imports	**Total**	Exports	Imports	**Total**
Azerbaijan	15.6	21.0	**19.1**	84.4	79.0	**80.9**
Kazakhstan	26.2	50.5	**35.5**	73.8	49.5	**64.5**
Kyrgyz Republic	24.5	26.3	**25.6**	75.5	73.7	**74.4**
Tajikistan	7.7	20.8	**15.1**	92.3	79.2	**84.9**
Uzbekistan	13.4	10.1	**11.6**	86.6	89.9	**88.4**

Source: Governments of the Central Asian republics and the authors' estimates.

in the territory of the other two. Domestic trade between these exclaves and other parts of the country they belong to inevitably involves customs transit through the country in which the exclave is located.

Accordingly, the transit systems—i.e., sets of rules and procedures in accordance with which customs transit is carried out—that are in place in the CARs have significant effects on both intra- and extra-regional trade in Central Asia. Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan's transit systems also affect domestic trade in at least one neighboring CAR. Indeed, certain aspects of the transit systems currently in place in the CARs do impose constraints on cross-border movements of goods by rail and by road.[1] These are, however, not crucial for cross-border movements of goods by rail, for which transport-related factors—such as the need for technical inspection of the train and shunting of damaged wagons and the lack of locomotives and train paths at border crossing points—are a binding constraint. Unless these transport-related constraints are removed, improvements in the rail transit systems will do little to facilitate cross-border movements of goods by rail. In contrast, inadequacies of the road transit systems impose a binding constraint on trade in Central Asia.

It is in part due to substantial outlays and delays associated with road customs transit, especially external road customs transit, that transport costs are high and transit times are long and unpredictable for international shipments by road to and from the CARs. And it is partly due to difficulties with external road customs transit through neighboring countries, some of the CARs have spent a considerable amount of resources on the construction of new roads primarily to avoid transit through a neighboring CAR. The construction of these new roads would have been harder to justify if the use of existing roads had not been beset by difficulties with transit through neighboring countries.

This chapter reviews the road transit systems currently in place in the CARs and identifies their weaknesses that contribute to high transport costs and long and unpredictable transit times for international shipments to and from the CARs, prompting some of them to build new roads with the primary aim of avoiding transit through a neighboring CAR. The chapter then discusses how regional cooperation could help the CARs reduce outlays and delays associated with road customs transit in Central Asia.

6.1 National Transit Systems

Following independence, the CARs developed national transit systems, which apply to customs transit not covered by the international or regional agreements that the CAR concerned has signed. Key features of these transit systems, including acceptable forms of a guarantee, are specified in the customs code of the respective CAR. The design of the national transit systems has improved markedly over the last several years, reflecting the considerable progress the CARs have made in revising their customs codes in line with the Convention on the Simplification and Harmonization of Customs Procedures (commonly known as the "Revised Kyoto Convention") and WTO standards.[2]

The main remaining problem with the national road transit systems is that they cover only one country and do not provide a "chain guarantee." Consequently, a transport operator undertaking customs transit under the national road transit systems has to submit separate transit documents and provide separate guarantees in the country of origin, the country of destination, and each of the transit countries (see Figure 6.1). The need to submit separate transit documents in several countries can increase transport time substantially. Providing a guarantee even in one country can be quite costly, let alone providing separate guarantees in several countries. Customs legitimately require that the

[1] The transit systems are not important for cross-border movements of goods by air because goods in transit by air always remain in a customs-controlled environment.

[2] Kazakhstan enacted its Revised Customs Code in 2003 and the Kyrgyz Republic in 2004. Tajikistan is expected to do so in November 2005. Azerbaijan and Uzbekistan are revising their customs codes.

guarantee must cover not only the cost of the potential duty and tax liabilities, but also the recovery costs and the amount of the potential penalties. Hence, the amount required for the guarantee can be substantially greater than the amount of the potential duty and tax liabilities.

Although customs in the CARs accept a guarantee in one of the several forms (e.g., a cash guarantee, a bank guarantee or an insurance guarantee), there are difficulties in providing a guarantee in any of these forms. The main difficulty in providing a cash guarantee is that small transport operators rarely hold large amounts of cash required for such a guarantee. In addition, drivers are understandably reluctant to carry large amounts of cash because not all roads in the region are secure. Furthermore, in most of the CARs, repayment system is slow and a cash guarantee can only be recovered through the customs headquarters, which is very inconvenient, especially for foreign transporters. A bank guarantee is fairly expensive and only available to large companies with a good "track record." Although an insurance guarantee is generally cheaper than a bank guarantee, it is difficult to obtain in most of the CARs because the insurance industry is still in its early stage of development.

In the absence of a guarantee, convoying is usually required for customs transit under the national road transit systems. A major problem with convoying is that the fee for the service is rather high in some of the CARs. It can be as high as US$285 in Kazakhstan, US$100 in Tajikistan, and US$245 in Uzbekistan. Another problem is that accumulating sufficient vehicles to make up a convoy takes time, that is, more than a day at light-traffic border crossing points. Furthermore, all the vehicles in a convoy arrive at the exit border crossing point together, thus creating an uneven workload for customs at that point and causing significant processing delays. That is why the variable costs of the national road transit systems in the CARs are quite high.

High costs of providing separate guarantees in several countries explain why transport operators often clear goods at the border instead of undertaking internal customs transit by road and join a customs convoy when external customs transit by road is required. A major advantage of customs convoy is that it protects, to some extent, truck drivers from attempts of corrupt traffic police officers along the route to extract unofficial payments from them. The latter is a serious problem for customs transit in the CARs not only when it is undertaken under their respective national transit systems, but also when it is undertaken under international and regional transit systems.

6.2 TIR System

The most important international road transit system used in the CARs is the so-called "TIR system"—that is, the international transit system based on the Customs Convention on the International Transport of Goods under Cover of TIR Carnets (often referred to as the "TIR Convention").[3] The main features of the TIR system are as follows:

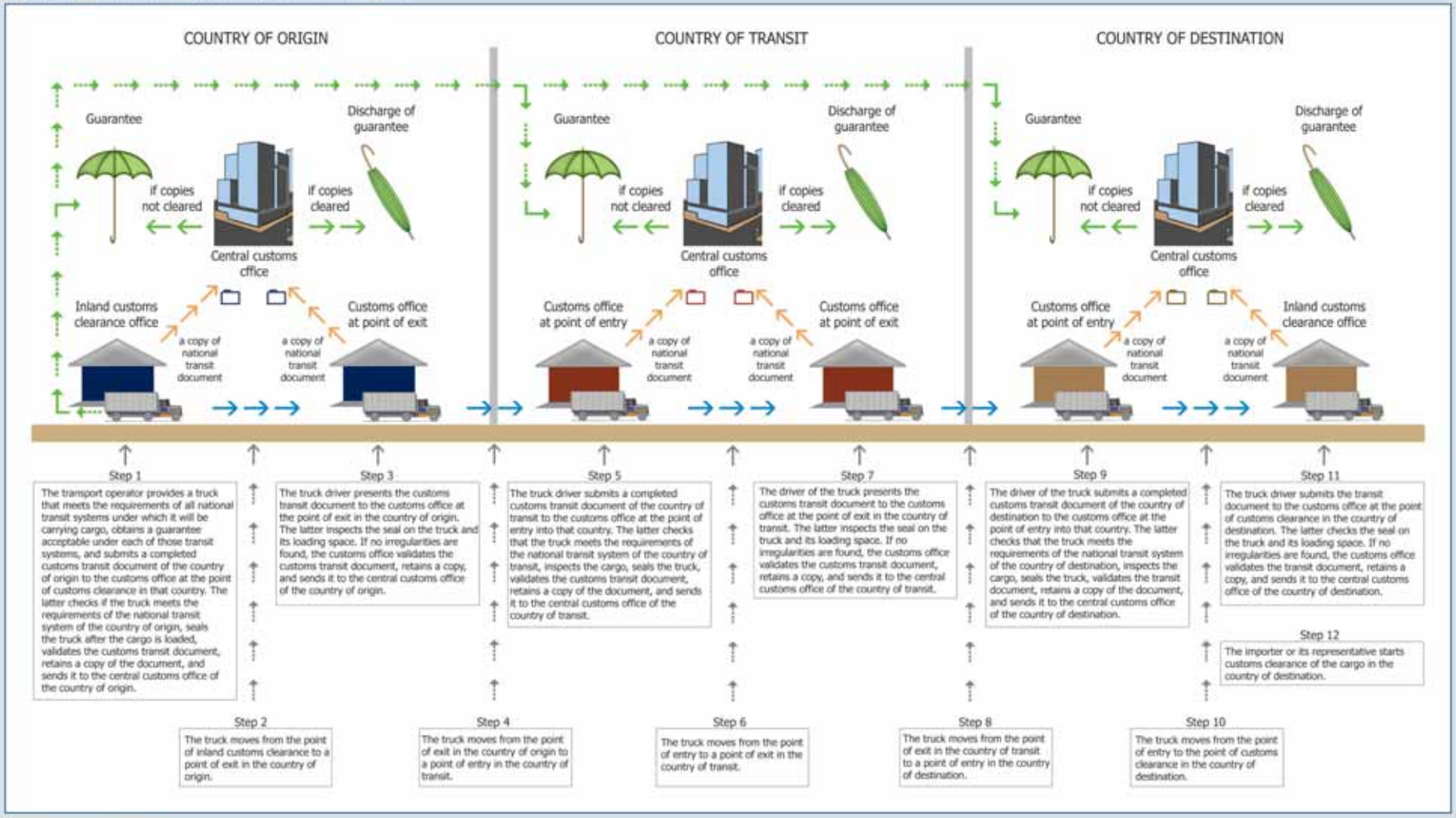
(i) Goods are transported in a customs-secure vehicle or container. The TIR Convention sets out standards and certification procedures for the load compartment (i.e., the cargo carrying area) of vehicles and for containers that can be used in customs transit under the TIR system. The standards are designed to ensure that the interior of a load compartment or a container is not accessible when it is sealed by customs and any tampering would be clearly visible.

(ii) While goods are in transit, the duties and taxes at risk are covered by a "chain guarantee" provided by the national associations of transport operators that control access to the TIR system.[4] If an irregularity

[3] All of the CARs are members of the Customs Convention on the International Transport of Goods Under Cover of TIR Carnets.

[4] The amount payable under the guarantee is up to US$200,000 for tobacco and alcohol and up to US$50,000 for all other goods.

Figure 6.1: A Typical Road Transit Operation under National Transit Systems



Source: Arvis (2005) and the authors.

occurs during a TIR transit operation and the transport operator fails to pay the taxes and duties that become due as a result of the irregularity, then the national transport operators' association of the country where the taxes and duties need to be paid pays them. If a different national association has issued the TIR Carnet for the transit operation, that association reimburses the expenses of the association that has paid the taxes and duties. Since the national associations are not financial institutions, their guarantee obligations under the TIR system are backed by insurance companies.

(iii) Goods are accompanied by a TIR Carnet, which is an international customs document issued in the country of origin and serves as a customs control document in the countries of origin, transit, and destination. A TIR Carnet serves as a proof that the goods it is accompanying are covered by a guarantee. The International Road Transport Union (IRU) prints TIR Carnets and distributes them to the national associations.

(iv) Customs control measures taken in the country of origin are accepted by the countries of transit and destination. This does not, however, preclude customs officials in a transit country from undertaking spot checks on the basis of an identified risk. If they do so, then they must reseal the load compartment or the container.

(v) National associations of transport operators control access to the TIR system and issue TIR Carnets. To obtain such rights, the associations and their members need to meet certain requirements. In particular, the associations need to have an agreement with the customs administration of their countries, whereby they provide a guarantee for all transit operations undertaken under the TIR system in their countries, irrespective of where the TIR Carnets are issued.[5]

Created more than 50 years ago, the TIR system has proven to be very effective in facilitating customs transit by road, especially when it involves crossing multiple borders. Moreover, it remains the only universal transit system in the world. However, the fixed costs of the TIR system—i.e., its costs that do not depend on the number of transit operations undertaken under the system—are too high for most transport operators from the CARs. This is because the first two features of the system have significant fixed-cost implications.

The first feature means a transport operator that wants to use the TIR system has to purchase or lease a truck that meets the requirements of the TIR Convention.[6] Moreover, the truck needs to be re-certified every two years for continued use under the TIR system. The requirements are rather stringent and can only be met by a high-quality truck. Since customs transit under the TIR system often involves entry to an EU member country, the truck used in such transit has to comply also with EU emission regulations. Hence, to be able to use the TIR system, transport operators from the CARs have to purchase or lease European-manufactured trucks, which are very expensive by local standards.[7]

[5] See Arvis (2005) for a detailed description of the TIR system.

[6] Although the requirements of the TIR Convention apply to the compartment of a truck, they are effectively requirements for the truck since a compartment can rarely be bought or leased separately from the rest of the truck.

[7] Used trucks of EURO-3 class, for example, cost at least US$70,000 and new trucks of EURO-5 class cost more than US$100,000. The high cost of trucks that meet the requirements of the TIR Convention and comply with the emission regulations of the EU is the main reason for the relatively small number of such trucks in the CARs. The total "TIR fleet" of the CARs is estimated at around 3,000 units, which is small given that Uzbekistan alone has 190,000 freight vehicles. With around 1,600 TIR-certified units, Kazakhstan has the largest "TIR fleet" of the CARs. By comparison, Tajikistan has no TIR-certified units and is not using the TIR transit system in practice, even though it can theoretically issue TIR Carnets.

The second feature of the TIR system means a national association controlling access to the TIR system needs to have an insurance that covers its guarantee liabilities under the system. It then needs to recover the cost of such insurance from its member transport operators through various fees, such as entry and annual membership fees. Since the amounts payable under the guarantee are quite high by Central Asian standards, so is the cost of the insurance. Moreover, most transit operations undertaken by transport operators from the CARs involve crossing a few borders. The amount of the duties and taxes at risk during such transit operations are generally much smaller than the amount of the guarantee under the TIR system.

Table 6.2 presents data on the costs of the TIR system in Azerbaijan, Kazakhstan, Kyrgyz Republic, and Uzbekistan. It shows that the cost of trucks that meet the requirements of the TIR Convention and comply with the emission regulations of the EU as well as the entry and/or annual fees for membership in the national association that controls access to the system, are indeed quite high in the four CARs. Most transport operators in the CARs are micro, small and medium-sized enterprises, which cannot afford using the TIR system at such high fixed costs. This partly explains why—as noted in Chapter 5—the market for international road shipments in the CARs is dominated by a small number of large transport operators, mostly from Iran and Turkey.

Although the fixed costs of the TIR system are high, these can be offset by its benefits, which primarily relate to faster border crossing and the exemption from a customs escort. The processing of vehicles transporting goods under a TIR Carnet (henceforth referred to as "TIR vehicles") at border crossing points should be significantly faster than for non-TIR vehicles. Furthermore, TIR vehicles should be allowed to pass through a transit country without a customs escort.

These benefits of the TIR system are, however, not always realized in the CARs due to border infrastructure problems, noncompliance by customs, and corruption. When a border crossing point becomes congested, the main delay factor is the waiting time to reach the border control zone rather than the actual processing time within the zone. The approaches to most border crossing points do not allow

Table 6.2: Costs of the TIR System in Azerbaijan, Kazakhstan, Kyrgyz Republic, and Uzbekistan
(As of 1 January 2006, in US dollars)

	Azerbaijan	Kazakhstan	Kyrgyz Republic	Uzbekistan
Cost of a new vehicle that meets the requirements of the TIR Convention and complies with emission regulations of the EU	>100,000	>100,000	>100,000	>100,000
Entry fee for membership in the national association that controls access to the TIR system	2,500	3,000–5,000	8,000	8,000
Annual fee for membership in the national association that controls access to the TIR system	600–1,800	200–2,000	200–1,000	120–130
Cost of a TIR Carnet	115	100	124–174	150

Note:
EU - European Union
TIR – Transport International Routier

Source: Data collected by the authors.

traffic separation schemes that would prioritize TIR vehicles over non-TIR ones. As a result, the former incur the same preprocessing delays as the latter.

Furthermore, when a TIR vehicle reaches a border control zone, customs officials should only check the TIR Carnet and the customs seal on the vehicle. They are allowed to break the seal and examine the contents of the vehicle only on the basis of an identified risk. However, customs officials in the CARs often require that drivers of TIR vehicles produce a full set of documentation almost identical to that required for drivers of non-TIR vehicles. In some countries, seals are broken routinely rather than on the basis of an identified risk, and customs officials often demand that TIR vehicles be escorted. Unofficial payments are usually needed to avoid excessive paper work and physical examination of the cargo at border crossing points.

Combined with various official and unofficial payments relating to the vehicle (e.g., an entry fee, a charge for an excess axle load, and unofficial payments to traffic police officers along the route), unofficial payments to customs officials significantly raise costs of customs transit and reduce the benefit of using the TIR system in the CARs. As Table 6.3 shows, a Kyrgyz truck carrying goods under a TIR Carnet has to make official and unofficial payments totaling US$1,255–1,805 (17–20% of the value of cargo) along the Bishkek-Frankfurt, Germany route, and US$1,740 (12–18% of the value of cargo) along the Bishkek-Istanbul, Turkey route. A significant proportion of these payments have to be made in Kazakhstan and Uzbekistan.

Even if the benefits of the TIR system had fully been realized, it would have not been suitable for short-distance customs transit due to its high fixed costs. The benefits of the system increase with the number of countries that need to be crossed during customs transit. The system is, therefore, mostly used in long-distance customs transit that requires the crossing of several countries. The fixed costs of the system are too high for it to be used in external customs transit that requires crossing of one country or in

Table 6.3: Official and Unofficial Payments to be Made by a Kyrgyz Truck Carrying Goods under a TIR Carnet along Selected Routes, 2005
(In US dollars, unless otherwise indicated)

Bishkek-Frankfurt, Germany			Bishkek-Istanbul, Turkey		
Route	Official payments	Unofficial payments	Route	Official payments	Unofficial payments
Kazakhstan	135	300-600	Kazakhstan	100	100
Russian Federation	100	300-500	Uzbekistan	415	100
Belarus	100	150-200	Turkmenistan	440	50
Poland	85	0	Iran	390	10
Germany	85	0	Turkey	135	0
Total	**505**	**750-1,300**	**Total**	**1,480**	**260**
In percent of the value of cargo	**7-8**	**10-12**	**In percent of the value of cargo**	**10-15**	**2-3**

Note:
TIR – Transport International Routier

Source: Data collected by the authors from Kyrgyz transport companies.

internal customs transit, which only requires crossing of the border between two trading countries.

6.3 Regional Cooperation in Customs Transit

Given the high fixed costs of the TIR system and the high variable costs of the national road transit systems, the CARs have been trying to establish regional transit systems that could be used for intraregional customs transit by road and would be less costly than the TIR and national road transit systems. To this end, the CARs—along with the other CIS countries—have signed the Agreement on Transit through the Territories of the CIS Member Countries. Within the framework of the ECO, the CARs—together with Iran, Pakistan, Turkey, and Turkmenistan—signed a Transit Trade Agreement, which seeks to facilitate trade between two signatory countries that involve external customs transit through the territory of another signatory country. In addition, Azerbaijan, Kazakhstan, Kyrgyz Republic, and Tajikistan—along with Afghanistan, Iran, Pakistan, Turkey, and Turkmenistan—have signed the Transit Transport Framework Agreement, which aims to facilitate customs transit along designated routes through the territories of the signatory countries. Within the framework of the EAEC, Kazakhstan, Kyrgyz Republic, and Tajikistan—along with Belarus and the Russian Federation—have signed the Agreement on Transit through the Territories of the Custom Union Member Countries. Kazakhstan and Kyrgyz Republic—along with the PRC and Pakistan—have signed a regional transit agreement. Kazakhstan has signed bilateral transit agreements with Georgia, Uzbekistan, and Kyrgyz Republic, which has signed a bilateral transit agreement also with Tajikistan.

These agreements have, however, had a very limited effect on customs transit in the CARs for a variety of reasons. The ECO Transit Transport Framework Agreement, for example, has not yet entered into force, as only five countries have so far ratified it (six are needed for it to become effective). Uzbekistan, a key transit country in the region, has not even signed it. The ECO Transit Trade Agreement and the bilateral transit agreement between Kazakhstan and Uzbekistan have entered into force but are not being implemented. The CIS and EAEC transit agreements do not address issues relating to the provision of a guarantee for customs transit. The bilateral transit agreement between Kazakhstan and the Kyrgyz Republic only applies to Kyrgyz trucks passing through the Kazak territory. It stipulates that Kyrgyz transport operators provide a bank guarantee to the Kyrgyz customs in return for its letter of guarantee, which enables a Kyrgyz truck to pass through the Kazakh territory without a customs escort. As noted above, a bank guarantee is fairly expensive in the CARs and is only available to large companies with a good "track record." This partly explains why a few Kyrgyz transport operators are making use of the bilateral transit agreement between their country and Kazakhstan.

Consequently, the need remains for the CARs and their neighbors to put in place an effective and relatively inexpensive regional transit system for short-distance customs transit by road. Given the success of the TIR system, its design could serve as a basis for the regional transit system. However, the design of the TIR system would have to be modified to make the fixed costs of the regional transit system cheaper than those of the TIR system. The main features of the regional transit system could be as follows:

(i) The system would be based on a regional transit agreement. The agreement would have to be drafted in consultation with transport operators and fully supported by the customs of all participating countries.

(ii) A regional supervisory body would be established to supervise the implementation of the system in the participating countries. The body could be set up as a separate institution or within the framework of one of the existing regional cooperation organizations or programs.

(iii) Goods would be transported in a customs-secure vehicle, but the requirements for such

a vehicle would be less stringent than those in the TIR system. The requirements as well as certification rules and procedures would need to be acceptable to the customs and set out in the regional transit agreement. Actual certification could be done by the same national body that does certification of the TIR vehicles.

(iv) A national guaranteeing body would be established in each participating country to control access to the system in their respective countries. One of the existing institutions, such as the national association of transport operators, could serve as such a body.

(v) While goods are in transit, the duties and taxes at risk would be covered by a "chain guarantee." This would be an insurance guarantee provided by the national guaranteeing bodies and backed by insurance companies. Therefore, the national legislation would need to be amended accordingly in those CARs where it currently does not allow insurance companies to insure transit operations. To make the guarantee cheaper, maximum payments under the guarantee could be set at lower levels than those under the TIR system.

(vi) Goods would be accompanied by a regional transit document issued by the national guaranteeing body in the country of origin and would serve as a customs control document in the countries of origin, transit, and destination. It would serve as a proof that the goods it is accompanying are covered by the insurance guarantee under the regional transit system. The regional supervisory body then would print regional transit documents and distribute them to the national guaranteeing bodies.

(vii) Customs control measures taken in the country of origin would be accepted by the countries of transit and destination. Breaking of seals and physical examination of goods would be allowed only under special circumstances.

Both fixed and variable costs of such a regional transit system would be relatively low. Its fixed costs would be less than those of the TIR system because its requirements for vehicles would be less stringent than those of the TIR system and the maximum payments under the "chain guarantee" it provides would be less than those under the TIR system. The variable costs of the system would be less than those of the national transit systems because one insurance guarantee would cover the entire transit operation and the transport operator would have to fill out only one transit document (see Figure 6.2). The benefits of the system would be even greater if the participating countries has established, at their border crossing points, separate lanes for vehicles carrying goods under the regional transit system.

The development of such a regional transit system requires concerted efforts by the CARs and their neighbors. Many elements of the system, including transport inspection mechanisms and organizations that could serve as national guaranteeing bodies, are already present in the CARs and in most of their neighbors. However, there is a lack of capacity and the political will to combine these elements into an effective regional transit system. Therefore, technical assistance by multilateral institutions as well as lobbying by firms that export and/or import goods by road, local transport operators, and other parties that stand to benefit from the establishment of the regional transit system are needed for it to happen. Given the difficulties in negotiating multiparty agreements, several bilateral transit systems could initially be set up as an intermediate step towards the regional transit system. However, these bilateral transit systems would have to be compatible and similar to the TIR system in order for them to serve as "building blocks" rather than become "stumbling blocks" of the proposed regional transit system.

Parallel to developing the regional transit system, the CARs need to ensure full implementation of the TIR Convention on their territories to better utilize the advantages of the TIR system in extra-regional customs transit. Although the TIR Convention is a multilateral agreement, the CARs could use regional cooperation mechanisms to put peer pressure on those countries which have signed the Convention but do not fully adhere to it. They could also use regional cooperation mechanisms to encourage the PRC to join the TIR Convention as soon as possible. The PRC's accession to the TIR Convention would enable some of the CARs to use the PRC as a transit country in trade with South and East Asian countries and fully realize their bilateral trade potential with those countries.

6.4 Conclusions

The transit systems in place in the CARs have a significant effect on both intra- and extra-regional trade in Central Asia, while the transit systems in place in Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan also affect domestic trade in at least one neighboring CAR. Indeed, certain aspects of the transit systems in the CARs impose constraints on cross-border movements of goods by rail and by road. These are, however, not crucial for cross-border movements of goods by rail, for which transport-related factors are a binding constraint. In contrast, inadequacies of the road transit systems impose a binding constraint on trade in Central Asia.

The main deficiency of national road transit systems of the CARs is that they cover only one country and do not provide a "chain guarantee." Hence, a transport operator undertaking customs transit under the national transit systems has to submit separate transit documents and provide separate guarantees in the country of origin, the country of destination, and each of the transit countries. This can be time-consuming and costly. In addition, there are difficulties in providing a guarantee in any form. In the absence of a guarantee, customs transit under the national transit systems usually requires convoying which also can increase transport costs and transit time substantially. That is why the variable costs of the national road transit systems in the CARs are quite high.

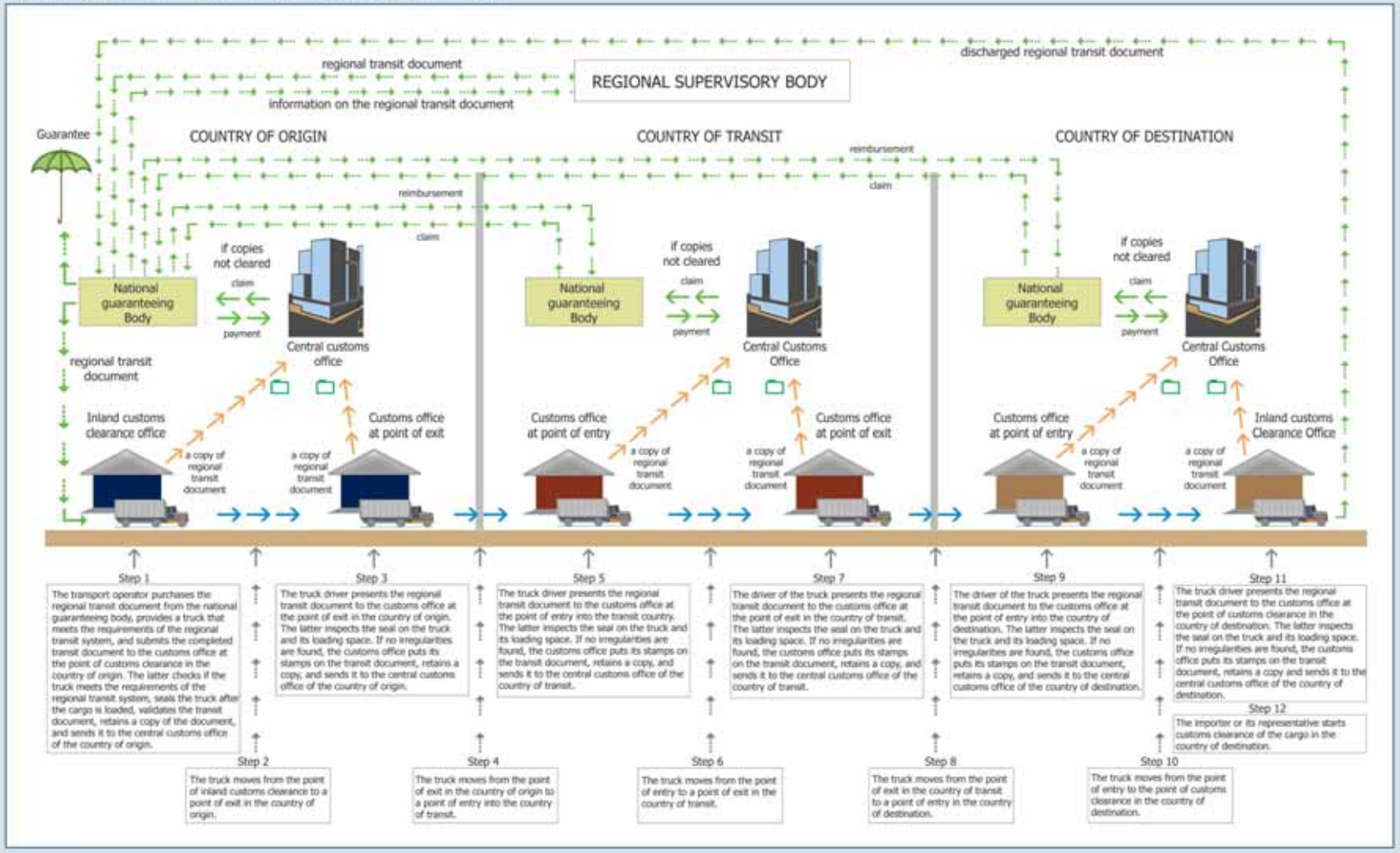
All CARs have acceded to the TIR Convention, but the fixed costs of the TIR system are too high for most transport operators from the CARs. Moreover, the benefits of the TIR system are not always realized in the CARs due to border infrastructure problems, noncompliance by customs, and corruption. Even if the benefits of the TIR system had fully been realized, it would have not been suitable for short-distance customs transit due to its high fixed costs.

The CARs have been trying to establish regional transit systems that could be used for intraregional customs transit by road and would be less costly than the TIR and the national road transit systems. To this end, they have signed numerous transit agreements with each other as well as with other countries. These agreements have, however, had a very limited effect on customs transit in the CARs for a variety of reasons. Some of them have not entered into force, while those that have entered into force have not been implemented or have not reduced the costs of customs transit significantly due to an inadequate design.

Consequently, the need remains for the CARs and their neighbors to develop an effective and relatively inexpensive regional transit system for short-distance customs transit by road. Given the success of the TIR system, it could serve as a blueprint for the regional transit system. But the design of the TIR system would have to be modified to reduce its fixed costs. Since negotiating multiparty agreements is relatively difficult, several bilateral transit systems could initially be set up, as an intermediate step towards the regional transit system. However, these bilateral transit systems would have to be compatible and similar to the TIR system in order for them to serve as "building blocks" rather than become "stumbling blocks" for the proposed regional transit system.

The TIR system will be indispensable for long-distance customs transit by road that involves crossing multiple borders. The CARs, therefore, need to ensure

Figure 6.2: A Typical Road Transit Operation under the Proposed Regional Transit System



Source: Authors

the full implementation of the TIR Convention on their territories. Although the TIR Convention is a multilateral agreement, the CARs could use regional cooperation mechanisms to put peer pressure on those countries which have signed the Convention but do not fully adhere to it.

The establishment of an effective and affordable regional road transit system and the full implementation of the TIR Convention would help the CARs reduce costs and delays associated with road customs transit in their territories. This would, in turn, reduce transport costs and make transit times shorter and more predictable for international road shipments to and from the CARs, and help the CARs expand trade and diversify it in terms of both geographical distribution and commodity composition. Easier customs transit by road through neighboring countries would help the CARs avoid the construction of new bypassing roads and enable them to allocate more resources for the rehabilitation and maintenance of existing transport networks and their closer integration with international transport networks. The establishment of an effective and affordable regional road transit system and the full implementation of the TIR Convention would also boost transit trade in the region and increase revenues it generates for the CARs.

7

General Equilibrium Analysis of the Effects of Regional Cooperation in Trade Policy, Transport, and Customs Transit on the Kyrgyz Republic

The preceding chapters argued that the CARs would reap considerable benefits from improved regional cooperation in trade policy, transport, and customs transit. In particular, Chapter 4 argued that by acceding to the WTO and joining the coalition of WTO members pushing for the elimination of trade-distorting cotton subsidies in developed countries, the CARs could bring about a reduction in these subsidies. This would in turn raise world cotton prices and increase the CARs' cotton export revenues. Chapters 5 and 6 argued that the CARs could reduce transport costs, make transit times shorter and more predictable for international shipments through increased regional cooperation in transport and customs transit. This would in turn help the CARs expand trade, take more active part in GPNs and related trade in manufactured products, and diversify trade in terms of both commodity composition and geographical distribution. The increase in cotton export revenues and the expansion of trade would improve social welfare and stimulate economic growth. And the diversification of trade would make the CARs less vulnerable to fluctuations in world commodity prices and possible swings in import demand in, and protectionist measures by, trading partners.

This chapter presents quantitative estimates of the likely effects of regional cooperation in trade policy within the multilateral framework and increased regional cooperation in transport and customs transit on the Kyrgyz Republic, based on the country's CGE model.[1] Specifically, the chapter presents the results of simulations of a 70% and 35% rise in world cotton prices that the CARs could bring about through regional cooperation in trade policy within the multilateral framework and of estimated reductions in transport costs that would result

[1] Like the CGE model of Kazakhstan mentioned in Chapter 4, the CGE model of the Kyrgyz Republic has been developed by the Asian Development Bank as part of its study on Central Asia regional cooperation in trade, transport, and transit. The model includes 31 sectors, 8 regions, 16 household types, government, and one composite trading partner. The specification and structural equations of the model are identical to those of the Kazakhstan's model described in Appendix 3.

from increased regional cooperation in transport and customs transit. The chapter also compares the effects of increased regional cooperation in transport and customs transit with those of a 50% reduction in tariffs.

7.1 Effects of Regional Cooperation in Trade Policy within the Multilateral Framework

One form of regional cooperation in trade policy that the CARs could and need to pursue within the multilateral framework is joint efforts with other developing countries to push for the elimination of trade-distorting cotton subsidies in the EU and the US. If successful, these efforts would raise world cotton prices by up to an estimated 71% and boost export revenue and GDP in cotton exporting developing countries The Kyrgyz Republic, where cotton accounts for more than 6% of merchandise exports and about 2% of GDP, would be one of the major beneficiary countries.

To assess the likely effects of regional cooperation in trade policy within the multilateral framework on the Kyrgyz Republic, we made simulations of a 35% and 70% rise in world cotton prices in 2006. The results of the simulations show that—as expected—a rise in world cotton price would give a major boost to the Kyrgyz economy. If world cotton prices rose by 35%, the cumulative increase in real GDP in 2006–2015 would be more than US$0.6 billion (at 2002 prices) greater or 33.4% (relative to 2005) higher than in the baseline ("no change") scenario (see Table 7.1). If world cotton prices rose by 70%, the cumulative increase in real GDP would be US$1.2 billion (at 2002 prices) greater or 61.3% (relative to 2005) higher than in the baseline scenario. The value of exports would grow substantially faster than in the baseline scenario, but growth of the volume of exports would accelerate only modestly, as the surge in cotton exports revenue would slow down growth of non-cotton exports through appreciation of the real exchange rate.[2] Both the value and the volume of imports would expand much more rapidly than in the baseline scenario to keep the trade balance at zero, as required by the model specification. Although aggregate income of poor households would rise less than that of nonpoor households in absolute terms, it would rise much

Table 7.1: Aggregate Effects of a Rise in World Cotton Prices in 2006 on the Kyrgyz Republic in 2006–2015

	Cumulative Change over Baseline Scenario		Cumulative Change Relative to 2005	
	(In million US dollars at 2002 prices)		(In percent)	
	A 35% Rise	A 70% Rise	A 35% Rise	A 70% Rise
Real GDP	631.5	1,159.8	33.4	61.3
Value of exports/imports	179.2	454.1	21.4	54.2
Volume of exports	26.6	72.9	3.1	8.4
Volume of imports	196.9	512.0	17.5	45.6
Income of poor households	114.6	246.7	37.8	81.3
Income of nonpoor households	333.1	633.1	29.9	56.9

Note:
GDP – gross domestic product

Source: Computable general equilibrium model-based simulations made by the authors.

[2] This is the phenomenon referred to as the "Dutch Disease."

more than that of nonpoor households relative to 2005 in both scenarios.

However, the rise in household income would be rather uneven across regions (see Figure 7.1). In particular, household income would rise significantly more in the Batken and Chui regions than in Bishkek city and the Naryn region. Furthermore, poor households' income would rise more than nonpoor households' income in the Issyk-Kul and Batkek regions, but less than nonpoor households' income in all other regions.

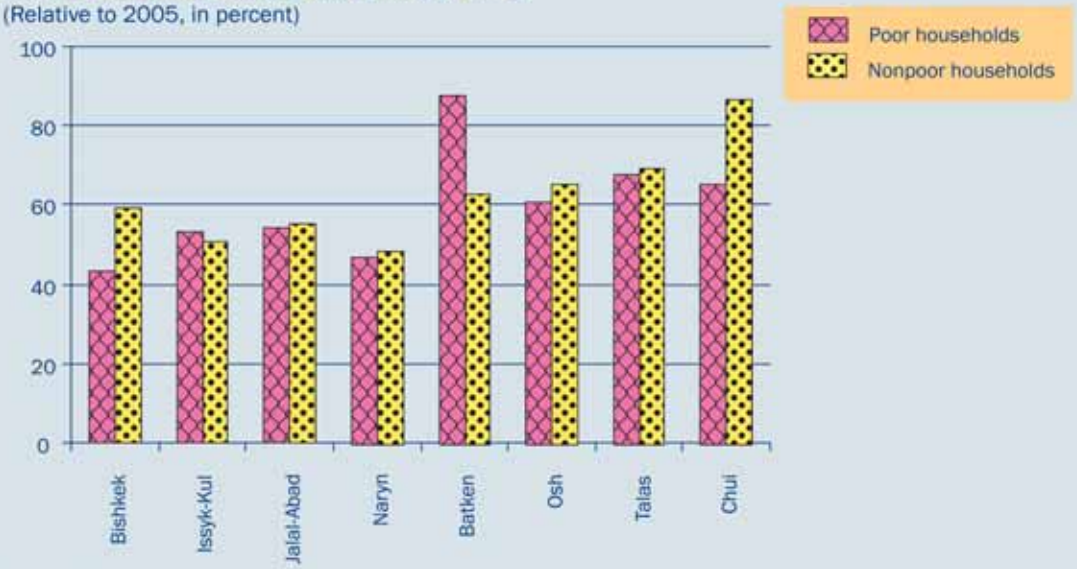
7.2 Effects of Regional Cooperation in Transport and Customs Transit

To be able to assess the effects of increased regional cooperation in transport and customs transit on the Kyrgyz Republic using its CGE model, we first estimated how increased regional cooperation in the two areas would affect the external transportation costs and domestic distribution margins for the sectors included in the CGE model.[3] We did so in three steps.

First, representative export and import commodities were selected for those sectors in the model for which the external transportation costs and/or domestic distribution margins were likely to be affected by increased regional cooperation in transport and customs transit.

Second, interviews were conducted with Kyrgyz firms to determine how improvements in transport infrastructure, transport regulations, transport and logistics services, and customs systems in the CARs would affect the external transportation costs and domestic distribution margins for the representative commodities.

Figure 7.1: Cumulative Change in Household Income in the Kyrgyz Republic in 2006–2015 due to a 70% Rise in World Cotton Prices in 2006
(Relative to 2005, in percent)



Source: Computable general equilibrium model-based simulations made by the authors.

[3] The domestic distribution margin for a particular sector is the difference between the price received by producers and the price paid by consumers in the case of a domestically produced and consumed product, the difference between the price received by producers and the border price in the case of an exported product, and the difference between the border price and the price paid by consumers in the case of an imported product. A major component of a domestic distribution margin is domestic transportation costs, including costs of delays in domestic transportation of goods.

Third, estimates of reductions in the external transportation costs and domestic distribution margins (as percent of border prices) for 17 sectors were made, based on interviews with Kyrgyz firms and additional information from other sources.[4]

The estimates are given in Table 7.2.

We then adjusted the border prices in the model in 2006 to reflect the estimated reductions in external transportation costs and domestic distribution margins that would result from increased regional cooperation in transport and customs transit.[5] The results of the simulation indicate that increased regional cooperation in transport and customs transit would have considerable positive effects

Table 7.2: Estimated Reductions in External Transportation Costs and Domestic Distribution Margins in the Kyrgyz Republic due to Increased Regional Cooperation in Transport and Customs Transit
(In percent of border prices)

	External Transportation Costs		Domestic Distribution Margin	
	Exports	Imports	Exports	Imports
Cotton	9.0	0.0	1.2	0.0
Other Agriculture	10.5	11.5	1.5	2.4
Fishery	0.0	4.0	0.0	0.7
Energy	4.0	14.0	0.7	1.3
Metal Mining	4.0	7.0	1.2	0.6
Other Mining	4.0	4.0	1.2	0.5
Processed Food	4.0	2.5	0.7	0.4
Textile and Apparel	9.0	15.0	3.0	1.0
Wood Products	11.0	19.0	2.0	1.5
Paper and Printing	5.0	11.0	1.3	1.3
Chemicals	6.0	13.0	1.4	1.5
Mineral Products	7.0	17.0	1.2	2.0
Metallurgy	4.0	10.0	1.2	1.5
Metal Products	4.0	10.0	1.2	1.5
Machinery	3.0	7.0	1.1	0.8
Other Industry	19.0	20.0	1.2	2.8
Electricity	9.0	18.0	1.2	2.0

Source: Estimates made by the authors based on interviews with Kyrgyz firms.

[4] For the other 14 sectors included in the model (mostly services), it was assumed that increased regional cooperation in transport and customs transit would have no impact on external transportation costs and domestic distributions margins.

[5] The border price for exported goods were adjusted as follows:

$$P_i^a = P_i * (1 + T_i/100) * (1 + D_i/100)$$

where P^a_i is the adjusted border price for exported product i, P_i is the border price for exported product i in the baseline scenario, T_i is the estimated reduction in the external transportation costs for exported product i, and D_i is the estimated reduction in the domestic distribution margin for exported product i.

The border price for imported goods were adjusted as follows:

$$P_j^a = P_j / [(1 + T_j/100) * (1 + D_j/100)]$$

where P^a_j is the adjusted border price for imported product j, P_j is the border price for imported product j in the baseline scenario, T_j is the estimated reduction in the external transportation costs for imported product j, and D_j is the estimated reduction in the domestic distribution margin for imported product j.

on the Kyrgyz Republic. The cumulative increase in real GDP in 2006–2015 would be US$2.1 billion (at 2002 prices) greater or 112.3% (relative to 2005) higher than in the baseline scenario (see Table 7.3). While both exports and imports would expand faster than in the baseline scenario, growth of real imports would accelerate more than that of real exports to keep the trade balance at zero. This is because improved regional cooperation in transport and customs transit would raise border prices for exported goods and lower border prices for imported goods. The cumulative percentage increase (relative to 2005) in both poor and nonpoor households' aggregate income would be substantial, although the former would be slightly lower than the latter. Moreover, the increase in household income would be fairly even across regions (see Figure 7.2).

We also made a simulation of the estimated reductions in external transportation costs and domestic

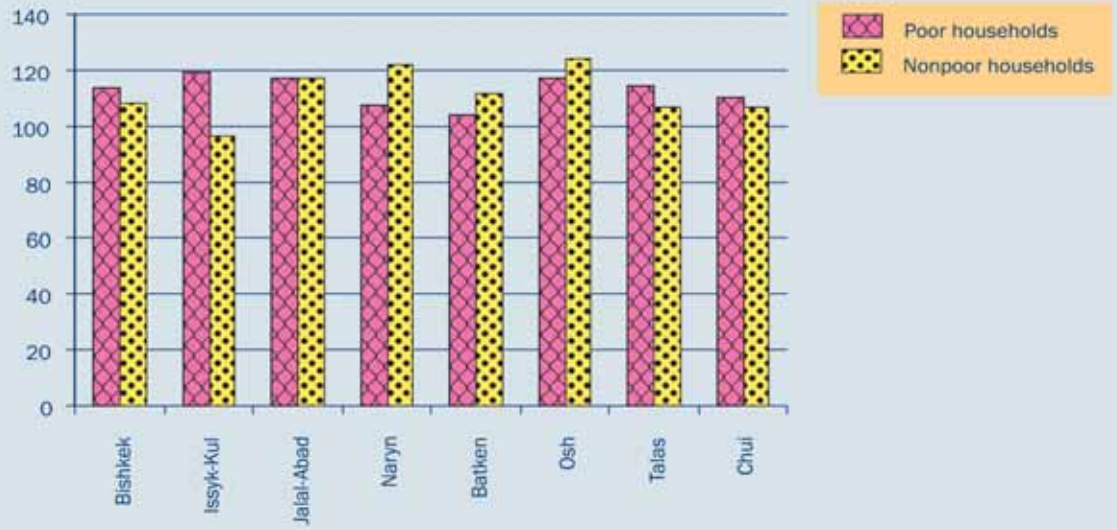
Table 7.3: Aggregate Effects of Increased Regional Cooperation in Transport and Customs Transit in 2006 on the Kyrgyz Republic in 2006–2015

	Cumulative Change over Baseline Scenario	Cumulative Change Relative to 2005
	(In million US dollars at 2002 prices)	(In percent)
Real gross domestic product	2,125.2	112.3
Value of exports/imports	1,682.7	200.9
Volume of exports	1,467.0	168.1
Volume of imports	4,338.0	386.2
Income of poor households	286.1	94.3
Income of nonpoor households	1,114.0	100.1

Source: Computable general equilibrium model-based simulations made by the authors.

Figure 7.2: Cumulative Change in Household Income in the Kyrgyz Republic due to Increased Regional Cooperation in Transport and Customs Transit, 2006–2015

(Relative to 2005, in percent)



Source: Computable general equilibrium model-based simulations made by the authors.

distribution margins (that would result from increased regional cooperation in transport and customs transit) and a 35% rise in world cotton prices (that regional cooperation in trade policy within the multilateral framework could bring about). We did so to assess how increased regional cooperation in transport and customs transit combined with regional cooperation in trade policy within the multilateral framework would affect the Kyrgyz Republic. The results of the simulation show that the Kyrgyz Republic would reap substantial benefits from increased regional cooperation in transport and customs transit, and regional cooperation in trade policy within the multilateral framework. If the estimated reductions in external transportation costs and domestic distribution margins and the rise in world cotton prices took place in 2006, the cumulative increase in real GDP in 2006–2015 would be US$2.8 billion (at 2002 prices) greater or 150.2% (relative to 2005) higher than in the baseline scenario (see Table 7.4). The value of both exports and imports would expand substantially faster than in the baseline scenario, with the cumulative increase in the volume of exports being 163.5% higher and that in the volume of imports 429.1% higher than in the baseline scenario. Growth generated by the reductions in transport costs and the rise in world cotton prices would be propoor. Specifically, the cumulative increase in poor households' aggregate income would be 153.9% higher than in the baseline scenario whereas the increase in nonpoor households' aggregate income would be 136.6% higher.

For comparative purposes, we then made a simulation of a 50% unilateral, nondiscriminatory, and uniform (across products) reduction in tariffs in the Kyrgyz Republic at the beginning of 2006. The results of the simulation suggest that a tariff reduction is not a potent growth stimulus for the Kyrgyz Republic, especially compared with the reductions in transport costs that would result from increased regional cooperation in transport and customs transit. In particular, the 50% reduction in tariffs would lead to a cumulative increase (relative to 2005) in real GDP of 27.6% in 2006–2015, compared with 112.3% in the case of increased regional cooperation in transport and customs transit (see Table 7.5). The reason is that tariffs in the Kyrgyz Republic are already quite low, and relatively high transport costs and long unpredictable transit times are a more significant barrier to imports to the Kyrgyz Republic than tariffs. Furthermore, economic growth generated by the reduction in tariffs would not be pro-poor. The cumulative increase (relative to 2005) in poor households' aggregate income would be 21.7%, compared with the increase of 27.1% in nonpoor households' aggregate income. The increase in household income would be uneven across regions, with nonpoor

Table 7.4: Aggregate Effects of Increased Regional Cooperation in Transport and Customs Transit and a 35% Rise in World Cotton Prices in 2006 on the Kyrgyz Republic in 2006–2015

	Cumulative Change over Baseline Scenario	Cumulative Change Relative to 2005
	(In million US dollars at 2002 prices)	(In percent)
Real gross domestic product	2,842.0	150.2
Value of exports/imports	2,555.1	305.0
Volume of exports	1,426.4	163.5
Volume of imports	4,820.0	429.1
Income of poor households	466.9	153.9
Income of nonpoor households	1,520.1	136.6

Source: Computable general equilibrium model-based simulations made by the authors.

households in the Naryn region, for example, benefiting much more than poor households in the Batken region (see Figure 7.3).

7.3 Conclusions

Quantitative estimates based on its CGE model suggest that the Kyrgyz Republic would reap considerable benefits from regional cooperation in trade policy within the multilateral framework and increased regional cooperation in transport and customs transit. A reduction in cotton subsidies and a resulting rise in world cotton prices (that regional cooperation in trade policy within the multilateral framework could bring about) and reductions in transport costs (resulting from increased regional cooperation in transport and customs transit) would accelerate economic growth in the Kyrgyz Republic substantially. If world cotton prices rose by 35% in 2006, cumulative growth of real GDP in 2006–2015 (relative to 2005) would be 33.4% higher than in the baseline scenario.

Table 7.5: Aggregate Effects of a 50% Reduction in Tariffs in 2006 on the Kyrgyz Republic in 2006–2015

	Cumulative Absolute Change over Baseline Scenario	Cumulative Change Relative to 2005
	(In million US dollars at 2002 prices)	(In percent)
Real gross domestic product	522.5	27.6
Value of exports/imports	408.8	48.8
Volume of exports	387.0	44.3
Volume of imports	983.7	87.6
Income of poor households	65.9	21.7
Income of nonpoor households	301.5	27.1

Source: Computable general equilibrium model-based simulations made by the authors.

Figure 7.3: Cumulative Change in Household Income in the Kyrgyz Republic due to 50% Reduction in Tariffs, 2006–2015
(Relative to 2005, in percent)

Source: Computable general equilibrium model-based simulations made by the authors.

If the estimated reductions in transport costs due to increased regional cooperation in transport and customs transit took place in 2006, cumulative growth of real GDP would be 112.3% higher than in the baseline scenario. If both events occurred in 2006, cumulative growth of real GDP would be 150.2% higher than in the baseline scenario. By comparison, a 50% unilateral, nondiscriminatory, and uniform (across products) reduction in tariffs would speed up cumulative growth in real GDP over the decade by a relatively modest 27.6%.

While similar estimates for the other CARs are not yet available, some general qualitative assessments can be made. In particular, one can expect unilateral nondiscriminatory trade liberalization to have greater positive effects on Azerbaijan, Kazakhstan, Tajikistan and, especially, Uzbekistan because their tariffs are, on the average, higher than those of the Kyrgyz Republic. Tajikistan is likely to benefit even more than the Kyrgyz Republic from increased regional cooperation in transport and customs transit. The reason is that high transport costs and long and unpredictable transit times are a particularly serious trade barrier for Tajikistan. Although the benefits of increased regional cooperation in transport and customs transit for Azerbaijan, Kazakhstan, and Uzbekistan are likely to be smaller than those for the Kyrgyz Republic and Tajikistan, one can still expect them to be considerable. This is because high transport costs and long and unpredictable transit times are a significant trade barrier for Azerbaijan, Kazakhstan, and Uzbekistan as well, albeit not as significant as for the Kyrgyz Republic and Tajikistan. Finally, Tajikistan and Uzbekistan are likely to gain more from a reduction in cotton subsidies in developed countries than the Kyrgyz Republic since cotton accounts for a larger share of their exports and GDP than those of the Kyrgyz Republic. In contrast, Azerbaijan and Kazakhstan would benefit less than the Kyrgyz Republic from a reduction in cotton subsidies in developed countries because cotton accounts for less than one percent of their exports and GDP.

8
Overall Conclusions and Recommendations

8.1 Overall Conclusions

Since the breakup of the FSU, the CARs have made considerable progress in expanding market-based trade with both FSU and non-FSU countries, and integrating into the global economy. Their merchandise trade grew rapidly in 2000–2004, and they all appear to have fully realized their trade potential in 2004 in terms of the overall level of trade. Nonetheless, the growth of trade in the Kyrgyz Republic, Tajikistan, and Uzbekistan was slower than that in many other countries. Excluding exports of crude oil and oil products and imports of capital goods for oil sector development, the expansion of trade in Azerbaijan and Kazakhstan was also relatively modest.

Moreover, a handful of primary commodities, such as crude oil, metals, and cotton fiber, continued to dominate the CARs' exports. Indeed, the rise in world prices for these commodities was a major factor that contributed to the rapid growth of their exports. At the same time, participation of the CARs in GPNs and related international trade in manufactured products remained very limited. Furthermore, the CARs' exports and, to a lesser extent, imports remained concentrated in a small number of countries. An analysis based on the gravity model suggests that the CARs "overtraded" with most other CIS countries in 2004, but "under-traded" with most East and South Asian and Western European countries as well as the US.

Heavy reliance on exports of a few primary commodities makes the CARs vulnerable to abrupt swings in volatile world prices for these commodities and complicates economic management. Their limited participation in GPNs and related trade in manufactured products means that the CARs derive relatively little benefits from trade in terms of attracting foreign direct investment, gaining access to advanced technologies, and fostering sustained economic development. The concentration of trade in a small number of countries makes the CARs vulnerable to changes in imports demand in, and possible trade sanctions by, those countries.

The presence of numerous trade barriers pertaining to trade policy, transport, and transit systems in the CARs their trading partners, and transit countries have constrained the growth of trade in the CARs. It has also hindered reorientation of their trade from FSU to non-FSU countries, limited their participation in GPNs and related trade in manufactured products, and skewed the structure of their exports towards primary commodities. The more significant trade barriers pertaining to trade policy in the CARs include a complex tariff schedule and relatively high tariffs (Kazakhstan and Uzbekistan); escalation of tariffs (all the CARs); frequent and unpredictable changes in the tariff schedule (Azerbaijan, Kazakhstan, Tajikistan, and Uzbekistan); high implicit tariffs in the form of taxes that are levied on imported goods but not on domestically produced goods or have higher rates for imported goods

than for domestically produced goods (Azerbaijan, Kazakhstan, and Uzbekistan); explicit export taxes (Azerbaijan and Kazakhstan); and prohibition and licensing of exports and imports of certain commodities (all the CARs). Large agricultural subsidies that developed countries provide to their farmers also constitute a significant barrier to trade in Central Asia.

Other significant barriers to trade in Central Asia are high transport costs and long and unpredictable transport times for international shipments to and from the CARs. This is not only due to the landlocked and remote location of the CARs and their difficult topography, but also due to the deficiencies of their transport networks, high costs and low quality of transport and logistics services in the region, and difficulties with movements of transport equipment and goods across borders and through the territories of the CARs and neighboring countries.

Although the CARs have considerably improved their transport links with non-FSU countries since independence, the lack of financial resources and poor coordination of national transport infrastructure projects have been hindering the integration of their transport networks into international transport networks. At the same time, the CARs have built a number of new roads and railways primarily to avoid transit through a neighboring country. The CARs now possess extensive transport networks, but many of them are in poor condition and require rehabilitation. Other elements of transport infrastructure—with the exception of the air transport infrastructure in Azerbaijan, Kazakhstan, and Uzbekistan—are also underdeveloped and in poor condition.

The availability, quality, and costs of transport services in the CARs compare unfavorably with many other countries. Lack of competition is one of the main reasons for the low quality and high costs of rail, air, and international road transport services. Competition is stiff in the market for domestic road transport services. The cost of these services is relatively low but the quality is not high. The availability of multimodal transport operations is limited and costs of international transport services for small cargo are relatively high due largely to the underdevelopment of logistics infrastructure and services.

National transport legislation and regulations in the CARs differ significantly and create serious obstacles to cross-border and transit traffic. A major problem is the availability and the cost of transport permits, which foreign transport operators generally need to obtain for their vehicles to be allowed to enter (and pass through) a CAR territory. There is a shortage of reciprocal (free) transport permits while the cost of nonreciprocal transport permits is high. In addition to obtaining a transport permit, foreign transport operators usually need to pay various taxes and charges, such as a road tax and an excess axle load charge. Also, foreign drivers generally need a visa to enter a CAR and have to obtain it in advance at an embassy of that CAR. This often causes delays because the CARs have cumbersome visa procedures and do not have embassies in many countries.

Certain aspects of the transit systems currently in place in the CARs impose constraints on cross-border movements of goods by rail and by road. These are, however, not crucial for cross-border movements of goods by rail, for which transport-related factors are a binding constraint. By contrast, inadequacies of the road transit systems impose a binding constraint on trade in Central Asia.

The main deficiency of the national road transit systems of the CARs is that they cover only one country and do not provide a "chain guarantee." Consequently, a transport operator undertaking customs transit under the national transit systems has to submit separate transit documents and provide separate guarantees in the country of origin, the country of destination, and each of the transit countries. Providing a guarantee even in one country can be quite costly, let alone providing a guarantee in several countries. In the absence of a guarantee, convoying is usually required for customs transit under the national transit systems. A major problem with convoying is that the fee for the service is rather high in some of the CARs. Thus, the variable costs of the national transit systems in the CARs are quite high.

The TIR system—that is, the international transit system based on the TIR Convention signed by all the CARs—provides a "chain guarantee" and has proven to be very effective in facilitating customs transit by road, especially when it involves crossing multiple borders. However, the fixed costs of the system (i.e., the cost of transport equipment that meets the requirements of the TIR Convention and the cost of the insurance guarantee that the TIR system provides) are too high for most transport operators from the CARs. Moreover, the benefits of the system are not always realized in the CARs due to border infrastructure problems, noncompliance by customs, and corruption.

Recognizing that their trade performance depends not only on their trade policy, transport sector, and transit systems but also on the trade policy, transport sector, and transit systems of neighboring countries, the CARs have actively pursued regional cooperation in these areas. In particular, they have joined several regional organizations that involve or seek to reach a multilateral RTA. Additionally, they have entered into numerous bilateral RTAs with other CIS countries. Many of these RTAs have not entered into force, while most of those that have formally entered into force have not been implemented. Consequently, their impact on the trade policy regime and the pattern of trade in the CARs has so far been limited. If fully implemented, however, the concluded and planned RTAs involving the CARs may cause considerable trade diversion and have significant adverse effects on the CARs. Notably, implementing the EAEC customs union is likely to slow down economic growth in Kazakhstan, Kyrgyz Republic, and Tajikistan significantly, unless it is accompanied by a substantial reduction in common external tariffs of its member countries.

In contrast, the potential benefits of WTO membership for the CARs are considerable. They have increased significantly with the accession of the PRC in 2001, and will increase further as more of the CARs' neighbors (including the Russian Federation) join the organization. Acceding to the WTO is, however, not enough for the CARs to realize the benefits of WTO membership. As the experience of the Kyrgyz Republic shows, good transport links with other WTO member countries and easy transit through neighboring countries are also necessary.

WTO membership also entails costs for the CARs, but these are often exaggerated and misinterpreted. The real costs of WTO membership are those directly associated with the accession process and not those associated with policy reforms that a country often implements in connection with WTO accession. Multilateral and bilateral development agencies can provide technical assistance in building institutions and capacity required for WTO accession.

WTO membership does not preclude regional cooperation in trade policy. In fact, there are several options for such cooperation that the CARs can pursue within the multilateral framework. Of these, concerted but nondiscriminatory trade liberalization and joint efforts with other developing countries to push for the elimination of cotton and other agricultural subsidies in developed countries are of particular importance for the CARs. WTO membership is also consistent with regional cooperation in transport and customs transit.

There have been a number of regional cooperation initiatives aimed at removing the deficiencies of transport infrastructure and services and facilitating cross-border and transit traffic in the CARs and in neighboring countries. Notably, the CAREC member countries have recently agreed on the Regional Transport Sector Road Map, which formulates the strategic priorities for regional cooperation in the transport sector and addresses most of the deficiencies of rail and road transport in Central Asia.

In an effort to establish regional transit systems that could be used for intraregional customs transit by road and would be less costly than the TIR and national road transit systems, the CARs have signed numerous transit agreements with each other as well as with neighboring countries. These agreements have, however, had a very limited effect on customs transit in Central Asia for a variety of reasons. Some of them have not entered into force while those that have entered into force have not been implemented

or have not reduced costs of customs transit significantly due to an inadequate design.

Consequently, the need remains for the CARs and their neighbors to develop an effective and relatively inexpensive regional transit system for short-distance customs transit by road. Given the success of the TIR system, its design could serve as a basis for such a regional transit system. However, the design of the TIR system would have to be modified to make the fixed costs of the regional transit system less expensive than those of the TIR system. Since negotiating multiparty agreements is relatively difficult, several bilateral transit systems could initially be set up as an intermediate step towards the regional transit system.

The TIR system will be indispensable for long-distance customs transit by road that involves crossing multiple borders. The CARs therefore need to ensure full implementation of the TIR Convention on their territories. Although the TIR Convention is a multilateral agreement, the CARs could use regional cooperation mechanisms to put peer pressure on those countries which have signed the Convention but are not fully implementing it.

Quantitative estimates based on the CGE model of the Kyrgyz Republic suggest that the CARs would reap considerable benefits from increased regional cooperation in transport and customs transit. If the estimated reductions in transport costs that would result from increased regional cooperation in these areas occurred in 2006, the cumulative increase in the Kyrgyz Republic's real GDP in 2006–2015 would be US$2.1 billion (at 2002 prices) greater or 112.3% (relative to 2005) higher than in the baseline scenario. Although similar quantitative estimates for the other CARs are not yet available, one can expect Tajikistan to benefit from increased regional cooperation in transport and customs transit more than the Kyrgyz Republic. The benefits of increased regional cooperation in these areas for Azerbaijan, Kazakhstan, and Uzbekistan would also be significant, albeit somewhat smaller than those for the Kyrgyz Republic and Tajikistan.

This means that deep regional economic integration that involves not only preferential trade liberalization but also increased regional cooperation in transport, customs transit, and other areas of trade facilitation can be beneficial for the CARs. The positive effects of increased regional cooperation in transport and trade facilitation can more than offset the negative effects of preferential trade liberalization. This is more likely to be the case when preferential trade liberalization is accompanied by broad-based trade liberalization resulting in fairly low nonpreferential policy barriers to trade.

8.2 Recommendations

The findings of this report suggest that it will help the CARs increase the gains from participation in international trade and reduce the associated costs if they:

- Intensify efforts to join the WTO and further liberalize trade policy on a nondiscriminatory basis as part of the WTO accession process (in the case of Azerbaijan, Kazakhstan, Tajikistan, and Uzbekistan)

- Liberalize trade policy in a more coordinated manner to avoid a situation in which trade liberalization by one country prompts its neighbors with a more restrictive trade policy to tighten restrictions on cross-border movements of people and transport equipment in an effort to counter the deflection of their trade with other countries through the country, liberalizing trade policy more rapidly;

- Join efforts with other developing countries to gain better access to markets in developed countries and push for the elimination of agricultural subsidies in those countries;

- Rationalize the existing RTAs, broaden their product coverage, and simplify the rules of origin (in the case of PTAs and FTAs);

- Develop and carry out—together with other CAREC member countries—a time-bound action plan to implement the Regional Transport Sector Road Map of the CAREC Program;

- Extend, in consultation with other CAREC member countries, the Road Map to address the deficiencies of air transport in Central Asia;

- Remove the infrastructure bottlenecks constraining movements of goods across borders by rail;

- Enhance competition in rail, air, and international road transport—in particular, by restructuring state-owned railways and airlines, separating regulatory and commercial functions in the transport sector, and creating a level playing field for domestic and foreign transport operators;

- Ensure full implementation of the TIR Convention; and

- Develop an effective and relatively inexpensive regional transit system for short-distance customs transit by road.

Regional organizations and programs involving CARs will help the CARs improve regional cooperation in transport and trade facilitation and increase the gains from participation in international trade if they:

- Ensure that the multilateral RTAs have a broad product coverage, simple rules of origin (in the case of PTAs and FTAs) and low external tariffs (in the case of customs unions);

- Ensure that preferential trade liberalization by the member countries under the multilateral RTAs is accompanied by (i) broad-based trade liberalization resulting in fairly low nonpreferential policy barriers to trade and (ii) increased regional cooperation in transport, customs transit, and other areas of trade facilitation;

- Intensify efforts to promote regional cooperation among the CARs and their neighbors in the areas of transport and trade facilitation;

- Help the CARs better coordinate national road and rail transport infrastructure projects, focusing them on improving the region's transport links with the other parts of the world—in particular, through the TRACECA, Asian Highway and Trans-Asian Railway projects; and

- Set up a mechanism for monitoring the implementation of the TIR Convention in the CARs and their neighbors.

Multilateral and bilateral development agencies will help the CARs closely integrate into the international trading system, increase the gains from trade, and achieve sustainable development if they:

- Help Azerbaijan, Kazakhstan, Tajikistan, and Uzbekistan join the WTO as soon as possible by increasing and better coordinating technical assistance for this purpose;

- Integrate technical and financial assistance in the areas of trade policy, transport, and trade facilitation, for example, by tying funding for transport infrastructure projects to requirements aimed at facilitating cross-border movements of goods and transport equipment;

- Increase technical and financial assistance in improving the quality of transport and logistics services in the CARs;

- Provide technical assistance to the CARs and their neighbors in developing—possibly under

the auspices of one of the regional organizations or programs—an effective and relatively inexpensive regional transit system for short-distance customs transit by road; and

- Undertake more analytical work that demonstrates the benefits of improved regional economic cooperation and helps build supportive constituencies.

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Appendix 1

Merchandise Trade Statistics on the Central Asian Republics

Table A1.1: Merchandise Exports of the Central Asian Republics, 1999–2004

	1999	2000	2001	2002	2003	2004
			(In million US dollars)			
Azerbaijan	929.7	1,745.2	2,314.2	2,167.4	2,592.0	3,614.3
Kazakhstan	5,871.6	8,812.2	8,639.1	9,709.0	12,926.7	20,096.2
Kyrgyz Republic	453.8	504.5	476.2	485.5	581.7	718.8
Tajikistan	688.7	784.3	651.5	736.9	797.2	914.9
Uzbekistan	2,927.8	2,815.6	2,803.5	2,513.5	3,190.1	4,279.4
			(Annual percentage change)			
Azerbaijan	53.4	87.7	32.6	(6.3)	19.6	39.4
Kazakhstan	8.7	50.1	(2.0)	12.4	33.1	55.5
Kyrgyz Republic	(11.6)	11.2	(5.6)	2.0	19.8	23.6
Tajikistan	15.4	13.9	(16.9)	13.1	8.2	14.8
Uzbekistan	(9.0)	(3.8)	(0.4)	(10.3)	26.9	34.1
			(In percent of GDP)			
Azerbaijan	20.3	33.1	40.5	34.8	36.3	42.3
Kazakhstan	34.6	48.2	39.0	39.5	41.9	49.3
Kyrgyz Republic	36.5	36.9	31.2	30.2	30.4	33.2
Tajikistan	63.4	79.1	61.6	60.8	51.3	44.1
Uzbekistan	17.2	20.6	24.1	26.0	36.6	44.0

Note:
GDP - gross domestic product

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.2: Merchandise Imports of the Central Asian Republics, 1999–2004

	1999	2000	2001	2002	2003	2004
			(In million US dollars)			
Azerbaijan	1,035.9	1,172.1	1,431.1	1,665.3	2,626.2	3,504.3
Kazakhstan	3,655.1	5,040.0	6,446.0	6,584.0	8,408.9	12,781.2
Kyrgyz Republic	599.7	554.1	467.2	586.8	717.0	941.0
Tajikistan	663.1	675.0	687.5	720.5	880.8	1,375.2
Uzbekistan	2,841.0	2,696.5	2,814.7	2,425.8	2,663.4	3,391.5
			(Annual percentage change)			
Azerbaijan	(3.8)	13.1	22.1	16.4	57.7	33.4
Kazakhstan	(14.1)	37.9	27.9	2.1	27.7	52.0
Kyrgyz Republic	(28.7)	(7.6)	(15.7)	25.6	22.2	31.3
Tajikistan	(6.7)	1.8	1.9	4.8	22.2	56.1
Uzbekistan	(9.1)	(5.1)	4.4	(13.8)	9.8	27.3
			(In percent of GDP)			
Azerbaijan	22.6	22.2	25.1	26.7	36.8	41.0
Kazakhstan	21.6	27.5	29.1	26.8	27.3	31.4
Kyrgyz Republic	48.3	40.5	30.6	36.5	37.5	43.4
Tajikistan	61.1	68.1	65.0	59.4	56.6	66.3
Uzbekistan	16.7	19.7	24.2	25.1	30.5	34.9

Note:
GDP - gross domestic product

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.3: Commodity Composition of Merchandise Exports, Azerbaijan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**929.7**	**1,745.2**	**2,314.2**	**2,167.4**	**2,592.0**	**3,614.3**
Animal and animal products	0.6	0.5	0.3	0.2	1.7	1.3
Vegetable products	22.7	28.5	20.7	35.6	60.1	72.1
Animal or vegetable fats	3.4	3.6	3.0	4.3	41.1	48.3
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	33.5	24.2	31.6	27.7	24.7	33.2
Mineral products (including energy resources)	730.6	1,485.3	2,117.9	1,927.7	2,229.5	2,973.8
Plastics and rubber	13.1	20.5	13.8	23.1	34.1	67.4
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	22.8	36.2	21.6	35.8	51.0	77.0
Hides and skins	1.7	1.7	1.6	1.6	2.7	2.6
Wood and wood products	0.6	0.8	0.4	0.4	1.0	0.9
Wood pulp products	0.3	0.6	0.8	0.6	0.8	3.0
Textile and textile articles	26.6	40.8	18.7	26.9	41.4	48.2
Footwear and headgear				0.1	0.1	0.2
Articles of stone, plaster, cement, and asbestos	0.7	0.3	0.2	0.1	0.2	0.2
Pearls, precious or semi-precious stones, and metals						
Base metals and articles thereof	24.9	32.0	19.0	21.6	55.1	97.1
Machinery, mechanical appliances, and electrical equipment	35.4	31.1	38.1	29.4	33.0	20.4
Transportation equipment	7.9	34.8	9.3	5.4	8.9	144.0
Instruments — measuring and musical	3.3	3.1	6.4	9.2	1.9	5.3
Arms and ammunition						
Miscellaneous manufactured articles	1.5	1.2	0.5	0.4	1.5	2.8
Works of art				0.1		
Others	0.1		10.3	17.2	3.2	16.5

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.4: Commodity Composition of Merchandise Exports, Azerbaijan, 1999–2004
(In percent of total merchandise exports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Animal and animal products	0.1				0.1	
Vegetable products	2.4	1.6	0.9	1.6	2.3	2.0
Animal or vegetable fats	0.4	0.2	0.1	0.2	1.6	1.3
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	3.6	1.4	1.4	1.3	1.0	0.9
Mineral products (including energy resources)	78.6	85.1	91.5	88.9	86.0	82.3
Plastics and rubber	1.4	1.2	0.6	1.1	1.3	1.9
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	2.5	2.1	0.9	1.7	2.0	2.1
Hides and skins	0.2	0.1	0.1	0.1	0.1	0.1
Wood and wood products	0.1					
Wood pulp products						0.1
Textile and textile articles	2.9	2.3	0.8	1.2	1.6	1.3
Footwear and headgear						
Articles of stone, plaster, cement, and asbestos	0.1					
Pearls, precious or semi-precious stones, and metals						
Base metals and articles thereof	2.7	1.8	0.8	1.0	2.1	2.7
Machinery, mechanical appliances, and electrical equipment	3.8	1.8	1.6	1.4	1.3	0.6
Transportation equipment	0.8	2.0	0.4	0.2	0.3	4.0
Instruments — measuring and musical	0.4	0.2	0.3	0.4	0.1	0.1
Arms and ammunition						
Miscellaneous manufactured articles	0.2	0.1			0.1	0.1
Works of art						
Others			0.4	0.8	0.1	0.5

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.5: Commodity Composition of Merchandise Exports, Kazakhstan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**5,871.6**	**8,812.2**	**8,639.1**	**9,670.3**	**12,926.7**	**20,096.2**
Animal and animal products	21.7	10.5	18.1	19.2	30.8	41.1
Vegetable products	378.5	559.7	392.7	408.2	659.5	640.7
Animal or vegetable fats	1.0	1.5	4.2	3.8	8.5	12.7
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	22.8	33.2	43.5	39.1	79.3	119.6
Mineral products (including energy resources)	2,731.1	4,790.6	5,028.8	5,917.5	8,316.3	13,727.2
Plastics and rubber	8.3	4.6	6.2	8.4	13.7	20.5
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	335.3	378.2	405.9	418.6	440.0	634.1
Hides and skins	25.4	23.2	21.5	32.8	74.6	138.0
Wood and wood products	6.2	7.4	8.4	5.2	0.3	0.3
Wood pulp products	9.2	3.9	9.1	6.5	7.9	11.5
Textile and textile articles	62.7	97.9	94.9	115.4	155.4	188.9
Footwear and headgear	6.7	1.5	2.8	0.8	3.0	3.3
Articles of stone, plaster, cement, and asbestos	2.5	2.6	3.4	1.9	2.8	5.3
Pearls, precious or semi-precious stones, and metals	285.5	387.6	264.6	269.5	249.9	345.6
Base metals and articles thereof	1,817.2	2,273.7	2,109.9	2,234.1	2,635.0	3,897.2
Machinery, mechanical appliances, and electrical equipment	104.3	146.2	132.8	112.2	154.8	193.1
Transportation equipment	36.8	52.8	69.0	52.6	74.9	76.0
Instruments — measuring and musical	7.1	29.1	17.6	16.6	16.0	30.9
Arms and ammunition						
Miscellaneous manufactured articles	1.4	3.5	3.5	1.9	3.2	3.4
Works of art						0.1
Others	7.9	4.5	2.2	6.0	0.8	6.6

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.6: Commodity Composition of Merchandise Exports, Kazakhstan, 1999–2004
(In percent of total merchandise exports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Animal and animal products	0.4	0.1	0.2	0.2	0.2	0.2
Vegetable products	6.4	6.4	4.5	4.2	5.1	3.2
Animal or vegetable fats					0.1	0.1
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	0.4	0.4	0.5	0.4	0.6	0.6
Mineral products (including energy resources)	46.5	54.4	58.2	61.2	64.3	68.3
Plastics and rubber	0.1	0.1	0.1	0.1	0.1	0.1
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	5.7	4.3	4.7	4.3	3.4	3.2
Hides and skins	0.4	0.3	0.2	0.3	0.6	0.7
Wood and wood products	0.1	0.1	0.1	0.1		
Wood pulp products	0.2		0.1	0.1	0.1	0.1
Textile and textile articles	1.1	1.1	1.1	1.2	1.2	0.9
Footwear and headgear	0.1					
Articles of stone, plaster, cement, and asbestos						
Pearls, precious or semi-precious stones, and metals	4.9	4.4	3.1	2.8	1.9	1.7
Base metals and articles thereof	30.9	25.8	24.4	23.1	20.4	19.4
Machinery, mechanical appliances, and electrical equipment	1.8	1.7	1.5	1.2	1.2	1.0
Transportation equipment	0.6	0.6	0.8	0.5	0.6	0.4
Instruments — measuring and musical	0.1	0.3	0.2	0.2	0.1	0.2
Arms and ammunition						
Miscellaneous manufactured articles						
Works of art						
Others	0.1	0.1		0.1		

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.7: Commodity Composition of Merchandise Exports, Kyrgyz Republic, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**453.8**	**504.5**	**476.2**	**485.5**	**581.7**	**718.8**
Animal and animal products	1.5	1.8	3.2	3.8	8.1	12.0
Vegetable products	18.0	14.4	13.3	19.9	18.9	26.2
Animal or vegetable fats	0.5	0.5		0.2	0.1	0.1
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	53.4	37.3	32.7	30.1	25.8	42.9
Mineral products (including energy resources)	57.2	86.8	58.4	62.4	74.7	94.1
Plastics and rubber	4.0	6.1	4.0	5.1	6.9	12.6
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	14.6	14.5	18.0	25.2	9.7	22.5
Hides and skins	2.8	7.6	10.3	24.2	11.5	9.3
Wood and wood products	0.4	0.6	0.3	0.4	0.4	0.5
Wood pulp products	0.6	0.4	1.2	0.6	1.4	2.5
Textile and textile articles	32.0	42.8	29.5	59.8	69.9	79.5
Footwear and headgear	0.2	0.2	0.5	0.2	0.7	1.2
Articles of stone, plaster, cement, and asbestos	5.3	4.2	5.2	8.9	26.2	38.0
Pearls, precious or semi-precious stones, and metals	183.6	196.9	226.7	164.8	262.1	291.2
Base metals and articles thereof	27.0	34.8	15.3	23.4	19.8	31.7
Machinery, mechanical appliances, and electrical equipment	27.5	33.4	28.5	26.9	28.2	35.5
Transportation equipment	16.3	14.9	26.5	21.2	14.5	14.8
Instruments — measuring and musical	1.5	3.3	1.3	1.8	1.1	1.5
Arms and ammunition						
Miscellaneous manufactured articles	7.4	4.0	1.2	6.5	1.7	2.3
Works of art				0.2		
Others			0.1			0.7

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.8: Commodity Composition of Merchandise Exports, the Kyrgyz Republic, 1999–2004
(In percent of total merchandise exports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Animal and animal products	0.3	0.4	0.7	0.8	1.4	1.7
Vegetable products	4.0	2.9	2.8	4.1	3.2	3.6
Animal or vegetable fats	0.1	0.1				
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	11.8	7.4	6.9	6.2	4.4	6.0
Mineral products (including energy resources)	12.6	17.2	12.3	12.9	12.8	13.1
Plastics and rubber	0.9	1.2	0.8	1.1	1.2	1.8
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	3.2	2.9	3.8	5.2	1.7	3.1
Hides and skins	0.6	1.5	2.2	5.0	2.0	1.3
Wood and wood products	0.1	0.1	0.1	0.1	0.1	0.1
Wood pulp products	0.1	0.1	0.3	0.1	0.2	0.3
Textile and textile articles	7.1	8.5	6.2	12.3	12.0	11.1
Footwear and headgear			0.1		0.1	0.2
Articles of stone, plaster, cement, and asbestos	1.2	0.8	1.1	1.8	4.5	5.3
Pearls, precious or semi-precious stones, and metals	40.5	39.0	47.6	33.9	45.1	40.5
Base metals and articles thereof	5.9	6.9	3.2	4.8	3.4	4.4
Machinery, mechanical appliances, and electrical equipment	6.1	6.6	6.0	5.5	4.8	4.9
Transportation equipment	3.6	3.0	5.6	4.4	2.5	2.1
Instruments — measuring and musical	0.3	0.7	0.3	0.4	0.2	0.2
Arms and ammunition						
Miscellaneous manufactured articles	1.6	0.8	0.3	1.3	0.3	0.3
Works of art						
Others						0.1

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.9: Commodity Composition of Merchandise Exports, Tajikistan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**688.7**	**784.3**	**651.5**	**736.9**	**797.2**	**914.9**
Animal and animal products	0.1		0.1		0.3	0.3
Vegetable products	15.8	19.2	18.1	15.3	18.5	22.4
Animal or vegetable fats				0.1		
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	11.7	11.6	8.8	7.5	7.3	6.5
Mineral products (including energy resources)	176.5	93.8	80.9	72.0	59.8	63.9
Plastics and rubber	0.1	0.1	0.1	0.1		0.1
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	9.0	9.5	5.4	2.3	4.8	8.8
Hides and skins	0.4	0.8	0.4	0.8	1.3	1.4
Wood and wood products	0.1		0.1		0.1	
Wood pulp products	0.1	0.1	0.2	0.9	0.1	0.2
Textile and textile articles	129.6	130.2	104.3	161.9	231.2	199.0
Footwear and headgear	0.1		0.1	0.1		
Articles of stone, plaster, cement, and asbestos	0.2			1.7	0.1	0.4
Pearls, precious or semi-precious stones, and metals						24.0
Base metals and articles thereof	312.9	436.6	399.9	401.3	436.0	572.8
Machinery, mechanical appliances, and electrical equipment	2.5	15.2	2.5	2.7	2.9	6.3
Transportation equipment	4.4	42.0	7.7	49.2	9.8	8.0
Instruments — measuring and musical	0.4	0.1		0.2	0.2	0.2
Arms and ammunition						
Miscellaneous manufactured articles	0.2	0.2	0.2		0.3	0.4
Works of art			0.1		0.1	0.1
Others	24.6	24.9	22.6	20.8	24.4	0.1

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.10: Commodity Composition of Merchandise Exports, Tajikistan, 1999–2004
(In percent of total merchandise exports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Animal and animal products						
Vegetable products	2.3	2.4	2.8	2.1	2.3	2.4
Animal or vegetable fats						
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	1.7	1.5	1.4	1.0	0.9	0.7
Mineral products (including energy resources)	25.6	12.0	12.4	9.8	7.5	7.0
Plastics and rubber						
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	1.3	1.2	0.8	0.3	0.6	1.0
Hides and skins	0.1	0.1	0.1	0.1	0.2	0.2
Wood and wood products						
Wood pulp products				0.1		
Textile and textile articles	18.8	16.6	16.0	22.0	29.0	21.8
Footwear and headgear						
Articles of stone, plaster, cement, and asbestos				0.2		
Pearls, precious or semi-precious stones, and metals						2.6
Base metals and articles thereof	45.4	55.7	61.4	54.5	54.7	62.6
Machinery, mechanical appliances, and electrical equipment	0.4	1.9	0.4	0.4	0.4	0.7
Transportation equipment	0.6	5.4	1.2	6.7	1.2	0.9
Instruments — measuring and musical	0.1					
Arms and ammunition						
Miscellaneous manufactured articles						
Works of art						
Others	3.6	3.2	3.5	2.8	3.1	

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.11: Commodity Composition of Merchandise Exports, Uzbekistan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**2,927.9**	**2,815.6**	**2,803.6**	**2,513.5**	**3,190.1**	**4,279.4**
Animal and animal products						
Vegetable products						
Animal or vegetable fats						
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	206.7	176.4	124.9	105.7	102.2	186.7
Mineral products (including energy resources)	371.5	335.2	322.9	243.1	364.3	601.6
Plastics and rubber	1.6	2.4	5.8	3.4	19.9	58.5
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	100.2	90.9	80.5	85.4	95.0	171.4
Hides and skins	1.0	2.0	3.8	2.2	1.6	1.7
Wood and wood products	0.1	0.2	0.1	0.7	0.4	0.5
Wood pulp products	1.1	1.6	2.1	4.4	3.3	4.0
Textile and textile articles	1,066.0	1,134.7	1,018.2	862.1	985.0	1,124.0
Footwear and headgear						
Articles of stone, plaster, cement, and asbestos						
Pearls, precious or semi-precious stones, and metals	884.8	707.2	868.2	873.0	1,121.0	1,300.5
Base metals and articles thereof	9.3	19.0	20.5	26.8	46.4	108.5
Machinery, mechanical appliances, and electrical equipment	50.6	40.3	34.2	42.3	44.3	40.1
Transportation equipment	52.6	71.5	88.2	74.2	174.0	317.4
Instruments — measuring and musical						
Arms and ammunition						
Miscellaneous manufactured articles						
Works of art						
Others	182.4	234.2	234.2	190.2	232.7	364.5

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.12: Commodity Composition of Merchandise Exports, Uzbekistan, 1999–2004
(In percent of total merchandise exports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Animal and animal products						
Vegetable products						
Animal or vegetable fats						
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	7.1	6.3	4.5	4.2	3.2	4.4
Mineral products (including energy resources)	12.7	11.9	11.5	9.7	11.4	14.1
Plastics and rubber	0.1	0.1	0.2	0.1	0.6	1.4
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	3.4	3.2	2.9	3.4	3.0	4.0
Hides and skins		0.1	0.1	0.1	0.1	
Wood and wood products						
Wood pulp products		0.1	0.1	0.2	0.1	0.1
Textile and textile articles	36.4	40.3	36.3	34.3	30.9	26.3
Footwear and headgear						
Articles of stone, plaster, cement, and asbestos						
Pearls, precious or semi-precious stones, and metals	30.2	25.1	31.0	34.7	35.1	30.4
Base metals and articles thereof	0.3	0.7	0.7	1.1	1.5	2.5
Machinery, mechanical appliances, and electrical equipment	1.7	1.4	1.2	1.7	1.4	0.9
Transportation equipment	1.8	2.5	3.1	3.0	5.5	7.4
Instruments — measuring and musical						
Arms and ammunition						
Miscellaneous manufactured articles						
Works of art						
Others	6.2	8.3	8.4	7.6	7.3	8.5

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.13: Commodity Composition of Merchandise Imports, Azerbaijan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**1,035.9**	**1,172.1**	**1,431.1**	**1,665.3**	**2,626.2**	**3,504.3**
Animal and animal products	26.7	31.6	34.5	34.3	37.8	38.2
Vegetable products	116.6	119.5	116.8	106.1	146.2	232.0
Animal or vegetable fats	12.7	11.2	13.0	13.7	24.9	30.6
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	52.4	59.5	69.7	84.0	101.9	113.8
Mineral products (including energy resources)	89.9	115.2	248.0	324.7	356.1	507.1
Plastics and rubber	17.8	22.8	29.7	39.6	74.2	88.3
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	57.6	84.1	68.7	83.0	110.2	132.9
Hides and skins	3.6	0.8	0.7	0.6	1.1	1.9
Wood and wood products	21.9	22.9	20.6	22.7	31.4	38.8
Wood pulp products	9.5	18.5	24.5	34.1	27.9	42.6
Textile and textile articles	20.2	25.2	33.2	27.3	37.9	56.5
Footwear and headgear	4.4	4.1	10.1	11.0	10.7	15.8
Articles of stone, plaster, cement, and asbestos	19.8	17.7	20.7	25.9	37.2	51.6
Pearls, precious or semi-precious stones, and metals	0.4	0.1	0.1	0.2	0.3	1.6
Base metals and articles thereof	111.5	123.4	132.1	281.1	498.8	611.1
Machinery, mechanical appliances, and electrical equipment	342.6	362.8	354.0	395.7	685.0	1,073.8
Transportation equipment	90.4	100.0	198.6	123.5	332.9	242.0
Instruments — measuring and musical	20.2	35.8	35.9	28.8	53.1	72.4
Arms and ammunition						
Miscellaneous manufactured articles	17.4	16.8	17.9	23.6	57.2	151.5
Works of art			0.1			
Others	0.3	0.1	2.2	5.4	1.4	1.8

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.14: Commodity Composition of Merchandise Imports, Azerbaijan, 1999–2004
(In percent of total merchandise imports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Animal and animal products	2.6	2.7	2.4	2.1	1.4	1.1
Vegetable products	11.3	10.2	8.2	6.4	5.6	6.6
Animal or vegetable fats	1.2	1.0	0.9	0.8	0.9	0.9
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	5.1	5.1	4.9	5.0	3.9	3.2
Mineral products (including energy resources)	8.7	9.8	17.3	19.5	13.6	14.5
Plastics and rubber	1.7	1.9	2.1	2.4	2.8	2.5
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	5.6	7.2	4.8	5.0	4.2	3.8
Hides and skins	0.3	0.1				0.1
Wood and wood products	2.1	2.0	1.4	1.4	1.2	1.1
Wood pulp products	0.9	1.6	1.7	2.0	1.1	1.2
Textile and textile articles	1.9	2.1	2.3	1.6	1.4	1.6
Footwear and headgear	0.4	0.3	0.7	0.7	0.4	0.5
Articles of stone, plaster, cement, and asbestos	1.9	1.5	1.4	1.6	1.4	1.5
Pearls, precious or semi-precious stones, and metals						
Base metals and articles thereof	10.8	10.5	9.2	16.9	19.0	17.4
Machinery, mechanical appliances, and electrical equipment	33.1	31.0	24.7	23.8	26.1	30.6
Transportation equipment	8.7	8.5	13.9	7.4	12.7	6.9
Instruments — measuring and musical	1.9	3.1	2.5	1.7	2.0	2.1
Arms and ammunition						
Miscellaneous manufactured articles	1.7	1.4	1.3	1.4	2.2	4.3
Works of art						
Others			0.2	0.3	0.1	0.1

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.15: Commodity Composition of Merchandise Imports, Kazakhstan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**3,655.1**	**5,040.0**	**6,446.0**	**6,490.5**	**8,408.7**	**12,781.2**
Animal and animal products	44.5	69.1	75.7	70.4	103.4	145.3
Vegetable products	53.3	60.6	69.0	76.9	104.7	116.5
Animal or vegetable fats	37.4	46.2	55.5	62.2	50.7	54.4
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	241.6	289.9	331.0	333.0	426.0	611.1
Mineral products (including energy resources)	421.7	657.6	904.4	822.9	1,007.3	1,873.5
Plastics and rubber	116.1	193.2	239.8	267.9	362.8	504.2
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	341.8	545.8	667.1	715.7	909.5	1,128.3
Hides and skins	2.6	3.0	4.2	6.3	9.5	19.3
Wood and wood products	27.6	52.3	71.5	62.9	100.9	158.5
Wood pulp products	89.3	132.6	166.1	167.3	209.6	277.7
Textile and textile articles	55.0	65.6	75.6	102.1	146.6	162.6
Footwear and headgear	24.7	22.7	15.0	23.4	23.3	22.9
Articles of stone, plaster, cement, and asbestos	77.3	110.2	114.2	136.2	183.5	311.0
Pearls, precious or semi-precious stones, and metals	14.3	14.5	12.3	6.3	8.9	13.8
Base metals and articles thereof	339.5	562.9	889.5	738.0	993.3	1,666.1
Machinery, mechanical appliances, and electrical equipment	961.0	1,402.4	1,852.2	1,881.7	2,152.6	3,421.9
Transportation equipment	619.8	563.0	625.0	803.2	1,222.8	1,777.2
Instruments — measuring and musical	97.1	134.9	159.3	165.7	208.4	274.8
Arms and ammunition						
Miscellaneous manufactured articles	88.9	102.3	115.4	139.3	178.2	234.4
Works of art		3.2	0.1	0.1	0.1	0.7
Others	1.6	8.0	3.1	2.5	6.6	7.0

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.16: Commodity Composition of Merchandise Imports, Kazakhstan, 1999–2004
(In percent of total merchandise imports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Animal and animal products	1.2	1.4	1.2	1.1	1.2	1.1
Vegetable products	1.5	1.2	1.1	1.2	1.2	0.9
Animal or vegetable fats	1.0	0.9	0.9	1.0	0.6	0.4
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	6.6	5.8	5.1	5.1	5.1	4.8
Mineral products (including energy resources)	11.5	13.0	14.0	12.7	12.0	14.7
Plastics and rubber	3.2	3.8	3.7	4.1	4.3	3.9
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	9.4	10.8	10.3	11.0	10.8	8.8
Hides and skins	0.1	0.1	0.1	0.1	0.1	0.2
Wood and wood products	0.8	1.0	1.1	1.0	1.2	1.2
Wood pulp products	2.4	2.6	2.6	2.6	2.5	2.2
Textile and textile articles	1.5	1.3	1.2	1.6	1.7	1.3
Footwear and headgear	0.7	0.5	0.2	0.4	0.3	0.2
Articles of stone, plaster, cement, and asbestos	2.1	2.2	1.8	2.1	2.2	2.4
Pearls, precious or semi-precious stones, and metals	0.4	0.3	0.2	0.1	0.1	0.1
Base metals and articles thereof	9.3	11.2	13.8	11.4	11.8	13.0
Machinery, mechanical appliances, and electrical equipment	26.3	27.8	28.7	29.0	25.6	26.8
Transportation equipment	17.0	11.2	9.7	12.4	14.5	13.9
Instruments — measuring and musical	2.7	2.7	2.5	2.6	2.5	2.2
Arms and ammunition						
Miscellaneous manufactured articles	2.4	2.0	1.8	2.1	2.1	1.8
Works of art		0.1				
Others		0.2			0.1	0.1

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.17: Commodity Composition of Merchandise Imports, the Kyrgyz Republic, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**599.7**	**554.1**	**467.2**	**586.8**	**717.0**	**941.0**
Animal and animal products	3.7	4.2	3.3	3.3	5.9	7.9
Vegetable products	37.5	42.3	15.5	21.7	16.2	23.0
Animal or vegetable fats	6.7	3.7	3.9	4.9	10.8	13.8
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	34.5	31.0	35.8	47.4	59.5	83.0
Mineral products (including energy resources)	128.7	133.3	129.5	163.4	195.6	273.3
Plastics and rubber	16.6	22.8	22.0	24.9	38.3	55.7
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	60.9	59.3	67.3	78.4	91.7	112.9
Hides and skins	0.6	2.3	4.1	2.6	1.3	1.9
Wood and wood products	4.5	7.0	5.2	6.6	10.5	17.2
Wood pulp products	12.3	15.8	12.8	13.4	17.5	22.6
Textile and textile articles	34.2	35.2	28.8	38.9	47.3	42.6
Footwear and headgear	5.7	5.2	5.1	5.9	7.6	5.8
Articles of stone, plaster, cement, and asbestos	5.5	4.9	5.1	6.2	8.6	10.8
Pearls, precious or semi-precious stones, and metals	0.2	0.2	0.1	0.1	0.1	0.2
Base metals and articles thereof	32.0	27.6	27.3	29.7	43.5	65.0
Machinery, mechanical appliances, and electrical equipment	148.9	98.2	56.5	89.6	89.1	107.3
Transportation equipment	29.9	41.8	31.8	32.1	51.2	70.3
Instruments — measuring and musical	27.2	10.8	8.0	10.6	12.2	14.9
Arms and ammunition						
Miscellaneous manufactured articles	10.1	8.5	5.1	6.9	10.1	10.5
Works of art				0.2		
Others						2.3

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.18: Commodity Composition of Merchandise Imports, the Kyrgyz Republic, 1999–2004
(In percent of total merchandise imports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Animal and animal products	0.6	0.8	0.7	0.6	0.8	0.8
Vegetable products	6.3	7.6	3.3	3.7	2.3	2.4
Animal or vegetable fats	1.1	0.7	0.8	0.8	1.5	1.5
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	5.8	5.6	7.7	8.1	8.3	8.8
Mineral products (including energy resources)	21.5	24.1	27.7	27.8	27.3	29.0
Plastics and rubber	2.8	4.1	4.7	4.2	5.3	5.9
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	10.2	10.7	14.4	13.4	12.8	12.0
Hides and skins	0.1	0.4	0.9	0.4	0.2	0.2
Wood and wood products	0.8	1.3	1.1	1.1	1.5	1.8
Wood pulp products	2.1	2.9	2.7	2.3	2.4	2.4
Textile and textile articles	5.7	6.4	6.2	6.6	6.6	4.5
Footwear and headgear	1.0	0.9	1.1	1.0	1.1	0.6
Articles of stone, plaster, cement, and asbestos	0.9	0.9	1.1	1.1	1.2	1.1
Pearls, precious or semi-precious stones, and metals						
Base metals and articles thereof	5.3	5.0	5.8	5.1	6.1	6.9
Machinery, mechanical appliances, and electrical equipment	24.8	17.7	12.1	15.3	12.4	11.4
Transportation equipment	5.0	7.5	6.8	5.5	7.1	7.5
Instruments — measuring and musical	4.5	1.9	1.7	1.8	1.7	1.6
Arms and ammunition						
Miscellaneous manufactured articles	1.7	1.5	1.1	1.2	1.4	1.1
Works of art						
Others						0.2

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.19: Commodity Composition of Merchandise Imports, Tajikistan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**663.1**	**675.0**	**687.5**	**720.5**	**880.8**	**1,375.2**
Animal and animal products	0.6	1.1	0.9	1.0	3.2	4.3
Vegetable products	48.2	46.9	40.0	38.9	36.9	55.6
Animal or vegetable fats	4.2	6.5	7.4	4.8	8.9	10.5
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	16.3	14.9	10.6	21.1	32.1	44.4
Mineral products (including energy resources)	388.2	254.0	256.8	225.4	218.4	279.1
Plastics and rubber	5.5	5.6	9.6	9.6	14.6	20.2
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	86.0	243.5	242.0	230.5	310.8	369.6
Hides and skins	3.3	3.0	9.2	19.2	33.4	192.8
Wood and wood products	7.8	6.9	9.7	7.7	12.3	13.3
Wood pulp products	2.7	2.2	2.8	2.8	4.7	4.7
Textile and textile articles	5.0	5.3	6.5	9.5	18.8	27.2
Footwear and headgear	17.4	10.3	12.7	12.9	25.5	14.6
Articles of stone, plaster, cement, and asbestos						55.2
Pearls, precious or semi-precious stones, and metals	44.8	39.3	37.0	43.5	82.1	132.1
Base metals and articles thereof	26.5	26.3	32.8	83.8	59.0	98.3
Machinery, mechanical appliances, and electrical equipment	0.8	1.8	3.2	3.1	4.1	7.8
Transportation equipment						
Instruments — measuring, musical	4.3	4.9	4.7	6.3	12.9	43.9
Arms and ammunition	0.1		0.1		0.1	0.1
Miscellaneous manufactured articles	1.4	2.5	1.5	0.4	3.0	0.6
Works of art	0.1				0.1	0.5
Others	0.5			0.3		

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.20: Commodity Composition of Merchandise Imports, Tajikistan, 1999–2004
(In percent of total merchandise imports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Animal and animal products	0.1	0.2	0.1	0.1	0.4	0.3
Vegetable products	7.3	6.9	5.8	5.4	4.2	4.0
Animal or vegetable fats	0.6	1.0	1.1	0.7	1.0	0.8
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	2.5	2.2	1.5	2.9	3.6	3.2
Mineral products (including energy resources)	58.5	37.6	37.4	31.3	24.8	20.3
Plastics and rubber	0.8	0.8	1.4	1.3	1.7	1.5
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	13.0	36.1	35.2	32.0	35.3	26.9
Hides and skins	0.5	0.4	1.3	2.7	3.8	14.0
Wood and wood products	1.2	1.0	1.4	1.1	1.4	1.0
Wood pulp products	0.4	0.3	0.4	0.4	0.5	0.3
Textile and textile articles	0.8	0.8	0.9	1.3	2.1	2.0
Footwear and headgear	2.6	1.5	1.8	1.8	2.9	1.1
Articles of stone, plaster, cement, and asbestos						4.0
Pearls, precious or semi-precious stones, and metals	6.8	5.8	5.4	6.0	9.3	9.6
Base metals and articles thereof	4.0	3.9	4.8	11.6	6.7	7.1
Machinery, mechanical appliances, and electrical equipment	0.1	0.3	0.5	0.4	0.5	0.6
Transportation equipment						
Instruments — measuring and musical	0.6	0.7	0.7	0.9	1.5	3.2
Arms and ammunition						
Miscellaneous manufactured articles	0.2	0.4	0.2	0.1	0.3	
Works of art						
Others	0.1					

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.21: Commodity Composition of Merchandise Imports, Uzbekistan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**2,841.1**	**2,696.4**	**2,814.6**	**2,425.7**	**2,663.5**	**3,391.5**
Animal and animal products						
Vegetable products						
Animal or vegetable fats						
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	408.1	361.1	337.6	339.3	293.5	260.9
Mineral products (including energy resources)	66.6	112.7	58.7	35.1	79.8	81.0
Plastics and rubber	120.2	175.6	153.1	131.0	133.6	177.1
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	242.7	223.9	244.6	279.5	246.3	300.7
Hides and skins	12.6	12.2	12.4	8.7	8.4	2.3
Wood and wood products	48.3	45.6	33.3	32.8	56.4	109.8
Wood pulp products	69.0	68.1	65.4	57.8	65.0	53.4
Textile and textile articles	45.8	43.0	47.2	36.5	39.2	41.9
Footwear and headgear						
Articles of stone, plaster, cement, and asbestos						
Pearls, precious or semi-precious stones, and metals	22.9	21.6	43.4	22.5	28.6	30.2
Base metals and articles thereof	222.5	232.0	299.9	193.7	206.7	362.9
Machinery, mechanical appliances, and electrical equipment	966.5	718.2	998.5	874.0	945.9	1,100.0
Transportation equipment	426.9	325.8	294.5	248.9	369.1	653.3
Instruments — measuring and musical						
Arms and ammunition						
Miscellaneous manufactured articles						
Works of art						
Others	189.0	356.6	226.0	165.9	191.0	218.0

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.22: Commodity Composition of Merchandise Imports, Uzbekistan, 1999–2004
(In percent of total merchandise imports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Animal and animal products						
Vegetable products						
Animal or vegetable fats						
Prepared foodstuff (including alcohol and nonalcoholic beverages, tobacco, and substitutes)	14.4	13.4	12.0	14.0	11.0	7.7
Mineral products (including energy resources)	2.3	4.2	2.1	1.4	3.0	2.4
Plastics and rubber	4.2	6.5	5.4	5.4	5.0	5.2
Chemical products (including pharmaceutical products, fertilizers, perfume, and detergent products)	8.5	8.3	8.7	11.5	9.2	8.9
Hides and skins	0.4	0.5	0.4	0.4	0.3	0.1
Wood and wood products	1.7	1.7	1.2	1.4	2.1	3.2
Wood pulp products	2.4	2.5	2.3	2.4	2.4	1.6
Textile and textile articles	1.6	1.6	1.7	1.5	1.5	1.2
Footwear and headgear						
Articles of stone, plaster, cement, and asbestos						
Pearls, precious or semi-precious stones, and metals	0.8	0.8	1.5	0.9	1.1	0.9
Base metals and articles thereof	7.8	8.6	10.7	8.0	7.8	10.7
Machinery, mechanical appliances, and electrical equipment	34.0	26.6	35.5	36.0	35.5	32.4
Transportation equipment	15.0	12.1	10.5	10.3	13.9	19.3
Instruments — measuring and musical						
Arms and ammunition						
Miscellaneous manufactured articles						
Works of art						
Others	6.7	13.2	8.0	6.8	7.2	6.4

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.23: Geographical Distribution of Merchandise Exports, Azerbaijan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**929.7**	**1,745.2**	**2,314.2**	**2,167.4**	**2,592.0**	**3,614.3**
CIS	**211.1**	**235.2**	**222.8**	**243.7**	**333.6**	**614.3**
CARs	19.3	29.3	22.1	44.5	46.2	59.0
Kazakhstan	4.1	6.7	6.6	11.6	10.1	9.4
Kyrgyz Republic	3.7	1.9	0.3	1.1	0.2	0.3
Tajikistan	10.8	19.6	12.1	28.0	34.4	46.5
Uzbekistan	0.7	1.1	3.1	3.8	1.5	2.8
Rest of CIS	191.8	205.9	200.7	199.2	287.4	555.3
Russian Federation	83.1	98.3	77.5	95.7	147.8	209.7
Turkmenistan	8.9	8.2	12.0	8.6	5.8	143.4
Others	99.8	99.4	111.2	94.9	133.8	202.2
Non-CIS	**718.6**	**1,510.0**	**2,091.4**	**1,923.7**	**2,258.4**	**3,000.0**
EU-15	423.4	1,053.7	1,608.0	1,463.3	1,745.6	1,841.0
East Asia						
PRC	0.2	4.9	2.4	1.3	19.3	31.7
Japan	0.4	0.1	0.2	0.3	19.8	0.3
Korea, South	1.4	2.0	1.2		1.0	3.8
Mongolia		1.2	0.3			
South Asia						
Afghanistan	1.2	0.8	0.2	0.7	0.6	2.2
India	1.3	1.6	1.8	2.2	1.3	5.4
Pakistan	0.1	0.3	3.6	2.5		
Other major trading partners						
Iran	22.7	7.7	9.1	29.9	49.1	153.5
Turkey	69.1	105.0	67.4	83.4	107.0	182.6
US	29.8	8.0	13.6	52.0	63.9	25.9
Israel	56.9	135.2	164.1	154.1	138.1	323.7
Croatia	2.1	3.7	24.3	7.3	61.1	109.2
Rest of the world	110.0	185.8	195.2	126.7	51.6	320.7

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.24: Geographical Distribution of Merchandise Exports, Azerbaijan, 1999–2004
(In percent of total merchandise exports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
CIS	**22.7**	**13.5**	**9.6**	**11.2**	**12.9**	**17.0**
CARs	2.1	1.7	1.0	2.1	1.8	1.6
Kazakhstan	0.4	0.4	0.3	0.5	0.4	0.3
Kyrgyz Republic	0.4	0.1		0.1		
Tajikistan	1.2	1.1	0.5	1.3	1.3	1.3
Uzbekistan	0.1	0.1	0.1	0.2	0.1	0.1
Rest of CIS	20.6	11.8	8.7	9.2	11.1	15.4
Russian Federation	8.9	5.6	3.3	4.4	5.7	5.8
Turkmenistan	1.0	0.5	0.5	0.4	0.2	4.0
Others	10.7	5.7	4.8	4.4	5.2	5.6
Non-CIS	**77.3**	**86.5**	**90.4**	**88.8**	**87.1**	**83.0**
EU-15	45.5	60.4	69.5	67.5	67.3	50.9
East Asia						
PRC		0.3	0.1	0.1	0.7	0.9
Japan					0.8	
Korea, South	0.2	0.1	0.1			0.1
Mongolia		0.1				
South Asia						
Afghanistan	0.1					0.1
India	0.1	0.1	0.1	0.1	0.1	0.1
Pakistan			0.2	0.1		
Other major trading partners						
Iran	2.4	0.4	0.4	1.4	1.9	4.2
Turkey	7.4	6.0	2.9	3.8	4.1	5.1
US	3.2	0.5	0.6	2.4	2.5	0.7
Israel	6.1	7.7	7.1	7.1	5.3	9.0
Croatia	0.2	0.2	1.1	0.3	2.4	3.0
Rest of the world	11.8	10.6	8.4	5.8	2.0	8.9

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.25: Geographical Distribution of Merchandise Exports, Kazakhstan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**5,871.6**	**8,812.2**	**8,639.1**	**9,670.3**	**12,926.7**	**20,096.2**
CIS	**1,510.5**	**2,336.7**	**2,644.6**	**2,194.4**	**2,980.5**	**4,097.2**
CARs	199.3	291.2	367.7	368.1	483.5	847.0
Azerbaijan	30.9	46.8	69.3	112.7	113.5	287.1
Kyrgyz Republic	59.1	58.3	87.0	108.6	156.4	222.1
Tajikistan	43.3	52.6	61.2	45.8	75.7	136.1
Uzbekistan	66.0	133.5	150.2	101.0	137.9	201.7
Rest of CIS	1,311.2	2,045.5	2,276.9	1,826.3	2,497.0	3,250.2
Russian Federation	1,146.5	1,751.4	1,759.5	1,497.8	1,967.9	2,838.1
Turkmenistan	12.6	7.1	14.2	15.3	37.2	26.1
Others	152.1	287.0	503.2	313.2	491.9	386.0
Non-CIS	**4,361.1**	**6,475.5**	**5,994.5**	**7,475.9**	**9,946.2**	**15,999.0**
EU-15	1,309.4	2,063.0	1,991.2	1,537.0	1,980.5	6,309.7
East Asia						
PRC	469.8	673.7	659.6	1,023.0	1,653.1	1,967.3
Japan	23.4	9.7	19.1	23.0	10.4	29.7
Korea, South	35.8	36.4	43.4	48.9	55.5	162.9
Mongolia	3.8	12.2	9.8	8.3	12.0	29.3
South Asia						
Afghanistan	11.4	57.9	18.2	31.1	49.4	86.4
India	26.4	29.8	9.7	5.1	5.9	10.7
Pakistan	2.1	1.5	0.5	0.4	0.7	0.8
Other major trading partners						
Iran	91.6	203.3	208.9	309.9	411.1	712.0
Turkey	36.4	62.3	74.2	97.4	99.2	147.1
US	81.3	209.5	159.0	116.9	99.1	274.0
Rest of the world	2,269.7	3,116.2	2,800.9	4,274.9	5,569.3	6,269.1

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.26: Geographical Distribution of Merchandise Exports, Kazakhstan, 1999–2004
(In percent of total merchandise exports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
CIS	**25.7**	**26.5**	**30.6**	**22.7**	**23.1**	**20.4**
CARs	3.4	3.3	4.3	3.8	3.7	4.2
Azerbaijan	0.5	0.5	0.8	1.2	0.9	1.4
Kyrgyz Republic	1.0	0.7	1.0	1.1	1.2	1.1
Tajikistan	0.7	0.6	0.7	0.5	0.6	0.7
Uzbekistan	1.1	1.5	1.7	1.0	1.1	1.0
Rest of CIS	22.3	23.2	26.4	18.9	19.3	16.2
Russian Federation	19.5	19.9	20.4	15.5	15.2	14.1
Turkmenistan	0.2	0.1	0.2	0.2	0.3	0.1
Others	2.6	3.3	5.8	3.2	3.8	1.9
Non-CIS	**74.3**	**73.5**	**69.4**	**77.3**	**76.9**	**79.6**
EU-15						
East Asia						
PRC	8.0	7.6	7.6	10.6	12.8	9.8
Japan	0.4	0.1	0.2	0.2	0.1	0.1
Korea, South	0.6	0.4	0.5	0.5	0.4	0.8
Mongolia	0.1	0.1	0.1	0.1	0.1	0.1
South Asia						
Afghanistan	0.2	0.7	0.2	0.3	0.4	0.4
India	0.4	0.3	0.1	0.1		0.1
Pakistan						
Other major trading partners						
Iran	1.6	2.3	2.4	3.2	3.2	3.5
Turkey	0.6	0.7	0.9	1.0	0.8	0.7
US	1.4	2.4	1.8	1.2	0.8	1.4
Rest of the world	38.7	35.4	32.4	44.2		31.2

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.27: Geographical Distribution of Merchandise Exports, Kyrgyz Republic, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**453.8**	**504.5**	**476.2**	**485.5**	**581.7**	**718.8**
CIS	**182.8**	**207.4**	**168.2**	**168.7**	**200.9**	**275.1**
CARs	102.5	134.3	95.9	80.4	94.3	125.8
Azerbaijan	1.5	4.0	2.1	5.6	2.0	1.8
Kazakhstan	45.0	33.4	39.0	36.8	57.1	87.3
Tajikistan	9.5	7.5	6.7	10.2	18.9	22.1
Uzbekistan	46.6	89.4	48.0	27.8	16.3	14.7
Rest of CIS	80.3	73.1	72.3	88.2	106.6	149.2
Russian Federation	70.7	65.1	64.5	80.0	97.0	137.7
Turkmenistan	2.8	2.7	1.5	2.4	2.3	4.0
Others	6.8	5.3	6.3	5.8	7.3	7.5
Non-CIS	**271.0**	**297.1**	**307.9**	**316.9**	**380.8**	**443.8**
EU-15	173.3	171.2	117.5	18.7	17.6	15.2
East Asia						
PRC	25.3	44.1	19.4	41.1	23.3	39.3
Japan	0.5	0.7	0.5	0.2	0.1	
Korea, South	0.2	0.4	0.6	1.1	0.4	0.5
Mongolia	1.2	2.5	1.2	1.1	1.0	1.2
South Asia						
Afghanistan	2.4	4.5	1.6	4.4	6.1	8.0
India	5.9	0.8	1.4	6.1	0.7	0.6
Pakistan	0.4	0.1	0.1			
Other major trading partners						
Iran	7.6	6.7	8.2	4.7	2.1	3.5
Turkey	4.6	7.2	13.8	16.4	11.0	17.0
US	11.2	2.8	7.1	36.1	6.5	3.2
UAE	1.1	1.4	0.5	68.8	144.3	189.3
Switzerland	18.1	34.1	124.2	96.4	117.9	101.8
Czech Republic	7.0	2.7	2.1	1.9	2.3	1.3
Rest of the world	12.2	17.8	9.9	19.9	47.4	62.8

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
UAE – United Arab Emirates
US – Unites States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.28: Geographical Distribution of Merchandise Exports, Kyrgyz Republic, 1999–2004
(In percent of total merchandise exports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
CIS	**40.3**	**41.1**	**35.3**	**34.7**	**34.5**	**38.3**
CARs	22.6	26.6	20.1	16.6	16.2	17.5
Azerbaijan	0.3	0.8	0.4	1.1	0.4	0.2
Kazakhstan	9.9	6.6	8.2	7.6	9.8	12.1
Tajikistan	2.1	1.5	1.4	2.1	3.2	3.1
Uzbekistan	10.3	17.7	10.1	5.7	2.8	2.0
Rest of CIS	17.7	14.5	15.2	18.2	18.3	20.8
Russian Federation	15.6	12.9	13.5	16.5	16.7	19.2
Turkmenistan	0.6	0.5	0.3	0.5	0.4	0.6
Others	1.5	1.0	1.3	1.2	1.2	1.0
Non-CIS	**59.7**	**58.9**	**64.7**	**65.3**	**65.5**	**61.7**
EU-15	38.2	33.9	24.7	3.9	3.0	2.1
East Asia						
PRC	5.6	8.7	4.1	8.5	4.0	5.5
Japan	0.1	0.1	0.1			
Korea, South	0.1	0.1	0.1	0.2	0.1	0.1
Mongolia	0.3	0.5	0.2	0.2	0.2	0.2
South Asia						
Afghanistan	0.5	0.9	0.3	0.9	1.1	1.1
India	1.3	0.2	0.3	1.3	0.1	0.1
Pakistan	0.1					
Other major trading partners						
Iran	1.7	1.3	1.7	1.0	0.4	0.5
Turkey	1.0	1.4	2.9	3.4	1.9	2.4
US	2.5	0.6	1.5	7.4	1.1	0.4
UAE	0.2	0.3	0.1	14.2	24.8	26.3
Switzerland	4.0	6.8	26.1	19.8	20.3	14.2
Czech Republic						
Rest of the world	2.7	3.5	2.1	4.1	8.1	8.7

Note:
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EU – European Union
PRC – People's Republic of China
UAE – United Arab Emirates
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.29: Geographical Distribution of Merchandise Exports, Tajikistan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**688.7**	**784.3**	**651.5**	**736.9**	**797.2**	**914.9**
CIS	**316.0**	**373.8**	**211.4**	**188.3**	**138.5**	**159.2**
CARs	189.5	106.6	92.8	80.6	76.1	73.9
Azerbaijan		0.4	0.5	0.5	0.7	0.1
Kazakhstan	3.6	5.7	3.1	3.5	4.6	3.5
Kyrgyz Republic	3.9	2.7	2.0	3.7	3.7	4.4
Uzbekistan	182.0	97.8	87.2	72.9	67.1	65.9
Rest of CIS	126.5	267.2	118.6	107.7	62.4	85.3
Russian Federation	115.1	258.8	104.7	87.5	52.2	60.5
Turkmenistan	1.3	4.7	0.7	10.0	2.2	7.5
Others	10.1	3.7	4.2	10.2	8.0	17.3
Non-CIS	**372.7**	**410.5**	**440.1**	**548.6**	**658.7**	**755.7**
EU-15	248.3	220.2	213.5	238.9	224.2	402.7
East Asia						
PRC	2.6	3.4	1.4	2.1	5.7	6.1
Japan					0.7	0.3
Korea, South	7.4	10.9	7.0	4.1	3.2	3.2
Mongolia						
South Asia						
Afghanistan	2.2	2.6	3.1	6.3	5.8	7.7
India						0.2
Pakistan	0.1	0.1	0.2		0.1	0.1
Other major trading partners						
Iran	13.5	12.5	29.9	28.4	51.4	29.6
Turkey	1	58.4	75.1	118.5	193.2	139.7
US	0.8	0.6	1.0	0.7	0.6	0.5
Switzerland	70.0	72.2	52.2	68.7	77.0	63.4
Slovak Republic	6.3	9.9	2.6	1.5	0.4	0.4
Rest of the world	20.5	19.7	54.1	79.4	96.4	101.8

Note:
CARs – Central Asian republics
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PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.30: Geographical Distribution of Merchandise Exports, Tajikistan, 1999–2004
(In percent of total merchandise exports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
CIS	**45.9**	**47.7**	**32.4**	**25.6**	**17.4**	**17.4**
CARs	27.5	13.6	14.2	10.9	9.5	8.1
Azerbaijan		0.1	0.1	0.1	0.1	
Kazakhstan	0.5	0.7	0.5	0.5	0.6	0.4
Kyrgyz Republic	0.6	0.3	0.3	0.5	0.5	0.5
Uzbekistan	26.4	12.5	13.4	9.9	8.4	7.2
Rest of CIS	18.4	34.1	18.2	14.6	7.8	9.3
Russian Federation	16.7	33.0	16.1	11.9	6.5	6.6
Turkmenistan	0.2	0.6	0.1	1.4	0.3	0.8
Others	1.5	0.5	0.6	1.4	1.0	1.9
Non-CIS	**54.1**	**52.3**	**67.6**	**74.4**	**82.6**	**82.6**
EU-15	36.1	28.1	32.8	32.4	28.1	44.0
East Asia						
PRC	0.4	0.4	0.2	0.3	0.7	0.7
Japan					0.1	
Korea, South	1.1	1.4	1.1	0.6	0.4	0.3
Mongolia						
South Asia						
Afghanistan	0.3	0.3	0.5	0.9	0.7	0.8
India						
Pakistan						
Other major trading partners						
Iran	2.0	1.6	4.6	3.9	6.4	3.2
Turkey	0.1	7.4	11.5	16.1	24.2	15.3
US	0.1	0.1	0.2	0.1	0.1	0.1
Switzerland	10.2	9.2	8.0	9.3	9.7	6.9
Slovak Republic	0.9	1.3	0.4	0.2	0.1	
Rest of the world	3.0	2.5	8.3	10.8	12.1	11.1

Note:
CARs – Central Asian republics
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EU – European Union
PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.31: Geographical Distribution of Merchandise Exports, Uzbekistan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**2,927.8**	**2,815.6**	**2,803.5**	**2,513.5**	**3,190.1**	**4,279.4**
CIS	**879.9**	**974.5**	**933.0**	**581.9**	**717.9**	**1,245.7**
CARs	282.8	233.1	257.2	200.5	210.9	452.3
Azerbaijan	1.3	2.0	1.9	3.3	3.5	142.7
Kazakhstan	119.3	89.8	105.1	62.2	80.1	159.6
Kyrgyz Republic	48.6	47.6	71.9	69.8	43.8	36.5
Tajikistan	113.6	93.7	78.3	65.2	83.5	113.5
Rest of CIS	597.1	741.4	675.8	381.4	507.0	793.4
Russian Federation	379.3	500.9	477.9	258.1	301.9	537.2
Turkmenistan	75.5	54.4	37.2	47.5	58.3	128.4
Others	142.3	186.1	160.7	75.8	146.8	127.9
Non-CIS	**2,047.9**	**1,841.1**	**1,870.5**	**1,931.6**	**2,472.2**	**3,033.7**
EU-15	668.3	583.6	495.9	520.6	544.8	673.4
East Asia						
PRC	16.9	19.2	9.8	9.0	44.5	87.8
Japan	5.4	11.2	6.6	5.6	6.5	7.8
Korea, South	93.2	67.4	96.4	43.9	33.0	43.3
Mongolia	0.1		0.1		0.1	
South Asia						
Afghanistan	5.0	10.8	10.9	54.9	78.4	119.3
India	0.5	2.0	11.5	16.4	79.9	113.4
Pakistan	1.6	3.1	1.6	1.7	3.4	1.8
Other major trading partners						
Iran	39.6	69.2	78.3	157.7	261.1	323.5
Turkey	62.7	94.2	75.3	95.8	120.9	207.2
US	34.8	36.9	74.0	58.1	78.8	112.7
Rest of the world	1,119.8	943.5	1,010.1	967.9	1,220.8	1,343.5

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.32: Geographical Distribution of Merchandise Exports, Uzbekistan, 1999–2004
(In percent of total merchandise exports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
CIS	**30.1**	**34.6**	**33.3**	**23.2**	**22.5**	**29.1**
CARs	9.7	8.3	9.2	8.0	6.6	10.6
Azerbaijan		0.1	0.1	0.1	0.1	3.3
Kazakhstan	4.1	3.2	3.7	2.5	2.5	3.7
Kyrgyz Republic	1.7	1.7	2.6	2.8	1.4	0.9
Tajikistan	3.9	3.3	2.8	2.6	2.6	2.7
Rest of CIS	20.4	26.3	24.1	15.2	15.9	18.5
Russian Federation	13.0	17.8	17.0	10.3	9.5	12.6
Turkmenistan	2.6	1.9	1.3	1.9	1.8	3.0
Others	4.9	6.6	5.7	3.0	4.6	3.0
Non-CIS	**69.9**	**65.4**	**66.7**	**76.8**	**77.5**	**70.9**
EU-15	22.8	20.7	17.7	20.7	17.1	15.7
East Asia						
PRC	0.6	0.7	0.3	0.4	1.4	2.1
Japan	0.2	0.4	0.2	0.2	0.2	0.2
Korea, South	3.2	2.4	3.4	1.7	1.0	1.0
Mongolia						
South Asia						
Afghanistan	0.2	0.4	0.4	2.2	2.5	2.8
India		0.1	0.4	0.7	2.5	2.7
Pakistan	0.1	0.1	0.1	0.1	0.1	
Other major trading partners						
Iran	1.4	2.5	2.8	6.3	8.2	7.6
Turkey	2.1	3.3	2.7	3.8	3.8	4.8
US	1.2	1.3	2.6	2.3	2.5	2.6
Rest of the world						31.4

Note:
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Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.33: Geographical Distribution of Merchandise Imports, Azerbaijan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**1,035.9**	**1,172.1**	**1,431.1**	**1,665.3**	**2,626.2**	**3504.3**
CIS	**325.3**	**375.5**	**445.2**	**650.6**	**851.2**	**1,200.5**
CARs	38.4	81.5	116.1	182.3	175.3	317.8
Kazakhstan	24.9	57.6	99.5	149.8	138.6	236.7
Kyrgyz Republic	2.0	3.2	1.4	0.7	0.8	1.4
Tajikistan	10.8	19.6	12.1	28.0	34.4	
Uzbekistan	0.7	1.1	3.1	3.8	1.5	79.7
Rest of CIS	286.9	294.0	329.1	468.3	675.9	882.7
Russian Federation	226.5	249.3	153.0	280.9	383.8	569.4
Turkmenistan	13.0	9.6	135.2	119.8	188.4	114.4
Others	47.4	35.1	40.9	67.6	103.7	198.9
Non-CIS	**710.6**	**796.6**	**985.9**	**1,014.7**	**1,775.0**	**2,303.8**
EU-15	190.1	227.2	274.0	393.5	866.8	1190.8
East Asia						
PRC	13.7	23.1	42.0	51.0	92.4	145.5
Japan	55.5	16.4	66.7	48.4	101.5	127.1
Korea, South	14.7	5.1	5.5	7.3	16.0	24.1
Mongolia						
South Asia						
Afghanistan						
India	3.0	11.3	15.1	19.4	35.4	47.0
Pakistan	2.7	1.6	0.8	1.1	1.1	1.6
Other major trading partners						
Iran	47.4	56.8	55.4	57.9	50.6	45.3
Turkey	143.0	128.5	148.2	156.2	195.1	224.8
US	83.0	104.1	230.9	98.7	132.6	131.5
Malaysia	1.5	1.8	2.4	4.2	100.3	125.4
UAE	12.3	19.9	18.7	19.2	26.5	31.1
Rest of the world	143.7	200.8	126.2	157.8	156.7	209.6

Note:
CARs – Central Asian republics
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EU – European Union
PRC – People's Republic of China
UAE – United Arab Emirates
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.34: Geographical Distribution of Merchandise Imports, Azerbaijan, 1999–2004
(In percent of total merchandise imports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
CIS	**31.4**	**32.0**	**31.1**	**39.1**	**32.4**	**34.3**
CARs	3.7	7.0	8.1	10.9	6.7	9.1
Kazakhstan	2.4	4.9	7.0	9.0	5.3	6.8
Kyrgyz Republic	0.2	0.3	0.1			
Tajikistan	1.0	1.7	0.8	1.7	1.3	
Uzbekistan	0.1	0.1	0.2	0.2	0.1	2.3
Rest of CIS	27.7	25.1	23.0	28.1	25.7	25.2
Russian Federation	21.9	21.3	10.7	16.9	14.6	16.2
Turkmenistan	1.3	0.8	9.4	7.2	7.2	3.3
Others	4.6	3.0	2.9	4.1	3.9	5.7
Non-CIS	**68.6**	**68.0**	**68.9**	**60.9**	**67.6**	**65.7**
EU-15	18.4	19.4	19.1	23.6	33.0	34.0
East Asia						
PRC	1.3	2.0	2.9	3.1	3.5	4.2
Japan	5.4	1.4	4.7	2.9	3.9	3.6
Korea, South	1.4	0.4	0.4	0.4	0.6	0.7
Mongolia						
South Asia						
Afghanistan						
India	0.3	1.0	1.1	1.2	1.3	1.3
Pakistan	0.3	0.1	0.1	0.1		
Other major trading partners						
Iran	4.6	4.8	3.9	3.5	1.9	1.3
Turkey	13.8	11.0	10.4	9.4	7.4	6.4
US	8.0	8.9	16.1	5.9	5.0	3.8
Malaysia	0.1	0.2	0.2	0.3	3.8	3.6
UAE	1.2	1.7	1.3	1.2	1.0	0.9
Rest of the world	13.9	17.1	8.8	9.5	6.0	6.0

Note:
CARs – Central Asian republics
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EU – European Union
PRC – People's Republic of China
UAE – United Arab Emirates
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.35: Geographical Distribution of Merchandise Imports, Kazakhstan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**3,655.1**	**5,040.0**	**6,446.0**	**6,584.0**	**8,408.7**	**12,781.2**
CIS	**1,603.8**	**2,731.7**	**3,309.5**	**3,043.2**	**3,932.3**	**6,117.9**
CARs	132.5	115.2	127.6	136.8	165.5	338.5
Azerbaijan	4.3	9.9	10.7	15.5	13.7	16.1
Kyrgyz Republic	32.5	30.1	33.5	31.8	54.8	91.3
Tajikistan	3.0	4.7	2.3	3.0	7.3	3.5
Uzbekistan	92.7	70.5	81.1	86.5	89.7	227.6
Rest of CIS	1,471.3	2,616.5	3,181.9	2,906.4	3,766.8	5,779.4
Russian Federation	1,351.8	2,439.2	2,891.9	2,548.8	3,282.1	4,812.5
Turkmenistan	17.8	43.4	77.5	74.6	49.1	75.5
Others	101.7	133.9	212.5	283.0	435.6	891.4
Non-CIS	**2,051.3**	**2,308.3**	**3,136.5**	**3,540.8**	**4,476.4**	**6,663.3**
EU-15	913.5	1,025.2	1,554.1	1,572.7	2,061.3	2,983.8
East Asia						
PRC	79.8	151.0	172.0	313.0	523.7	758.2
Japan	118.2	105.1	142.0	164.6	212.0	398.2
Korea, South	49.0	83.6	110.6	110.2	114.6	247.7
Mongolia	0.6	0.2	0.2	0.8		0.7
South Asia						
Afghanistan	0.2					0.3
India	30.8	45.9	45.0	55.1	73.0	86.0
Pakistan	1.5	2.1	1.0	1.2	2.0	2.2
Other major trading partners						
Iran	7.8	13.3	11.0	12.4	12.8	13.0
Turkey	106.1	1,440.0	137.0	173.7	209.0	342.4
US	344.8	277.4	349.1	461.4	470.4	562.0
Rest of the world	399.0	460.5	614.5	675.7	797.6	1,268.8

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.36: Geographical Distribution of Merchandise Imports, Kazakhstan, 1999–2004
(In percent of total merchandise imports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
CIS	**43.9**	**54.2**	**51.3**	**46.2**	**46.8**	**47.9**
CARs	3.6	2.3	2.0	2.1	2.0	2.6
Azerbaijan	0.1	0.2	0.2	0.2	0.2	0.1
Kyrgyz Republic	0.9	0.6	0.5	0.5	0.7	0.7
Tajikistan	0.1	0.1			0.1	
Uzbekistan	2.5	1.4	1.3	1.3	1.1	1.8
Rest of CIS	40.3	51.9	49.4	44.1	44.8	45.2
Russian Federation	37.0	48.4	44.9	38.7	39.0	37.7
Turkmenistan	0.5	0.9	1.2	1.1	0.6	0.6
Others	2.8	2.7	3.3	4.3	5.2	7.0
Non-CIS	**56.1**	**45.8**	**48.7**	**53.8**	**53.2**	**52.1**
EU-15	25.0	20.3	24.1	23.9	24.5	23.3
East Asia						
PRC	2.2	3.0	2.7	4.8	6.2	5.9
Japan	3.2	2.1	2.2	2.5	2.5	3.1
Korea, South	1.3	1.7	1.7	1.7	1.4	1.9
Mongolia						
South Asia						
Afghanistan						
India	0.8	0.9	0.7	0.8	0.9	0.7
Pakistan						
Other major trading partners						
Iran	0.2	0.3	0.2	0.2	0.2	0.1
Turkey	2.9	28.6	2.1	2.6	2.5	2.7
US	9.4	5.5	5.4	7.0	5.6	4.4
Rest of the world	10.9	9.1	9.5	10.3	9.5	9.9

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.37: Geographical Distribution of Merchandise Imports, the Kyrgyz Republic, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**599.7**	**554.1**	**467.2**	**586.8**	**717.0**	**941.0**
CIS	**259.3**	**298.6**	**257.0**	**322.5**	**410.5**	**582.1**
CARs	130.1	136.2	150.5	189.9	213.6	257.5
Azerbaijan	3.4	2.4	0.4	2.4	0.4	0.4
Kazakhstan	72.7	57.4	81.8	123.9	170.9	202.9
Tajikistan	4.0	1.9	1.5	3.5	3.1	2.4
Uzbekistan	50.0	74.6	66.7	60.1	39.2	51.9
Rest of CIS	129.1	162.3	106.5	132.6	196.9	324.6
Russian Federation	109.4	132.6	85.1	116.7	176.1	293.7
Turkmenistan	7.8	18.7	9.0	1.7	0.4	1.4
Others	12.0	11.0	12.5	14.2	20.4	29.6
Non-CIS	**340.5**	**255.6**	**210.3**	**264.2**	**306.5**	**358.9**
EU-15	109.9	66.3	54.8	76.1	79.6	98.6
East Asia						
PRC	36.9	36.9	48.5	59.1	77.7	80.1
Japan	12.0	10.3	5.8	6.4	11.8	11.6
Korea, South	27.1	6.8	7.8	7.0	11.7	25.1
Mongolia						
South Asia						
Afghanistan	0.1	0.1			0.1	0.3
India	4.7	2.9	4.3	2.9	3.7	4.0
Pakistan	0.2	0.2	0.2	0.3	0.5	0.4
Other major trading partners						
Iran	8.6	8.7	6.7	4.3	5.9	7.0
Turkey	23.1	26.8	15.8	17.0	26.0	33.2
US	54.2	53.8	26.8	47.4	47.9	44.6
UAE	9.6	7.0	6.8	7.3	7.8	7.6
Switzerland	2.1	3.1	1.2	3.5	2.5	2.9
Brazil	1.2	0.3	1.8	0.2	0.3	2.0
Rest of the world	50.8	32.4	29.8	32.5	30.9	41.4

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
UAE – United Arab Emirates
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.38: Geographical Distribution of Merchandise Imports, the Kyrgyz Republic, 1999–2004
(In percent of total merchandise imports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
CIS	**43.2**	**53.9**	**55.0**	**55.0**	**57.3**	**61.9**
CARs	21.7	24.6	32.2	32.4	29.8	27.4
Azerbaijan	0.6	0.4	0.1	0.4		
Kazakhstan	12.1	10.4	17.5	21.1	23.8	21.6
Tajikistan	0.7	0.3	0.3	0.6	0.4	0.3
Uzbekistan	8.3	13.5	14.3	10.3	5.5	5.5
Rest of CIS	21.5	29.3	22.8	22.6	27.5	34.5
Russian Federation	18.2	23.9	18.2	19.9	24.6	31.2
Turkmenistan	1.3	3.4	1.9	0.3	0.1	0.1
Others	2.0	2.0	2.7	2.4	2.8	3.1
Non-CIS	**56.8**	**46.1**	**45.0**	**45.0**	**42.7**	**38.1**
EU-15	18.3	12.0	11.7	13.0	11.1	10.5
East Asia						
PRC	6.2	6.7	10.4	10.1	10.8	8.5
Japan	2.0	1.9	1.3	1.1	1.6	1.2
Korea, South	4.5	1.2	1.7	1.2	1.6	2.7
Mongolia						
South Asia						
Afghanistan						
India	0.8	0.5	0.9	0.5	0.5	0.4
Pakistan				0.1	0.1	
Other major trading partners						
Iran	1.4	1.6	1.4	0.7	0.8	0.7
Turkey	3.8	4.8	3.4	2.9	3.6	3.5
US	9.0	9.7	5.7	8.1	6.7	4.7
UAE	1.6	1.3	1.5	1.3	1.1	0.8
Switzerland	0.4	0.6	0.3	0.6	0.3	0.3
Brazil	0.2		0.4			0.2
Rest of the world	8.5	5.8	6.4	5.5	4.3	4.4

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
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US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.39: Geographical Distribution of Merchandise Imports, Tajikistan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**663.1**	**675.0**	**687.5**	**720.5**	**880.8**	**1,375.2**
CIS	**514.7**	**559.7**	**537.8**	**547.4**	**598.9**	**957.8**
CARs	366.0	338.6	278.9	250.9	318.3	516.9
Azerbaijan	15.6	63.1	33.5	41.1	62.3	86.0
Kazakhstan	78.8	82.4	89.0	72.2	95.8	209.7
Kyrgyz Republic	7.2	7.5	5.7	5.2	27.5	52.6
Uzbekistan	264.4	185.6	150.7	132.4	132.7	168.6
Rest of CIS	148.7	221.1	258.8	296.5	286.0	440.9
Russian Federation	92.4	105.1	129.4	163.5	178.1	332.8
Turkmenistan	15.2	29.3	62.3	47.1	31.6	33.7
Others	41.1	86.7	67.1	85.9	76.3	74.4
Non-CIS	**148.4**	**115.3**	**149.7**	**173.1**	**281.9**	**417.4**
EU-15	83.0	29.1	41.4	57.4	51.8	62.0
East Asia						
PRC	2.5	11.9	6.0	7.6	26.7	57.0
Japan	0.7	0.3	1.2	0.8	0.6	1.1
Korea, South	1.6	2.1	4.2	3.3	2.6	4.1
Mongolia						
South Asia						
Afghanistan	0.1	0.1	0.1	0.3	1.6	3.9
India	1.0	0.1	34.4	31.5	3.2	3.3
Pakistan	0.2	1.0	0.1	0.1		0.3
Other major trading partners						
Iran	10.4	7.6	10.0	15.6	23.7	26.2
Turkey	1.4	4.0	9.3	10.5	29.5	37.9
US	1.7	1.3	2.8	6.1	5.3	79.2
Switzerland	24.9	0.6	2.1	1.0	2.9	2.7
UAE	4.0	2.8	4.9	6.9	13.8	16.2
Virgin Islands						0.1
Rest of the world	16.9	54.4	33.2	32.0	120.2	123.4

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
UAE – United Arab Emirates
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.40: Geographical Distribution of Merchandise Imports, Tajikistan, 1999–2004
(In percent of total merchandise imports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
CIS	**77.6**	**82.9**	**78.2**	**76.0**	**68.0**	**69.6**
CARs	55.2	50.2	40.6	34.8	36.1	37.6
Azerbaijan	2.4	9.3	4.9	5.7	7.1	6.3
Kazakhstan	11.9	12.2	12.9	10.0	10.9	15.2
Kyrgyz Republic	1.1	1.1	0.8	0.7	3.1	3.8
Uzbekistan	39.9	27.5	21.9	18.4	15.1	12.3
Rest of CIS	22.4	32.8	37.6	41.2	32.5	32.1
Russian Federation	13.9	15.6	18.8	22.7	20.2	24.2
Turkmenistan	2.3	4.3	9.1	6.5	3.6	2.5
Others	6.2	12.8	9.8	11.9	8.7	5.4
Non-CIS	**22.4**	**17.1**	**21.8**	**24.0**	**32.0**	**30.4**
EU-15	12.5	4.3	6.0	8.0	5.9	4.5
East Asia						
PRC	0.4	1.8	0.9	1.1	3.0	4.1
Japan	0.1		0.2	0.1	0.1	0.1
Korea, South	0.2	0.3	0.6	0.5	0.3	0.3
Mongolia						
South Asia						
Afghanistan					0.2	0.3
India	0.2		5.0	4.4	0.4	0.2
Pakistan		0.1				
Other major trading partners						
Iran	1.6	1.1	1.5	2.2	2.7	1.9
Turkey	0.2	0.6	1.4	1.5	3.3	2.8
US	0.3	0.2	0.4	0.8	0.6	5.8
Switzerland	3.8	0.1	0.3	0.1	0.3	0.2
UAE	0.6	0.4	0.7	1.0	1.6	1.2
Rest of the world	2.5	8.1	4.8	4.4	13.6	9.0

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
UAE – United Arab Emirates
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.41: Geographical Distribution of Merchandise Imports, Uzbekistan, 1999–2004
(In million US dollars)

	1999	2000	2001	2002	2003	2004
Total	**2,841.0**	**2,696.5**	**2,814.7**	**2,425.8**	**2,663.4**	**3,391.5**
CIS	**748.5**	**954.3**	**1,058.2**	**897.1**	**1,033.3**	**1,351.9**
CARs	189.3	316.5	248.9	200.4	217.0	253.2
Azerbaijan	1.8	3.8	7.7	4.8	3.1	3.9
Kazakhstan	116.0	208.4	182.4	159.8	179.4	222.5
Kyrgyz Republic	43.9	90.4	44.7	27.0	18.2	19.2
Tajikistan	27.6	13.9	14.1	8.8	16.3	7.6
Rest of CIS	559.2	637.8	809.3	696.7	816.3	1,098.7
Russian Federation	393.5	423.2	549.5	542.7	632.9	860.7
Turkmenistan	9.6	14.9	8.3	7.6	9.3	10.1
Others	156.1	199.7	251.5	146.4	174.1	227.9
Non-CIS	**2,092.5**	**1,742.2**	**1,756.5**	**1,528.7**	**1,630.1**	**2,039.6**
EU-15	809.0	618.5	677.0	545.2	604.9	603.0
East Asia						
PRC	59.0	70.3	89.4	103.0	154.7	252.4
Japan	149.9	51.4	126.1	16.8	49.5	45.8
Korea, South	386.3	268.1	322.7	234.2	220.9	341.3
Mongolia					0.1	2.5
South Asia						
Afghanistan	0.1	0.3	0.3	0.2	0.6	2.7
India	22.7	10.7	11.0	10.1	12.4	21.4
Pakistan	5.7	3.7	1.8	3.8	5.5	6.2
Other major trading partners						
Iran	26.7	44.6	43.6	31.4	27.7	34.5
Turkey	109.4	91.9	101.8	83.0	138.3	161.0
US	218.1	234.9	185.1	308.4	186.4	312.3
Rest of the world	305.6	347.8	197.7	192.6	229.1	256.7

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Table A1.42: Geographical Distribution of Merchandise Imports, Uzbekistan, 1999–2004
(In percent of total merchandise imports)

	1999	2000	2001	2002	2003	2004
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
CIS	**26.3**	**35.4**	**37.6**	**37.0**	**38.8**	**39.9**
CARs	6.7	11.7	8.8	8.3	8.1	7.5
Azerbaijan	0.1	0.1	0.3	0.2	0.1	0.1
Kazakhstan	4.1	7.7	6.5	6.6	6.7	6.6
Kyrgyz Republic	1.5	3.4	1.6	1.1	0.7	0.6
Tajikistan	1.0	0.5	0.5	0.4	0.6	0.2
Rest of CIS	19.7	23.7	28.8	28.7	30.6	32.4
Russian Federation	13.9	15.7	19.5	22.4	23.8	25.4
Turkmenistan	0.3	0.6	0.3	0.3	0.3	0.3
Others	5.5	7.4	8.9	6.0	6.5	6.7
Non-CIS	**73.7**	**64.6**	**62.4**	**63.0**	**61.2**	**60.1**
EU-15	28.5	22.9	24.1	22.5	22.7	17.8
East Asia						
PRC	2.1	2.6	3.2	4.2	5.8	7.4
Japan	5.3	1.9	4.5	0.7	1.9	1.3
Korea, South	13.6	9.9	11.5	9.7	8.3	10.1
Mongolia						0.1
South Asia						
Afghanistan						0.1
India	0.8	0.4	0.4	0.4	0.5	0.6
Pakistan	0.2	0.1	0.1	0.2	0.2	0.2
Other major trading partners						
Iran	0.9	1.7	1.5	1.3	1.0	1.0
Turkey	3.9	3.4	3.6	3.4	5.2	4.7
US	7.7	8.7	6.6	12.7	7.0	9.2
Rest of the world	10.8	12.9	7.0	7.9	8.6	7.6

Note:
CARs – Central Asian republics
CIS – Commonwealth of Independent States
EU – European Union
PRC – People's Republic of China
US – United States

Source: Governments of the Central Asian republics and the authors' estimates.

Appendix 2

Models of Potential Openness to International Trade

Models of Potential Openness to International Trade

Dependent Variable / Independent Variables	Logarithm of the Ratio of Merchandise Exports and Imports to GDP at Current Prices		Logarithm of the Ratio of Merchandise Exports and Imports to GDP at PPP-Based Valuation	
	Coefficients	Robust Standard Errors	Coefficients	Robust Standard Errors
Ln (GDP per capita)	0.086**	0.037	0.575***	0.068
Ln (Population)	(0.155)**	0.017	(0.160)***	0.023
CIS	0.463***	0.139	0.198	0.165
East Asia	0.813***	0.136	0.461***	0.166
South Asia	0.106	0.128	(0.236)	0.147
Pacific	0.188	0.117	0.227*	0.128
Western Europe	(0.034)	0.144	0.025	0.161
East and Central Europe	0.324***	0.100	(0.035)	0.096
Middle East and Africa	0.158*	0.088	0.163	0.114
Constant	(0.061)**	0.309	(6.065)***	0.608
Number of observations	173		172	
Degrees of freedom	163		162	
F statistic	18.56		46.38	
p-value	0.0000		0.0000	
R^2	0.4821		0.6598	

Note: The models have been estimated using two-stage least squares, with a nonweighted average of the World Bank's governance indicators for regulatory quality, control of corruption, and the rule of law used as an instrument for the logarithm of GDP per capita.
* denotes the statistical significance at the 10% level
** denotes the statistical significance at the 5% level
*** denotes the statistical significance at the 1% level
CIS – Commonwealth of Independent States
GDP – gross domestic product
PPP – purchasing power parity

Source: Authors' estimates

Appendix 3
Computable General Equilibrium Model of Kazakhstan

This appendix describes Kazakhstan's computable general equilibrium (CGE) model that has been developed by the Asian Development Bank (ADB) as part of its study on Central Asia regional cooperation in trade, transport, and transit and used to assess the effects of implementing the customs union of the Eurasian Economic Community (EAEC) on Kazakhstan.

A3.1 Overview of the Model

Kazakhstan's CGE model is a one-country dynamic CGE model, typical in most respects. The model has been developed according to generally accepted specification standards and implemented in the General Algebraic Modelling System. It includes 25 sectors (aggregated from 61 sectors in Kazakhstan's social accounting matrix (SAM) for 2002), 16 regions, 30 household types, government, and five trading partners (People's Republic of China, Kyrgyz Republic, Russian Federation, Uzbekistan, and the rest of the world). As such, the model permits an assessment of both direct and indirect effects of implementing the EAEC customs union on Kazakhstan. These include effects on the country as a whole as well as individual sectors, regions, and population groups.

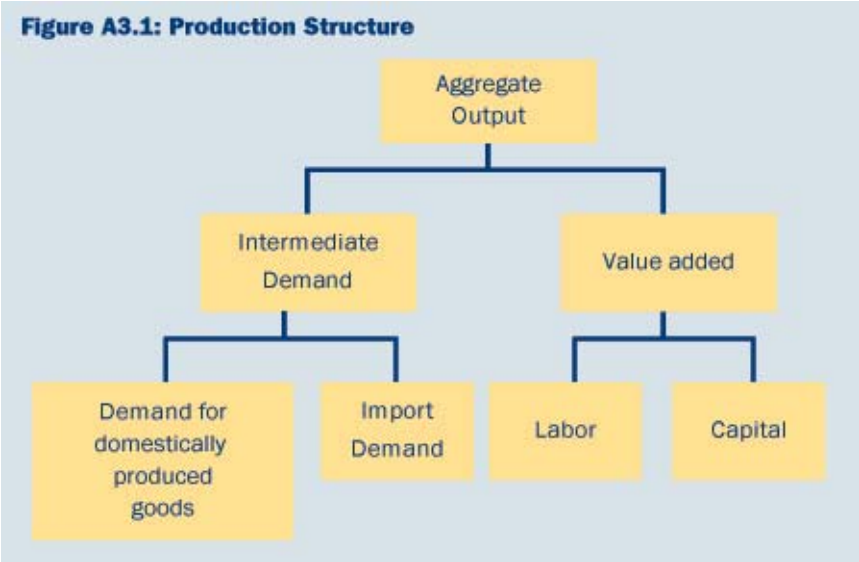
Technically, the model is a system of simultaneous equations that simulate price-directed interactions between firms and households in commodity and factor markets. Commodity and factors prices are key endogenous variables, with changes in prices inducing changes in the level and composition of supply and demand, production, and income; and the remaining variables in the system. The equation system is solved for prices that correspond to equilibrium in commodity and factor markets and satisfy the accounting identities governing economic behavior. It is then calibrated to Kazakhstan's SAM for 2002.

A3.2 Specification of the Model

Production

As with many applied general equilibrium models, the Kazakhstan model decomposes the production structure into a series of nested decisions allowing for a wide range of substitution possibilities between various inputs. Figure A3-1 provides a graphical depiction of the nested production structure used in the model.

Figure A3.1: Production Structure



The top level of the production structure decomposes the production decision between aggregate inputs (intermediate demand) and an aggregate value-added bundle. While there is a possibility to allow some substitution between intermediate inputs and value added, for the examples considered in this report, it is assumed that the substitution elasticity is zero or, in other words, the value added is always mixed in fixed proportions with intermediate inputs. It is also assumed that all intermediate inputs are consumed in fixed proportion amongst themselves, though it is possible to substitute between domestic and imported intermediate goods. The next level of the production structure decomposes the aggregate value-added bundle into labor and capital components.

Consumption

The composite domestic household group is captured by a single representative consumer who allocates disposable income across various commodities. The model uses an extension of the Stone-Geary consumer demand system, known as the extended linear expenditure system (ELES). The ELES has several distinct advantages over other demand systems. It allows for commodity-specific income elasticities, which can either be econometrically estimated or derived from literature searches. In addition, the ELES integrates the household saving decision in the consumer optimization process, and is easy to calibrate and implement. In the ELES, consumption is represented as the sum of two components: (i) a subsistence minimum and (ii) a share of supernumerary income, which is the residual disposable income after subtracting expenditures on the subsistence minimum. Household direct taxation is a fixed proportion of income.

Other Final Demand

There are three other domestic final demand accounts: government expenditures, investment expenditures, and changes in inventory. Aggregate real government expenditure is assumed to be fixed while aggregate real investment expenditure will depend upon the closure rule. The decomposition into demand for commodities is assumed to use fixed shares in both cases.

Trade

The model uses an extension of the Armington hypothesis to implement trade equations. The principle behind the Armington assumption is that goods are differentiated according to region of origin. In practice this means that each agent specifies a demand for a specific aggregate good (derived from maximizing utility for example). This good is a constant-elasticity–of-substitution aggregate of imports and domestic products in each sector. At this stage of the demand system, agents decompose demand for the aggregate good into its domestic and (aggregate) import components based on relative prices and (calibrated) penetration shares.

Export supply is treated symmetrically to import demand—i.e., domestic producers are assumed to differentiate between domestic and export markets. A rise in export prices (relative to domestic prices) induces producers to shift production resources towards export markets. The model implements a constant-elasticity-of-transformation curve to capture this assumption.

Equilibrium

Production is modeled with a constant-returns-to-scale technology, which guarantees that supply equals domestic plus external (export) demand for domestic output. Factor prices, including wages and returns on capital, are generally determined by equilibrium conditions. In both markets, there are a wide range of possibilities. We assume that aggregate capital is fixed in supply and mobile between sectors. We assume that labor of a specific skill is perfectly mobile across sectors, which implies a single economy-wide average wage rate for each skill, assuming labor markets are competitive. A number of authors have demonstrated, however, that significant and persistent wage differentials exist across sectors for the same occupational groups. To account for this, we calibrate a distribution of inter-sectoral wage differentials which are held constant during the simulations.

Closure

There are three key macro-closure rules. The first concerns the government revenue-expenditure balance. For the purpose of the simulations, we assume real government saving is fixed in each region. The instrument used to achieve the balance is the household tax schedule which will shift either up or down to guarantee the budget balance holds.[1]

The second closure rule concerns the saving-investment balance. Domestic investment is determined by the stock of domestic private and public saving, plus net foreign saving (which is exogenous).

The third and final closure rule governs the external account where we assume that the trade balance is equal to the level of foreign saving. If foreign saving is fixed, the real exchange rate adjusts to keep the trade balance equal to foreign saving. In the case of trade liberalization, this means that the real exchange rate must depreciate to cause an increase in exports, which will finance the increase in imports resulting from trade liberalization. With scarce resources, exports can only expand by taking resources from the production of goods whose relative prices have declined due to structural adjustments. These include traded goods that are being displaced by new imports and nontraded goods, with the decline in relative prices of nontraded goods causing a decrease in domestic resource costs and a depreciation of the

[1] This is equivalent to a lump-sum tax or rebate.

real exchange rate. When foreign saving is endogenous, net flows of foreign investment will also exert an influence on external adjustment, possibly causing appreciation of the real exchange rate and offsetting the export competitiveness which would otherwise result from trade liberalization.

A3.3 Structural Equations of the Model

Consumer Behavior

$$C_i = LES_C(P_{Di}, Y) = \gamma_i + \frac{\eta_i}{P_{Di}}\left(Y - \sum_{j=1}^{n} P_{Dj}\gamma_j\right) \quad \text{(A3-1)}$$

Production Technology

$$S_i = \min\{CES_S(L_{Di}, K_{Di}; \phi_i), V_{1i}/a_{1i}, \ldots, V_{ni}/a_{ni}\} \quad \text{(A3-2)}$$

$$V_{ij} = a_{ij} S_j \quad \text{(A3-3)}$$

Factor Demands

$$LD_i/KD_i = \psi(w/r_{Di}; \phi_i) \quad \text{(A3-4)}$$

$$KD_i = KD_i^d + \sum_f KD_i^f \quad \text{(A3-5)}$$

Factor Supplies

$$LS = LES_L(w, Y) \quad \text{(A3-6)}$$

$$KS_i = KS_i^d + \sum_f KS_i^f \quad \text{(A3-7)}$$

Commodity Demands, Supplies, and Allocation of Traded Goods

$$D_i = \overline{A}_{D_i}\left[\sum_k \beta_i^k \left(D_i^k\right)^{(\sigma_i - 1)/\sigma_i}\right]^{\sigma_i/(\sigma_i - 1)} \quad \text{(A3-8)}$$

$$D_i^f/D_i^d = g_D\left(P_{Di}^f/P_{Di}^d; \sigma_i\right) \quad \text{(A3-9)}$$

$$S_i = \overline{A}_{S_i}\left[\sum_k \delta_i^k \left(S_i^k\right)^{(\tau_i + 1)/\tau_i}\right]^{\tau_i/(\tau_i + 1)} \quad \text{(A3-10)}$$

$$S_i^f/S_i^d = g_S\left(P_{Si}^f/P_{Si}^d; \tau_i\right) \quad \text{(A3-11)}$$

Composite Domestic Prices

$$P_{Di} D_i = \sum_k P_{Di}^k D_i^k \quad \text{(A3-12)}$$

$$P_{Si} S_i = \sum_k P_{Si}^k S_i^k \quad \text{(A3-13)}$$

Domestic Market Equilibrium

$$D_i = C_i + \sum_{j=1}^{n} V_{ij} \quad \text{(A3-14)}$$

$$D_i^d = S_i^d \quad \text{(A3-15)}$$

$$L_l^S = \sum_{i=1}^{n} L_{lii}^D \quad \text{(A3-16)}$$

$$KS = \sum_{i=1}^{n} KD_i^d \quad \text{(A3-17)}$$

Income and Government Revenue

$$Y = (1-t_L)\sum_{i=1}^{n} w\,LD_i + (1-t_K)\sum_{i=1}^{n} r_{Di}\,KD_i + Y_G \quad \text{(A3-18)}$$

$$Y_G = t_L \sum_i w\,LD_i + t_K \sum_i r_{Di}\,KD_i + \sum_k \sum_i \left(t_{Di}^k\,P_{Di}^k\,D_i^k + t_{Si}^k\,P_{Si}^k\,S_i^k\right) \quad \text{(A3-19)}$$

Balance of Payments

$$B^f = \sum_i \left[PW_{Si}^f\,S_i^f - \left(1+\theta_i^f\,\rho_i^f\left(1+t_{Di}^f\right)\right)PW_{Di}^f\,D_i^f\right] \quad \text{(A3-20)}$$

Foreign Commodity Prices

$$P_{Di}^f = (1+t_{Di}^f)\,e\,PW_{Di}^f \quad \text{(A3-21)}$$

$$P_{Si}^f = \left[1/(1+t_{Si}^f)\right]e\,PW_{Si}^f \quad \text{(A3-22)}$$

Foreign Demand and Supply Functions

$$D_i^{h,ROW} = \overline{A}_{M_i}\left(PW_{Si}^{h,ROW}\right)^{\zeta_i} \quad \text{(A3-23)}$$

$$S_i^{h,ROW} = \overline{A}_{E_i}\left(PW_{Di}^{h,ROW}\right)^{\xi_i} \quad \text{(A3-24)}$$

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$$\sum_i \omega_i P_{Di}^d = 1 \quad \text{(A3-25)}$$

Variable and Parameter Definitions

Price Variables

e	Exchange rate (domestic/foreign currency)
P_{Di}^{d}	Domestic purchaser prices- of domestically produced goods
P_{Di}^{f}	Domestic purchaser prices of imports from trading partner *f*
P_{Si}^{d}	Domestic producer prices of domestically consumed goods
P_{Si}^{f}	Domestic producer price of exports to trading partner *f*
P_{Di}	Purchaser price of composite domestic demand
P_{Si}	Producer price of domestic output
PW_{Di}^{f}	World price of imports from trading partner *f*
PW_{Si}^{f}	World price of exports to trading partner *f*
r_{Di}	Rental rate on capital
w	Average wage rate

Quantity Variables

C_i	Personal consumption
D_i^d	Domestic demand for domestically produced goods
D_i^f	Domestic demand for imports from trading partner *f*
D_i	Composite goods for domestic consumption
KD_i^d	Domestic demand for domestic capital
KS_i^d	Domestic supply of domestic capital
LD_i	Demand for labor

LS Aggregate labor supply

S_i^d Domestic production for domestic consumption

S_i^f Domestic production for export to trading partner f

S_i Gross domestic output

V_{ij} Demand for intermediate good i in sector j

Nominal Variables

B^f Net foreign borrowing from trading partner f (may be exogenous)

Y Nominal domestic income

Y_G Government income

Structural and Policy Parameters

a_{ij} Intermediate use coefficients (Leontief technology)

γ_i Subsistence consumption of good i

η_i Marginal budget share of consumption of good i

ϕ_i Elasticity of substitution between labor and capital in domestic production

σ_i Elasticity of substitution between domestic and imported goods

τ_i Elasticity of transformation between domestic and exported goods

ζ_i ROW import supply elasticity

ξ_i ROW export demand elasticity

$\overline{A}_{D_i}$ Calibrated intercept parameter for composite product demand

$\overline{A}_{S_i}$ Calibrated intercept parameter for composite product supply

$\overline{A}_{M_i}$ Calibrated intercept parameter for ROW import supply

$\overline{A}_{E_i}$ Calibrated intercept parameter for ROW export demand

β_i^k Base share parameter of demand by origin in the composite demand

δ_i^k Base share parameter of supply by destination in the composite supply

ρ_i^f Ad valorem equivalent of nontariff barriers to imports from trading partner *f*

t_{Di}^d Indirect tax rates on domestic production

t_{Di}^f Ad valorem tariff rates on imports from trading partner *f*

t_K Tax rate on capital income

t_L Tax rate on labor income

t_{Si}^d Producer tax or subsidy on domestic deliveries

t_{Si}^f Tax or subsidy on exports to trading partner *f*

ω_i Domestic expenditure shares

Indices

i, j : sectors

d = Kazakhstan

f = set of trading partners

k = d$\cup$ f

Appendix 4

Status of Accession of the Central Asian Republics to Major International Transport Agreements and Conventions

Status of Accession of the Central Asian Republics to Major International Transport Agreements and Conventions
(As of 16 February 2006)

International Agreements and Conventions	Azerbaijan	Kazakhstan	Kyrgyz Republic	Tajikistan	Uzbekistán
Convention on Road Traffic (08/11/1968)*	X	X		X	X
Convention on Road Signs and Signals (08/11/1968)*		X		X	X
Convention on the Contract for the International Carriage of Goods by Road–CMR (19/05/1956)*		X	X	X	X
Customs Convention on the Temporary Importation of Commercial Road Vehicles (18/05/1956)*	X		X		X
Convention on Taxation of Road Vehicles Use in International Road Transport (14/12/1956)					X
Customs Convention on the International Transport of Goods under Cover of TIR Carnets (14/11/1975)*	X	X	X	X	X
International Convention on the Harmonization of Frontier Controls of Goods (21/10/1982)*	X		X		X
Customs Convention on Containers (02/12/1972)*					X
European Agreement Supplementing the Convention on Road Traffic (01/05/1971)					
European Agreement Supplementing the Convention on Road Signs and Signals (01/05/1971)					
European Agreement Concerning the Work of Crews of Vehicles Engaged in International Road Traffic (AETR) (01/07/1970)	X	X			X
European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) (30/09/1957)	X	X			
Agreement on the International Carriage of Perishable Foodstuff and on the Special Equipment to be Used for such Carriage (ATP) (01/09/1970)	X	X			X
European Agreement on Main International Traffic Arteries (AGR) (15/11/1975)	X	X			
European Agreement on Main International Railway Lines (AGC) (31/05/1985)					
European Agreement on Important International Combined Transport Lines and Related Installations (AGTC) (01/02/1991)		X			

Note:
* Included in Resolution 48/11 of 29 October 2001 of the United Nations Economic and Social Commission for Asia and the Pacific.

Source: United Nations Economic Commission for Europe

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The work of the Asian Development Bank (ADB) is aimed at improving the welfare of the people in Asia and the Pacific, particularly the nearly 1.9 billion who live on less than $2 a day. Despite many success stories, Asia and the Pacific remains home to two thirds of the world's poor. ADB is a multilateral development finance institution owned by 65 members, 47 from the region and 18 from other parts of the globe. ADB's vision is a region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their citizens.

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