

## Geography, Policy, and Barriers to International Trade in Central Asia

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### Abstract

*The region of Central Asia today faces a number of barriers to international, extra-regional trade. Nearly two decades after independence, the former Soviet republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan confront trade-hindering obstacles emanating from the region's geography and individual state trade policy regimes. Geographical barriers include a landlocked location at great distances from major world markets, an isolating endogenous physical geography, and a complexity in political boundary delimitation. Policy barriers in general result from a restrictive trade policy resulting in political boundaries themselves functioning as barriers to the movement of tradable goods. Examining the World Bank's Trading Across Borders dataset, the Central Asian region emerges as one of the world's most expensive, time consuming, and bureaucratically encumbered regions with which to trade. While geography may be unavoidable, liberalizing trade policy may yield drastic increases in trade performance. To ameliorate a portion of the region's geographical disadvantage, greater intra-regional integration and possibly a future Central Asian Union can ensure long term regional economic sustainability.*

### Introduction

Central Asia, defined here as including the former Soviet republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, remains a region in transition. Each of these states met independence in 1991 with similar histories as components in a Soviet centrally-planned economic and political order. At independence, infrastructure stocks were similar, as was the alignment of these networks with Moscow and the Soviet core. While some researchers and commentators highlight each republic's initial conditions at independence as being equal, in fact the Central Asian republics (CARs) exhibited striking discontinuities in natural resource endowments as well as human capital stocks. Viewed in both political and economic terms, transition implies a certain dynamism, a movement toward market orientation and to some extent democratization. This paper takes aim at a particular aspect of economic transition, that of access to global trade. The assumption here is that increased global market access will have long-term benefits for each of the CARs. Specialization based on comparative advantage, resulting efficiencies and increasing gains from trade, sustainable economic growth, and ultimately increases in overall standards of living within the region are anticipated results.

Today, however, nearly two decades after independence, significant barriers to international trade continue to afflict the region. In general, these barriers are grouped in this paper along the dimensions of geography and policy. Globally, as states clamor for membership in the World Trade Organization (WTO) and any number of the myriad of

preferential trading agreements in effect, free trade is lauded as a potential antidote to a number of economic (as well as political, social, and the like) woes in this latest wave of so-called globalization. The purpose of this paper therefore is to examine the contemporary barriers to international trade facing the region of Central Asia. First addressed will be those geographical barriers to trade, many of which are unavoidable, which currently (and will continue to) impede extra-regional trade. Next will be an examination of generalized state trade policies within the region, which also act to hinder trade, though policy impediments show some variation between regional states. Following the discussion of geography and trade policy within Central Asia, a cursory treatment of trade performance will substantiate the negative geographical and policy influences on the region's international trade. The paper will conclude with policy prescriptions aimed at facilitating extra-regional trade and improving trade performance, while recognizing the inherent and unavoidable geographical constraints. Given these constraints, an intra-regional trade focus, culminating in some sort of Central Asian Union, appears paradoxically to be both unfeasible in the near term and necessary for long term regional economic sustainability.

### **Geography**

With respect to integration into the global economy and associated global trade networks, Central Asia is at a geographical disadvantage. Today the region is landlocked and remote, possessing an isolating endogenous physical geography and in many places an illogical framework of political boundary delimitation. These impediments, discussed below, are largely unavoidable today and will continue to be so given the current state of transportation technologies and regional boundary configurations.

#### *Landlocked location*

Each of Central Asia's states is landlocked without direct port access to the world's open oceans. This locational fact itself adds costs (fiduciary, time, processing documents, etc.) to the import or export of goods via oceanic trade routes as port access requires crossing an additional international boundary. For Uzbekistan, this is a particular disadvantage as this state is one of only two in the world (Europe's Liechtenstein is the other) that is doubly landlocked – landlocked itself and completely encircled by landlocked states. A landlocked location has been shown empirically to increase trade transport costs by over 50 percent, and the world's median landlocked economy has less than a third of the trade volume of the median coastal economy (Lim ã and Venables, 1999). In a further indictment of Central Asia's location, nearly all Chinese goods bound for Europe travel via oceanic routes, largely a result of the break-of-bulk costs associated with negotiating a complex mix of rail, road, and sea transport modes overland through the Eurasian heartland (Norling and Swanström, 2007).

#### *Distance*

Aside from being landlocked, Central Asia's location, centrally positioned on the Earth's largest landmass, imparts another impediment to international trade – that of distance. The region is hampered by great distances to major global economic centers (Table 1). Data presented here depict rather simplistic straight-line distances, and actual

distances, of course, are greater and exacerbated by poor regional infrastructure (Linn, 2009).

**Table 1: Distances to/from Central Asia<sup>1</sup>**

From	To	km	miles
Tashkent, UZ	Frankfort, Germany	4,678	2,905
Tashkent, UZ	New York, US	10,181	6,322
Tashkent, UZ	Seoul, S. Korea	4,884	3,033

<sup>1</sup> Straight line distances between a centrally-located major Central Asian city (Tashkent, Uzbekistan) and major cities in the European Union, United States, and Pacific Asia.

The concept of distance decay, an axiom within economic geography (see e.g. Hanink, 1989), clearly illustrates the economic costs and decreasing likelihood of interaction with increasing distances. In the case of international trade, spatial interaction (the movement of exports or imports) is expected to decline with increasing distances between exporter and importer. In simple terms, the costs associated with overcoming the friction of distance manifest themselves in transportation costs and related costs of time and uncertainty as distances increase.

At the global scale, the negative influence of distance on bilateral trade flows has been well documented (Carrère and Schiff, 2005; Gallup *et al.*, 1999; Henderson *et al.*, 2001). For Central Asia, given the great distances involved in reaching major world markets, distance would appear to be a particular trade impediment. In analyzing a perceived ‘under-trading’ between Europe and Central Asia, Raballand *et al.* (2005) identify transportation costs as a major contributor to less than expected trade flows between these two regions. While total transport costs clearly rise with distance, per kilometer transport costs also rise dramatically once European goods enter former Soviet space. Transport inefficiencies and corruption at border crossings help to explain much of the transport cost rate differential between Europe and Central Asia (Raballand *et al.*, 2005).

#### *Physical geography*

Adding to the disadvantageous conditions of being landlocked and located at great distances from major markets, Central Asia also possesses an isolating physical geography. In nearly all directions, significant physical barriers to extra-regional trade exist. To the west lies the Caspian Sea, where transport cost-increasing break-of-bulk facilities are needed both at exit ports in Kazakhstan or Turkmenistan and entry ports in

Russia, Azerbaijan, or Iran. To the southwest lie Turkmenistan's harsh Kara Kum desert and the Kopet Dag mountain range separating the region from Iran. Along the region's southern and southwestern flanks rise Afghanistan's Hindu Kush and Tajikistan's Pamir and Fan ranges. To the east, along the political boundary separating Kyrgyzstan and Kazakhstan from China lay the Tien Shan Mountains. To the northeast, roughly coinciding with the Kazakhstan-China and Kazakhstan-Russia borders rises the Altay range. Central Asia's North and Northwest offer topographically routes of least resistance for extra-regional trade. To the north, Kazakhstan's border with Russia essentially coincides with a transition zone into Siberia. To the northwest, between the Caspian Sea and where the Ural Mountains extend South to penetrate Kazakhstan's border with Russia, lies the most amenable exit route from Central Asia.

#### *Political boundaries*

An additional geographical factor complicating Central Asian trade are the region's political boundaries. While the functioning of these international borders (degree of openness, etc.) falls within the policy sphere, where the boundaries are delimited and the complexity of the boundary framework can also hinder trade. As Stalin-era Soviet constructs, the CAR borders were not drawn with independent states in mind – quite the contrary. These republican borders were delimited to minimize ethnic cohesion, separatist tendencies, or any other factors conducive to independence (International Crisis Group, 2002). Particularly curious is the political boundary situation in the Ferghana Valley, where a complex ethnic distribution has an equally complex international border framework artificially superimposed upon it. Within this particular region, three states, Kyrgyzstan, Uzbekistan, and Tajikistan intertwine, with a number of territorial enclaves existing entirely within the bounds of one state, but part of another's sovereign territory. Here, travelling a short distance in many cases involves the crossing of as many as three international boundaries. In the case of the European Union, with relatively free factor flow across national boundaries, the frequency of border crossings is not problematic. In Central Asia, however, the functioning of these borders, discussed later in this paper, significantly restricts such movement.

#### **Policy**

In general, a state's trade policy is reflected in a number of government-imposed elements through which, taken as a whole, restrict or facilitate international trade. A grouping of such elements would include tariffs, quotas, non-transparent trade regulations, licensing requirements, and overall complexity in customs regulation. Such barriers have been described as "exceptionally high" for the Central Asian states (Linn, 2009, p. 249). Some intra-regional variation does exist, however, with respect to trade policy restrictiveness. The Asian Development Bank (ADB) (2006) provides a general description of this variation, categorizing Kyrgyzstan (the regions only WTO member) as "very liberal," "fairly liberal" for Kazakhstan and Tajikistan, and "quite restrictive" for Uzbekistan (p. 24). Turkmenistan, not considered in the ADB trade report mentioned above, and where economic data are classified as state secret, would (as discussed below) most likely join Uzbekistan as having a very restrictive trade policy.

To further investigate trade policy within Central Asia, a number of trade-related economic indicators can be considered to tease out intra-regional indirect nuances of trade policy implementation (**Table 2**). Regional disparities in *per capita* gross domestic product (GDP) are striking (column 1), particularly so between Kazakhstan and

Tajikistan. The value of Kazakhstan's economic output is certainly buoyed by its sizeable oil exports, while Tajikistan remains largely impoverished, relying on its main

**Table 2: Selected Economic Indicators, Central Asia**

	pcGDP <sup>1</sup>	OpTr <sup>2</sup>	CPIr <sup>3</sup>	EFr <sup>4</sup>
Kazakhstan	10,863	0.773	120	82
Kyrgyzstan	2,006	0.948	162	80
Tajikistan	1,753	1.049	158	128
Turkmenistan	4,953	0.749	168	171
Uzbekistan	2,425	0.577	174	158

<sup>1</sup> Gross Domestic Product per capita (\$US, PPP) 2007. Source: United Nations, 2009

<sup>2</sup> Openness to Trade, calculated by author using 2007 import, export, and GDP data

<sup>3</sup> Corruption Perceptions Index rank 2009 (of 180 ranked). Source: Transparency International, 2009

<sup>4</sup> Index of Economic Freedom rank 2010 (of 179 ranked). Source: Heritage Foundation, 2010

exports of cotton and aluminum. Turkmenistan's *per capita* GDP position within the region is largely a result of its status as a major global exporter of natural gas and cotton. Uzbekistan, with a *per capita* GDP of roughly half of Turkmenistan, relies greatly on export earnings from cotton and natural gas. Kyrgyzstan, with a *per capita* GDP just slightly above Tajikistan, relies primarily on revenue from gold and hydropower exports.

Openness to trade (column 2), which is calculated as simply the value sum of imports and exports as a proportion of GDP (imports + exports/GDP), shows the importance of international trade to a given state's economy. Openness to trade ratios do not necessarily indicate the level of restrictiveness or openness of a state's trade policy (i.e. trade policy barriers) (Gerber, 2002), though in the case of Central Asia these ratios (aside from Tajikistan) do correlate with the ADB liberal-restrictive classification described above. Tajikistan, showing the region's highest openness to trade ratio, is likely highly reliant upon imports from Russia, and this coupled with a low GDP may influence its ratio in this regard. Also of note here is the importance of remittances of Tajik laborers working abroad (mainly in Russia), which amount to as much as half the value of Tajikistan's GDP (Kireyev, 2006).

An additional condition which can significantly impede trade is corruption (column 3). Transparency International's ubiquitous Corruption Perceptions Index places each of Central Asia's states (with the possible exception of Kazakhstan) near the bottom of its annual rankings of perceived corruption within global states. Uzbekistan (ranked 174 out of 180), and Turkmenistan (168) stand out as particularly corrupt, though

Kyrgyzstan (162) and Tajikistan (158) fare just slightly better. As a barrier to international trade, corruption at border crossings can increase the cost and time required of trade transactions, as well as lead to non-transparency in actual customs and tax levies. Corruption has been shown to greatly hinder international trade globally (Anderson and Marcouiller, 2002), and results in border-crossing difficulty and increased transportation costs within Central Asia (Raballand et al., 2005). Corruption is also deemed a particular economic development challenge within each of the Central Asian states, though somewhat less so for Kazakhstan (Humala, 2009).

The notion of economic freedom, particularly the freedom of individuals and firms to freely make their own economic decisions without excessive government intervention, can also impact international trade performance. In this context, economic freedom is of heightened relevance in Central Asia, a region with a history (both Soviet and post-Soviet) of strong centralized state control. The Heritage Foundation's Economic Freedom index, applied to 179 world economies in 2010, measures economic freedom, broadly incorporating the concepts of "empowerment of the individual, non-discrimination, and open competition" (Miller and Kim, 2010, p. 57). More specifically, a given economy's final index score results from an average of ten separate indices reflecting property rights, trade freedom, business freedom, investment freedom, freedom from corruption, fiscal freedom, government spending, monetary freedom, financial freedom, and labor freedom (Heritage Foundation, 2010). While the trade freedom component (incorporating tariff and non-tariff barriers) has a direct bearing on barriers to international trade, each of the other nine constituent indices can, directly or indirectly, impact trade performance. According to final index rankings (column 4), Kyrgyzstan and Kazakhstan are classified as 'moderately free,' Tajikistan as 'mostly un-free,' and both Uzbekistan and Turkmenistan as 'repressed' (Heritage Foundation, 2010).

### **Barriers to Trade, Empirical Evidence**

Presented above has been a general overview of geographical and policy elements that impede international trade within Central Asia. The empirical expression of these trade barriers is elucidated by examining the Trading Across Borders dataset found within the World Bank's most recent Doing Business report (World Bank, 2010). The trading across borders data indicate the cost, time, and documents required to import and export a standardized 20-foot container by ocean transport. For exports, this reflects all costs and procedures involved in moving goods from the factory to the nearest port, while for imports it includes procedures in moving goods from the port to a domestic warehouse or factory. An examination of these data for each of the Central Asian states (Turkmenistan is omitted for lack of data) with respect to imports (**Table 3**) and exports (**Table 4**) shows significant barriers to international trade within the region. Data values are included for cost, time, and documents required to import and export, as are each regional state's world ranking for each. With a total of 183 world economies considered, the Central Asian states generally rank near the bottom of world rankings in cost, time, and documents required for both imports and exports. With the exception of documents required to import and export for Kyrgyzstan (likely a function of its adherence to policy norms associated with its WTO membership) and number of documents required to export for Uzbekistan, all other data values are among the highest in the world. Costs

across the region are exceptionally high, particularly those to import to Uzbekistan and those to export from Tajikistan. The time requirements for regional imports and exports exceed two months in all cases, and approach three months in many. The 92 days required for importing goods into Uzbekistan and the 89 days required to export from Kazakhstan are very near the longest times in the world (101 days to import and 102 days to export into/from Iraq). Similarly, though with the seeming exception of WTO member Kyrgyzstan, the number of documents required to import and export are also high regionally, particularly in Kazakhstan. The 13 documents required for import into Kazakhstan approach the greatest number in the world (17 for Central African Republic), as do Kazakhstan's 11 documents required to export (the 13 documents required to export from Fiji are the most in the world).

**Table 3: Trading Across Borders: Imports<sup>1</sup>**

	Cost (\$) <i>World rank</i>		Time (days) <i>World rank</i>		Docs. (#) <i>World rank</i>	
Kazakhstan	3,055	167	76	178	13	181
Kyrgyzstan	3,250	169	72	176	7	97
Tajikistan	4,550	178	83	180	11	165
Turkmenistan	N/A	-	-	-	-	-

<sup>1</sup> World Bank Doing Business, 2010: Trading Across Borders. Data refer to the cost (USD), time (days), and documents required (#) to import a standardized cargo container by ocean transport. World ranks list position among 183 world economies.

**Table 4: Trading Across Borders: Exports<sup>1</sup>**

	Cost (\$) <i>World rank</i>		Time (days) <i>World rank</i>		Docs. (#) <i>World rank</i>	
Kazakhstan	3,005	173	89	182	11	181
Kyrgyzstan	3,000	172	63	176	7	128
Tajikistan	3,150	175	82	181	10	172
Turkmenistan	N/A	-	-	-	-	-

<sup>1</sup> World Bank Doing Business, 2010: Trading Across Borders. Data refer to the cost (USD), time (days), and documents required (#) to export a standardized cargo container by ocean transport. World ranks list position among 183 world economies.

**Discussion**

This paper has sought to examine the general geographical and policy-related international trade barriers faced by the states of Central Asia. As seen above, significant trade barriers, particularly for oceanic trade, make Central Asia one of the world's most expensive, time consuming, and bureaucratically encumbered regions with which to trade. Central Asia is clearly at a disadvantage with respect to oceanic trade, being landlocked within the world's largest landmass. Given the empirical evidence shown above, it becomes clear why overland rail transport is the mode of choice for extra-regional trade.

Both geography and governmental actions (policy) would seem to impact the cost, time and documents required for import and export. Being landlocked and distant from ports, as Central Asia surely is, would certainly increase the time for import and export, and greater transport costs would, of course, increase costs. The region's physical geography might also make for longer, more expensive movements of goods. Crossing an additional international boundary (as a landlocked state) would increase the cost and time to import/export, and would also add another layer of required documents. Tariffs and other taxes increase cost, and additional required documents raise bureaucratic obstacles as well as add time and perhaps cost. With both geography and policy impacting the Trading Across Borders performance of Central Asian states, as well as presenting significant barriers to international trade, it would seem advantageous for regional states to attempt to ameliorate some of these barriers.

The Central Asian states are burdened by a location and internal physical geography that present real barriers to international trade. In many ways these states must accept their geography as these constraints are largely unavoidable. With geographical barriers largely intransient, the trade policy arena offers particular opportunities for improvement (relaxing trade barriers) in international trade performance. In the Trading Across Borders dataset, one policy-related variable that offers ample room for improvement is the number of documents required to import and export. One could expect Uzbekistan, as a doubly landlocked state, to have at least one set of additional documents required, though the exceptionally high requirements in this regard for Kazakhstan and Tajikistan offer significant room for improvement. In Kazakhstan's case, its major export revenue earner, oil, exits the region via pipeline and rail networks. As a result, perhaps less of a priority may exist to decrease the documentary requirements and time to export goods. Across the region, Kyrgyzstan (again likely a result of its WTO membership) exhibits the fewest documents, shortest time, and in most cases, least cost to export and import. The only exception to this is the cost of import for Kazakhstan, which is the lowest in the region, though the documents required to import are exceedingly high. At any rate, it seems lowering the number of documents required to import and export, across the region, would yield shorter import and export times, as well as possibly lessening the cost of international trade. Fewer documents would also decrease the opportunity for corruption and other non-transparent uncertainties, improving the overall regional performance and efficiency in the import and export of goods.

**Conclusion**

Geography and general policy have been discussed with respect to the expected barrier effects on international trade within Central Asia. Examining the World Bank's



Trading Across Borders dataset, the role of both geography and policy interact to present significant empirical barriers to international oceanic trade as expressed by many required documents, long time periods, and high costs associated with import and export. While the region's geography may be unavoidable, the trade policy arena offers much opportunity for improvement in international trade efficiency. Greater efficiency in this regard would also be expected to increase global competitiveness and perhaps increase overall levels of economic development.

Central Asia's geography, its landlocked location at great distances to world markets, as well as its internal physical landscape and complex boundary configurations, remains a largely unchangeable extra-regional trade impediment. To ameliorate some of the negative aspects of its geography, the region could certainly benefit from increased intra-regional integration, harmonizing trade policy, and increasing intra-regional trade. Such benefits seem to be, in part, rationale for the creation of a Central Asian Union (see e.g. Yermukanov, 2005) that would have sustainable, long term economic benefits for the region. With an unfavorable geography (at least for extra-regional trade), a single market, free trade area with policy harmonization capitalizing on internal comparative advantage and associated efficiencies may be the region's best long term option. The region's geography, in fact, encourages trade introversion, making a greater case for increased intra-regional integration and leading, at some point in the future, to some form of regional preferential trading agreement. Clearly intra-regional trade would be enhanced under this scenario, and Central Asia's global competitiveness would also be heightened. It is hoped that such benefits would culminate in increased levels of economic development and human welfare across the region.

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