

Shifting Comparative Advantages in Tajikistan

Implications for Growth Strategy

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Abstract

The future development of the Tajik economy will be shaped by its comparative advantage on world markets. Exploiting comparative advantage enables an economy to reap gains from trade. Tajikistan's most important comparative advantage is its hydropower potential, which is far larger than the economy's domestic requirements. Yet, high capital costs of building hydropower plants and the unstable geopolitical situation in the transit region to reach South Asian export markets are constraining the realization of this potential. In the short term, the sector, which provides the greatest opportunity for Tajikistan to diversify its exports, appears to be agro-industry and, to a lesser extent, clothing. For both sectors, the main export market is likely to be the regional market. Tajikistan also has a comparative advantage in labor exports, which it has successfully exploited since the mid-2000s. To harness the full potential for labor exports will require improving

the skills base of migrant workers and, in particular, their command of the Russian language. In the medium term, the paper argues that an export diversification strategy should tap the agglomeration economies generated by cities. More specifically, establishing Tajikistan's two leading cities, Dushanbe and Khujand, and their surroundings as enclave economies, linked to each other and to major regional markets through improved transport infrastructure so as to minimize production and transportation costs. The two enclave economies should provide the supporting services (finance, logistics, transport and storage) for private sector businesses. In the long term, regional cooperation on trade and transport facilitation could be pursued to reduce transport costs to attractive regional markets such as China, India, Russia and Turkey.

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Shifting Comparative Advantages in Tajikistan: Implications for Growth Strategy¹

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Introduction

The economy of Tajikistan has historically been shaped by its role in the integrated Soviet economy, and much of this economic structure remains in place today. Indeed, by expanding its territory to what was then called Turkistan (covering the current five Central Asian countries of Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan) the Russian Empire expanded its cotton-producing area when the American Civil War started driving up significantly the price of cotton. This spurred cotton cultivation in Tajikistan, with American cotton introduced in 1884 (Jurahonov, 2010). Similarly, aluminum production was introduced in Tajikistan during the Soviet area, with the construction of an aluminum smelter at the Tajik-Uzbek border in Turzunsoda in 1972. As Tajikistan produces no aluminum ore, it had to be shipped from other Soviet republic using the wide-reaching Soviet rail network.

Unfortunately, Tajikistan suffers from several disadvantages. For all practical purposes, the country is doubly-landlocked. It is cut off from China by some of the highest mountain ranges and deserts. Security concerns in Afghanistan present an insurmountable transit barrier to the south. In addition to that, its logistics performance is one of the poorest of the world: for instance according to *Doing Business 2012*, eleven documents are required to export compared to only six in Moldova which is another landlocked ECA country; eighty-two days are required to export a standard container compared to only 32 in Moldova; and exporting a standard container to the US costs on average \$3,850 compared to \$1.545 in Moldova.

With the importance of market forces slowly increasing since the end of the civil war that shook Tajikistan in the second half of the 1990s, future development trajectories will be shaped by comparative advantage, among other factors. Comparative advantage in turn depends on variables such as resource endowments and transport costs. Given the country's constraints, there is a need to identify the sectors that offer the greatest prospects for export success and prioritize the use of the country's resources to lay out a sensible sustainable growth strategy. This is the aim of this policy note.

Based on a detailed analysis of the diversification potential as well as the domestic and external connectivity of Tajikistan's settlements, the note makes the case that starting by unleashing the potential of the two leading cities and their hinterlands by establishing them as enclave economies linked with each other and with major regional markets is the most effective export diversification strategy to be considered, and a reachable goal. The policy recommendations then derived cover short term measures to harness low hanging fruits, medium term measures to develop the proposed enclave economies anchored on the two leading cities, Dushanbe and Khujand, and medium to long term measures to foster regional cooperation on trade and transport facilitation to expand export.

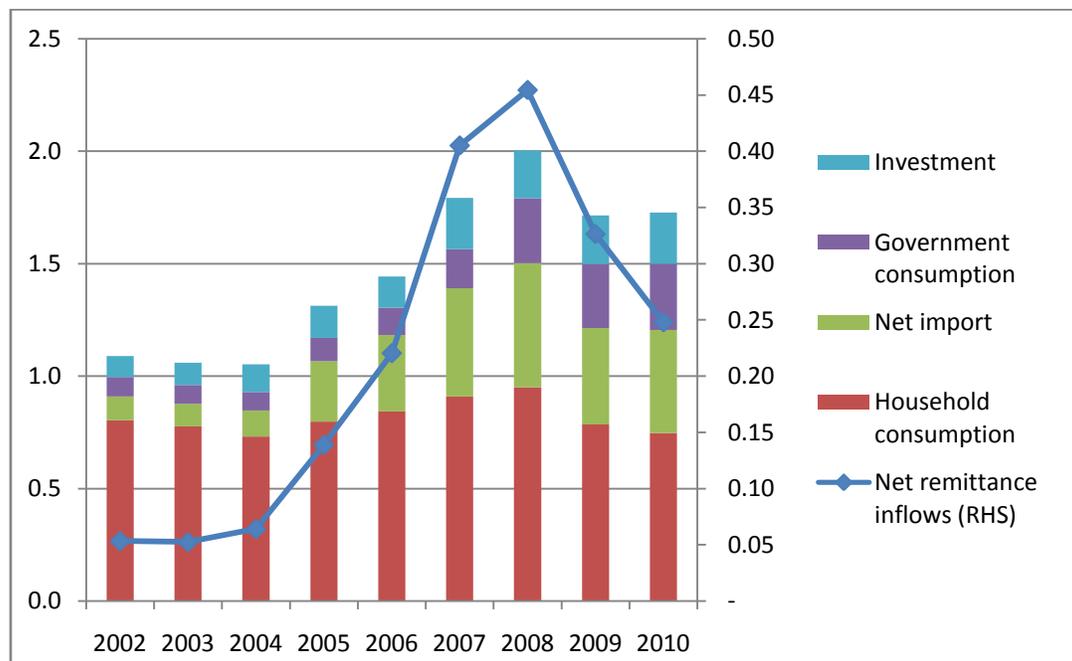
Tajikistan, a changing economy

At the end of the civil war in 1996, Tajikistan's GDP structure was 39 percent from agriculture, 32 percent from industry and 29 percent from services. In 2003, it was 37 percent from industry, 36 from services and 27 from agriculture. Since then, services have taken over as the main source of GDP, followed by industry and then agriculture. In 2010, the GDP decomposition was 57 percent from services, 22 percent from industry and 21 percent from agriculture although more than half of total employment was in agriculture. This is one of the many structural changes the country has been going through lately. The increasing contribution of remittances to country's growth is another major trend.

Increasing contribution of remittances

Remittances increasingly contribute to the Tajik economy: from 5 percent in 2002, the GDP share of net remittance inflows skyrocketed to 45 percent in 2008, with an estimated value of nearly USD2.5 billion, before declining during the global crisis to reach 25 percent in 2010 (Figure 1). In 2010, the remittance inflows were coming from an estimated 791 thousands migrants working in Russia, Ukraine, Uzbekistan, Kazakhstan and the Kyrgyz Republic (Migration Factbook, 2011).

Figure 1. Tajikistan: GDP Expenditure Decomposition, 2002-2010
(share of GDP)



Source: WDI 2010, Migration Factbook 2011 and authors' calculation.

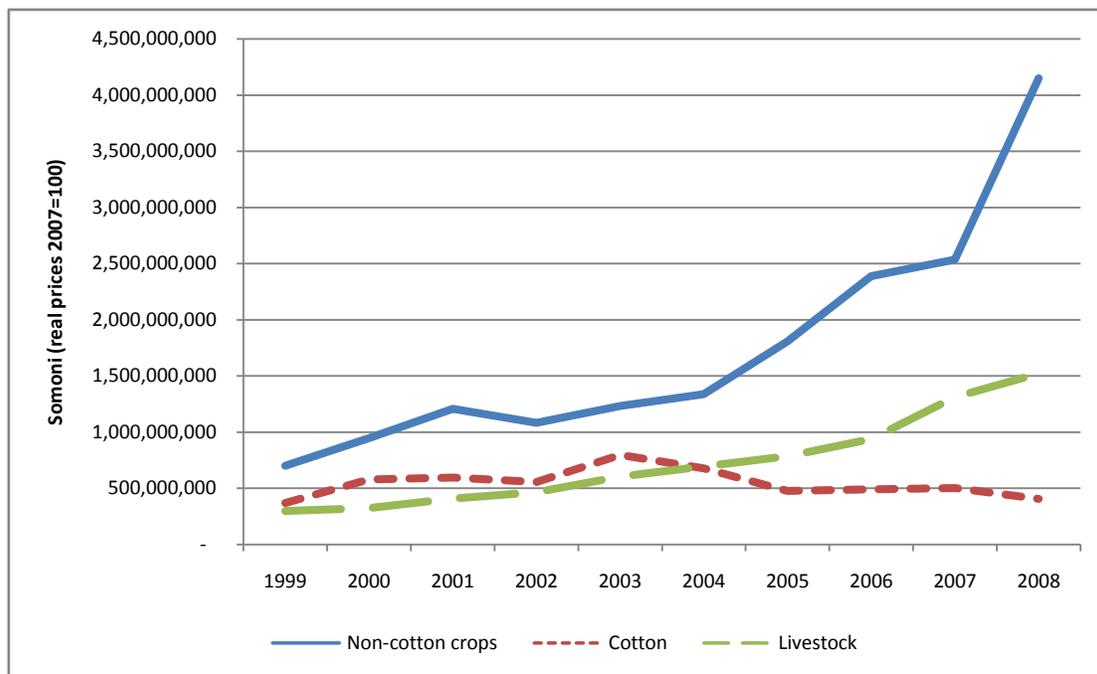
By stimulating domestic consumption through soaring imports, remittances have significantly contributed to Tajikistan's growth since 2004 (Figure 1). However, there isn't much evidence that remittances have fueled private investment. Indeed, Tajikistan statistics agency data indicate that the share of private investment in agriculture, trade and light industry (sectors reportedly receiving investment from migrants) has decreased from 2 to less than 1 percent between 2007 and 2008, when remittance inflows were reaching record levels. This situation makes an export-led growth strategy more difficult to achieve, particularly given that the country cannot rely on domestic demand from its seven million people to grow sustainably.

Shifting agricultural production

Another structural transformation Tajikistan is going through occurs in the agriculture sector. Since 1999, the growth patterns of cotton, non-cotton crops and livestock have been markedly different. With the share of cotton in GDP decreasing while the share of non-cotton agriculture has been steadily increasing (Figure 2). This was due to the decreasing price of cotton on world markets, the decreasing productivity in the cotton sector, as well as the increasing demand for horticulture products in regional

markets combined with an increasing productivity in that sub-sector. The contribution of livestock has also been increasing, although at a slower pace than non-cotton crops.

Figure 2. Tajikistan: Trends in Gross Agricultural Output, 1999-2008
(Billion Somoni, constant price)



Source: Background paper for the Tajikistan CEM (2009)

This production shift put the issue of freedom to farm at the center of the country's growth strategy. Indeed, given that Tajikistan is constrained by its stock of arable land (estimated at about 500 thousands hectares) and that the productivity of cotton sector has been decreasing lately, a more efficient use of such scarce resource could make a significant difference in the country's growth prospects.

Shifting trade patterns

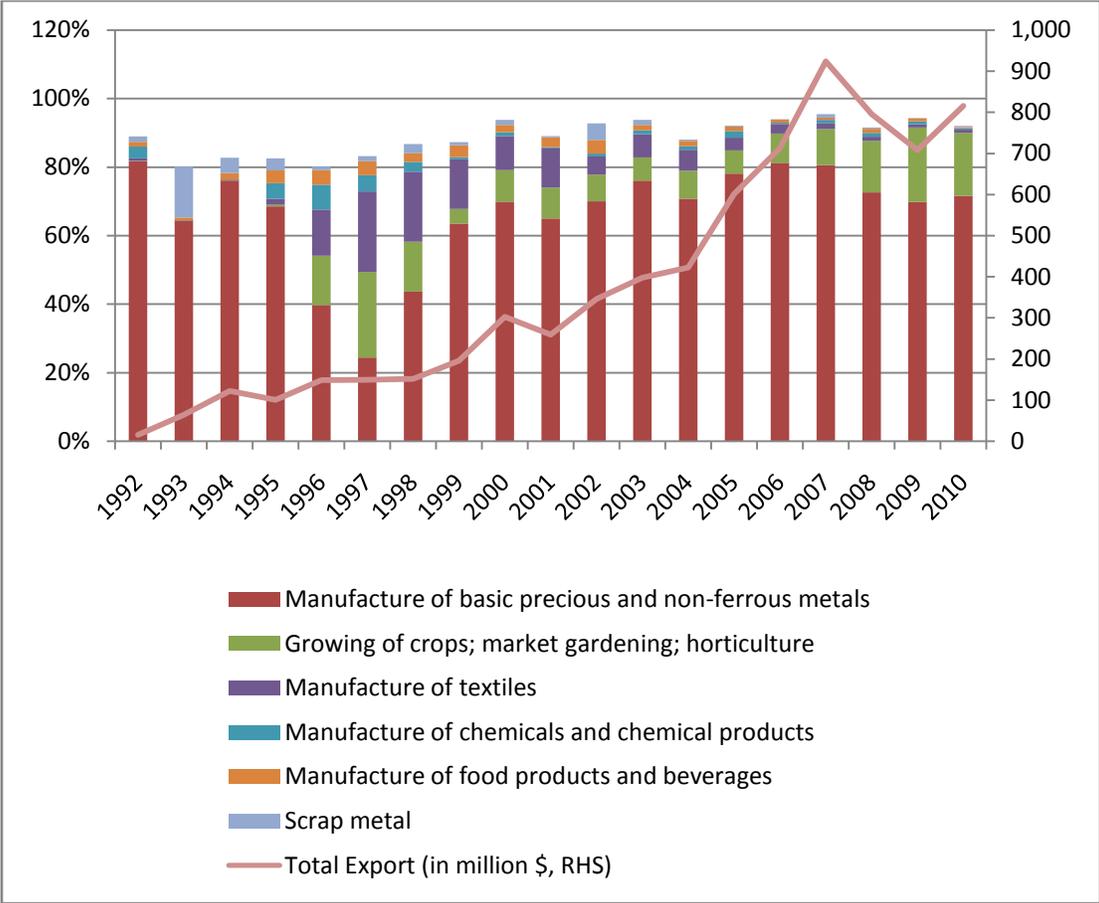
The easiest way to see how Tajikistan's trade patterns have been shifting is to cluster its exported goods by production sector.³ As can be seen in Figure 3, the bulk of Tajikistan export is coming from the manufacture of precious and non-ferrous metal (mainly aluminum). As exports started expanding after the independence of the country in 1992, the share of aluminum in total export declined from more than 80 percent to less than 25 percent in 1997, mainly due to the civil war as world prices for aluminum were trending up between \$1,200 and \$1,600 per ton during that period. Then the share of aluminum started to increase again, to stabilize at around 70 percent of total export since 2008. Add to that farming activities and you cover more than 80 percent of the country's total trade.

Other sectors contribute moderately to Tajikistan exports: manufacture of textile, manufacture of chemicals and chemical products, manufacture of food and beverages and scrap metal. The manufacture of textile is mainly yarns and cotton fabrics produced from cotton mainly grown in the

³ We use the third revision of the STIC trade classification along with its corresponding ISIC sector classification. The 5-digit STIC and their corresponding 4-digit ISIC classifications are used.

Kathlon and Sughd regions. The share of these cotton products in total exports steadily increased from 2 to 24 percent between 1995 and 1997 before slowly declining to fall below 5 percent after 2005. The manufacture of chemicals and chemical products mainly include inorganic chemicals and plastics products.

Figure 3. Tajikistan: Sectoral Composition of Exports, 1992-2010
(percent of total exports)



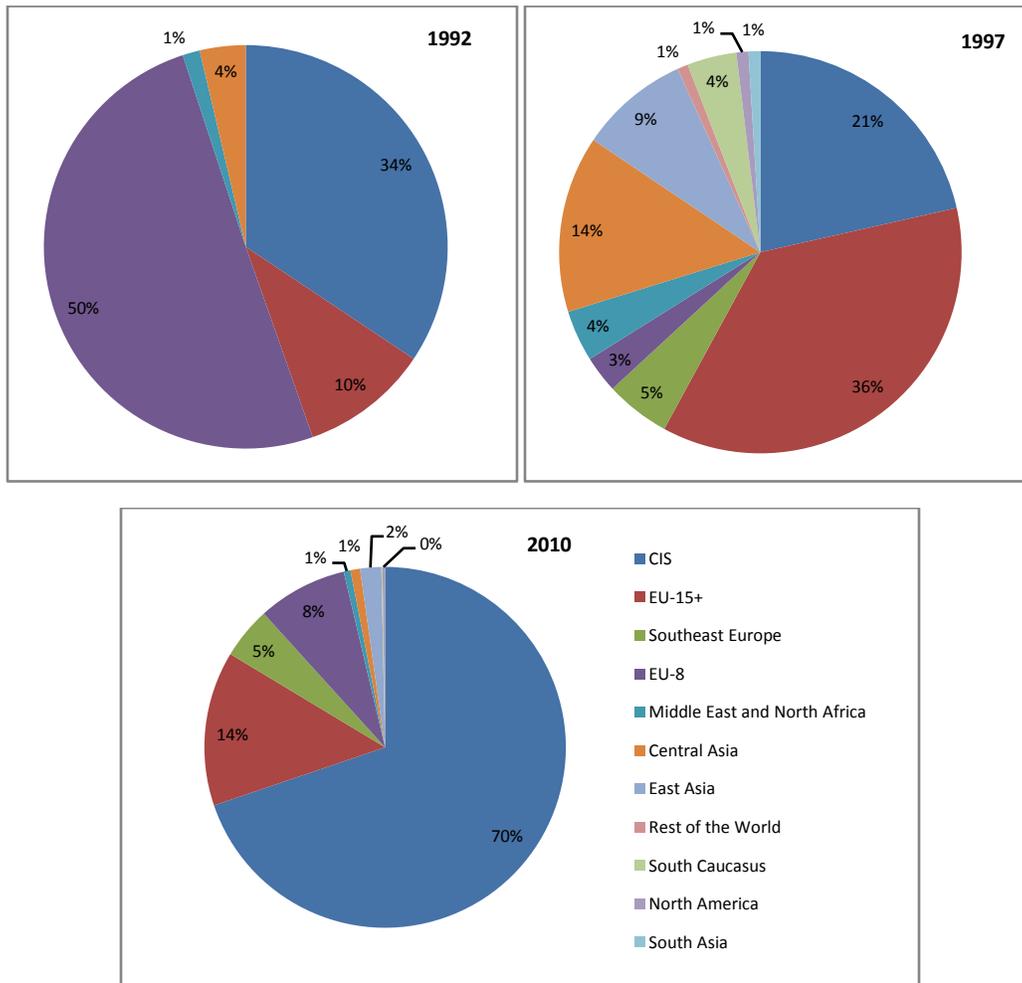
Source: COMTRADE database and authors' calculations.

Shifting Trading Partners

There is also a shift in Tajikistan's major trade partners (Figure 4). In 1992, the top-5 export markets were per order of importance the EU8, the CIS, the EU15+, the Central Asia and the Middle East and North Africa⁴. In 1997 when the number of Tajikistan trading partners covering 90 percent of its total exports jumped from 15 in 1992 to 46, the top-5 export markets were the EU15+, the CIS, East Asia and Southeast Europe. In 2010, the top-5 export markets were the CIS, the EU15+, the EU8, Southeast Europe and East Asia. The slight product diversification around 1997 illustrated in Figure 3 seems to have been accompanied with a slight market diversification away from its traditional CIS partners.

⁴ The EU8 covers the following countries: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Slovenia. The CIS covers Belarus, Moldova, Russia and Ukraine. The EU15+ covers the EU15 countries plus Norway, Switzerland and Turkey.

Figure 4. Tajikistan: Direction of Exports, 1992-2010



Source: COMTRADE data and author's calculation.

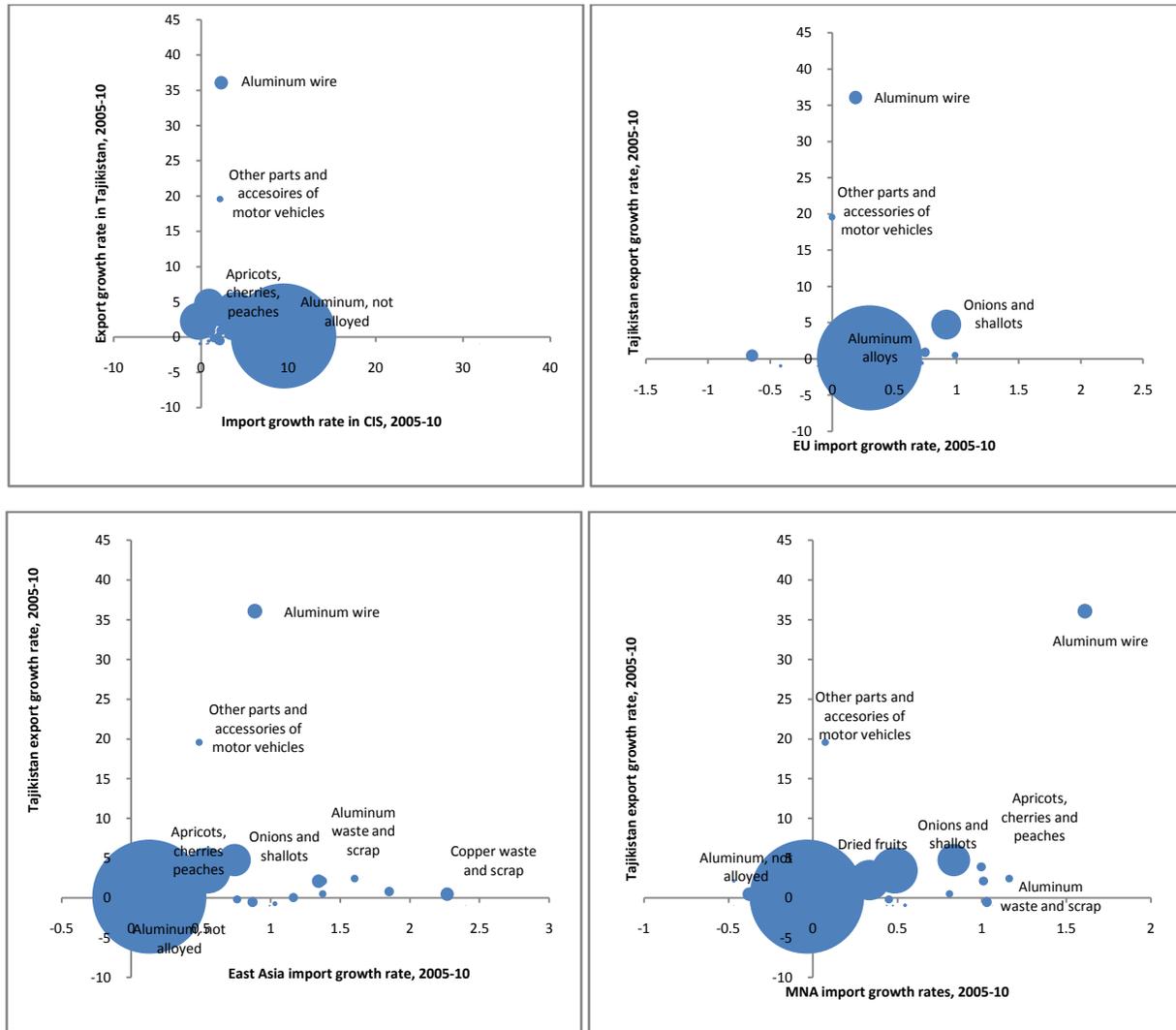
A closer look at 2010 data indicates that the top-10 countries receiving Tajik exports were respectively Russia, EU15, Bulgaria, Slovenia, Poland, China, Ukraine, Turkey, Norway and Turkmenistan. In 2007, before the global crisis hit, the top-ten importers of Tajik goods were Russia, Romania, Poland, EU15, Bulgaria, China, Norway, Mongolia, Slovenia and Belarus. The landlocked situation of Tajikistan seems to be favoring trade with traditional Soviet partners and regional powers such as the EU and China. This geographical dimension should be kept in mind when designing an export-led growth strategy for Tajikistan.

Tajikistan, an economy that may benefit from an export-led growth strategy

As long as remittance inflows are stable, Tajikistan can continue enjoying higher growth rates on the account of strong domestic consumption. But the experience of developing countries that have grown sustainably over decades teaches us that higher investments and export expansion to tap global demand are essential ingredients (The Growth Commission, 2008). However, Tajikistan's geographical disadvantage and poor logistics and business environment call for a parsimonious export diversification

strategy. Building on successful products and targeting markets that have been successfully reached or are reachable by virtue of implementable policy measures should be a guiding principle. Figure 5 presents the expansion potential of some products in four regional markets where Tajik products have had some success: the CIS, the EU, the Middle East and North Africa and East Asia.

Figure 5. Tajikistan Export Potential in Four Markets
(Bubbles represent Tajikistan export value of specific products)



Source: COMTRADE data and author's calculations.

Three types of products can be derived from Figure 5: products experiencing a limited supply-demand growth which Tajikistan is exporting a lot (big bubbles in the bottom left corner, e.g. aluminum alloys or aluminum not alloyed); products experiencing a moderate supply-demand growth which Tajikistan is exporting moderately, e.g. dried fruits, onions or apricots; and products with a strong supply-demand growth which Tajikistan is exporting too little (small bubbles in the top right, e.g. aluminum wire).

The first type of products does not need a particular action from the government to sustain its expansion: traditional supply chains can keep exports high as long as commodities importers are

growing. The second type of products may call for an extensive diversification strategy to develop the farming activities and agro-processing. The third type of products may call for an intensive diversification strategy to expand the production and the reach of products that are demanded in leading markets.

In thinking about a diversification strategy, it is also important to have a sense of the country's comparative advantage, for the stronger comparative advantages the most likely the strategy can succeed. The simple measure used by trade economists to assess a country comparative advantage is the Revealed Comparative Advantages (RCA) after Balassa (1965), which measures how intensely a country is exporting a given product compared to other trading partners in the world. RCA measures reflect both a country's resource endowment but also any trade policy that has shaped its export capacity (Bender and Li, 2002). As such, the RCA is a good summary of how effective a country is using its endowment and policies to shape its export landscape.⁵ Of an even more important significance is the variation of the RCA over time, which indicates whether there is a shift in a country's comparative advantage. Cai and Leung (2008) proposes a rigorous method to evaluate these variations, by properly reflecting the changes in the export position of each products as we move from a year to another.⁶ Using these two indicators, Table 1 reports products increasingly demanded in leading markets for which Tajikistan has experienced increasing RCA over the period 2005-10: farming and agro-processing, aluminum manufacturing and chemical materials seem to provide the broadest intensive export diversification opportunity to Tajikistan.

Table 1. Tajikistan: RCA in Products Increasingly Demanded in Regional Markets

STIC Rev. 3	Product description	Export growth 2005-10 (%)	2010 RCA
p05799	Dried fruit not elsewhere specified, mixtures	342	500
p05451	Onions/shallot, fresh/chilled	474	156
p05776	Walnuts, fresh/dried	208	55
p68422	Aluminum/alloy wire	3607	32
p68412	Aluminum alloys, unwrought	223	30
p05752	Grapes dried (raisins)	90	29
p22212	Groundnuts shelled	79	24
p05423	Dried beans not elsewhere specified	210	12
p05793	Stone fruit not elsewhere specified, fresh	388	8
p59312	Prepared explosives not elsewhere specified	211	7

Source: Tajikistan Customs Committee data, COMTRADE data and author calculations.

To close the discussion on Tajikistan's export potential, we can look at the resource endowment of the country. Tajikistan has 3.3 million hectares of pastures land, suggesting that livestock may be a sector for potential diversification if complementary measures for fodder conservation, animal health and hygiene are appropriately taken (World Bank 2007a). Given its mountainous landscape, Tajikistan may

⁵ The RCA of country *i* in product *j* in year *t* is defined as: $RCA_{ijt} = \frac{E_{ijt}/E_{it}}{E_{jt}/E_t} = \frac{c_{ijt}}{c_{jt}}$, where E_{ijt} is country *i* export of product *j* in year *t*, E_{it} is country *i* total export in year *t*, E_{jt} is world export of product *j*, and E_t is world total export in year *t*. If $RCA_{ijt} > 1$, country *i* is said to have a revealed comparative advantage in product *j* in year *t*.

⁶ Cai and Leung (2008) calculates the variation of the RCA as follows: $\Delta RCA_{ijt} = RCA_{ijt+1} - \beta_t RCA_{ijt}$, with $\beta_t = (1 + g)/(1 + \sum_k c_{ikt} g_k)$, $g_k = (E_{kt+1} - E_{kt})/E_{kt}$ and $g = (E_{t+1} - E_t)/E_t$.

also be sitting on huge mining resources yet to be discovered. The scenery of these mountains also could make tourism a viable export expansion sector. But developing any of these sectors poses the challenge of using the limited resource of the country in a constrained business environment.

Tajikistan, an economy with many major binding constraints to growth

Hausmann, Rodrik and Velasco (2005) provide a useful framework to assess the binding constraints a country is facing. Is it the cost of financing, the low return on private investment or the poor appropriability of investment returns? A similar exercise on Tajikistan suggests the following major constraints to growth: government regulations and interventions that weaken the business climate, weak control of corruption resulting in informal taxation that adds to the cost of doing business, and costly and unreliable connectivity service raising the cost of trading and limiting access to markets and technology. We can summarize these constraints into two: a constrained production capacity and constrained accessibility to market.

Constraints to Tajikistan's Production Capacity

In countries with disadvantageous geography like Tajikistan, rent-seeking behavior and elite capture have limited the potential of positive spatial externalities, reducing access to quality intermediate goods and services and contributing to low returns on investment. This increases perceptions of risk among potential investors, both domestic and foreign, who tend to prefer to engage in activities with safe returns, such as real estate, or to operate in the shadow economy. A successful diversification strategy would support the development of backbone services and infrastructure, and business-friendly business environments.

With regards to backbone service and infrastructure, ICT plays an important role in reducing the economic distance to markets and integrating urban centers. Such technology helps with negotiations, reduces the need for travel and transportation, and reduces information distortions by allowing easy cross-checking of available information. Despite significant recent progress Tajikistan lags behind on many accounts its neighbors (Table 2).

Table 2. ICT Performance in Kazakhstan, the Kyrgyz Republic, and Tajikistan, 2007

Item	Kazakhstan	Kyrgyz Republic	Tajikistan
Mobile cellular subscriptions (percent)	80	41	35
Telephone lines (percent)	21	9	5
Internet users (percent)	12	14	7
Digital subscriber lines (monthly payment, USD) ^a	31	265	104
Internet traffic (incoming + outgoing, terabytes) ^a	67,539	n.a.	56,000

Source: World Development Indicators database; countries' statistical agencies.

^a Data are for 2008.

Heavy administrative burdens on firms, such as frequent and lengthy inspections, bribe extortions, and excessive involvement of the political elite in business, also tend to weaken property rights, threaten profits, and reduce a country's attractiveness to domestic and foreign investors. In countries with weak institutions like Tajikistan, overcoming these kinds of constraints may take a long time. If leading cities could improve their business environment, this could initiate transformation of the private sector. But firms in Tajikistan's two leading cities (Dushanbe and Khujand) face obstacles in both their internal and external operating environments.

The latest BEEPS surveys raise major concerns about the internal business environment for firms operating in Tajikistan. Just 17 percent of firms in Tajikistan reported having an internationally recognized quality certificate; this compares with 43 percent in Chad, one of the world's poorest countries. Only 24 percent of the interviewees in Tajikistan reported using technologies licensed from foreign companies, compared with 36 percent in Mozambique; and only 21 percent of interviewees in Tajikistan reported having their own Web sites, compared with 63 percent in Armenia. Of firm employees interviewed, only 22 percent in Tajikistan were offered some kind of formal training, compared with 63 percent in Kenya. The BEEPS indicators provide a broad look at the external environment in which firms in leading Central Asian cities are operating. The most challenging issues appear to be permits and licensing, regulation and tax issues, and corruption (Table 3).

Another constraint to industrial expansion, particularly in the food and textile industries, appears to be fragmentation of the production chain into small-scale, poorly equipped operators. Such fragmentation leads to low quality and low quantity of raw materials for the food industry, and therefore to safety and quality issues. Fragmentation has also blocked development of a shadow textiles sector, whose production and market knowledge cannot be harnessed to scale up the sector.

While Tajik food products have so far enjoyed easy access to CIS markets, the increasing share of supermarkets in Russia's retail trade will soon make food safety and quality the main binding constraints facing exports to CIS markets. Almaty and Astana are following the Russian lead. CIS standards, which are the same standards employed in the former Soviet Union, have little modern relevance, given their poor oversight and safety mechanisms. More robust systems for managing microbiological risks are therefore needed (Wrathall and Haigh 2005). As many countries have adopted the hazard analysis critical control point (HACCP) system as their reference food safety systems, successful export diversification in Central Asia should include HACCP certification of all firms involved in the production chain to jump start and sustain expansion of the food industry.

Urban consumers' tastes and quality perceptions are becoming a major factor in production of food and textiles. Wrathall and Haigh (2005, p. 12) define nonexportable products as "anonymous products, poorly labeled, in unfashionable, outdated packaging that are difficult to store and even more difficult to open, with indifferent, inconsistent quality, with sensory and physical characteristics impaired by insensitive over-processing, produced in indifferent surroundings that are unclean and unhygienic by untrained staff." The need to address these kinds of issues sets the agenda for export diversification in Tajikistan. All the necessary upgrading processes are increasing returns to scale activities and could benefit from coordinated implementation involving leading cities and their hinterlands through public-private partnerships.

**Table 3. External Business Environment Constraints,
Kazakhstan, the Kyrgyz Republic, Tajikistan, and Europe and Central Asia**

BEEPS indicators, various years		Europe & Central Asia, 2009	Kazakhstan, 2009	Kyrgyz Republic, 2009	Tajikistan, 2008
Permits and Licensing	Number of days to obtain an operating license	26	32	18	23
	Number of days to obtain a construction-related permit	78	68	65	63
	Number of days to obtain an import license	16	23	10	14
	Percentage of firms identifying business licensing and permits as a major constraint	16	25	16	17
Regulation and tax issues	Percentage of senior management time spent on dealing with requirements of government regulations	11	5	5	12
	Average number of visits or required meetings with tax officials in a typical month	2	3	2	2
	Percentage of firms identifying tax rates as a major constraint	40	46	48	56
	Percentage of firms identifying tax administration as major constraint	21	24	32	17
Corruption	Percentage of firms expected to pay informal payments to public officials (to get things done)	17	23	38	41
	Percentage of firms expected to give gifts to get an operating license	13	30	26	39
	Percentage of firms expected to give gifts at meetings with tax officials	13	25	39	33
	Percentage of firms expected to give gifts to secure a government contract	26	55	56	31
	Percentage of firms identifying corruption as a major constraint	34	44	59	38

Source: BEEPS data, various years.

Constraints to Tajikistan's Market Accessibility

The fact that transport cost between Dushanbe and Khujand are higher than the cost of exporting a container of the same weight from Moldova to the United States (Table 4) illustrates how challenging domestic connectivity is in Tajikistan. We can use Geographical Information System (GIS) data to assess the market accessibility of Tajik settlements (Map 1).⁷ Map 1 confirms the poor domestic market accessibility of Tajikistan, with a clear geographical segmentation of the country between the North and the South. Accessibility seems to be limited by small settlements and high travel time, particularly in GBAO. Dushanbe, Kurgan Tyube, Kulyab and their surroundings have a relatively high access to domestic market, but they are quite isolated from Khujand and its surroundings in the Northern part of the country better connected via rail and road to Kyrgyzstan, Uzbekistan and all the way to Kazakhstan and Russia.

Table 4. Domestic Freight Rates, Tajikistan, 2009

	Distance (km)	USD per 10 tons of freight
Within Dushanbe	12	14–112
Dushanbe–Tursunzade	56	242
Dushanbe–Kurgan-tyube	99	546
Dushanbe–Kulyab	204	909
Dushanbe–Nijny Panj	206	1,091
Dushanbe–Jirgatal	287	1,697
Moldova to United States ^a	7,668	1,895
Dushanbe–Khujand	341	1,940
Dushanbe–Kanibadan	421	2,424
Dushanbe–Isfara	448	2,546
Dushanbe–Khorog	524	2,606

Source: International Finance Corporation and World Bank 2009; Ministry of Transport, Tajikistan.

^aData from *Doing Business* 2009.

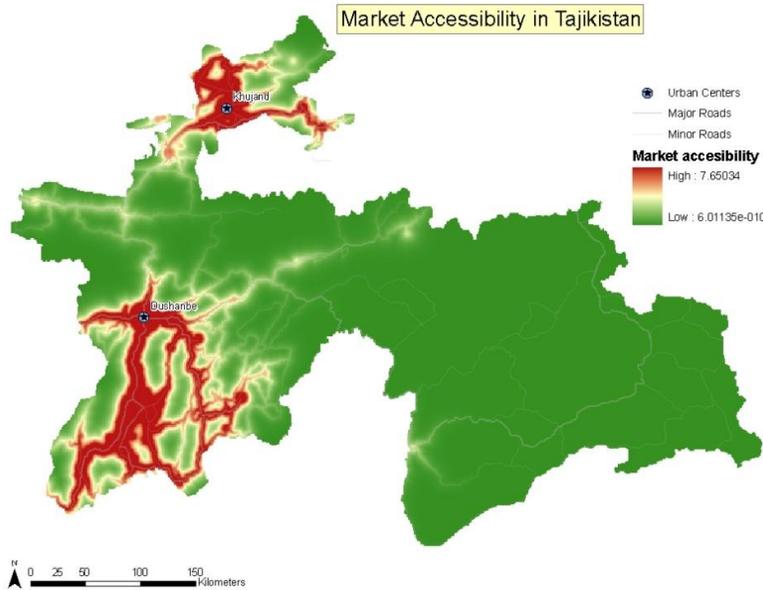
The Tajik government is considering upgrading or rehabilitating a couple of roads. The market accessibility index can provide a quick assessment of which of these projects may provide better market accessibility to domestic producers. Indeed, a road crossing settlements with better domestic market accessibility is more likely to induce more demand for transport services by local producers trying to connect to markets, thus unleashing the potential for cargo consolidation along the way. Given established increasing return to scale in transport services, such freight consolidation opportunity is vital for regional and global competitiveness of Tajikistan. Map 2 overlays some of these road projects with the market accessibility level of Tajik settlements.

As highlighted by the low market accessibility of the settlements crossed in Map 2, the following projects appear to be less urgent: the reconstruction of the Highway Aini-Panjakent-Uzbek border; the reconstruction of the Highway Obburdon-Auchi-Gonchi; and the reconstruction of the Highway Kulyab-Kalai Khumb. However, the reconstruction of the highways Kofarnihon-Romit and Rudaki-Sultanabad-

⁷ The index is calculated using the gravity-type relation $A_i = \sum_j g(W_j)f(c_{ij})$, where A_i is the accessibility measure of settlement i , W_j is the activity to be reached in settlement j , c_{ij} is the generalized cost of reaching market j from i , $g(.)$ is called the activity function, and $f(.)$ the impedance function. We use the population of settlements for W_j and the travel time for c_{ij} to compute the market accessibility index for all settlements with an identified population.

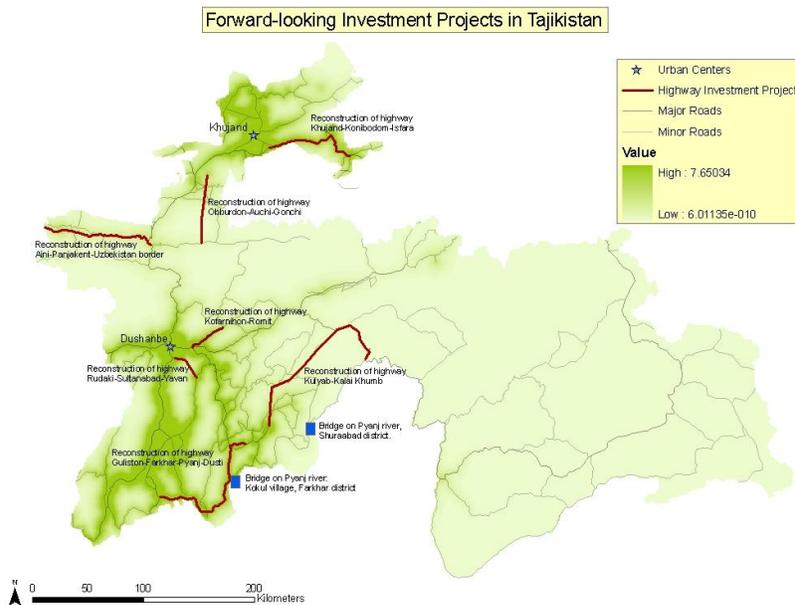
Yavan may improve the efficiency of the Dushanbe and its hinterland, while the reconstruction of the highway Khujand-Konobodon-Isfara may be more strategic than the Dushanbe-Karamik road to access Kyrgyz, Kazakh and Chinese markets given the better access to market it provides (both domestically and regional with Tashkent and Osh relatively close by) and ongoing reconstruction of the Osh-Batken road connection in Kyrgyzstan.

Map 1: Market accessibility in Tajikistan



Source: "Expanding Trade in Central Asia" (2009).

Map 2: Prioritizing Tajikistan road upgrading/rehabilitation projects



Source: "Expanding Trade in Central Asia" (2009).

Inefficient border operations and cumbersome international transit

Border crossing challenges also seem to considerably reduce access to other leading cities in the region. Indeed, inefficiencies along the North-South corridor, as for the other corridors crossing Central Asia, include customs valuation problems, inefficiencies at border-crossing points, uncertainty created by transit through Uzbekistan, administrative bottlenecks leading to informal payments and excessive conveying costs. In the entire region, customs valuation is unclear and inconsistent, mainly based on importer's declared value or weight, which favors informal payments to negotiate down the valuation and reduce Customs proceeds. Furthermore, Customs declarations are handled manually (though partly automated in Kazakhstan and Kyrgyzstan) and the documentations required for clearance are different from a country to another, and are too numerous (10 to 13 compared to 6 in Moldova). The brokerage services costs seem also high for small and medium traders: 150\$ in Kyrgyzstan, 250\$ in Tajikistan and 300\$ in Kazakhstan for a typical declaration.

There are two other sources of inefficiency in border crossing-related operations: limited use of risk management to control loads, and limited use of payment guarantees. Indeed, by regulation in all three countries, all import cargo must be unloaded for inspection prior to clearance and release (no risk management) which is costly and time consuming, favoring informal payments to speed up the process. Also, in Tajikistan and Kyrgyzstan, Customs payments are made directly to Customs officers (no Bank or guarantee system involved), which increases informal payments and corruption. A Customs guarantee system exists in Kazakhstan, but covers separately each customs-related operations (e.g. in-bond transportation, bonded warehousing, customs brokerage), favoring informal payments to simplify the procedure.

Another challenge is that transiting through Uzbekistan both via road or rail creates uncertainty of delivery time and cost. Central Asia could likely diversify the reach of its food products to Afghanistan and Gulf countries (Jordan, Bahrain, and United Arab Emirates) if not for this fact. Indeed, transiting via Uzbekistan is can be cumbersome. Many breaches of TIR seals have been reported by Tajik and Kyrgyz truckers transiting via Uzbekistan. Furthermore, although official transit fees are 300\$ (extra 30\$ for non-TIR trucks), informal payments are estimated in the order of 1,000\$. Other Central Asian truckers need a visa to transit via Uzbekistan, and have to pay a 1\$ per kilometer escort fee. Even Kazakh trucks that used to pass freely via Uzbekistan have now difficulties to get third-country transport permits (allowing transporting Uzbek products on empty Kazakh trucks): in 2006 only 1,000 such permits were issued compared to the 3,000 requested. Tajik truckers report that each time they cross Uzbekistan, they are deliberately held for not less than 4 hours in addition to unloading and loading, standing at customs control point, inducing additional expenses. Finally, Uzbek border closings have become pervasive: the latest in date was in June 2009 and lasted nearly the entire month, creating disruptions in trade and transport operations.

If the road between Osh and Batken that avoids Uzbek enclaves is rehabilitated and the Anzob and Shakrishtan tunnels between Khujand and Dushanbe are completed and fully operational, crossing Tajikistan via Isfara, Khujand, Dushanbe, Kurgan Tybe and Nijny Pjanj towards Kabul may be a competitive and friendlier road corridor to reach these markets. Kyrgyzstan and Tajikistan could join their effort to add this corridor to the CAREC priority corridors. For now though, the smoothest road corridor for traders in Tajikistan and Kyrgyzstan is the northern connection to Bishkek, Almaty, Astana, Petropavlosk towards Moscow. Yet, although this corridor is in a better physical condition, administrative barriers translate to large informal payments that deter trade expansion.

To put in perspective the administrative burdens on transit vehicles, in 2008, the Agribusiness Competitiveness Center in Kyrgyzstan conducted a monitoring study that documented all the administrative barriers and informal payments faced along this Kyrgyz corridor by a 19-ton refrigerated truck of black cherries from the rural Markaz district in Batken region.⁸ To get the required documents to ship the truck, the local custom body asked 700\$ (allegedly to informally pay financial police, local government, law enforcement bodies, public prosecution department and other local authorities). The services of a Customs broker in Bishkek would only cost 200\$. The only legal requirements are a land plot ownership certificate (to indicate the origin of the product) and a purchase certificate, both free. On the way from Osh to Bishkek, informal payments were made at the following checkpoints:

- Frontier veterinary quarantine (245 km away from Osh), whose purpose is to prevent the expansion of animal morbidity: the trucker paid the equivalent of 7\$ so that the control agent would not open the refrigerator.
- General road directorate (280 km away from Osh): official fees are 60\$, but the trucker paid an unofficial fee of 30\$.
- Axle load road control terminal in Jala-Abad region (295km away from Osh): the officer estimated an overload of one ton and asked for 7,000KGS. The trucker paid informally 100\$.
- Chychkan terminal (419 km away from Osh): the terminal is an ecological control terminal. The trucker made an informal payment of the equivalent of 24\$ to pass.

Incredibly, all the above costs are borne on the domestic leg of the journey for a Kyrgyz truck. The amount foreign carriers would have to pay is reported to be almost double that. Now, add to this the equivalent of 750\$ paid informally while transiting in Kazakhstan (passport registration, load registration, certificate registration, transit documents (TIR carnets), and various documents checking and registration), and the 295\$ in Russia before reaching the delivery place. All these informal payments can easily add to about 5 percent of the value of product transported.

Truckers can face many other challenges, one being the duration of stay necessary within a transit or destination country. Consider a truck going all the way to the European Union. Since 2004, the number of EU members has significantly increased with the accession of many Eastern and Central European countries, while duration of stay for a truck remained the same. In order to follow rules of transportation (required time for relaxation for drivers for instance) and taking into account unexpected queries, traffic jams, loading/unloading (taking between 2 and 6 days), holidays and distance (4 days to cross Poland), it could take about 20 days for Central Asian trucks' drivers to be present in European Union countries while the official permission is 10 days and visa extension is not guaranteed.

Finally, in the absence of a guarantee, convoying is usually required for customs transit under the national road transit systems in Kazakhstan and Russia. A major problem with convoying is that the fee for the service is rather high. According to the existing regulation, customs convoying rates range from 14\$ for less than 50km to 900\$ for more than 2000km in Kazakhstan.⁹ In Russia, it ranges from 60\$ for less than 50km to 30\$ per 100km beyond 200km, with a minimum of 180\$. Usually one customs escorts is convoying less than 10 transport vehicles. A side effect of convoys is that accumulating sufficient vehicles to make up a convoy takes time, 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.

⁸ Agribusiness Competitiveness Center (2008), "Research Monitoring of Existing Barriers Restraining Promotion of Products and Trade Development in the Region", Bishkek (2008).

⁹ Regulation #669 from 07/08/2003

Poor distribution and transport services in Tajikistan

Physical connectivity is not the only challenge to access market. A poor distribution and transport system may be more constraining than connectivity. By distribution and transit system, we mean a network of wholesale or retail distributors and transit operators identifying the production of profitable goods/services within and outside the country as well as potential consumers of these goods/services and facilitate their interactions through various distribution outlets in exchange of a distribution margin. Some distributors have their own transit service unit, thus providing a full logistic service of transporting and distributing goods.

Distribution and transit systems allow production to reach markets. They are generally more developed in urban centers because they enjoy increasing return to scale. Indeed, the larger and more frequent freight has to be shipped between locations the lower the unit transport cost. This characteristic makes constant return to scale activities such as agriculture indirectly dependent on urban centers to thrive. An assessment of the distribution system in Dushanbe and Khujand therefore provides a good sense of the challenges faced by the whole country.

Wholesale trade in Dushanbe is represented by four large wholesale markets, seven in Khujand. Retail trade in Dushanbe comprises 11,555 retail firms and only 3,172 firms in Khujand.¹⁰ The average cost of rented shop or outlet varies from \$135 to \$700/month, on top of utility cost, namely electricity and water. For food products traders are mainly cooperative farmers coming to Dushanbe and Khujand from neighboring districts and sell their products early in the morning in bulk to retailers, who in their turn resell the food products in retail markets. There are three major food markets in Dushanbe and two in Khujand, as well as few smaller markets for food.

Most of the farmers do not hold patents, but stay in the trade point for an hour or so and sell their products for very low price, in comparison with retail food markets, where the prices are up to 7 times higher. The estimated average operating cost of using a typical outlet (3mx3m) in a wholesale market place is in the range of \$2,500-3,000 per year: the owner pays a so called check or receipt on a daily basis in amount of 2 somonis and the lessee pays up to 250 somonis per month. Note that this amount is about four times Tajikistan per capita GDP, which suggests that most of the farmers who are the poorest in the country can't afford an outlet in formal wholesale and retail markets.

The modal split of freight transported in Tajikistan in 2008 was: 30 percent by rail, 69 percent by trucks and 1 percent by air. The freight transported by trucks is done by private operators (63 percent), ABBAT¹¹ (2 percent), Operators affiliated or recognized by the ministry of transport (12 percent), other ministries and institutions (23 percent). Multimodal transportation is not well-developed because of isolated rail lines (northern, central and southern line) compounded by a mountainous landscape. Only one company located in Khujand appears to provide multimodal transportation in the whole country to destinations as far as Vietnam and Thailand (Box 1). The major constraints faced (on top of physical one) by operators in the transit sector are the lack or poorly implemented transit agreements with neighbors. For instance, the current agreement with Uzbekistan (signed in 1992) is not implemented by Uzbekistan, and Tajik operators suspect an implicit order by Uzbek authorities to check Tajik trucks for not less than 4 hours in addition to unloading, loading and standing idle at customs control points. Furthermore, Tajik truckers are not yet allowed to cross the Khorgos border crossing point between Kazakhstan and China.

¹⁰ These data were collected by a local consultant who visited neighboring districts of Dushanbe and Khujand.

¹¹ ABBAT is the association of transporter in Tajikistan.

The Tajik situation illustrates how more Central Asian products could reach regional markets if the cargo capacity of empty trucks departing the leading cities was better harnessed (Table 5). Thousands of trucks leave Tajikistan empty. Between 2007 and 2008, the number of empty trucks departing from Tajikistan increased by 10,000 to reach 21,317. 43 percent of these empty trucks leaving the country were Tajik trucks, 42 percent were going back to non-CIS countries such as Afghanistan, China, Iran and Turkey. Furthermore, Dushanbe and Khujand are quite well connected via rail to major regional markets. By facilitating freight consolidation services, Tajikistan could tap into this potential to scale up its existing exports of agriculture and agro-processed products.

Box 1: “Yashar Bar”, a multi-modal freight forwarding company operating from Khujand

“Yashar Bar”, an Iranian trucking company established in 2002 a Tajik affiliate located in Khujand to provide multimodal transportation services using empty Iranian trucks to export Tajik products to Thailand, Vietnam, China and Korea. The goods are transported to the port of Bandar-Abbas within 8 to 10 days, and then shipped over sea. The same mode of transport (motor and rail, sea) is used while exporting ginned cotton, silk, silk hides, etc. from Tajikistan as well as importing tea and coffee from India, Indonesia, Malaysia, Persian Gulf countries.

Currently a 20ft container from Khujand to the port of Bandar-Abbas costs \$1800, including assurance; from Dushanbe, it costs about \$2000. A 40ft container from Dushanbe or Khujand to Bandar-Abbas costs \$2,650, which is to be compared with \$1,800 from Tashkent. However, these tariffs can vary substantially. For instance, the latest freight transportation (May 2009) of “Yashar Bar” was a 40ft container from Khujand to Bandar-Abbas, and it cost \$3,300 (\$1,800 for the driver’s services and \$1,500 for the company’s services). It is necessary to point out that the return trip from Tajikistan can be cheaper if the product transported does not require the use of refrigerators.

Transportation from Dushanbe sometimes requires 2 Invoices to be filled in order to avoid additional costs in using a 40ft container for lower freight volumes. In such case, the company pays for trucks to transport these small amounts of cargo and consolidate them in Khujand before shipping it to Bandar-Abbas, although domestic freight rates can be very high. Yet, the latest statistics of “Yashar Bar” shows that since the beginning of its activities, the company has transported Tajik goods worth \$12 million, which suggests that the freight consolidation idea can be scaled up to improve the market accessibility of Tajik products.

Source: World Bank (2011).

Table 5. Tajikistan: Cargo capacity to regional markets

	Cargo vehicles arrival				Cargo vehicles departure			
	2007		2008		2007		2008	
	With goods	Empty	With goods	Empty	With goods	Empty	With goods	Empty
Foreign countries, o/w	7,343	310	11,110	585	2,159	4,825	2,745	8,901
Iran	2,786	2	2,485	2	1,027	1,762	616	1,844
Turkey	2,171	0	2,841	1	899	1,242	1,175	1,676
China	1,984	273	2,369	232	224	1,518	243	2,011
Afghanistan	381	34	3,392	348	9	280	711	3,351
CIS countries	5,340	340	4,963	255	1,961	3,448	1,806	3,164
Russia	172	91	272	131	41	112	14	171
Kazakhstan	2,137	14	1,472	16	786	1,362	802	662
Kyrgyzstan	1,341	221	1,662	87	713	691	742	1,030
Uzbekistan	1,105	10	739	5	418	702	245	495
Turkmenistan	527	0	762	0	2	524	0	755
Tajikistan	4,025	3,395	7,717	3,538	1,430	3,205	1,600	9,252
Total	16,708	4,045	23,790	4,378	5,550	11,478	6,151	21,317

Source: Ministry of Transport, Tajikistan

Tajikistan, an economy with limited resources

Previous works have pointed to arable land (T), water (W) and labor force (L) as the main productive resources of Tajikistan (World Bank 2001, 2005). Land is used to produce cotton and other crops, water is used to irrigate agricultural parcels and generate hydroelectricity, and labor is used in production sectors (agriculture, industry and service) and temporary migration. Another important resource for the country is public finance (K). By deciding on the allocation of public finance, the government implicitly channel the primary resources in a sector or another, hence the necessity to have a clear and sound strategy of public finance. To simplify the analysis, we will focus on the three following resources: land (T), labor (L) and public finance (K).

Let consider a theoretical framework in which the major sectors of the economy (excluding public sector) are the hydropower sector, labor service abroad (temporary migration), agribusiness and industrial production. This categorization leaves out private service provision such as trade, transport and tourism but provides a minimal framework necessary to highlight the competing use of the country's resources. Indeed, hydropower has a strong place in the government growth strategy, migration is the most profitable service activity so far, agribusiness has historical been central in the country's production structure and industrial production is dominated by aluminum processing and light industry.

If we define by $F(.)$ the production function of a sector, we can highlight the most important production factors necessary for production (Y). For the hydropower sector, Y is assumed mainly driven by public financing to increase generation capacity and transmission lines (i.e. $Y=F(K)$). For labor migration, Y is assumed mainly driven by private initiative through labor participation and training (general purposes and or specific skills) provided by public finance (i.e. $Y=F(L,K)$). For agribusiness, Y is assumed mainly

driven by arable land available for competing crops, adequate supply of labor and public financing to upgrade labor skills and connect production to markets (i.e. $Y=F(T,L,K)$). For industrial production, Y is assumed mainly driven by energy availability, adequate labor supply, and public financing to upgrade skills and connect with markets (i.e. $Y= F(E,L,K)$). Let also assume that the government capacity to use public financing (K) is limited by its external sustainable debt level, and that labor market is at equilibrium with L_m involved in migration, L_a involved in agribusiness and L_i involved in industry, but public financing (K) can be used in a specific sector to improve labor productivity: $H(L,K)$ is variable.

Hydropower vs. other sectors

Given the current deficit in winters and surpluses in summers, Tajikistan is importing and exporting an increasing amount of electrical power. For instance, in 2003 the country exported about \$3 million of electrical power against \$14 million of import, the amounts increasing to respectively \$10 and \$37 million in 2007. But this two-way trade is mainly with Uzbekistan. An expansion of hydropower capacity as a driver of growth is therefore closely related to the extent to which Tajikistan can export this extra power during summers. This would require a huge investment to expand production capacity (completion of Sangtuda and Rogun I and II for instance) as well as building transmission lines to connect with the Afghan power network, and hope that the complementary investments are made in Afghanistan to connect with Pakistan. Unless private capital is harnessed to complement a reasonable public investment, the government debt sustainability will be seriously threatened in pursuing such hydropower expansion strategy. Furthermore, this will limit the capacity of the government to provided financing for other important public infrastructures and social expenses.

If energy security of the country is the main goal, huge investments in new hydropower projects may not be the way out, the seasonality of its hydropower production playing against. Connecting the northern grid to the southern grid seems to be the first priority for energy security. Then prospecting for alternative source of energy such as coal to supplement the winter energy deficit may be the second stage. For instance, the Fon Yaghnob coal mine (Ayni District in Sughd) is the largest coal deposit in Tajikistan (forecasted 900 million tons of reserve, of Tajikistan 3.6 billion tons) and seems to be already considered by the Tajik government for the financial and technical assistance of the US Trade and Development Agency.

Labor productivity as driver for growth

With such a strategy, the government can use public financing to provide training opportunities to workers. If the government focuses on general purpose training, it equips workers to improve their productivity in any of the three sectors using labor, whichever will provide them with a job opportunity after training. However, if government chooses to provide sector-specific training, it will either spread the available funds or pick a “winner” sector, which may be costly if the choice happens not to be a winner later on.

If the government anchors its growth strategy on improving labor productivity through general purpose training, leaving the prospect to expand hydropower capacity to the private sector, the productivity of migrants but also workers involved in agribusiness and industrial production will improve and consequently improve the country’s growth prospect. We can think of general purpose training as language training (Russian, English) or computer literacy that provides workers with the necessary skills to increase their knowledge and know-how via face-to-face or Internet-based exchanges. This flexibility will be lost if the government decide to only focus on sector-specific training demanded in the targeted migration destination countries.

Optimal growth strategy

In the limit of its fiscal space and external debt sustainability, the Tajik government could use public financing to invest in its people (via general purpose training) and in its leading places (via improving connectivity of its leading cities to regional and global markets). With such strategy, public finance in hydropower would be limited to the connection of the domestic networks, leaving the prospect to expand generation capacity to the private sector. Migration would depend on external demand and improved labor productivity, agribusiness would depend on how efficiently land is used between cotton and non-cotton agriculture (government regulation of land will matter) but also on improved labor productivity and market accessibility, industry production would depend on how efficiently energy is allocated by markets to the most profitable activities (government regulation of power market will matter) but also on improved labor productivity and market accessibility.

This requires rethinking the country's public resource allocation to sustain its growth path. In this process, improved business environment and market accessibility will be essential to optimize what the country produces and what it trades. Based on the detailed analysis of the diversification potential as well as the domestic and external connectivity of Tajikistan settlements conducted, this policy note makes the case that starting by unleashing the potential of the two leading cities by establishing them as enclave economies linked with each other and with major regional markets is the most effective export diversification strategy to be considered, and a reachable goal. The policy recommendations then derived cover short term measures to harness low hanging fruits, medium term measures to develop the proposed enclave economies anchored on the two leading cities, Dushanbe and Khujand, and medium to long term measures to foster regional cooperation on trade and transport facilitation.

Tajikistan, an economy that may bet on its two leading cities for a successful diversification strategy

The binding constraints analysis of Tajikistan points to constrained production capacity and poor market accessibility as the major constraints to growth in Tajikistan. As such, they are also the binding constraints to export diversification since the process of growth goes hand in hand with the process of diversification. Indeed, Imb and Wacziarg (2003) among other scholars have pointed to the empirical regularity that as a country grows from a low to middle and then high income level, it tends to first diversify from its traditional export products and only specializes at high income levels.

In 1971, Kuznets was awarded the Nobel Prize in economics for his work showing that as a country moves from low to medium to high income levels, it goes through a structural transformation from agriculture to industry to services (Kuznets 1971). Traditional agriculture tends to be replaced slowly as agribusiness activities emerge in response to increased demand from urban areas both within and outside a country (World Bank 2007b). These agribusiness activities-storage, sorting, quality control, packaging, transport, processing, distribution, and services related to risk management-are already increasing returns to scale activities where internal and external economies of scale drive productivity and the ability to export. As industrialization takes over in a country, the share of manufacturing and business-related services becomes increasingly important.

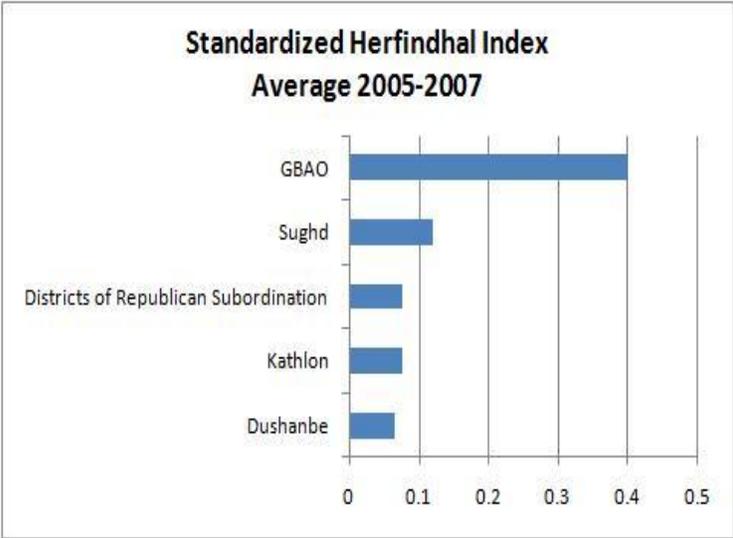
As this structural transformation occurs, cities tend to play a larger role in production and trade as traditional agriculture activities require fewer workers and excess workers migrate to cities to participate in the advanced division of labor. In 2008, Krugman was awarded the Nobel Prize in economics for his work showing that the structural transformations proposed by Kuznets were facilitated by this spatial transformation favoring concentration of economic activities in leading urban

centers. Krugman's work suggests that growth is lumpy in relation to space and that fighting this lumpiness is fighting growth. This finding clearly challenges the justification for space-based policies that divert economic activities to lagging regions, but leaves room for policy measures that would use space efficiently to maximize benefits from economic concentration. These results were echoed by the *World Development Report 2009* (World Bank 2008) summarizing the development experience of developed and now quickly growing East Asian countries as a move to higher concentration seen in the growth of cities, more mobile people and thinner borders with neighbors and far away trading partners. This suggests that focusing on the leading cities of a country and making sure that they are delivering the services necessary for the structural transformation, and thus diversification, to occur is a second best solution that a developing country may seriously consider.

Why focus on leading urban centers?

Leading cities are the most diversified production places in a country. They are also the well-connected domestically, regionally and globally. Tajikistan is no exception. As shown in Figure 6, Dushanbe is the most diversified place in Tajikistan.¹² Map 1 also confirms that Dushanbe and Khujand are the two places well connected domestically and regionally, with the highest market accessibility index. Dushanbe and to a lesser Khujand are the well-connected places with outside world through their international airports and all the facilities going with this status. Tajikistan is poorly connected by air with the rest of Central Asia and the rest of the world but Dushanbe and Khujand are far well-connected than any other location within the country: Dushanbe receives 70 percent of international flights landing and taking off in Tajikistan, Khujand receives 28 percent. Even for domestic flights, Dushanbe and Khujand represent nearly 90 percent of the whole domestic traffic. Furthermore, the major rail connections with the wider CIS rail networks also go through Khujand (73 percent of freight exported via rail) and Dushanbe (23 percent of freight exported via rail).

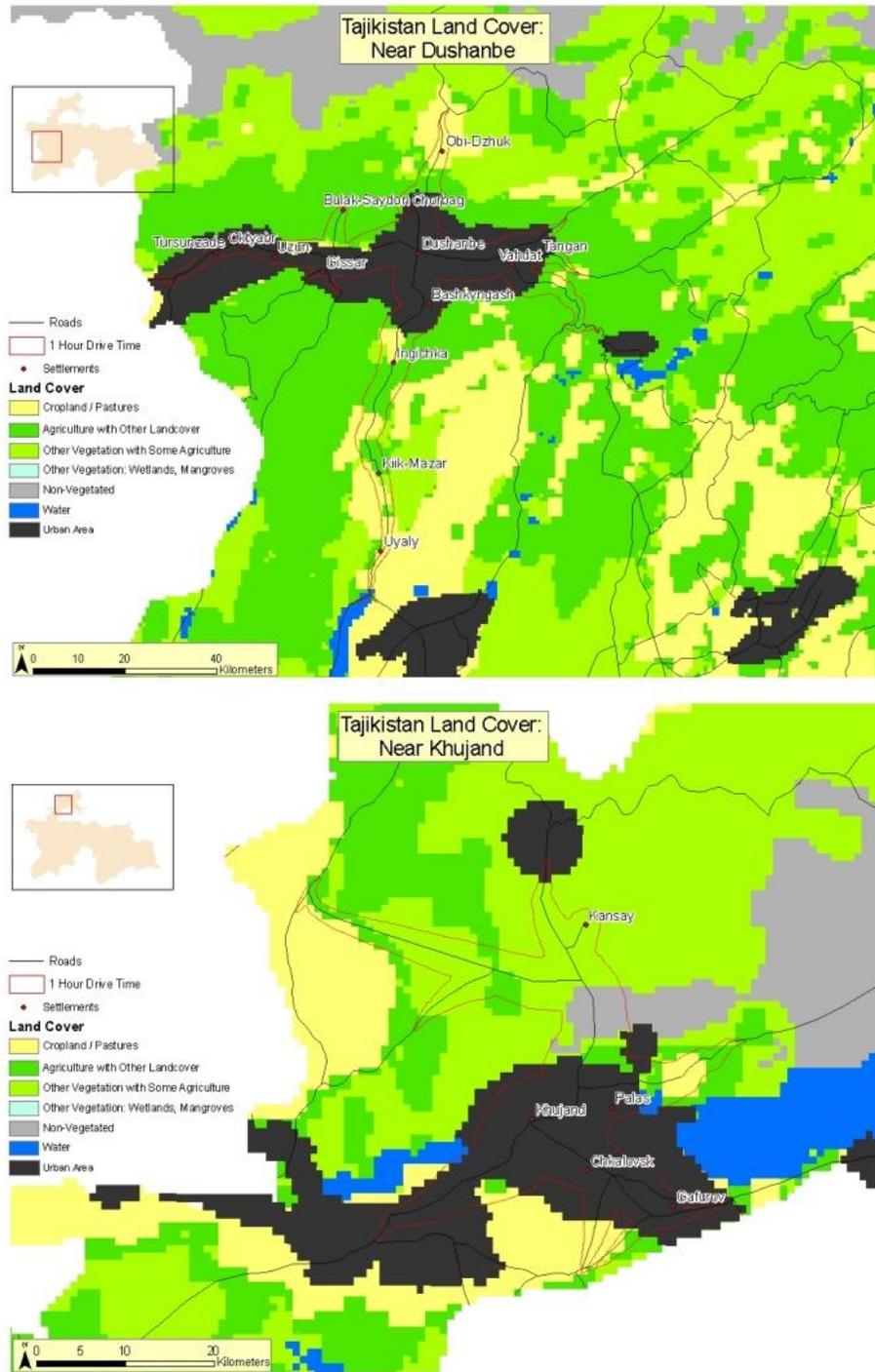
Figure 6. Tajikistan: Production Diversification at Regional Level



Source: Tajikistan Statistic Committee data and author calculations

¹² The Herfindhal index is a classical diversification measure computed as $\sum_i s_i^2$, where s_i is the share of industry i in total production. If N is total number of sectors, it is better to use the standardized Herfindhal index H^* defined as $H^* = (H - 1/N)/(1 - 1/N)$. $H^* < 0.1$ indicates diversified production, $0.1 < H^* < 0.18$ indicates moderately diversified production and $H^* > 0.18$ indicates highly specialized production.

Map 3: Land coverage and accessibility to Dushanbe and Khujand's hinterlands



Source: "Expanding Trade in Central Asia" (2009).

A diversification strategy anchored on Dushanbe and Khujand and their hinterlands would therefore significantly mitigate the country's poor market accessibility and allow tapping in the already diversified

production in both cities and their relatively good connection with their agricultural hinterlands (Map 3). The strategy would be to establish two Special Economic Zones anchored on Dushanbe and Khujand where relevant institutions would be developed to improve the business environment and adequate infrastructures would be provided to establish these two cities as the gateways of the country. Livestock or crop growing can be developed and intensified in the hinterlands of these two cities, and their distribution and transit system improved to reduce domestic and external transport costs.

Institutional reforms that may be needed

Poor business environment seems to be Tajikistan most binding constraint to growth, both in agribusiness and urban services. To undertake a diversification strategy tapping into peri-urban agribusiness potential and the distribution and transit services provided by Dushanbe and Khujand, there is a need to create an administrative unit encompassing inner city and hinterland under a single authority to facilitate coordination between agriculture production in rural areas and logistic service provision in urban areas. To make sure that internal transport cost in such new administrative unit is low enough to make peri-urban agribusiness profitable, the boundaries can be determined as extending the leading city by any district whose center is at one hour drive reach. As shown in Map 3, this extends the inner cities with enough agricultural and pasture land for an intensified peri-urban agribusiness.

The second institutional reform would be to enforce freedom to farm in this delimited area to boost agriculture activities identified as profitable by farmers. By focusing on a limited space in the hinterlands of Dushanbe and Khujand, this allows the government to still dedicate some arable land to cotton production seen as an integrating activity. The main production in districts surrounding Dushanbe (e.g. Rudaki, Vahdat and Varzob) and Khujand (e.g. Kanibadan and Isfara) are livestock and horticulture and may benefit from an export diversification strategy to reach the quality and quantity making them competitive domestically, regionally and globally.

The third institutional reform would be to provide a level playing field to all transport modes so as to put in competition road, rail and air transport modes in carrying agriculture and agro-processed products in these two new administrative areas. Monopolistic pricing or controlled access to production can distort the distribution and transit system to the point of harming the competitiveness of the goods produced. This multi-modal framework would reinforce the integration of the Dushanbe and Khujand with regional and global markets and facilitate their establishment as transport hubs.

Infrastructure investments that may be needed

For the multi-modal transport framework to be operationalized, there is a need to design and implement a logistics center in Dushanbe and Khujand to facilitate the consolidation of agriculture and agro-processed production in the new administrative area. Such centers could provide world-class services to the private sector and facilitate the traceability of the products all the way from the production places to the destination markets, be they domestic, regional or global. The rehabilitation of the two international airports anchored on Dushanbe and Khujand as well as a more liberalized air transport sector should be an integral part of the logistics centers development.

It may also be necessary to upgrade a number of feeder roads to facilitate the connection between agriculture production and the logistics centers in the inner cities. Rehabilitation of urban roads could improve both urban transport and freight transportation between the hinterlands and the inner cities. Major trunk roads rehabilitation may be considered only if they connect places with the potential to attract domestic freight as suggested by the market accessibility map. The North-South connection from

Kanibadan at the border with Kyrgyzstan to Nijny Pyanj at the border with Afghanistan via Khujand, Dushanbe and Kurgan Tyube seems to be the priority corridor to be promoted.

The third type of infrastructure needed is wholesale market places in the hinterlands. This can be done by establishing collaboration between Tajik Matlubot who has an extended network of market places inherited from the Soviet area and still operational, with the two new administrative units. Rehabilitating infrastructure stock in the hinterlands of the inner cities and better connecting them with the logistics centers with feeder roads as suggested could significantly reduce the adverse impact of fragmented production by small farmers.

Conclusion

Tajikistan is going through a series of structural changes that represent both challenges and opportunities. Given the limited resources of the government, a prioritization of public financing is necessary to get the highest possible return. In the short to medium term, migration seems to be there to stay. Therefore maximizing the return from migration through general purpose training allowing diversifying destination countries and better channeling of remittances through an improved financial sector seems the first-step of a successful growth strategy. Then, developing non-cotton agri-business with Dushanbe and Khujand as domestic trade centers to take advantage of scale economies in transport and distribution services should be considered. Establishing two Special Economic Zones anchored on these two cities and enforcing their freedom to farm and developing a world-class distribution and transit system could help to jumpstart a much needed diversification process.

Short term policy measures to harness low hanging fruits:

- Strengthen the existing vocational training system to upgrade the skills of migrants to increase their productivity and earnings
- Promote non-cotton agribusiness activity expansion via adequate financing opportunities and enforcement of freedom to farm
- Promote the development of freight consolidation services to take advantage of the backhaul capacity available.

Medium term policy measures to develop enclave economies anchored on Dushanbe and Khujand:

- Establish enclave economies anchored on the two leading cities by creating new administrative units encompassing leading cities and nearby secondary cities under a single authority
- Revise the regulations for entry and operation in business supporting services (distribution, transport logistics, telecommunication, finance) within the enclave economies to facilitate entry and improve productivity
- Build the needed transport (feeder roads) and market (serviced storages and market places) infrastructures to improve the integration of the enclave economies
- Establish a competent export promotion agency providing advisory services and market information to the business community in the enclave economies.

Medium to long term policy measures to foster regional cooperation on trade and transport facilitation:

- Engage in regional cooperation with Kyrgyzstan and Kazakhstan on the North-South corridor linking the 6 leading cities of the three countries

- In the framework of this regional cooperation:
 - promote the establishment of an integrated border management system at Border Crossing Points along the North-South corridor
 - promote the establishment of a regional Corridor management Institution to oversee the smoothness of traffic flow along the North-South corridor
 - Develop a quadripartite transit agreement with China to facilitate trade in goods and services.

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