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Tajikistan:

Market Profile for Emergency Food Security Assessments

Strengthening Emergency Needs Assessment Capacity (SENAC)

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Tajikistan: Market Profile for Emergency Food Security Assessments

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SUMMARY AND CONCLUSIONS

Although Tajikistan is still a poor country, the last few years have been marked with strong economic recovery. The country's socio-political stability has improved but poverty is still widespread. The Government plays no direct role in food crop production or marketing and the agriculture sector suffers from over dependence on cotton production. Crop production is also constrained by land entitlements and the slow pace of land reform. Over the past few years, wheat production has increased, driven by larger planted area rather than improvements in yields. At the same time, wheat flour imports have also surged due to higher costs of production and poorer quality of locally produced flour. Trade is relatively open with very little government intervention. The country is landlocked and mountainous with inadequate road and railway networks which also raise the cost of internal transport.

Basic Facts

Capital: *Dushanbe*
Total area: 143,100 square km with less than 6% as arable.
Population: 6.7m (2005 est.) including some 400 000 working outside the country, 90% in the Russian Federation. Almost 5m live in rural areas. The current annual population growth is roughly 2%.
Main languages: Officially Tajik (variant of Persian), written in the Cyrillic script, is the state language and Russian is a language of inter-ethnic communication. Uzbek is the main language for about 25% of the population.
Geography: Landlocked mountainous country located in Central Asia, bordering Afghanistan (1,206km, south), Uzbekistan (1,161km west), Kyrgyzstan (870km, north) and China (414km, east). In total, more than 90% of the land is mountainous and over 50% above 3000 meters with Qullai Ismoili Somoni (7,495m) as its highest point.
Climate: Continental (hot summers, mild winters).
Natural hazards: Earthquakes, floods, droughts and avalanches.
Main Regions: i) *Sugd*, the main industrial oblast; ii) *Khatlon*, which makes up the country's main cotton growing area; the *Regions under Republican Subordination (RRS)*; iii) the stronghold of the country's main aluminum smelter; and iv) *Gorno-Badakhshan Administrative Oblast (GBAO)*, which is a sparsely-populated mountainous region.
Main towns (with population in thousands): *Dushanbe* (562); *Khujand* (149); *Kulob* (78); *Qurghonteppa* (60); *Istaravshon* (51); *Khorog* (28).
Government: Republic. As of October 2005, the State is headed by President Imomali Rahmonov from the ruling People's Democratic Party (PDP) and the Government is headed by the Prime Minister Akil Akilov, appointed by the President.
Economy: Per capita GDP: $310; Purchasing Power Parity of about $1,100
Currency: Somoni (S). The average market rate in 2004: S2.97: US$ 1 and $3.18: US $1 in October 2005.
Exports: Aluminum, cotton, electricity, fruits, vegetable oil, textiles.
Imports: Aluminum oxide, natural gas, oil products, electricity, machinery, foodstuffs (mostly wheat grain and wheat flour).
Major crops/agricultural products: Cotton, wheat, maize (sweet and feed), rice, potatoes, vegetables, fruits, grapes, and livestock (cattle, sheep and goats).
Transport: Roughly 28,000km of road network, mostly in poor condition and not all paved with the main North-South road connecting Khujand to the capital closed in the winter because of snow. Railway system is small, about 480Km, connecting several of its main towns to the Uzbek and Turkmen railway networks. Air travel capacity is inadequate and waterways are limited to 200km (along Vakhsh River). The first road to China was opened only in 2004.

All regions in Tajikistan are often in a food deficit situation and this problem is even more pronounced in remote parts of the country. For this reason, seasons (weather) play a critical role in the distribution and flow of food, especially to the mountainous areas, which are more vulnerable during the winter period. In each region of the country, there is at least one major food market but prices (of wheat flour in particular) always tend to be lower in those markets near the border with Uzbekistan where the main import and export routes are concentrated. The difference in prices across the main markets is mainly due to transport (fuel) charges. Current domestic wheat flour prices are higher than during the last food

crisis in 2000-01. Recent higher prices have been sustained by strong demand for quality wheat flour, driven by improvements in consumer incomes. In general, prices are moving more in line with international markets while domestically most food commodity markets appear to be fully integrated. Per capita food availability has also improved considerably since 2002 and the sharp fall in food aid in recent years has been compensated by a surge in commercial imports. However, developments in the country's main markets may not fully reflect the food situation in rural areas and malnutrition and access to food remains a major problem.

Despite much improved food supply conditions in the country and more competitive markets, the task of securing food to remote rural areas and/or improving the nutritional value of food consumed by its poorest may continue to rest largely on international aid agencies and NGOs for the foreseeable future. In addition, for as long as relations with neighboring Uzbekistan are tense and unstable, Tajikistan will remain a vulnerable country both economically and politically.

Against this background, addressing the root causes of the country's food security problems requires institutional initiatives, including major investment to improve transport systems, sanitation and diets. However, in Tajikistan, sound economic planning and suitable food policy strategies have proven a long and painstaking process. For this reason, continuous vigilance and careful scrutiny of the country's food situation through closer collaboration between multilateral agencies and NGOs could prove most valuable in averting food crises. In the meantime, the close monitoring of plantings and growing conditions throughout the domestic wheat production cycle in all major growing regions can provide early signals about any impending food shortage. In addition, monitoring price movements for all primary food commodities across the major markets may also assist in designing an appropriate and timely response in case of a crisis.

INTRODUCTION

The primary purpose of this study is to develop a *pre-crisis market profile* (PCMP) for Tajikistan with an aim to strengthening food security assessments in the country. The study is part of an on-going programme of work under the markets-related theme of the Strengthening Emergency Needs Assessment Capacity (SENAC) project conducted by the World Food Programme. This PCMP will explore the structure of the domestic food market with the main focus on the country's wheat market. Wheat is not only a subsistence crop but also forms the base of the nation's staple diet (in the form of bread), accounting for nearly three-fifth of the total calorie intake; the reminder is mostly accounted for by dairy, meat, potatoes, and vegetable oil[1].

In Tajikistan, evidence suggests that there is minimal direct government intervention in the country's food sector. Furthermore, in recent years, improved political stability, rising income, and higher export earnings have given rise to higher food imports and greatly reduced dependence on food aid. On the other hand, Tajikistan remains a poverty-

[1] Markets for the primary non-wheat food commodities warrant a detailed explanation which falls beyond the scope of the present report.

stricken and highly vulnerable food deficit country. It is landlocked with limited outlets to world markets and an inadequate internal transport infrastructure. Heavy dependence on aluminum and cotton as the first and the second largest sources of export revenues also contributes to the country's vulnerability to swings in world prices of these commodities. These factors raise legitimate concerns about the ability of the domestic market to cope with any unexpected interruptions in food supplies.

This paper is presented in two parts. Part I provides an overview of the country's economy, agriculture, trade and transport situation with the main emphasis on food production and marketing. This section draws predominantly on information and analysis contained in the latest reports by the Government, aid agencies and international financial institutions. Part II focuses on developments in the primary national markets for food, with the emphasis on wheat and wheat flour. This section generally draws on the main findings of the country visit (field trips) and information collected on location. The purpose of Part II is to provide an overview of the main supply and demand factors driving the food markets and to illustrate the extent of market integration and linkages. Annex I provides a list of the main references used for this paper and a list of persons met during the visit with their contact details. Annex II contains a recent administrative map of Tajikistan from the United Nations, selected indicators from the 2005 Human Development Report, and relevant recent economic indicators published by the Economic Intelligence Unit (EIU) and the International Monetary Fund (IMF). Annex III provides a summary table on evolution of the trade regime in Tajikistan published by IMF.

PART I: THE COUNTRY

1. THE ECONOMY

- Although still poor, recent years have been marked with strong economic recovery
- Socio-political stability has improved but poverty is still widespread
- Vulnerability to internal and external shocks persists

The Soviet Socialist Republic of Tajikistan was among the poorest in the Former Soviet Union. Ever since its independence in 1991, the Republic of Tajikistan has ranked among the least prosperous countries in the world. In terms of the Human Development Index (HDI)[2], Tajikistan was the worst performer in the ex-Soviet block in 2003 although its situation improved slightly in 2004. According to the 2005 Human Development Report, in 2003, the country ranked 122nd, out of 177 countries, with an HDI of 0.652, and with a low per capita (PPP US$) Gross Domestic Product (GDP) of 1,106, it ranked even lower, at 158th place[3].

Tajikistan is an extremely vulnerable country, economically and socially speaking. Natural disasters (droughts in particular) and five years of civil war and internal conflicts (1992-97) took their toll on the country's fragile economy immediately after its independence in September 1991. Output, measured by real GDP, contracted by nearly two-thirds in the 1990s while inflation and unemployment soared to unprecedented levels.

1.1 RECENT GROWTH IS ROBUST

By the late 1990s, however, some positive signs began to emerge; supported by the rise in export revenue from cotton and aluminum, the country's main export items, while the large inflow of remittances from Tajik nationals working outside the country, and more successful structural reforms (since 2001 in the form of fiscal and monetary policies) also helped. Recent economic data points to strong growth in real GDP in 2004, up 10.6% from 2003 (IMF, October 2005), a sharp slowdown in inflation to 5.6%, and a generally stable exchange rate, averaging just under 3 Somoni per 1 US dollar in 2004[4]. In spite of recent economic successes, however, unemployment remains elevated at about 45% - although official estimates put the figure at well below 10% (with official registered unemployment rate shown as stable at around 2.2%[5]). In addition, according to the State

[2] The HDI is a composite index that focuses on three measurable dimensions of human development: living a long and healthy life, being educated and having a decent standard of living. More pertinent data are provided in Annex II.

[3] The GDP per capita (PPP US$) compares standard of living across countries. Economic statistics are converted into the Purchasing Power Parity (PPP) terms to eliminate differences in national price levels.

[4] The National Bank of Tajikistan maintains a managed floating exchange rate regime.

[5] State Committee on Statistics Republic of Tajikistan. 2005. *Food Security and Poverty in the Republic of Tajikistan.* Information Bulletin No. 2, 2005, p.9

Committee on Statistics (*Goscomstat*) in 2004, 64% of the population could not afford the minimum consumption basket (defined as 36 Somoni/person/month).

Foreign debt remains high at about 80% of GDP. Based on the IMF's estimates, foreign debt repayment accounts for one-quarter of the national budget and while the country's debt situation over the medium term is expected to be sustainable, it is still exposed to risks as its economy remains highly vulnerable to shocks especially in the event of any sharp decline in international prices of its main export commodities: cotton and aluminum. Servicing the current debt is also a major burden, curtailing the country's urgently needed ability to invest in agriculture.

1.2 POVERTY STILL HIGH

In spite of strong economic performance in recent years and a more stable political climate since the end of the civil war (1997), the main challenge facing Tajikistan is how to combat entrenched poverty. Tajikistan is predominately agrarian and over 70% of the population lives in rural areas where poverty is most widespread, especially in the large agricultural regions of *Khatlon* and *Sugd*, where the number of extreme poor (earning below $1.08 per day) increased sharply between 1999 and 2003[6]. However, the overall poverty level seems to have declined since 1999, from 80% to 64% (those living on less than US$2.15 per day at PPP). Remittances from Tajik workers (mostly in the Russian Federation, Kazakhstan, and the Islamic Republic of Iran, accounting for 25% of the Tajik working population) have been the main factor for the reduction in poverty in recent years.

Still, poverty remains more predominant in Tajikistan than other transitional countries of the former Soviet Republics. One reason is the fact that in contrast to other regions, the population grows fastest in Tajikistan's rural areas in view of much less favourable employment opportunities in its urban centers. Tajikistan is a mountainous country with one of the highest population density levels in the world, about 488 people per sq km of arable land. The combination of strong growth in rural population with an already high level of population density makes fighting poverty a formidable task.

2. AGRICULTURE SETTING

- Strong growth in agricultural output in recent years
- Government plays no direct role in food crop production and marketing
- The sector suffers from inadequate investment and over dependence on cotton production
- Crop production also constrained by land entitlements and the slow pace of land reform
- Wheat flour imports have risen in recent years due to higher cost and poorer quality of locally produced flour
- Meat consumption is low but livestock plays important role in income generation

[6] World Bank. Republic of Tajikistan: Poverty Assessment Update. Report No: 30853-TJ. January 6, 2005.

The agriculture sector plays a vital role in the Tajikistan economy. In 2004, it accounted for almost 22% of the country's GDP – a drop of nearly 3% from 2003 and some 4% below the 1999-2004 average (IMF, April 2005)[7]. Agriculture also contributes to between 20- 30% of the country's export revenues (mostly from cotton and some also from fruits and vegetables) and 35% of the Government's tax revenue. Over two-thirds of all people are dependent on agriculture for their livelihood. The sector employs about 1.3 million people or some 67% of the working population and unlike most other developing regions, this trend is moving upward in Tajikistan, driven by migration from the urban centers to rural areas in addition to more rapid birth rates in rural communities.

According to *Goscomstat*, the value of gross agricultural output in 2004 was around US $ 800 or around 11% higher than the output at the corresponding period of the previous year, with about a 12% increase in plant products and 9% increase in animal products. Geographically, the largest share in gross agricultural production was registered in the *Khatlon* and *Sugd* regions, 44.4% and 29.5% respectively[8].

2.1 MANAGEMENT OF ARABLE LAND IS PROBLEMATIC

Over 90% of the country's territory consists of elevated mountains. Before independence, the mountain territories were used for summer pastures and rainfed farming. But during the post-independence period, most of highland has become marginal land. Currently almost 98% of the highland areas are affected by severe degradation and erosion[9]. Against this background, total cultivated area in Tajikistan is estimated at less than 900 000 ha, of which some 590 000 ha, or 67 %, is irrigated (2004)[10]. Cotton accounts for almost 32% of the planted area, grown mostly on irrigated lands, while some 50% of the arable land is used for food crops, mainly wheat, followed by maize, vegetables and fruits.

Land entitlement issues, the slow pace of land reform and privatization (initiated in 1992) have left farmers with little incentive to invest in the land which they do not consider to be their own. Currently, there are three types of farm systems in Tajikistan: large capital incentive state and collective farms, carried-over from the Soviet time; *Dehgan* farms, born out of land reform but still largely under the old collective management system; and small household plots (backyard or garden plots). It is notable that the latter contributes to about 54% of the gross agricultural output as opposed to roughly 24% from state farms and 22% from *Dehgan* farms. The main reason for this is the fact that the household plots are not controlled by the state and their owners decide freely on what to produce.

[7] Recent figures from the World Bank put the agriculture contribution to the GDP at a higher rate of about 24%. Better performance of agriculture has resulted in a decline in rural poverty.
[8] State Committee on Statistics (or Goscomstat), Food Security and Poverty Information Bulletin of the Republic of Tajikistan, No 4, 2004 (Dushanbe 2005).
[9] FAO. Republic of Tajikistan: Watershed Management Project. Report TCP/TAJ/2903 (A). December 2004.
[10] Goscomstat.

2.2 COTTON IS THE MAIN CASH CROP

Cotton contributes to nearly 90% of total agricultural export earnings and during the Soviet era, it accounted for 11% of total cotton harvested in the Soviet Union. After the lows reached in the late 1990s, cotton production has increased progressively in recent years. Stronger world prices coupled with improved economic conditions have given rise to this recovery. However, yields are low (around 1.8 tonnes/ha) and the sector continues to struggle with substantial accumulation of debt; resulting mainly from the extension of credit to farmers at unfavourable terms in the mid-1990s. Unlike wheat, cotton is closely managed by a handful of joint ventures with close ties to local and central authorities. In fact, farmers have benefited the least from the growth in cotton export earnings in recent years as a result of official production policies; through land allocation as well as *de facto* targeting practices and implicit high taxes, stemming from the central government's price policies; by setting maximum rather than minimum prices[11].

2.3 WHEAT IS THE MAIN FOOD CROP

Wheat in Tajikistan is mostly a winter crop (i.e. planted in the fall, lies dormant during the winter, and is harvested beginning about May of the next year). About one-third of the wheat crop is irrigated which is grown mainly in the northern and southern plains; *Khatlon* is the leading producing area, accounting for almost half of the country's irrigated production and almost two-thirds of its rain-fed production.

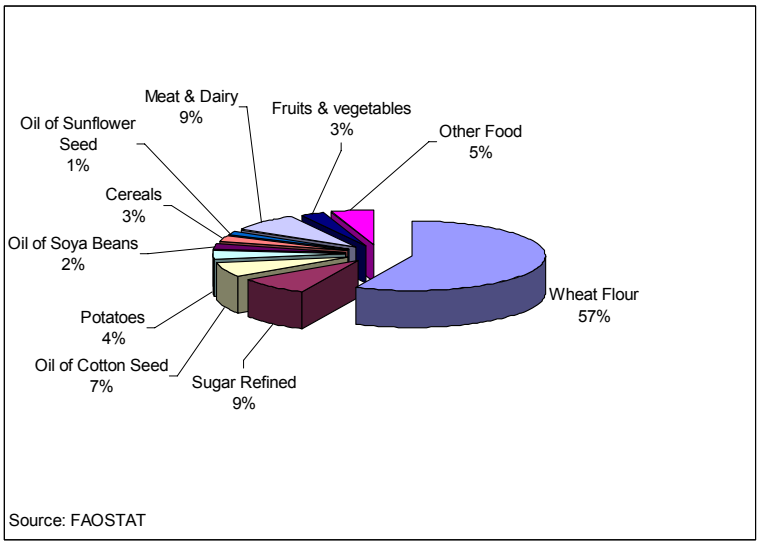
Prior to its independence, a main reason for cultivating wheat was for the fodder production. Wheat was grown mostly on marginal lands with limited inputs and poor seed quality. Wheat for human consumption was therefore largely imported in exchange for cotton. After independence, however, the country's need for imports grew while the outbreak of war also brought about a partial collapse of the domestic production system, infrastructure and transport network. Improved political stability towards the late 1990s brought about a modest but short-lived recovery in wheat production. Drought in 2000 and 2001 reduced production again, and confronted the country with a sharp rise in prices and led to the first major food crisis since its independence.

Domestic production resumed its recovery again in 2002 with a return of favourable weather conditions and a rapid expansion in planted area. In 2005, wheat production exceeded 700 000 tonnes, the second highest since the independence in 1991. However, poor quality seeds (old varieties that are susceptible to diseases), deteriorating machinery, inadequate access to credits and other inputs, as well as the fact that prime irrigated land is devoted mostly to growing cotton, have kept wheat yields at low levels and limited the growth in wheat production. Wheat farmers do not benefit from any government support or subsidies *per se* and there is no explicit intervention, safety-net or insurance scheme policies in place.

[11] More detailed information on the implicit tax system is contained in a recent discussion draft paper by the World Bank (PP 38-39). The paper is expected to be published in November 2005. World Bank, Priorities for Sustainable Growth: A review of Agriculture Sector Development in Tajikistan, Discussion Draft, 2005.

Wheat consumption accounts for nearly three-fifth of the total calorie intake in Tajikistan. In recent years, per caput food consumption of wheat has increased and it is currently estimated at around 150kg; up 40kg since the mid-1990s but still some 10-20kg below the levels during the Soviet period. Wheat is consumed mostly in the form of bread as a part of any meal if not the main course. Non-food utilization of wheat (mainly for animal feed and spirit production) is not significant but post harvest losses are considered as high, to the tune of 20 to 25 percent of the production in some years.

Graph 1: Tajikistan: Food Consumption (calories/caput/day)



2.4 LOW QUALITY FLOUR AND TOO MANY SMALL MILLS

According to a recent study by the Asian Development Bank[12], before its independence, Tajikistan had 17 classical mills with capacity from 75 up to 550 metric tonnes of wheat flour per day (mt/d). Most of the large millers have failed to operate since independence as a result of problems associated with deteriorating infrastructure. For this reason production of flour has shifted to smaller or medium sized mills (with less than 150mt/d capacity) which today number more than 1000. Total wheat flour consumption is currently about 780 000 tonnes, or 1 million tonnes in grain equivalent.

Wheat flour produced by domestic mills is estimated at about 333 000 tonnes. As much as 80% of domestic flour output is produced by small “Chinese mills” which, with a limited capacity of only 1mt/d, produce mostly second/third grade quality flour. Higher quality flour is produced only by larger mills, mostly run by the State Unitary Enterprise (company) "*Galla*", which produce about 75 000 tonnes, of which 76% is considered to be fortified flour. This is considered an extremely low ratio, given the importance of wheat in Tajik’s staple and that per caput consumption of bread and bread products in

[12] Asian Development Bank, Country Project Office (Project JFPR-9005-Tajikistan), 13 January 2005.

Tajikistan exceed the recommended norms by a notable margin[13]. Based on information provided by *Galla,* currently less than 50% of the State's owned mills throughout the country are producing flour. In the capital city, *Dushanbe*, for example, only 20% of the *Galla* owned mills are currently in action.

2.5 THE ROLE OF LIVESTOCK

While the meat consumption level in Tajikistan is relatively low (about 5% of the total daily calorie intake), the livestock sector, comprising of mostly dairy cattle, yaks and Karakul sheep, is considered to play a critical role as a source for revenue and asset accumulation by the rural poor. Based on a recent joint FAO/WFP study, productivity of livestock remains low because of feeding problems (e.g., in average 1500 kg of milk per year per head)[14]. A recent national survey (by Action Against Hunger) also indicates that most private livestock owners have inadequate access to fodder.

Based on a recent food security and vulnerability survey (WFP, 2004), for the men, income from livestock sales account for as much as 50% in *Sughd*, followed by 49% in *DRD* and *GBAO*, and 45% in *Khatlon*[15]. Livestock sales are also important source of income for the women, especially in *GBAO* (67%) and *DRD* (22%). Almost all of the communities reported owning cattle, ranging from 90% in the *DRD* sample to 99% in *Sughd* while oxen were also found in most communities[16]. Donkeys were found in every community in *Khatlon* but only in two-thirds of the *GBAO* communities. Horses were found in 60% of the communities, ranging from only 25% in the *GBAO* sample to 82% in the *Khatlon* sample. Yaks were found in only 20% of the sampled communities – 14% in *Sughd* and 23% each in *DRD* and *GBAO* regions[17].

3. TRADE AND TRANSPORT

- Country's access to world markets is constrained by its geography
- Cotton is the main agricultural export and wheat and wheat flour are the leading food import
- Trade is mostly private and the number of wheat traders has grown rapidly
- In spite of low import tariffs on wheat, informal trade has grown sharply

During the Soviet era, Tajikistan used to receive large transfers in the form of financing and food (mostly wheat) in exchange for exports of mostly raw cotton, fruits, vegetables, and aluminum. As a landlocked country, access to outside markets was mainly through

[13] According to Goscomstat, the average daily calorie intake in 2004 was around 2071 Kcal per capita (and 2023 Kcal per capita in the first quarter of 2005), only slightly lower than 2100 Kcal per day recommended by the World Health Organisation (WHO). In the same period, consumption of bread and bread products exceeded the approved "healthy norm" by 16% and amounted to 38Kg per capita for the first quarter in 2005 per household.

[14] WFP-FAO. 2005. *Special Report: Crop and Food Supply Assessment: Tajikistan*. Rome

[15] WFP. 2005. *Household Food Security and Vulnerability Survey in Rural Tajikistan: November 2004*. ODAV(VAM) Report. Rome, p 3.

[16] Ibid. p 25.

[17] Ibid. p 4.

Uzbekistan. Tajikistan still imports more than 50% of its food (mostly wheat) but those imports are now paid for and are mostly on commercial terms. As far as the outlet for trade is concerned, little has changed since independence and access to foreign markets, for imports as well as for exports, is still mainly through neighboring Uzbekistan.

3.1 FOOD IMPORTS

Today, major food items imported include wheat and wheat flour (the greatest share), sugar, vegetable oil, tea, meat, and flour products (macaroni, noodles, bread, cakes, and pastries). Tajikistan continues to rely on imports of wheat and wheat flour because its own production does not suffice.

Privatization, political stability and rising incomes have fueled demand for higher quality imported flour in recent years. This is one reason for the surge in purchases of wheat flour from Kazakhstan in spite of the rise in domestic production. Very little of the domestic produce actually reaches main urban centers as most of production is consumed at source. Lately, imported wheat flour accounted for more than 50% of domestic flour consumption. Most of the imports are of Kazakh origin (from 5-6 large mills in that country), some from Uzbekistan and a small amount from Kyrgyzstan. Reflecting this surge in demand for quality grains, the number of private traders engaged in importing wheat and wheat flour has increased sharply, from about 20 in 2000 to 85 in 2005[18]; mostly as medium size shop owners and large scale agents acting as middlemen for retailers. In addition, three State and Corporate entities also account for large amount of wheat and wheat flour imports: the State Enterprise "*Galla*", joint-stock company "*Somonien*" and joint-stock company "*Nonpaz*".

The rise in informal trade has boosted imports of wheat flour as opposed to imports of wheat (grains). Wheat is imported through the well controlled rail system and its imports are therefore subject to the established duties. Relative to wheat flour, import demand for wheat is also lower because of the high cost and low quality of domestic milling. On the other hand, wheat in the form of grains can be kept longer than wheat flour and for this reason imports of flour do not fully replace imports of grains. In addition, grains are also used for the production of spirit (alcohol for human consumption) and this makes imports of higher quality grains still attractive.

3.2 MAIN EXPORTS

Cotton is the main cash (commercial) crop and the most important export commodity. It is mostly grown in three irrigated valleys of *Vakhsh*, *Kofarnihon*, and *Zeravshan*. The increased world prices at the start of the decade provided a boost to domestic cotton production and exports. However, the slide in cotton prices since late 2003 have raised some concerns about the country's over dependence on this commodity. The cotton sector could be regarded generally as uncompetitive. In addition, its input supply and exports are heavily controlled by several investors from the private sector with privileged ties to central and local authorities. As a result, farmers are often overcharged for inputs

[18] Based on discussions with grain merchants and local officials.

and underpaid for their output. This has lead to an excessive accumulation of debt, to the tune of $ US 180 million according to recent estimates. The burden of this high debt rests mostly on farmers, who are generally poor, have no alternative sources of credit, no control over land and are obliged to allocate up to 70% of their irrigated arable land to cotton or else may see their land seized by local authorities[19].

Tajikistan produces more high-quality fruit and vegetables than it consumes. Horticulture has a traditional role in Tajikistan. Most orchards and vineyards are located in the northern valleys, where apricots, pears, plums, apples, cherries, pomegranates, figs, and nuts are grown. Nearly 90% of domestic production is available for exports but most of the fresh produce must be sold in a short time and often at low prices because of a lack of proper storage and cooling facilities. Major problems also face the food processing industry where most traditional linkages with large farms remain weak. The sector also suffers from a lack of capital investments to modernize. The potential for exports of fruits, vegetables and processed food through the neighboring countries is constrained by tariffs and non-tariff barriers as well as political tensions. The continuing delays associated with long border controls (blamed on recurring political tensions with Uzbekistan) hamper the quality of fresh products in particular. At the same time, the main market for Tajikistan's fruits and vegetables is the Russian Republic, which is a fast growing market where rising vertical integration and the spread of supermarkets has greatly reduced the competitiveness of high-cost food products from Tajikistan.

3.3 TRADE POLICY

Tajikistan has a relatively open trade regime, with an average import tariff of 8% and no export taxes or significant non-tariff barriers (Annex III provides a snapshot of the evolution of the overall trade regime). In 1996, the country lifted the monopoly on cotton exports but exports of cotton fiber are subject to a 100% prepayment requirement. Tajikistan has also been actively pursuing regional trade partnership. While many of those are still at an incipient stage, the main one is the Euro-Asian Economic Community (EAEC) which includes Belarus, Kazakhstan, the Kyrgyzstan Republic, the Russian Federation, and Tajikistan. The aim of EAEC is to create a customs union by end-2006.

Imports of wheat and wheat flour from the EAEC countries are equal and subject to 20% Value Added Tax (VAT) and 0.15% custom fee. Imports from outside EAEC are subject to an additional 0.5% custom duty. However, very little, if any, wheat or wheat flour is imported from outside EAEC. While these duties have been in place since the late 1990s, until very recently, only a small fraction of them were levied on imported wheat at the invoice value, which was usually undervalued by traders.

In more recent times, the Custom authorities seem to have succeeded in strengthening its control on declared export prices. This, however, has also given rise to unofficial imports in the form of large volume of wheat flour being smuggled into the country, mainly on

[19] World Bank. Discussion Draft, 2005.

trucks across the border from Uzbekistan[20]. The movement of wheat flour takes place at several points across the long (1,161km) Tajikistan-Uzbekistan border but the *Khujand* route is considered as the principal hub. For this reason, wheat flour prices in *Istravsha,* which is *Khujand*'s closest market to the border with Uzbekistan, are the lowest in the country.

3.4 TRANSPORT

- Poor road network and railway system
- Private-owned trucks are vital to the domestic food distribution system
- Weather plays an important role in internal trade. The railway system plays a critical role in external trade
- Most food aid is transported by rail from the Baltic seaport of *Riga*

Tajikistan is a landlocked country with restricted access to world markets. Internally, a lack of proper investment has resulted in an extremely inefficient and costly transport network, an added obstacle to the smooth flow of trade. The domestic freight traffic is characterized by highly competitive small operators and food is generally transported on private (driver-owned) medium-sized trucks (10-15 tonnes). Government role in domestic trucking is relatively small although, legally speaking, trucks are subject to safety controls and the drives must pay a special patent fee for driving trucks. Neither the Government nor any group of transport companies currently appear as enjoying a dominant role in the domestic trucking network.

The main North-South road connecting the *Sugd* region (the city of *Khujand* in the north where most of agro-processing output originates), to where most people live (in the capital city *Dushanbe* and in the southern parts) is closed in the winter because of snow. During this period, goods must be transported through Uzbekistan, a factor that adds substantially to transport costs. Trucks are the main mode of food transport across the country. Most trucks can carry up to 13 tonnes of food or about 260 bags of wheat flour (in bags of 50kg) but they are old and inefficient (with very high fuel consumption between 60-70 liters of diesel per 100km) and this also raises the cost of transport – the estimated cost of transporting one fully loaded truck containing wheat flour from *Istravsha* (the main market in the north) to *Dushanbe* was estimated at about S1200 (or roughly US $ 400) per truck.

The railway system is small, less than 500 Km, but it connects several of the main towns to railways network in Uzbekistan. A recent review of the country's railway system demonstrates its vital role in the Tajik economy with over 80% of trade (exports and imports) using trains and a large portion of food imports (grains and flour) relying on the railway system (Tables 1 and 2)[21]. The most predominant routes are the central line from

[20] These imports are unrecorded and according to some local experts such imports could represent as much as 70% of total imported wheat flour into the country.
[21] Feasibility Study of measures for the rehabilitation and renewal of the freight wagon fleet of Tajik Railways – DRAFT (September 2005), p.6-7.

Patahabad at the Uzbekistan border to *Yangibazar* (via *Dushanbe*) which represents around 48% of total import-export freight traffic; the northern line, from *Bekabad* to *Kanibadam* (via *Kudjand*), which covers 33%; and the southern line, from *Hashidy* at the Uzbekistan border to *Kulyab* (via *Kurgan Tyube*), which handles 19%. This pattern also reflects the location of the main industrial and agricultural activities: the main industrial site, the aluminium smelter, is located in *Tursunzoda*, west of *Dushanbe*, while the main cotton growing areas are located in central and northern parts of the country.

Table 1 - Volume loaded/unloaded during the year ('000 tons) by commodity From Tajik Railways

Commodity group	Volume loaded / unloaded during the year ('000 tons)					
	1999	2000	2001	2002	2003	2004
Export						
Aluminium	226,1	278	289,8	307,2	319,2	344,3
Cotton	109,7	88,4	83,7	137,6	149,7	130,3
Fruits and Vegetables	30,4	44,6	49,5	55,7	49,2	57,9
Scrap metal	4,8	10,1	19,8	81,2	28,4	2,1
Other foodstuff	30,1	77,7	122,2	124,3	104,9	87,9
TOTAL	401,1	498,8	565	706	651,4	622,5
Import						
Alumina	457	542,8	539	606,2	511,2	667,1
Petroleum products	428,1	338,5	434,4	434,6	685,4	596
Fertilizer	55,3	84,2	97,3	88,9	115,3	148,9
Cement	75,9	99,8	92	44,5	45,5	157,5
Grain	337,6	364,6	357,1	293,5	159,8	145,8
Flour	131,8	115,9	206,4	239,6	279,5	256,8
TOTAL	1485,7	1545,8	1726,2	1707,3	1796,7	1972,1
TOTAL IMPORT+ EXPORT	1886,8	2044,6	2291,2	2413,3	2448,1	2594,6

Table 2 - Freight distribution within Tajikistan – (000 net tonnes)

000.net tons	1997		1998		1999		2000		2001		2002	
Rail	13194	82,6%	12706	76,9%	11638	80,5%	13102	82,3%	12714	83,8%	11777	84,0%
Road	2773	17,4%	3802	23,0%	2815	19,5%	2815	17,7%	2463,3	16,2%	2236,8	16,0%
Air	4	0,0%	4	0,0%	2	0,0%	2	0,0%	2,5	0,0%	2,4	0,0%
Total	15971	100%	16512	100%	14455	100%	15919	100%	15180	100%	14016	100%

Source: Tajkistan National Statistic (2003)

3.5 FOOD AID LOGISTICS

In terms of the volume of food aid delivered or distributed, the two leading food aid agencies in Tajikistan are the World Food Programme (WFP) and CARE. Based on information supplied by WFP, food commodities imported as food aid are transported by rail from the Baltic seaport of *Riga* directly to three main Extended Delivery Points (EDPs) in Tajikistan: *Kurhan-Tyube* in the South, *Khujand* in the North and *Dushanbe* for the central part. WFP maintains a warehouse in *Dushanbe* in addition to transshipment warehouses in *Khorog* and *Vanj* (*Vanj* will be reallocated to *Darwaz* starting November 2005). The total storage capacity of all warehouses is 18,500 tonnes which can be increased if needed. Commercial trucking companies are used to transport food to final distribution points. Since transport routes to *GBAO* are closed during winter, food for this mountainous region needs to be pre-positioned. Regional purchases of cereals in Kazakhstan have proven to be cost effective in terms of competitive pricing of

lower external transport costs, and faster delivery to Tajikistan. Iodized salt, however, is purchased through local suppliers within Tajikistan.

CARE-Tajikistan is the lead agency for importing food aid commodities (largely wheat flour and vegetable oil) from the United States[22] to Tajikistan with its counterparts, Mercy Corps and Save the Children (US). Food commodities are transported from the United States to Tajikistan via European ports (*Rotterdam* and *Bremerhaven*) and the port of *Riga* (Baltic Sea) and *Poti* (Black Sea) and then by rail to Tajikistan. Food aid commodities are then stored in CARE warehouses located in *Dushanbe*.

[22] Under the Fiscal Year 2004 U.S. food related humanitarian programme in Tajikistan, the U.S. provides the Government of Tajikistan with 2,000 metric tons of wheat seed and 17,500 tonnes of food commodities that are sold to support poverty alleviation and income generation projects.

PART II: REGIONS AND MARKETS

4. REGIONS

- Tajikistan is divided into 4 administrative regions plus the country's Capital
- All regions are often in a food deficit situation
- Seasons (weather) play an important role in food distribution in the country

Tajikistan is divided into 4 regions (or *viloyatho* in Tajik and *Oblasts* in Russian) and one independent city, which is the National Capital *Dushanbe*. The regions are i) *Sugd*, the main industrial center in north; (ii) *Khatlon*, which is the country's main cotton and wheat growing area; (iii) the *Regions under Republican Subordination (RRS)*, which represent the stronghold of the country's main aluminum smelter; and (iv) *Gorno-Badakhshan Administrative Oblast (GBAO),* which is a sparsely-populated mountainous region. While *GBAO* covers almost 40 percent of the country's territory, it is ill suited to both agriculture and industry[23].

Table 3: Regions at a glance

Regions	Population*	Poverty** Level	Area (km.^{2})	Centers ***
Sugd (north)	2 million	64 %	26,100	Khujand (Leninabad)
Khatlon (southwest)	2.4 million	78%	24,600	Qurghonteppa (Kurgan-Tyube)
RRS or DRD, Regions under Republican Subordination (central)	1.5 million	45%	28,400	
GBAO, Gorno-Badakhshan Autonomous Oblast (east/Pamir mountains)	217 000	84%	63,700	Khorugh (Khorog)
Dushanbe (central)	600 000	49%	300	Dushanbe (Stalinabad) – National Capital

* Population projections for 2005

** Poverty estimates refer to 2003. Defined by World Bank as share of population living below US $2.15 PPP per capita per day (source: World Bank. 2005. *Republic of Tajikistan Poverty Assessment Update*. Report No. 30853-TJ. 97).

*** Modern name in Tajik (old Soviet name in parentheses)

[23] A recent administrative map of Tajikistan is provided in Annex II.

4.1 WHEAT PRODUCTION PATTERS BY REGION

Sugd has a diverse agricultural land, ranging from highly productive to infertile and saline. Some 20% of the country's wheat area is also located in this region. Eastern parts however tend to suffer from poor market access. According to latest *Poverty Assessment Update* by the World Bank, higher cotton prices coupled with some industrial recovery have given some rise to income and lowered poverty levels in this region (in 2003)[24].

Table 4: Wheat Production in Sugd[25]	Dry land farming	Irrigation
Sown area (ha)	19 485	33 335
Potential yield production (t/ha)	0.3 - 0.6	4
Average yield production (t/ha)	0.2 - 0.6	1.2
Average sowing date	18 – 24 October	16 - 30 October
Average flowering date	12 June	13-28 May
Average harvesting date	8 - 29 July	17 - 28 June
Average irrigation (mm). Method	-	1700-1900 m3/ha. Method of furrow irrigation
Representative locations	Sakhristan	Pendjikent
Farmers access to credit and inputs (fertilizers, seeds,…)	Low	Low

Khatlon is the country's main cereal and cotton producing region. The region accounted for more than half of the country's cereal production in 2005. The increase in cotton prices between 1999 and 2003 resulted in higher income and some reductions in poverty levels although the region's per capita GDP ranked among the lowest.

Table 5: Wheat Production in Khatlon	Dry land farming	Irrigation
Sown area (ha)	62 261	696 640
Potential yield production (t/ha)	1	5
Average yield production (t/ha)	0.5 - 0.6	1.1
Average sowing date	18 October	4 - 30 November
Average flowering date	12 May	15 May
Average harvesting date	-	-
Average irrigation (mm). Method	-	1 500 - 1 800 m3/ha Method of furrow irrigation
Representative locations	Dangara	Vaksh
Farmers access to credit and inputs (fertilizers, seeds,…)	Low	Low

RRS registered higher inputs and improved irrigation networks than elsewhere. It also benefits from better access to urban centers. The region accounts for the bulk of the country's potato and vegetable output as well almost 25% of wheat production. In the World Bank's view, while the region experienced the lowest rate of per capita GDP

[24] World Bank. 2005. *Republic of Tajikistan Poverty Assessment Update*. Report No. 30853-TJ, page ix.

[25] FAO, Asian wheat producing countries: http://www.fao.org/ag/AGP/AGPC/doc/field/Wheat/asia/tajikistan.htm#institutes\

growth, it witnessed the highest rate of poverty reduction and the lowest level of inequality, most likely because of the dominance of non-cotton agriculture and the fact that under recent reforms farmers could "reap the benefits of security and macroeconomic stability and to increase their incomes just above the poverty line".
Dushanbe is the National Capital where the country's largest food markets are located. While *Dushanbe* enjoys twice the national average per capita GDP and benefits from generally better infrastructure and a transport network system than most other parts of the country, the rate of extreme poverty and inequality was still very high in 2003.

Table 6: Wheat Production in Dushanbe and RRS	Dry land farming	Irrigation
Sown area (ha)	19 078	31 907
Potential yield production (t/ha)	1.5 - 2.5	5
Average yield production (t/ha)	0.7 - 0.9	0.9
Average sowing date	27 October - 27 November	27 October - 27 November
Average flowering date	13 - 18 May	10 - 30 May
Average harvesting date	15 - 20 June	10 - 16 June
Average irrigation (mm). Method	-	1800 - 2000 m3/ha
Representative locations	Rushdskaya	Gyssar
Farmers access to credit and inputs (fertilizers, seeds,…)	Low	Low

GBAO is a sparsely-populated mountainous region with sparse arable land. Potato is the main agricultural crop in this region. Aid programmes play an important role in *GBAO* and while poverty seems to have dropped, migration (of the extremely poor) was considered as an important factor. Few mountain roads connect *GBAO* to the Capital *Dushanbe* but these roads are often not operational between November and April because of snow.

Table 7: Wheat Production in GBAO	Dry land farming	Irrigation
Sown area (ha)	-	5 359
Potential yield production (t/ha)	0.3	2
Average yield production (t/ha)	-	0.8
Average sowing date	-	16 September - 24 October
Average flowering date	12 May	2 - 20 June
Average harvesting date	-	12 - 30 July
Average irrigation (mm). Method	-	1 800 - 2 000 m3/ha Method of furrow irrigation
Representative locations	Khorog	Khorog
Farmers access to credit and inputs (fertilizers, seeds,…)	Low	Low

4.2 ALL REGIONS ARE FOOD DEFICIT

Although some regions produce more food than others, all regions in Tajikistan are food deficit most of the time in any given year. For example, based on the latest assessment of the cereal situation for the current marketing season, *Sugd* is the region with the largest

deficit, followed by *RRS* and *GBAO*. Even the main producing region of *Khatlon* is expected to experience some deficit 2005/06 marketing season, as shown in Table 8

Table 8 - Cereal balance sheet by region in Tajikistan for 2005/2006 Marketing Year

Regions	Cereal Production ('000 MT)			Cereal Required ('000 MT)			Surplus OR Deficit (-)
	Main Crop	Second Crop	Total	For human	Seed use	Losses & feed for animals	
Sugd	185	10	**195**	305	22	22	(-) 154
Khatlon	377	65	**442**	362	38	45	(-) 3
RRS	161	19	**180**	227	16	21	(-) 84
GBAO	17	0	**17**	33	2	3	(-) 21
Tajikistan*	**740**	**94**	**834**	**1019***	**78**	**91**	**(-) 354**

Source: Draft FAO/WFP Crop and Food Supply Assessment, Special Report, October 2005

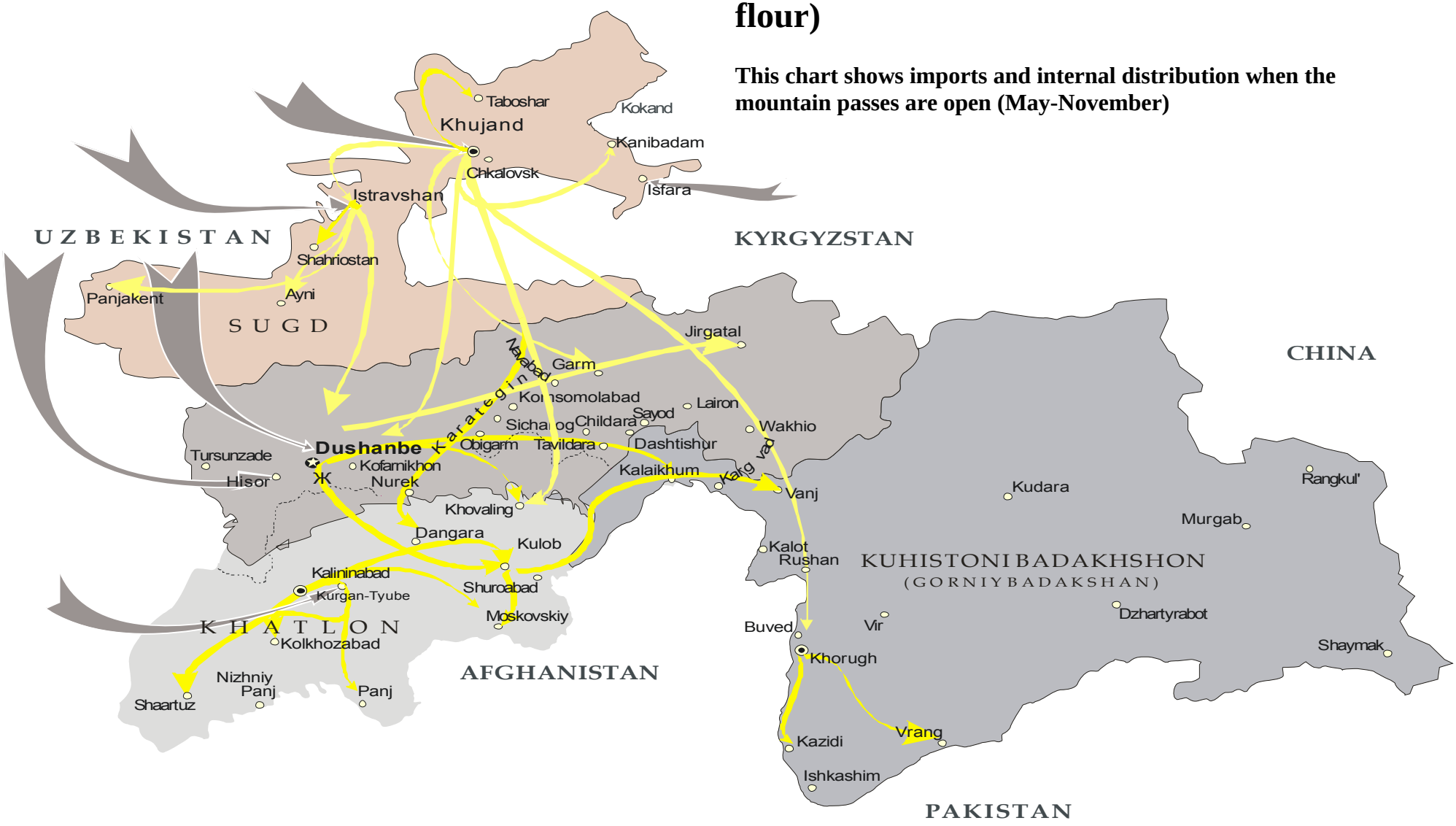
For this reason, imports (commercial and/or in the form of food aid) always play an important role in augmenting domestic supply and covering for shortfalls. In addition, geography also plays a critical role. While the vicinity of northern, central and western parts of the country to food entry points from Uzbekistan often facilitates access to markets in those areas, food markets in some of the southern and eastern parts of the country are constrained by their long distances from the main food distribution centers, higher prices due to transport cost and seasonal factors.

Maps 1 and 2 below illustrate the origin and flow of wheat and wheat flour imports as well as the internal distribution between regions and markets. The first map indicates how food is moved when the mountain passes are open while the second map shows food flows during the winter period when the main mountain passes are closed.

FOOD MAP 1

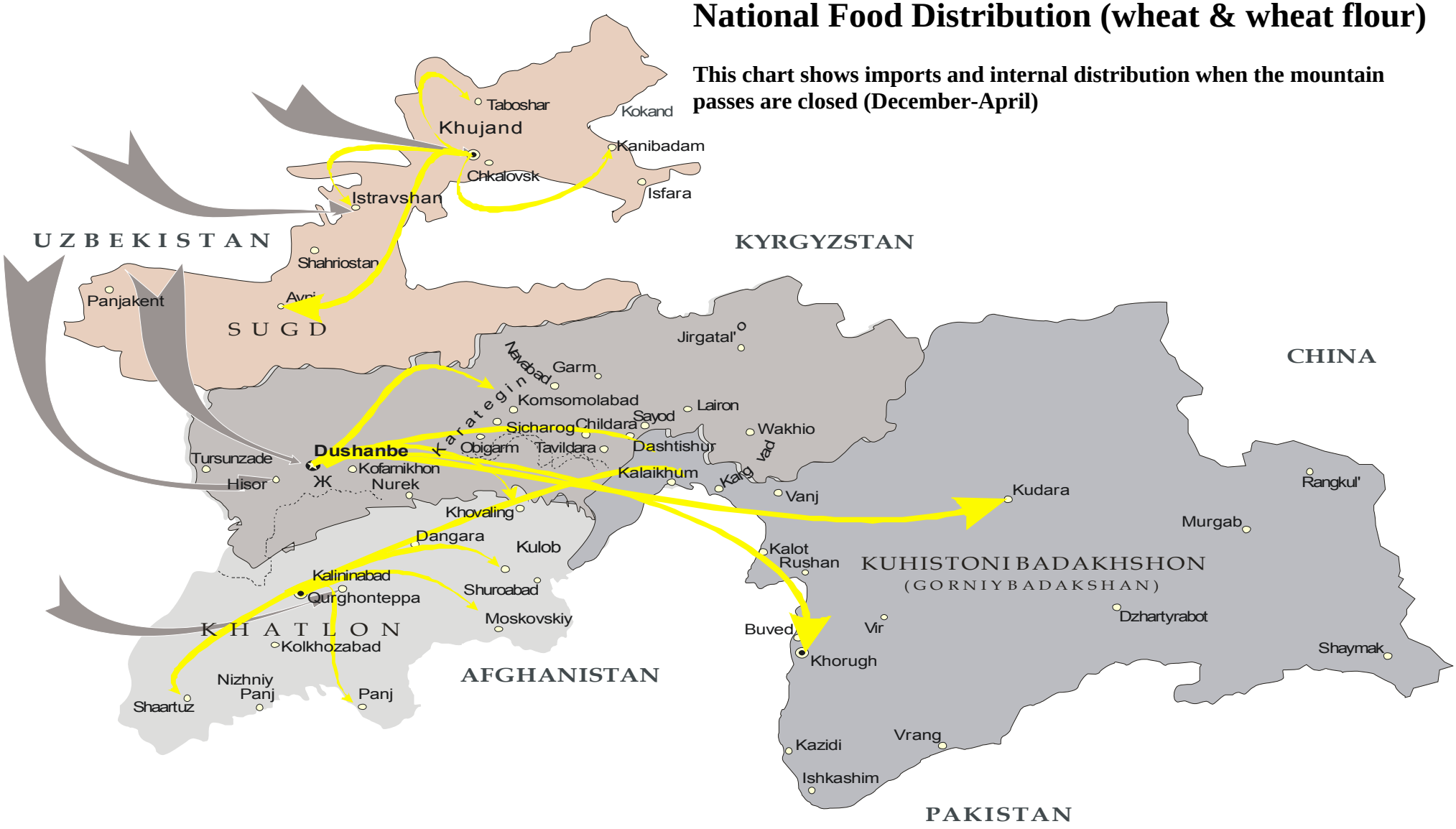
National Food Distribution (wheat & wheat flour)

This chart shows imports and internal distribution when the mountain passes are open (May-November)



FOOD MAP 2
National Food Distribution (wheat & wheat flour)

This chart shows imports and internal distribution when the mountain passes are closed (December-April)



5. FOOD MARKETS

- In each region there is at least one major food market
- Food prices (wheat flour) are lowest in markets near the main entry (import) locations
- The difference in prices across markets is mainly due to transport (fuel) charges
- Per capita food availability has improved considerably since 2002
- Sharp falls in food aid in recent years have been compensated by a surge in commercial imports

For this mountainous and landlocked country, markets and trade form an integral part of its history in spite of 70 years of Soviet rule. Tajikistan is home to three major "Silk Road" routes along which some of the country's most ancient bazaars have come and gone. These routes which run through its present day territory are among the world's oldest and represent historically the most significant trade routes, not only for silk but also for gold and agricultural commodities. The origins of the markets known as *bazaars* alongside the trade routes go back to the ancient period of the Persian dominance.[26] The central role of *bazaars* in today's Tajikistan is very much evident in the name given to its Capital *Dushanbe,* meaning "*Monday*" in Tajik which signifies the opening day of the city's main *bazaar*.

Given the poor status of available statistics, it is difficult to describe with any great precision the structure of the primary food (wheat and wheat flour) supply chain. Based on data from *Tajikmatlubot* and information collected on the field trips, the number of wheat retail and wholesale entities appear to range from 30 to 50 units in large food markets and 5 to 10 units in smaller food centers. More recently, however, domestic conditions seem to have become more conducive to market concentration. This has lead to the rise of 5 to 8 large-sized domestic grain companies. Although the extent of this concentration is still limited, the larger companies are becoming more influential in domestic marketing of wheat in and around the country's major urban centers.

There are several major food markets in present day Tajikistan. For the purpose of this study, some of the largest and most important ones were visited (October 2005). The primary objective of the visits was to collect information on market prices and domestic distribution of wheat and wheat flour. The visits covered nearly all regions except for some in eastern parts of the country

[26] Markets were originally referred to as "*Vakar*" before being transformed to "*Al bazaar*"; the latter entered through the French language to other European languages in that form.

where for logistical reasons, as well as time limitations, field trips were not possible. However, this report benefited from valuable information provided by the Aga Khan Foundation and German Agro Action, the two leading NGOs in Tajikistan with active programmes in the areas which could not be visited.

A summary of the main findings about the major markets in Tajikistan is provided below followed by a brief statistical analysis, presenting some preliminary results about the degree of market integration in the country.

5.1 MARKETS IN *DUSHANBE (HISSAR)*

The largest retail and wholesale food markets in *Dushanbe* are located in *Hissar*, about 22 km west of the Capital. Food markets in *Hissar* are among the most important in the country, especially for wheat and wheat flour. Grains sold in *Hissar* markets originate from the surrounding farms but imported wheat and wheat flour from Kazakhstan and Uzbekistan are also sold in *Hissar*. Large supplies of imported wheat flour in 2005 had put some downward pressure on wheat prices compared to previous year although prices remain generally high due to strong demand. At the time of the visit, the price for 50Kg bag of wheat flour (second grade quality) was around 43-45 Somoni (or US $ 13-14) while for first grade, the price was slightly higher, 46-47 Somoni.

5.2 MARKETS IN *KULYAB* (*SEMONI* AND CENTRAL)

Most of the grains sold in the two leading *Kulyab* markets (some 200km south of *Dushanbe*) come from local farms. During the fall-winter period, wheat flour sold in *Kulyab* originates mostly from the capital *Dushanbe*, mainly from the wholesale market of *Hissar*. During the summer period, food also comes from *Sugd* in the north. Wheat flour prices in these markets were slightly above those in *Hissar* and the difference was largely associated with transport costs. At the time of the visit, wheat flour of the first grade was selling at 48-50 Somoni (50kg bags) and slightly lower for the second grade (at 45-46 Somoni). While these markets also supply some food to the mountainous region of *Pamir* in *GBAO* during the summer period, quantities are often not very large as transaction concern mostly small retail deliveries. The wholesale market originates mainly from *Hissar* or further north, directly from *Khujand*. Most of the wheat flour sold in these markets was imported. Poor quality of domestic wheat (in part due to inferior seed), high cost of production and low processing of the domestic milling factories has left domestic flour out of favour and uncompetitive.

5.3 MARKETS IN *KHUJAND* (*PANJSHANBE, GULISTON, ISTRAVSHA)*

Panjshanbe (literally meaning *Thursday* in Tajik) is one of the biggest food markets not only in the northern part of Tajikistan (one hour flight from Dushanbe) but in the whole country. This large covered market was built in the 1950s and consists of two floors; with the ground floor mostly for food and the second floor for other essential commodities. *Panjshanbe* supplies food to *Khujand*, over 45 surrounding villages and two districts of *Jabbor Rasulov* and *Bobojon Gafurov*. The retail and wholesale *Panjshanbe* markets are not far from "*Guliston*" which is a smaller market. Wheat flour prices (50kg bag) in both markets were about 3-5 Somoni lower than those in *Hissar* with the difference corresponding mostly to transport costs.

Istravsha is located about 80 km south east of *Khujand*. The market is in the vicinity of the Uzbekistan border and about 20km away from the rail station. This is a historical market, not far from the famous "silk roads". *Istravsha* is the principal entry point for imports of wheat flour to Tajikistan and for this reason prices in this market are usually among the lowest in the country. Large stocks are kept in *Istravsha* since this is also the country's most important distribution location. Total warehouse capacity in *Istravsha* was estimated at about 10 000 tonnes and at the time of the visit, at least 5000 tonnes of wheat flour seemed available for sale.

5.4 MARKETS IN *KARATEGIN VALLEY*

Karategin Valley is primarily an agricultural-based area situated in the eastern side of *RRS* comprising 6 districts. Information collected by German Agro Action for the period between 2002 and 2004 indicated higher prices than in *Dushanbe* for all imported commodities but lower prices for commodities produced locally (meat and wheat)[27]. Wheat and wheat flour prices were in fact about 13% cheaper than in the Capital. However, one significant aspect of the market situation in *Karategin Valley* has been the exposure of the local producers of certain food commodities to price risks driven by imports of those commodities. A recent example concerns the "potato crisis" in spring 2004 when unusually large imports (mostly from Iran) coupled with an early domestic harvest resulted in a sharp fall in prices in all major markets across the country (40% drop in *Dushanbe*). This forced local potato producers in *Karategin Valley* to sell theirs at lower prices, hence suffering a major income loss.

5.5 MARKETS IN *GBAO*

An important feature of *GBAO,* the vast mountainous region covering eastern parts of the country, is its small and sparsely spread population (some 217 000 people spread over 424 villages). No specific large market has been identified although there are food markets of smaller size in *Khorugh,* the region's center. Based on the 2002 baseline survey of the region by the Aga Khan Foundation, this region suffers from poor food security and high malnutrition. Back in 2002, only 13% of households were considered self sufficient in food staples (potatoes and wheat) and as subsistence farmers, sales of surplus agricultural produce in local markets were limited[28].

6. PRE-CRISIS AND POST-CONFLICT

In Tajikistan, the transition from the centrally planned to market economy has proven exceptionally difficult with the civil war in the 1990s and the food crisis in 2000-01 slowing down the process even further. However, in recent years the economy has begun to show signs of sustained growth to the extent that IMF decided to phase out Tajikistan's status from a *transition* country to a *post-conflict* country and to put it also in the *Base Case Scenario* category – this

[27] The German Agro Action in Tajikistan, "Food Basket and Market prices Assessment in Karantegin Valley", July 2003-June 2004.
[28] The Aga Khan Foundation, "Mountain Societies Development Support Programme, 2002 Baseline Survey of Gorno-Badakhshan Oblast, Tajikistan". Draft Report, Policy and Evaluation Unit GBAO, February 2004.

latter may imply a reduction in financial lending to the country[29]. Since 2002, agricultural output has been on the rise, inflation started to decline resulting in strong real GDP growth that also supported a rapid rise in real wages, household incomes and consumption. Similarly in its food markets, the real turning point towards more normal and therefore *pre-crisis* conditions started in 2002/03, i.e. after the end of a 2-year drought which brought about a severe food shortage and high inflation. In fact, it is more appropriate to refer to the prevailing food market situation in Tajikistan as "post-crisis" rather than "pre-crisis".

Table 9 - Developments in per capita availability of basic foodstuffs[30]

(per capita, kg/month)

	2002	**2003**	**9 months of 2003**	**9 months of 2004**
Bread products (expressed in grain)	13,2	13,1	12,1	12,1
Potatoes	2,3	2,5	2,5	3,0
Vegetables and melons	7,4	6,5	10,3	10,3
Fruits and berries	3,6	2,3	2,6	3,3
Sugar and confectionery items	0,6	0,8	0,7	0,8
Meat and meat products	0,4	0,6	0,4	0,5
Eggs (pieces)	4,5	4,2	4,9	4,8
Milk and dairy products	2	2	2	2
Vegetable oil	0,8	0,9	0,8	0,9

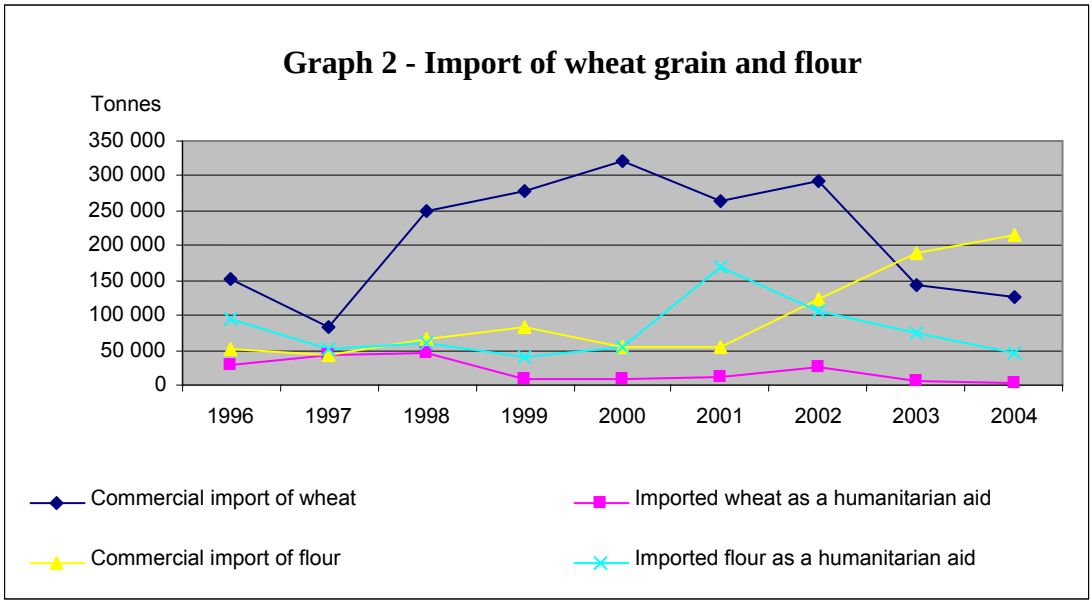
Source: Goscomstat, Household Budget Survey

An additional element pointing to more normal, if not stable, domestic market conditions is the fact that per capita food availability has improved considerably since 2002. A recent report from *Goscomstat* (Table 6) shows that the availability of potatoes, fruits, milk and dairy products as well as vegetable oil increased significantly compared to 2002 and 2003.

Imports play an important role in augmenting domestic food availability. Although in the past the country was a significant recipient of wheat flour donations, the rapid increase in imports of wheat flour has been mostly on a commercial basis (Graph 2). Food aid shipments in the form of wheat flour peaked to almost 200 000 tonnes (in wheat grain equivalent) in 2001/02 but by 2004/05 it had already fallen sharply and based on a recent FAO-WFP assessment, food aid and pledges for 2005/06 could decline even further, to 33,000 tonnes (in wheat equivalent).

[29] Under a base case scenario, Asian Development Bank assistance to Tajikistan would be expected to be about $120 million in 2003-2005, while a high case scenario could raise lending by up to 20%, and a low case scenario would lower lending below the base case by the same percentage.

[30] Shown as Table 6, page 152, in "Food Security and Poverty Information Bulletin", No 4, 2004.



Source: WFP/FAO. 2005. Special Report: Crop and Food Supply Assessment

6.1 FOOD PRICE DEVELOPMENTS

- Recent higher prices have been sustained by strong demand for quality wheat flour
- Domestic wheat flour prices are higher than during the last food crisis in 2000-01 but they move more in line with international markets
- For most food commodities, markets appear fully integrated

Paradoxically, the increase in commercial wheat imports in recent years coincided with improvements in domestic production levels and higher prices. One factor for the rise in prices has been the increase in world prices and in Central Asian markets in particular. The most significant price surge occurred in 2003 and that happened mainly in response to a drop in exports from Kazakhstan, Tajikistan's principal supplier.

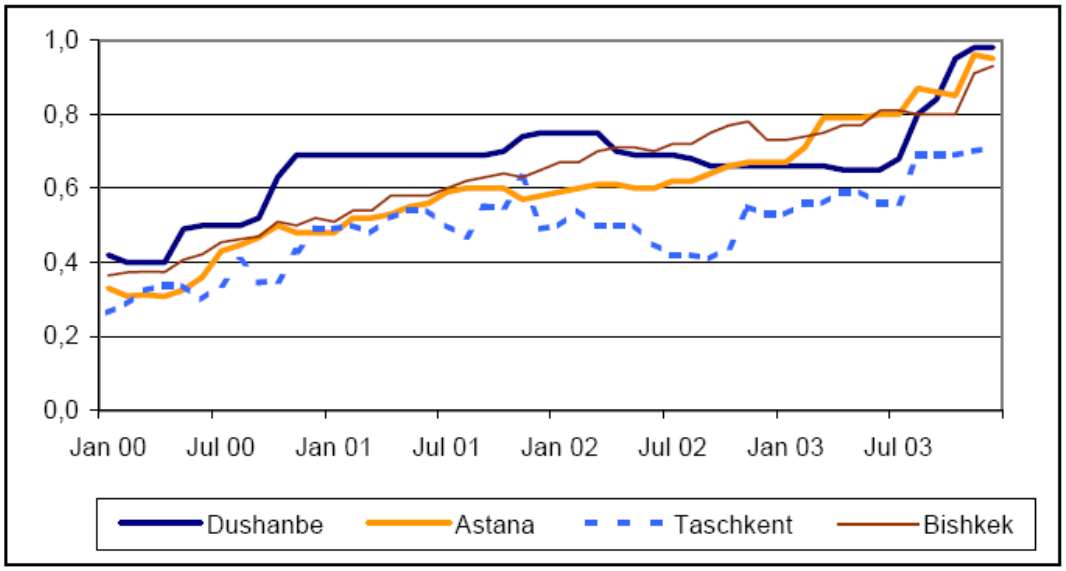
Because of a tight domestic supply situation, Kazakhstan opted for the temporary imposition of export quotas. However, a more sustained rise in prices seems to have taken hold since 2003 and this is a development that is perhaps most influenced by stronger demand driven by higher income levels and rapid changes in preferences for superior quality flour.

A recent study by CARE compares monthly wheat flour price movements in *Dushanbe* to other nearby capitals[31]. The study shows that while prices in *Dushanbe* generally followed a similar path in 2000 and 2001 (the drought years) to those in other major Central Asian markets, they diverged significantly in 2002 and 2003 as they fell below those prices and remained

[31] CARE Tajikistan. Bremer, U. & Noleppa, S. *Tajikistan: Market Analysis - Food Items Fluctuations and Trends, Linkages and Integration.* London.

unexpectedly flat (Graph 3). However, domestic prices moved up during the second half of 2003 just when domestic production and imports had both increased.

Graph 3 - Prices for Wheat Flour (First Quality) in Major Central Asian Cities (2000–2003) (in TJS/kg)



Source: CARE

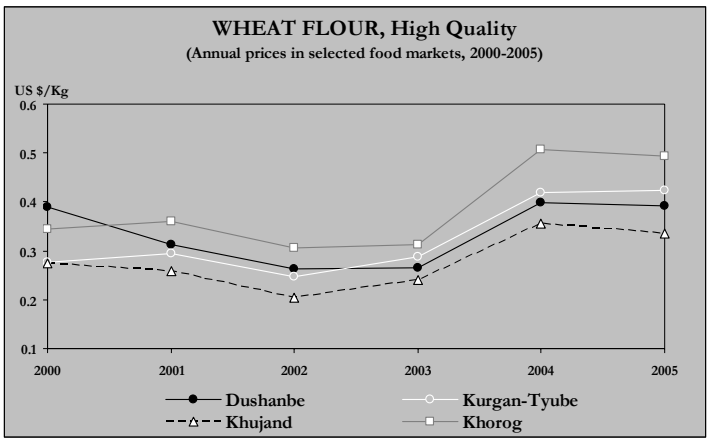
There could be several explanations for the incongruous market price movements observed between 2000 and 2003. The most important is perhaps the reoccurrence of "market failures" which is typical in situations when markets can not bring "efficiency" for one reason or another. Two years of droughts at the start of the decade reduced domestic production but large food aid inflows seemed to have compensated for some of the shortfall and also slowed down increases in domestic prices.

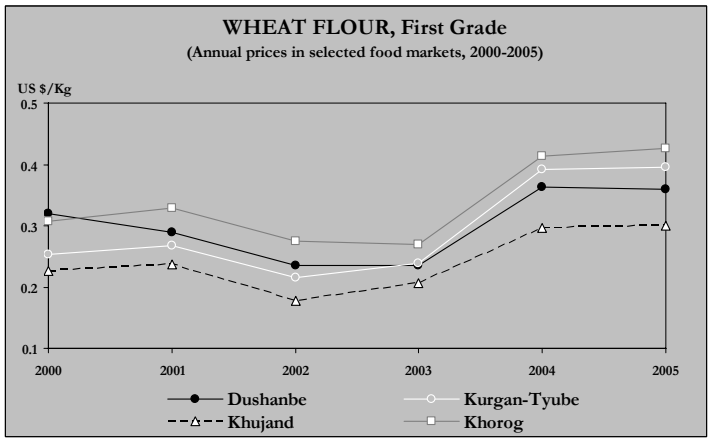
On the other hand, for domestic prices to fall below those in neighboring countries and remaining steady for almost two years between 2002 and 2003, other factors must have been at play. As one would have expected, the recovery in domestic production in 2002 and 2003 helped in easing domestic prices. However, the reasons for prices in *Dushanbe* to first fall below those in other markets and then keep steady (while prices were rising in other markets) are far from clear.

This apparent inconsistency coupled with generally weak price transmission from the world markets into the domestic market was most probably related to a combination of market interventions and a rapid macro-economic adjustment taking place at the same time. In fact, after this interval, domestic prices resumed their increase and again rose above those in other major central Asian markets (Graph 3). Price development since 2003 suggest a gradual emergence of a more "open market" in which price levels correspond increasingly to changes in market fundamentals, both domestic as well as external.

Turning to the domestic market, the increase in prices of wheat flour since 2003 occurred not only in *Dushanbe* but in all major markets across the country (Graphs 3-4)[32]. The differences in prices across the main markets are associated mostly with transport costs: the highest price was always registered in *Khorog,* the most distant market from the principal import distribution center in *Khujand* - where prices were recorded as the lowest. Again, changes in domestic prices seem more consistent in recent years which could be regarded as a sign of improved market integration, explored in more detail below.

Graphs 4-5: Domestic wheat flour prices moving together and rising in recent years





Source for prices: WFP/Tajikistan Database

6.2 MARKET INTEGRATION IN TAJIKISTAN[33]

The concept 'Market Integration' is closely allied to the classical theorem of the 'Law of One Price'. This hypothesizes that price transmission is complete with equilibrium prices of a commodity sold on competitive markets, when converted to a single currency, differing only by transactions costs. The theorem predicts that changes in supply and demand in one market will affect trade and therefore prices in other markets as equilibrium is restored through spatial arbitrage.

In a wider context, market integration refers to the extent of integration of economic agents in the market process. Integration can be assessed through the transmission of price signals, namely through their information content, from one market to another. For instance, markets may not be integrated owing to incomplete price transmission arising either due to trade and other policies, or due to poor transport and communication infrastructure. In turn, this results in a reduction in the information available to economic agents and consequently may lead to decisions that contribute to inefficient outcomes.

[32] Prices used in this report are from the World Food Programme database (WFP/Tajikistan). This valuable database contains weekly prices of major food commodities in all leading markets. The most consistent price data are available from 2000.

[33] The analysis presented in this section is carried out by Adam Prakash (FAO) based on price data provided by WFP.

The concept also assists in shedding light on the dynamics of commodity price determination and can provide an indication of market efficiency, resource allocation and economic welfare.

6.3 TESTING THE INTEGRATION OF MARKETS FOR BASIC COMMODITIES:A PRECURSORY EXAMINATION AND FURTHER ISSUES

Integration within a system of four spatial markets for a set of 6 commodities was tested for using a time-series econometric framework[34]. The results of this analysis are presented in Graphs 6-11. With the exception of bread and wheat grain, markets for all commodities appear fully integrated. That is, prices for the other 4 commodities at any of the four locations, do not behave independently, at least in the long-run, suggesting the existence of a spatial arbitrage process. As for bread and wheat grain markets, there is evidence of some degree of integration, with subsets of prices linked, but the exact nature of the interaction within these commodity markets requires further testing.

The framework does not define the arbitrage mechanism through which prices are equilibrated, but it can indicate which market is the centre of 'price discovery 'for a particular commodity and in what manner information from this market is propagated to the connected markets. The framework also provides a springboard for the analysis of a host of other issues, which can easily be addressed by further econometric testing.

For instance, to what degree do international prices determine domestic prices? As well as identifying whether world prices influence domestic prices, a similar analysis could be undertaken to determine whether prices in neighbouring countries, play a role in influencing prices in Tajikistan. Are price signals propagated rapidly, completely and symmetrically?

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[34] Econometric Framework:

For a market to be referred to as integrated, a prerequisite is that a set of locations share both the same traded commodity and the same long run information. Formally, a market with n geographically distinct locations will be considered integrated if the following two conditions are satisfied (González-Rivera and Helfand, 2001):

1. There must be physical flows of goods connecting all n locations either directly or indirectly; and
2. The n locations must have a corresponding vector of prices: $P_t = \{p_{1t}, p_{2t} \cdots p_{nt}\}$ that can be decomposed as $p_{it} = a_i f_t + \widetilde{p}_{it}$, i = 1...n, and ai≠0, where ft is the integrating factor that characterizes the permanent (long run) component of the price, and $\widetilde{p}_{it}$, is the transitory (short run) component for each location.

The formal testing of market integration (2) can be conducted under the cointegration framework, which is equivalent to requiring the existence of one and only one integrating factor that is common to all series of prices. Since cointegrating vectors and integrating factors are intimately related, the existence of one and only one integrating factor for all prices implies that (i) prices must be cointegrated, and (ii) there must be n-1 cointegrating vectors.

Condition (2) is the common factor representation of a multivariate cointegrated system of prices with n-1 cointegrating vectors. Searching for just one common factor is equivalent to searching for n-1 cointegrating vectors. The search for the largest set of locations that share n-1 cointegrating vectors is conducted in a multivariate framework: the reduced rank VAR proposed by Johansen (1988, 1991).

Analysing the nature of price transmission between markets (domestic and international) can provide an insight about how well markets in the country are functioning.

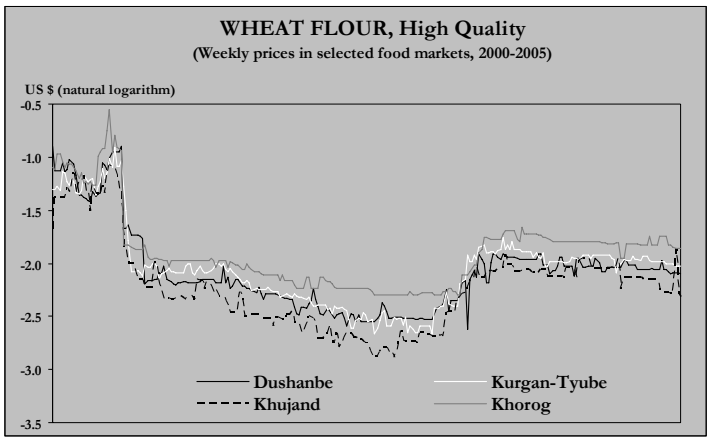
Seasonality was found to be important in affecting the nature of market integration.[35] This is not surprising given the potential of harsh winter weather conditions to constrain product flows. As a further step it would be useful to establish whether or not integration 'weakens' over such periods and to understand how exactly integration is affected season by season.

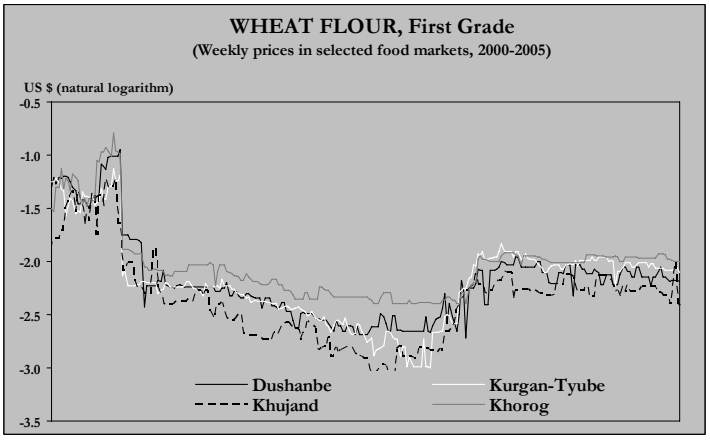
The evolution of market behaviour in a transitional economy is also an important issue for policy makers. In this respect, it would be useful to determine whether the nature of integration has changed over time. For instance, are markets 'more integrated' since the post-crisis period? What impact has the introduction of SMS and mobile phones had on market integration? This is considered as particularly relevant in view of the rapid introduction and growth of mobiles over the past two years in the country and the profound effect of this technology in disseminating information quickly and at low cost.

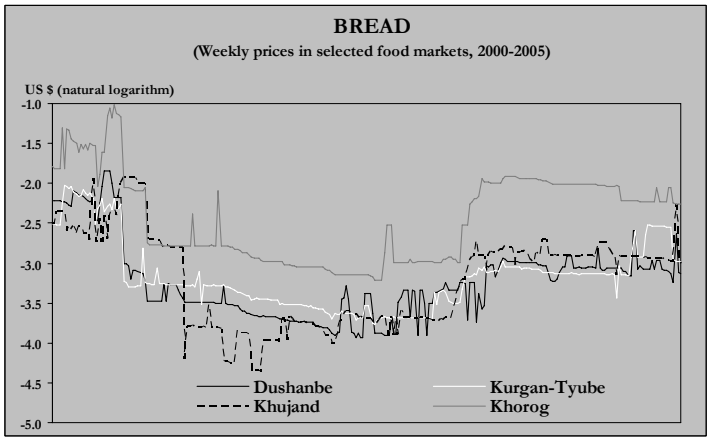
Given the significance of the results so far, a more in-depth investigation of these issues is clearly warranted. The methods that could be employed to shed light on these issues are well-established in the literature and should provide robust answers to them. Not only would addressing the issues provide a greater understanding of 'how markets work' in Tajikistan, but it could provide a benchmark framework for the full assessment of market integration in similar countries.

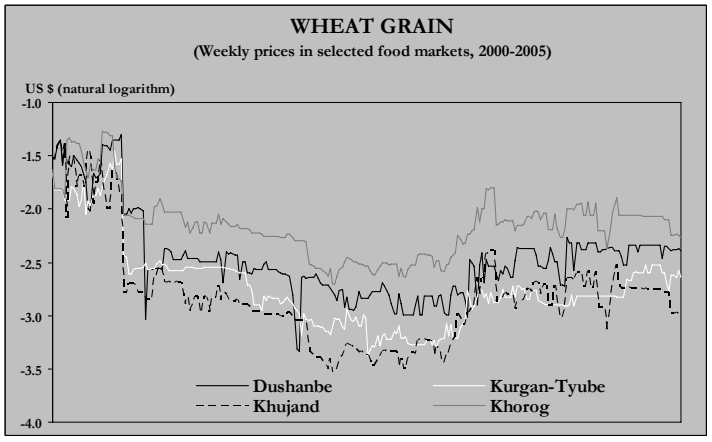
[35] The introduction of a dummy variable to reflect the winter period was found to be significant in the cointegration regressions.

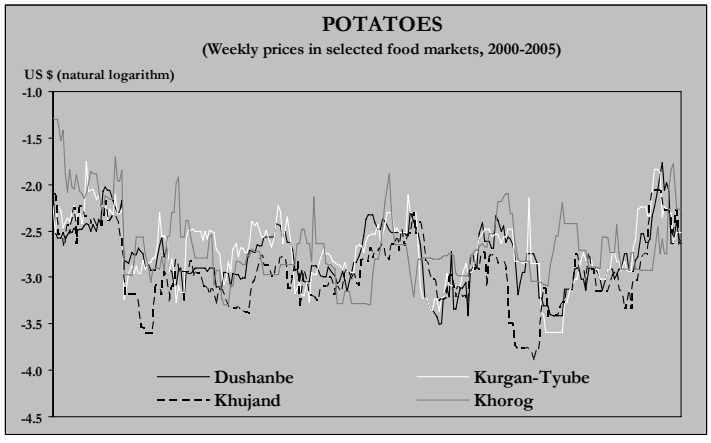
Graphs 6-11: Integration of Markets for Basic Commodities in Tajikistan

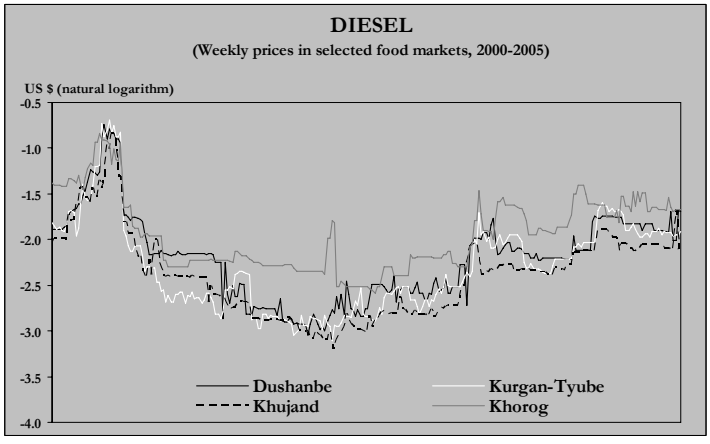












Source: WFP/Tajikistan Price Database

6.4 MARKETS VS FOOD SECURITY

- Price movements may not fully reflect the real food situation in rural areas
- Access to food and malnutrition remains a major problem in spite of signs of improvements in food supplies at the national level.

In the case of Tajikistan, over emphasis on "markets" or "market profiles", when making an evaluation of its domestic food security situation, could prove deceptive. As was shown, from a national point of view, recent years have been marked with a strong performance of the country's economy, more open markets, an improved food supply situation, and a reduced need for relief food aid. However, the apparent improvement in the country's food supplies, stemming from the continued growth in imports at the time when domestic food production has also been on the rise, masks the persistent problems confronted by small farmers and those living in hundreds of villages in marginal areas. In the absence of any effective government strategy or action to remedy the problem, multilateral agencies and international NGOs have been filling the gap, mostly under specific projects geared toward reducing poverty and improving the nutritional status of targeted groups.

Poverty and difficulties in accessing food is most widespread among those living in remote parts of the country. So far, the benefit of recent economic progress seems to be shared primarily by those living in urban centers. Therefore, the geographic and demographic problems have further deteriorated the extent of market segmentation. This problem of poverty-driven segmentation in Tajikistan is in fact both a supply side issue, because food may not always reach all the remote areas, and a demand problem, because the poor continue to suffer from insufficient income to purchase food. Various socio-economic surveys carried out in recent years point to very slow decline in poverty levels in remote areas while limited access to credit (micro and cash) and total reliance on own production continue to aggravate the already precarious food situation facing the rural poor[36].

Another critical food security concern which may not be so evident when analysing the country's supply and demand developments at the national level or changes in its main food markets, is dietary imbalances and high micronutrient malnutrition. While latest estimates by *Goscomstat* put the daily per capita calorie intake in 2004 at over 2000 Kcal, which is close to the acceptable levels by the World Health Organization, most of these calories are derived from bread and bread products, consumption of which is reported at well above acceptable nutritional levels. According to a recent national survey by WFP, almost one-third of the sample households were found to be experiencing "very poor consumption" and equal percentage "poor food consumption". Among those in the very poor category, 10% were characterized as chronically food insecure with the lowest dietary diversity but with the highest share of total expenditure on food.[37]

[36] A leading provider of credit in Tajikistan is the Aga Khan Foundation which is also the most active NGO in *GBAO*. In 2003, the Foundation provided credit (cash and kind) to 12176 households in *GBAO* under its *Mountain Societies Development Programme (MSDSP)*. However, with an estimated regional population of 200 000 in 2003, access to credits was still limited.

[37] WFP. 2005. *Household Food Security and Vulnerability Survey in Rural Tajikistan: November 2004*. ODAV (VAM) Report. Rome, pp 11-13.

A recent national survey by Action Against Hunger (AAH) and the Ministry of Health also found increases in the prevalence of acute malnutrition (stunting, as measured by height and age) in all regions of Tajikistan between 2003 and 2004. The Survey showed most significant increases in malnutrition in *GBAO* and *Kurgan Tyube.* Even the rate of acute malnutrition in the country's capital, *Dushanbe*, seems to have increased significantly in 2004. In addition, the survey also found a very high occurrence of children suffering from being underweight in all regions; with the highest occurrence in *Kurgan-Tyube* and the lowest in *Sogd.* [38]

7. INDICATORS

- Three sets of indicators: Food Market, Economic, and Socio-Human Development
- Wheat production cycle and prices must be monitored closely
- Main information sources are *Goscomstat*, multilateral organisations and international NGOs
- Closer collaboration among all the agencies involved helps in collection and streamlining of information on vulnerable groups

Based on the review of the country's agriculture and its food markets, this paper proposes three sets of indicators which, taken together, are expected to shed some light on the food market situation and outlook in Tajikistan: Food Market Indicators (FMI), General Economic Indicators (GEI), and Socio and Human Development Indicators (SHDI).

7.1 FOOD MARKET INDICATORS

The first indicator (FMI) provides a measure of food supply and demand conditions, at national and sub-national levels. Recently, *Goscomstat* started publishing *Information Bulletins on Food Security and Poverty*. The Bulletins are extremely useful in providing up-to-date information and analyses on a variety of relevant indicators associated with food availability, access to food and developments concerning food consumption. In addition, the joint *Crop and Food Supply Assessments* by FAO and WFP provide valuable insights on the current situation and short-term outlook for the main food commodities in the country. The latest FAO/WFP report (to be made available soon) evaluates the food supply situation for the 2005/06 marketing year. An additional step towards enhancing market indicators would be to construct a comprehensive and timely price database. Currently both *Goscomstat* and WFP collect prices of food commodities. Although prices collected by *Goscomstat* are more detailed, they need to be reported on a more concurrent basis if they were to be useful as short-term indicators. Weekly prices compiled by WFP are most useful for understanding the market situation for major food commodities in different markets across the country but those prices may not always be easily accessible.

[38] State Committee on Statistics Republic of Tajikistan. 2005. *Food Security and Poverty in the Republic of Tajikistan.* Information Bulletin No. 4, 2004. Dushanbe.

7.2 CHECK LIST FOR EARLY WARNING FOOD MARKET MONITORING

I. Monitor planting and growing conditions throughout the domestic wheat production cycle in all major growing regions (Khatlon in particular):

Compare final production estimates with 3-year average. Alert if expected output is more than 10 percent below the 3-year average. Use the drought-reduced production levels in 2000 and 2001 (just under 300 000 tonnes) as the worst (crisis) case.

	Winter Wheat	Spring Wheat
January		
February	**M**	
March	**M**	
April	**C**	
May	**C**	**M**
June	**C**	**M**
July	**M**	**C**
August	**M**	**C**
September		**M**
October		

Methods: WFP/FAO Field Surveys, NDVI (Normalized Difference Vegetation Index) analysis, FAO/GIEWS Workstation, and Government reports (Goscomstat) on planting area and production.

M: Time of the year weather can be a **Major** market (impact on prices) determining factor. For winter wheat, it refers to January and February, the two months associated with the planting period, and July-August, the main harvesting time. For spring wheat, May-June and September are the important months to monitor.
C: Time of the year weather can be a most **Critical** determining factor. For winter wheat, March to June corresponds to the growing and maturing phase of crops which are the most critical months. For spring wheat, July and August are the key months.

April:
- Ideal growing conditions are cool and wet which promotes maximum yield potential
- Watch for hot temperatures but freezing conditions could be ignored

May:
- Crop approaching maturity
- Watch for freezing temperatures
- Rainfall is of less significance

June
- Wet weather is a bullish indicator
- Warm, dry weather is favourable for a rapid harvest

II. Monitor weekly price movements for the primary food commodities in all major markets across the country. Monitor wheat flour prices in particular for all regions.

Any price deviation beyond 10% from the trend (3-year average), be it positive or negative, is highly significant. Wheat flour prices in Istravsha are good indicators for market developments in major urban centers across the country

Food markets to monitor:

	Sources
Dushanbe (Hissar)	WFP/Goscomstat
Kulyab (Semoni and Central)	WFP/ Goscomstat
Khujand (Panjshanbe, Guliston, Istravsha)	WFP/Goscomstat
Karategin Valley	WFP/Goscomstat/German Agro Action
GBAO	WFP/Goscomstat/Aga Khan Foundation

- A positive price deviation (i.e. a price increase) at or just after the harvest time raises the possibility of a price surge in that season. A negative deviation (i.e. a price decline) during the seeding period can influence planting decisions and result in a reduction in area and ultimately production in the following season.

- A sudden increase in wheat flour prices in **Istravsha** is perceived as an early sign of supply tightening. This is likely to give rise to higher prices across the country in view of the high level of market integration.

7.3 GENERAL ECONOMIC INDICATORS

The second indicator (GEI) deals with developments that are mainly of a macro-economic nature, such as the Consumer Price Index (CPI), National Accounts, Balance of Payments, External Debt and Foreign Reserves. The primary source of data for most of these indicators is the State Committee on Statistics (or *Goscomstat*). However, obtaining relevant and timely statistical information directly from *Goscomstat* is not always forthcoming and for this reason a number of alternative sources could be used, most notably: Country Reports and Country Profiles published regularly by the Economic Intelligence Unit (EIU) and Poverty Reduction Strategy Papers (PRSPs) by the World Bank and IMF. As an example, a sample list of statistical tables with those indicators is provided in Annex II.

7.4 SOCIO AND HUMAN DEVELOPMENT INDICATORS

The third indicator (SHDI) goes beyond economic fundamentals and provides a measure for understanding the level of the people's well-being and dietary constraints. At the national level, The Human Development Report (HDR) by the United Nations Development Programme lists

several relevant indicators (i.e. The Human Development Index) each offering useful information for comparative analysis of the general well-being of one country against the others. Relevant statistics from the latest HDR for Tajikistan are also included in Annex II. More specifically, however, household surveys carried out by aid agencies and local NGOs also provide valuable information on developments regarding the socio-economic and nutrition situation among targeted groups, mainly the less privileged living in remote parts of the country. This information, however, can only be accessed or obtained through individual contacts with the respective agencies responsible for carrying out the surveys, which is always a time consuming endeavor. For the benefit of all, therefore, serious attempts are needed to streamline coordination and collaboration between all agencies involved with a view to facilitate wider access to up-to-date information on socio-economic developments of the most vulnerable segments of society.

8. FOLLOW UP

This paper has reviewed the functioning of the major food markets across Tajikistan and has also discussed some of the main features associated with recent developments in wheat markets, and proposed a number of general indicators that could be used to measure food security at the national and to some extent at the regional level. The absence of reliable statistical information prevents more detailed analysis of the country's food markets but as with its economy, positive signs are emerging with the government starting to enhance its data collection on food and agriculture. This study relied heavily on information provided by several international organizations, food aid agencies and NGOs active in Tajikistan. In the author's view, if these agencies were to collaborate more closely with one another, by establishing a formal working group for instance, they would be contributing a great deal to improving the quantity and the quality of information about market prospects for the country's food situation. This endeavor could also provide a further impetus to recent official attempts at building a more accurate, comprehensive, and timely database.

Weather continues to play a crucial role in domestic food production while cotton export prices and revenues from remittances are most critical in determining the overall purchasing power ability of its people, the level of imports and access to food. This study drew from the developments since the country's last food crisis, at the beginning of this decade. Another, and hopefully more comprehensive, review of its food markets in say 2 to 3 years from now would provide a better insight into the main fundamentals. In the meantime, the WFP Household Food Security and Vulnerability Survey, conducted in 2004, provides the most comprehensive picture to-date of the country's vulnerability at regional and sub-regional levels. Findings shown in this WFP report can be most helpful in guiding food assistance programmes in the country for at least the next few years.

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ANNEX II: ADMINISTRATIVE MAP & SELECTED INDICATORS

Recent Administrative Map of Tajikistan

http://www.un.org/Depts/Cartographic/map/profile/tajikist.pdf

Selected Indicators from the 2005 Human Development Report

Tajikistan
HDI Rank : 122

Human Development Index (HDI)

Human development index (HDI) value, 2003	0.652
Life expectancy at birth (years) (HDI), 2003	63.6
Adult literacy rate (% ages 15 and above) (HDI), 2003	99.5
Combined gross enrolment ratio for primary, secondary and tertiary schools (%), 2002/03	76
GDP per capita (PPP US$) (HDI), 2003	1,106
Life expectancy index	0.64
Education index	0.91
GDP index	0.40
GDP per capita (PPP US$) rank minus HDI rank	36

Demographic trends

Total population (millions), 1975	3.4
Total population (millions), 2003	6.4
Total population (millions), 2015	7.6
Annual population growth rate (%), 1975-2003	2.2
Annual population growth rate (%), 2003-2015	1.5
Urban population (% of total), 1975	35.5
Urban population (% of total), 2003	24.8
Urban population (% of total), 2015	24.4
Population under age 15 (% of total), 2003	40.4
Population under age 15 (% of total), 2015	33.0
Population age 65 and above (% of total), 2003	3.0
Population age 65 and above (% of total), 2015	3.5
Total fertility rate (births per woman), 1970-75	6.8
Total fertility rate (births per woman), 2000-05	3.8

Economic performance

GDP (US$ billions), 2003	1.6
GDP (PPP US$ billions), 2003	7.0
GDP per capita (US$), 2003	246
GDP per capita (PPP US$), 2003	1,106
GDP per capita annual growth rate (%), 1975-2003	- 8.1 [5]
GDP per capita annual growth rate (%), 1990-2003	- 6.5
GDP per capita, highest value (PPP US$), 1975-2003	2,790 [5]

GDP per capita, year of highest value	1988
Average annual change in consumer price index (%), 1990-2003	..
Average annual change in consumer price index (%), 2002-03	..

Inequality in income or consumption

Survey Year	2003 [6]
Share of income or consumption (%) - Poorest 10%	3.3
Share of income or consumption (%) - Poorest 20%	7.9
Share of income or consumption (%) - Richest 20%	40.8
Share of income or consumption (%) - Richest 10%	25.6
Inequality measures - Ratio of richest 10% to poorest 10%	7.8
Inequality measures - Ratio of richest 20% to poorest 20%	5.2
Inequality measures - Gini index	32.6

The structure of trade

Imports of goods and services (% of GDP), 1990	35
Imports of goods and services (% of GDP), 2003	79
Exports of goods and services (% of GDP), 1990	28
Exports of goods and services (% of GDP), 2003	60
Primary exports (% of merchandise exports), 1990	..
Primary exports (% of merchandise exports), 2003	..
Manufactured exports (% of merchandise exports), 1990	..
Manufactured exports (% of merchandise exports), 2003	..
High-technology exports (% of merchandise exports), 1990	..
High-technology exports (% of merchandise exports), 2003	..
Terms of trade (1980=100), 2002	..

Flows of aid, private capital and debt

Official development assistance (ODA) received (net disbursements) Total (US$ millions), 2003	144.1
Official development assistance (ODA) received (net disbursements) Per capita (US$), 2003	22.9
Official development assistance (ODA) received (net disbursements) (as % of GDP), 1990	..
Official development assistance (ODA) received (net disbursements) (as % of GDP), 2003	9.3
Net foreign direct investment inflows (% of GDP), 1990	0
Net foreign direct investment inflows (% of GDP), 2003	2.0
Other private flows (% of GDP), 1990	..
Other private flows (% of GDP), 2003	- 1.6
Total debt service (As % of GDP), 1990	..
Total debt service (As % of GDP), 2003	5.7
Total debt service (As % exports of goods, services and net income from abroad), 1990	..
Total debt service (As % exports of goods, services and net income from abroad), 2003	7.7

Priorities in public spending

Public expenditure on education (% of GDP), 1990	..
Public expenditure on education (% of GDP), 2000-2002	2.8
Public expenditure on health (% of GDP), 2002	0.9
Military expenditure (% of GDP), 1990	..
Military expenditure (% of GDP), 2003	2.2
Total debt service (% of GDP), 1990	..
Total debt service (% of GDP), 2003	5.7

Refugees and armaments

Internally displaced people (thousands), 2004	..
Refugees by country of asylum (thousands), 2004	3
Refugees by country of origin (thousands), 2004	59
Conventional arms transfers (1990 prices) - Imports (US$ millions), 1994	24
Conventional arms transfers (1990 prices) - Imports (US$ millions), 2004	0
Conventional arms transfers (1990 prices) - Exports (US$ millions), 2004	..
Conventional arms transfers (1990 prices) - Exports (share %), 2000-2004	..
Total armed forces Thousands, 2003	8
Total armed forces Index (1985=100), 2003	..

Gender-related development index

Gender-related development index (GDI) rank, 2003	93
Gender-related development index (GDI) value, 2003	0.650
Life expectancy at birth, female (years), 2003	66.3
Life expectancy at birth, male (years), 2003	61.0
Adult literacy rate, female (% ages 15 and above), 2003	99.3 [7]
Adult literacy rate, male (% ages 15 and above), 2003	99.7 [7]
Combined gross enrolment ratio for primary, secondary and tertiary level schools, female (%) , 2002/03	69
Combined gross enrolment ratio for primary, secondary and tertiary level schools, male (%) , 2002/03	82
Estimated earned income, female (PPP US$), 2003	854
Estimated earned income, male (PPP US$), 2003	1,367
HDI rank minus GDI rank, 2003	2

Basic indicators for other UN member countries

Life expectancy at birth (years), 2000-05	63.5
Adult literacy rate (% ages 15 and above), 2003	99.5
Combined gross enrolment ratio for primary, secondary and tertiary schools, 2002/03	75.9
GDP per capita (PPP US$) (HDI), 2003	1,106

Total population (thousands), 2003	6
Total fertility rate (births per woman), 2000-05	3.8
Under-five mortality rate (per 1,000 live births), 2003	118
Net primary enrolment ratio (%), 2002/03	94
HIV prevalence (% ages 15-49), 2003	<0.1 [<0.2]
Undernourished people (% of total population), 2000/03	61
Population with sustainable access to an improved water source (%), 2002	58

Notes :
1 -
2 - Data refer to a UNESCO Institute for Statistics estimate where no national estimate is available.
3 - Data refer to the 1998/99 school year.
4 - Preliminary UNESCO Institute for Statistics estimate, subject to further revision.
5 - Data refer to a period shorter than that specified.
6 - Survey based on consumption.
7 - For purposes of calculating the GDI, a value of 99.0 % was applied.
8 - Data refer to the 1998/99 school year.
9 - Preliminary UNESCO Institute for Statistics estimate, subject to further revision.
10 - Refers to the year women were elected to the current p

Selected Economic Indicators from EIU[39]

Nominal gross domestic product by expenditure
(S bn at current prices; % of total in brackets)

	1998	1999	2000	2001	2002
Private consumption	0.9	1.0	1.3	2.1	2.7
	(84.1)	(72.7)	(72.0)	(85.3)	(81.8)
Government consumption	0.1	0.1	0.1	0.2	0.3
	(9.5)	(9.9)	(8.2)	(8.8)	(8.7)
Gross fixed investment	0.2	0.3	0.4	0.5	0.8
	(15.5)	(18.9)	(23.9)	(18.0)	(22.7)
Stockbuilding	0.0	0.0	0.0	0.0	0.0
	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Exports of goods & services	0.5	0.9	1.5	1.6	2.0
	(48.2)	(64.2)	(81.1)	(62.1)	(58.4)
Imports of goods & services	0.6	0.9	1.5	1.9	2.4
	(57.3)	(65.7)	(85.2)	(74.2)	(71.6)
GDP	**1.0**	**1.3**	**1.8**	**2.5**	**3.3**

Source: World Bank.

Gross domestic product by origin
(S m unless otherwise indicated; at current prices)

	2000	2001	2002	2003	2004
Industry	431.7	573.8	744.2	994.8	1,206.9
% of total	23.9	22.8	22.2	20.9	19.6
Agriculture	488.0	669.8	886.8	1,199.0	1,330.0
% of total	27.0	26.7	26.5	25.2	21.6
Construction	61.1	103.7	127.8	199.8	338.7
% of total	3.4	4.1	3.8	4.2	5.5
Trade	330.0	483.4	671.4	904.0	1,213.0
% of total	18.3	19.2	20.1	19.0	19.7
Transport	88.3	98.5	123.5	180.8	338.7
% of total	4.9	3.9	3.7	3.8	5.5
Supplies	4.2	3.3	7.0	9.5	12.9
% of total	0.2	0.1	0.2	0.2	0.2
Other material sectors[a]	5.8	7.5	8.3	23.4	19.0
% of total	0.3	0.3	0.2	0.5	0.3
Non-material services[a]	248.2	358.7	463.7	742.2	1,010.6
% of total	13.7	14.3	13.9	15.6	16.9
Indirect taxes	149.7	213.5	312.2	504.3	657.7
% of total	8.3	8.5	9.3	10.6	10.7
Total	**1,806.8**	**2,512.0**	**3,345.0**	**4,757.8**	**6,157.5**

[a] Includes estimate of the informal sector.

Source: IMF, *Republic of Tajikistan-Selected Issues and Statistical Appendix*, April 2005.

Prices and earnings
(year-end; % change)

	2000	2001	2002	2003	2004
Consumer prices	60.6	12.5	14.5	13.7	5.6
Wholesale prices	33.9	9.4	19	14.3	15.2
Average wages	34.1	50.9	38.5	37.1	36.3

Source: IMF, *Republic of Tajikistan-Selected Issues and Statistical Appendix*, April 2005.

[39] Source: EIU, all tables included in this Annex are extracted from "Tajikistan, Country Profile 2005".

Economic Indicators from EIU

Agricultural production
('000 tonnes)

	2000	2001	2002	2003	2004
Raw cotton	335	453	515	537	557
Grain	550	494	596	730	734
Sweet corn	38	42	55	95	95
Feed corn	226	241	299	294	295
Rice	82	39	50	59	59
Potatoes	303	308	357	473	527
Vegetables	354	397	473	583	679
Fruits	169	144	147	89	144
Grapes	110	110	81	28	93
Hay	290	275	376	356	443

Source: IMF, *Republic of Tajikistan-Selected Issues and Statistical Appendix*, April 2005.

Yields of major crops
(kg/ha)

	2000	2001	2002	2003	2004
Raw cotton	1,410	1,790	1,930	1,900	1,910
Grain	1,270	1,430	1,820	1,990	1,970
Sweet corn	2,700	2,950	3,510	3,770	3,540
Feed corn	10,250	11,750	13,080	14,800	14,223
Rice	3,790	2,610	2,850	3,460	3,000
Potatoes	11,870	12,550	15,550	17,740	17,400
Vegetables	11,370	11,710	13,890	16,200	18,300
Fruits	2,420	2,490	2,470	1,520	2,400
Grapes	3,270	3,290	2,460	950	3,100
Hay	1,714	1,010	1,430	1,360	2,060

Source: IMF, *Republic of Tajikistan-Selected Issues and Statistical Appendix*, April 2005.

Livestock numbers
('000 head unless otherwise indicated)

	2000	2001	2002	2003	2004
Beef cattle	510	532	549	583	636
Dairy cattle	552	559	587	636	642
Sheep	1,478	1,490	1,591	1,672	1,782
Goats	744	779	842	920	975
Horses	72	71	73	74	77

Source: IMF, *Republic of Tajikistan-Selected Issues and Statistical Appendix*, April 2005.

Economic Indicators from EIU

Industrial production by sector
(at constant prices; 1990=100)

	1999	2000	2001	2002	2003
Electricity	119.7	107.4	111.3	119.8	127.7
Fuel & refinery products	7.5	7.9	8.7	11.5	13.9
Non-ferrous metallurgy	50.1	59.4	66.3	69.8	72.7
Chemical & petrochemical products	n/a	10.5	8.8	8.9	13.8
Mechanical engineering & metal-working	n/a	14.7	17.7	23.8	31.5
Wood-working & paper	5.6	5.1	7.6	9.4	13.0
Glass	n/a	26.5	42.5	45.4	41.3
Construction materials	3.4	3.6	4.2	5.6	8.5
Light industry	33.9	35.7	37.7	47.1	55.5
Food industry	16.4	16.8	25.3	26.0	26.8
Total incl others	**37.0**	**40.6**	**46.7**	**50.6**	**55.6**

Source: IMF, *Republic of Tajikistan: Selected Issues and Statistical Appendix*, January 2003 and April 2005.

Main exports
(US$ m)

	1999	2000	2001	2002	2003
Total exports fob	**666**	**788**	**652**	**699**	**799**
Aluminium	284	424	398	399	430
Cotton fibre	93	92	71	128	193
Electricity	175	181	79	68	55

Source: IMF, *Republic of Tajikistan-Selected Issues and Statistical Appendix*, January 2003 and April 2005.

Main imports
(US$ m)

	1999	2000	2001	2002	2003
Total imports fob	**714**	**811**	**777**	**824**	**1,003**
Aluminium oxide	139	199	184	188	236
Natural gas	n/a	36	27	22	24
Oil products	n/a	63	73	70	80
Electricity	179	203	98	82	62
Grain & flour	n/a	45	62	36	61

Note. Data for 1999 are cif.

Source: IMF, *Republic of Tajikistan: Selected Issues and Statistical Appendix*, January 2003 and April 2005.

Economic Indicators from EIU

Main trading partners
(% of total)

	1999	2000	2001	2002	2003
Exports fob to:					
Turkey	0.2	7.4	11.5	17.0	19.5
Uzbekistan	27.2	12.4	13.4	10.4	11.6
Switzerland	11.3	9.2	8.0	9.8	10.4
Russia	17.3	32.8	16.1	12.5	8.9
Imports cif from:					
Uzbekistan	37.0	21.6	18.8	15.5	15.1
Russia	12.9	12.2	16.2	19.2	13.1
Ukraine	5.3	9.8	7.9	9.4	9.2
Kazakhstan	11.0	9.6	11.1	8.5	8.2

Source: IMF, *Direction of Trade Statistics*.

Balance of payments
(US$ m unless otherwise indicated)

	1999	2000	2001	2002	2003
Exports of goods fob	666	788	652	699	799
Imports of goods fob	-693	-811	-777	-824	-1,003
Trade balance	**-27**	**-24**	**-125**	**-125**	**-205**
Net services	11	4	-8	-36	-54
Net income	-55	-36	-72	-57	-90
Net transfers	35	37	131	184	329
Current-account balance	**-36**	**-62**	**-73**	**-33**	**-20**
Disbursements	10	36	22	28	55
Amortisation payable	-9	-18	-27	-18	-23
Foreign direct investment	21	24	9	36	32
Change in commercial banks' net foreign assets (- indicates increase)	-35	24	20	8	3
Other capital	23	-51	-18	-12	-26
Change in gross reserves	7	-29	-8	-1	-39
Capital & financial account balance	**42**	**63**	**64**	**54**	**55**
Overall balance	**6**	**1**	**-9**	**21**	**35**
Financing	**-13**	**28**	**18**	**-21**	**4**
IMF	4	16	3	-24	-3
Purchases	9	26	15	11	11
Repurchases	5	10	12	35	14
Other reserve liabilities	0	2	0	0	0
Debt-service account (- indicates increase)	0	0	0	27	7
Arrears	-18	11	-41	-23	0
Rescheduling	1	0	55	0	0
Memorandum items					
Current-account balance (% of GDP)	-3.4	-6.5	-7.1	-2.8	-1.3
Total reserves minus gold	55	93	93	90	112

Sources: IMF, *Republic of Tajikistan-Selected Issues and Statistical Appendix*, January 2003 and April 2005; *International Financial Statistics*.

Economic Indicators from EIU

External debt, World Bank series
(US$ m unless otherwise indicated)

	1999	2000	2001	2002	2003
Public medium- & long-term	741	755	762	901	926
Official creditors	686	704	762	851	917
Bilateral	529	518	497	545	550
Multilateral	157	186	264	306	366
Private creditors	55	51	0	50	9
Private medium- & long-term	331	91	107	87	59
Total medium- & long-term debt	**1,072**	**846**	**869**	**988**	**985**
Short-term debt	102	77	79	60	82
Interest arrears	41	45	27	9	3
Use of IMF credit	100	111	110	94	100
Total external debt	**1,275**	**1,034**	**1,058**	**1,142**	**1,166**
Principal repayments	53	37	58	79	73
Interest payments	26	25	23	17	16
Ratios (%)					
Total debt service[a] (paid)	11.3	7.8	11.5	11.3	9.1
Total external debt/GDP	123.6	110.7	104.6	97.0	79.7

[a] Debt service as a percentage of exports of goods and services.

Source: World Bank, *Global Development Finance*.

Foreign reserves
(US$; end-period)

	2000	2001	2002	2003	2004
Total reserves incl gold	94.3	94.3	89.5	117.6	172.1
Total international reserves excl gold	92.9	92.6	89.5	111.9	157.5
Gold, national valuation	1.4	1.7	0.0	5.7	14.6

Source: IMF, *International Financial Statistics*.

Exchange rates
(S per unit of currency unless otherwise indicated; annual averages)

	2000	2001	2002	2003	2004
US$	1.83	2.37	0.56	3.06	2.97
£	2.76	3.41	0.84	5.00	5.44
€	1.69	2.12	0.53	3.47	3.69
Rb	0.065	0.081	0.018	0.100	0.103
Rmb	0.221	0.287	0.068	0.370	0.359
¥	0.017	0.020	0.004	0.026	0.027

Sources: IMF, *International Financial Statistics*; Economist Intelligence Unit.

Selected Economic Indicators from IMF [40]

Selected Macroeconomic Indicators, 2002–05

(Quota: SDR 87 million)
(Population: 6.5 million)
(Per capita GDP: $310; Per capita GNP: $370)

			2004		2005
	2002	2003	Prog. (IMF CR No. 04/248)	Prel.	Proj.
	(Annual percent change, unless otherwise indicated)				
National accounts					
Nominal GDP (in millions of somoni)	3,345	4,758	5,750	6,158	7,100
Norminal GDP (in millions of dollars)	1,197	1,556	1,797	2,073	2,338
Real GDP	9.1	10.2	8.5	10.6	8.0
CPI inflation (end-of-period)	14.5	13.7	7.3	5.6	6.0
Poverty rate (in percent)	...	64.0	...	...	...
	(In percent of GDP)				
Investment and savings 1/					
Investment	13.9	13.1	13.1	14.9	16.5
Fixed capital investment	10.9	11.5	11.8	13.5	14.0
Government	5.4	6.5	7.0	8.1	8.1
Private	5.5	5.0	4.8	5.4	5.9
Gross national savings	11.2	11.8	11.1	11.0	12.3
Public	3.0	4.8	3.6	5.4	3.6
Private	8.3	7.1	7.5	5.6	8.7
Savings/investment balance	-2.7	-1.3	-2.0	-3.9	-4.2
	(In percent of annual GDP)				
Budgetary operations					
Revenue and grants	16.7	17.3	17.7	17.9	17.7
Of which: Tax revenue	15.0	15.0	15.3	15.2	15.7
Expenditure and net lending	19.2	19.1	21.1	20.7	22.2
Of which: Current	13.7	12.6	14.1	12.5	14.1
Capital	5.4	6.5	7.0	8.1	8.1
Balance (excluding debt-financed PIP)	-0.1	0.9	-0.4	0.3	-0.5
Balance (including debt-financed PIP)	-2.4	-1.8	-3.4	-2.7	-4.5
Domestic financing	-0.1	-1.1	-1.7	-1.7	0.7
External financing	2.6	2.8	5.2	4.4	3.7
	(12-month growth in percent of broad money, unless otherwise indicated)				
Monetary sector 2/					
Net foreign assets	24.1	37.0	37.1	-23.1	12.1
Net domestic assets	6.0	-8.8	-10.9	78.0	3.2
Broad money	39.7	29.2	26.2	14.3	18.4
Velocity of broad money (four-quarter average)	2.9	2.7	3.1	3.8	3.7
Interest rate (28-day NBT bill rate, in percent)	23.1	4.9	...	6.2	...
	(In millions of U.S. dollars, unless otherwise indicated)				
External sector					
Exports of goods and services	768.0	883.5	975.3	1,046.8	1,131.6
Annual percent change	7.6	15.0	10.4	18.5	8.1
Imports of goods and services	928.2	1,141.8	1,265.1	1,445.9	1,575.6
Annual percent change	10.2	23.0	10.8	26.6	9.0
Current account balance	-32.4	-19.5	-36.2	-80.9	-97.5
In percent of GDP	-2.7	-1.3	-2.0	-3.9	-4.2
Total public sector external debt	1,010.0	1,030.7	1,097.0	822.2	899.1
In percent of GDP	84.4	66.2	61.0	39.7	38.5
Gross official reserves	96.2	135.4	189.1	189.3	235.3
In months of imports	1.8	1.9	2.3	2.0	2.2
Memorandum items:					
Nominal effective exchange rate (Index 1999=100)	58.92	49.36	48.15	46.9	...
Real effective exchange rate (Index 1999=100)	87.29	79.09	76.87	75.5	...
Average exchange rate (somoni per dollar)	2.76	3.06	2.97	2.97	...

Sources: Data provided by the Tajikistan authorities; and Fund staff estimates.

1/ Private investments and savings are estimates.
2/ The definition of broad money was revised in 2004.

[40] Source: IMF, all tables included in this Annex are extracted from "Country Report No. 05/132"

Economic Indicators from IMF

Nominal GDP by Sector of Origin, 2000–04

	2000		2001		2002		2003		2004	
		Share (in percent)		Share (in percent)		Share (in percent)		Share (in percent)		Share (in percent)
Industry	431,661	23.9	573,789	22.8	744,230	22.2	994,777	20.9	1,206,865	19.6
Agriculture	487,960	27.0	669,809	26.7	886,818	26.5	1,198,970	25.2	1,330,014	21.6
Construction	61,059	3.4	103,682	4.1	127,821	3.8	199,828	4.2	338,662	5.5
Trade	330,016	18.3	483,396	19.2	671,424	20.1	903,985	19.0	1,213,022	19.7
Transport	88,270	4.9	98,465	3.9	123,487	3.7	180,797	3.8	338,662	5.5
Supplies	4,153	0.2	3,256	0.1	7,025	0.2	9,516	0.2	12,881	0.2
Procurement	...	...	...	...	...	...	...	...	...	...
Other material sectors 1/	5,784	0.3	7,450	0.3	8,308	0.2	23,395	0.5	19,038	0.3
Nonmaterial services 1/	248,183	13.7	358,670	14.3	463,653	13.9	742,219	15.6	1,040,613	16.9
Indirect taxes	149,681	8.3	213,484	8.5	312,234	9.3	504,329	10.6	657,716	10.7
GDP	1,806,767	100.0	2,512,000	100.0	3,345,000	100.0	4,757,816	100.0	6,157,472	100.0

Source: State Statistical Committee.

1/ Since 1998, includes the State Statistical Committee's estimate of the informal sector.

Economic Indicators from IMF

Production and Yields of Major Agricultural Crops, 2000–04

	2000	2001	2002	2003	2004
	(In thousands of somoni at constant 2000 prices)				
Crop production	594,192	642,143	753,683	828,184	959,037
	(In thousands of tons)				
Production					
Of which:					
Raw cotton	335	453	515	537	557
Grain	550	494	596	730	734
Sweet corn	38	42	55	95	95
Feed corn	226	241	299	294	295
Rice	82	39	50	59	59
Potatoes	303	308	357	473	527
Vegetables	354	397	473	583	679
Fruits	169	144	147	89	144
Grapes	110	110	81	28	93
Hay	290	275	376	356	443
	(In kilograms per hectare)				
Yield					
Of which:					
Raw cotton	1,410	1,790	1,930	1,900	1,910
Grain	1,270	1,430	1,820	1,990	1,970
Sweet corn	2,700	2,950	3,510	3,770	3,540
Feed corn	10,250	11,750	13,080	14,800	14,223
Rice	3,790	2,610	2,850	3,460	3,000
Potatoes	11,870	12,550	15,550	17,740	17,400
Vegetables	11,370	11,710	13,890	16,200	18,300
Fruits	2,420	2,490	2,470	1,520	2,400
Grapes	3,270	3,290	2,460	950	3,100
Hay	1,714	1,010	1,430	1,360	2,060

Source: State Statistical Committee.

Economic Indicators from IMF

Animal Husbandry, 2000–04

	2000	2001	2002	2003	2004
	(In thousands of somoni at constant 2000 prices)				
Animal husbandry	121,611	143,461	156,838	169,747	203,187
	(In thousands)				
Total production	3,357	3,432	3,643	3,886	4,113
Of which:					
Beef cattle	510	532	549	583	636
Milk cows	552	559	587	636	642
Pigs	1	1	1	1	1
Sheep	1,478	1,490	1,591	1,672	1,782
Goats	744	779	842	920	975
Horses	72	71	73	74	77

Source: State Statistical Committee.

Economic Indicators from IMF

Agricultural Production by Type of Farm, 2000–04

	2000	2001	2002	2003	Jan-Sep. 2004
	(In thousands of somoni at 2000 prices)				
Total for all types of farms	715,803	785,604	910,525	1,001,995	1,171,571
	(In percent)				
Total for all types of farms	100.0	100.0	100.0	100.0	100.0
Of which:					
Crop production	83.0	81.7	82.8	83.0	81.0
Animal husbandry	17.0	18.3	17.2	17.0	19.0
State and collective farms	36.2	32.7	32.4	48.0	24.9
Of which:					
Crop production	95.0	96.2	96.6	97.0	95.6
Animal husbandry	5.0	3.8	3.4	3.0	4.4
Personal lots	63.8	67.3	67.6	52.0	75.1
Of which:					
Crop production	85.0	74.7	76.1	60.0	76.1
Animal husbandry	15.0	25.3	23.9	40.0	23.9

Source: State Statistical Committee.

Economic Indicators from IMF

Allocation of Agricultural Land, 2004

	Total	Collective and Other Farms 1/	Private Farms and Employees	Other 2/
		(In hectares)		
Total crops	886,864	451,815	240,132	194,917
Of which:				
Irrigated land	592,006	328,997	167,158	95,851
Winter crops	187,215	61,081	36,245	89,889
Of which:				
Winter wheat	177,050	56,695	34,519	85,836
Rye	248	220	28	0
Barley	9,917	4,166	1,698	4,053
Spring crops	209,113	96,630	68,698	43,785
Of which:				
Wheat	157,816	73,001	51,411	33,404
Barley	27,570	13,722	10,015	3,833
Maize	8,320	2,714	923	4,683
Rice	11,394	6,362	2,544	2,488
Oats	681	565	116	...
Other grains and beans	11,652	2,980	4,612	4,060
Cotton	284,367	200,178	84,189	0
Flax	21,108	6,162	8,581	6,365
Tobacco	795	471	246	78
Potatoes	25,988	2,966	5,395	17,627
Vegetables	30,299	5,505	3,812	20,912
Fodder	96,098	65,118	23,556	7,424
Melons and gourds	10,671	3,817	3,500	3,347
Other industrial crops	12,867	6,919	5,439	119
Seed trees of vegetables and melons	93	84	6	3
		(In percent of total)		
Total crops	100.0	50.9	27.1	22.0
Of which:				
Irrigated land	66.8	37.1	18.8	10.8
Winter crops	21.1	6.9	4.1	10.1
Of which:				
Winter wheat	20.0	6.4	3.9	9.7
Rye	0.0	0.0	0.0	...
Barley	1.1	0.5	0.2	0.5
Spring crops	23.6	10.9	7.7	4.9
Of which:	0.0	0.0	0.0	0.0
Wheat	17.8	8.2	5.8	3.8
Barley	3.1	1.5	1.1	0.4
Maize	0.9	0.3	0.1	0.5
Rice	1.3	0.7	0.3	0.3
Oats	0.1	0.1	0.0	...
Grains and beans	1.3	0.3	0.5	0.5
Other grains and beans	1.3	0.3	0.5	0.5
Other cereals	3.7	1.7	1.5	0.5
Cotton	32.1	22.6	9.5	...
Flax	2.4	0.7	1.0	0.7
Tobacco	0.1	0.1	0.0	0.0
Potatoes	2.9	0.3	0.6	2.0
Vegetables	3.4	0.6	0.4	2.4
Fodder	10.8	7.3	2.7	0.8
Melons and gourds	1.2	0.4	0.4	0.4
Other industrial crops	1.5	0.8	0.6	0.0
Seed trees of vegetables and melons	0.0	0.0	0.0	0.0

Source: State Statistical Committee.
1/ Includes collective farms (kolkhozes), state farms (sovkhozes), state farms in transformation to collective farms (mezhozes), and other farms.
2/ Personal plots, including 75,000 hectares of land distributed by presidential decree in 1997.

Economic Indicators from IMF

Electricity Output, Trade and Consumption, 2000–04

(In billions of kilowatt hours)

	2000	2001	2002	2003	2004 Prel.
Output	14.3	14.4	15.3	16.5	16.8
Of which:					
Hydropower	14.1	14.2	15.2	16.4	16.5
Thermal power	0.2	0.2	0.1	0.1	0.3
Imports	5.2	5.4	4.7	4.6	4.8
Exports	3.9	4.1	3.9	4.6	4.4
Total internal consumption (by sector)	15.6	15.7	16.1	16.5	...
Of which:					
Industry	5.8	6.1	6.2	6.7	...
Construction	0.0	0.0	0.0	0.0	...
Agriculture	4.3	4.5	4.2	4.3	...
Transport	0.0	0.0	0.0	0.0	...
Other sectors	0.5	0.4	0.4	0.4	...
Households	2.8	2.5	2.9	2.6	...
Losses	2.2	2.2	2.3	2.5	...
Discrepancy	-1.0	-0.1	0.1	0.0	...

Source: State Statistical Committee.

Economic Indicators from IMF

Consumer Price Index, 2000–04

		Overall CPI	Foodstuff	Nonfood	Services
		(Monthly percent change)			
2003	January	3.7	1.7	0.9	25.4
	February	1.5	1.8	0.8	0.5
	March	2.5	3.4	0.3	0.3
	April	1.4	1.3	0.4	3.8
	May	-0.4	-0.7	0.6	0.4
	June	-0.8	-2.3	1.2	5.3
	July	0.4	0.6	1.1	-9.0
	August	0.3	-0.6	0.4	0.1
	September	1.1	1.2	0.6	1.5
	October	3.8	3.0	0.7	14.7
	November	0.6	0.2	0.9	2.6
	December	0.3	0.1	0.1	1.5
2004	January	0.7	0.1	0.1	5.8
	February	0.2	-0.2	1.0	1.0
	March	0.1	-0.1	0.0	0.9
	April	0.2	0.4	0.3	-1.1
	May	0.1	0.3	2.8	-6.3
	June	-0.3	-0.4	0.1	0.0
	July	1.1	1.7	0.3	-0.6
	August	0.5	0.4	0.6	1.0
	September	1.7	2.5	0.1	-0.1
	October	1.1	0.4	0.2	7.4
	November	-0.3	-1.1	0.5	3.1
	December	0.4	0.5	0.1	0.3
		(Quarterly percent change; end-period)			
2000	Q1	4.9	5.4	4.0	2.0
	Q2	11.3	13.5	3.3	3.8
	Q3	14.1	15.3	11.1	2.9
	Q4	20.7	20.6	20.7	22.8
2001	Q1	5.0	6.1	1.7	1.0
	Q2	3.3	4.0	0.7	0.6
	Q3	-1.4	-2.7	3.5	0.7
	Q4	5.2	5.5	4.3	0.7
2002	Q1	2.9	3.5	1.5	2.0
	Q2	2.8	3.1	1.2	2.2
	Q3	4.2	5.2	0.8	3.7
	Q4	3.8	4.3	2.7	1.8
2003	Q1	7.9	7.1	2.1	26.4
	Q2	0.2	-1.7	2.2	9.7
	Q3	0.4	1.2	2.1	-7.5
	Q4	4.7	3.3	1.7	19.4
2004	Q1	1.0	-0.1	1.0	7.9
	Q2	0.0	0.3	3.2	-7.3
	Q3	3.4	4.7	1.0	0.3
	Q4	1.2	-0.2	0.9	11.1
		(Annual percent change; end-period)			
2000		60.6	66.3	44.2	34.0
2001		12.5	13.7	10.5	3.2
2002		14.5	17.0	6.3	9.9
2003		13.7	10.2	8.3	53.1
2004		5.6	4.6	6.4	11.4

Source: State Statistical Committee.

Economic Indicators from IMF

Wholesale Price Index, 2000–04

	Overall WPI	Foodstuff	Fuel	Light Industry
	(Monthly percent change)			
2003 January	1.3	0.2	3.6	0.1
February	2.7	0.3	0.0	2.7
March	-0.6	0.1	1.4	-0.3
April	-2.3	0.0	-1.9	0.0
May	3.4	0.0	0.8	-0.2
June	-0.3	0.1	0.0	0.1
July	0.7	0.1	0.3	0.9
August	1.2	0.1	27.9	0.0
September	-0.6	0.0	7.1	0.0
October	3.4	3.5	-2.2	0.0
November	3.0	11.8	-3.0	3.2
December	1.8	2.7	2.4	0.2
2004 January	1.7	0	1.3	0
February	2.2	0.1	9	-0.6
March	-0.7	-0.1	-3	5.1
April	3.5	3	8.6	0.5
May	-3.4	0	-0.3	2.7
June	2.6	0	-1	-0.3
July	2.3	1.3	-0.9	0.3
August	-0.1	0.1	1.4	0.6
September	1.5	0	0.2	0.2
October	3.5	0.1	1.1	0.2
November	-0.1	0.0	1.9	-0.4
December	1.4	0.0	0.9	-0.4
	(Quarterly percent change; end-period)			
2000 Q1	3.7	-5.9	37.7	0.6
Q2	2.8	21.9	-1.1	6.5
Q3	15.8	-12.3	7.1	11.3
Q4	16.9	47.1	2.5	3.7
2001 Q1	5.0	7.4	7.8	0.8
Q2	1.1	1.3	1.1	1.0
Q3	-3.6	0.8	22.9	-1.2
Q4	0.8	-0.1	-12.0	-5.4
2002 Q1	5.4	-6.8	8.2	3.2
Q2	3.9	-3.7	8.8	-0.3
Q3	1.0	1.5	0.0	1.6
Q4	7.7	9.0	-0.9	2.2
2003 Q1	3.4	0.6	5.1	2.5
Q2	0.7	0.1	-1.2	-0.1
Q3	1.3	0.2	37.4	0.9
Q4	8.4	18.8	-2.9	3.4
2004 Q1	3.2	0.0	7.1	4.5
Q2	2.6	3.0	7.2	2.9
Q3	3.7	1.4	0.7	1.1
Q4	4.8	0.2	2.7	1.0
	(Annual percent change; end-period)			
2000	33.9	48.1	49.4	23.7
2001	9.4	37.7	23.7	-6.0
2002	19.0	-0.6	16.6	6.9
2003	14.3	21.0	38.5	6.9
2004	15.2	4.7	18.7	9.8

Sources: State Statistical Committee; and Fund staff estimates.

Economic Indicators from IMF

Average Monthly Wages by Sector, 2000–04 1/

	2000	2001	2002	2003	2004
			(In somoni)		
Total economy	15.6	23.5	32.6	44.6	60.8
Of which:					
Agriculture	7.8	13.7	18.9	27.0	35.0
Industry	47.1	71.2	92.5	114.2	144.1
Forestry	5.3	7.0	10.7	13.0	20.7
Transportation	31.0	48.9	69.6	101.1	147.6
Communication	38.4	59.6	95.2	149.0	212.8
Construction	38.9	55.4	74.8	100.0	150.8
Trade and supplies	16.9	23.1	32.7	46.1	50.7
Housing and municipal services	18.3	26.3	36.8	49.8	66.9
Health care	6.7	8.9	12.7	17.1	22.8
Education	11.6	17.3	25.6	34.4	43.4
Arts and culture	11.5	18.3	24.2	33.8	40.7
Sciences	16.4	23.4	34.8	44.8	66.5
Banking and insurance	76.7	90.5	118.5	174.9	230.9
General government	23.9	29.9	49.2	63.3	74.2
Private enterprises	...	35.04	62.25	88.6	136.4
			(Percent change)		
Total economy	34.1	50.9	38.5	37.1	36.3
Of which:					
Agriculture	44.6	76.0	38.3	42.6	29.5
Industry	31.5	51.2	29.8	23.5	26.2
Forestry	-8.7	32.1	52.9	53.9	53.9
Transportation	33.3	57.8	42.5	45.2	46.0
Communication	34.1	55.0	59.9	56.4	42.8
Construction	5.0	42.4	35.0	33.8	50.8
Trade and supplies	42.1	36.9	41.6	41.0	10.0
Housing and municipal services	8.1	43.3	40.1	35.5	34.2
Health care	50.5	31.5	43.4	34.8	33.2
Education	51.7	49.2	48.4	34.5	26.1
Arts and culture	39.5	58.4	32.4	39.8	20.3
Sciences	0.0	43.0	48.6	28.8	48.3
Banking and insurance	56.8	18.0	30.9	47.6	32.0
General government	4.7	25.5	64.2	28.7	17.3
Private enterprises	...	...	77.7	42.3	54.0

Source: State Statistical Committee.

1/ Data are based on final and reconciled annual data on wages and employment, while average annual wages reported in Table 17 are preliminary monthly figures. As a result, annual averages in Table 18 are not entirely consistent with the data reported in Table 17.

Economic Indicators from IMF

Exports by Product, 2000–04

	2000	2001	2002	2003	2004 Prel.
			(In millions of U.S. dollars)		
Total exports, f.o.b	787.6	651.6	699.1	798.6	915.0
Aluminum	423.9	398.4	398.6	429.6	573.0
Cotton fiber	91.8	71.0	128.0	192.7	162.0
Electricity	180.6	78.5	67.6	55.1	60.5
Other	91.3	103.7	104.9	121.2	119.5
			(Percent change)		
Total exports, f.o.b	14.3	-17.3	7.3	14.2	14.6
Aluminum	37.2	-6.0	0.1	7.8	33.4
Cotton fiber	12.0	-22.7	80.3	50.5	-15.9
Electricity	3.4	-56.5	-13.9	-18.5	9.8
Other	-25.8	13.6	1.2	15.5	-1.4
			(Volumes, in units indicated)		
Aluminum (thousand tons)	274	286	305	317	352
Cotton fiber (thousand tons)	79	75	141	149	134
Electricity (million kWh)	3,908	4,047	3,831	4,597	4,743
Aluminum ($/T)	1,547	1,393	1,307	1,356	1,626
Cotton fiber ($/T)	1,165	942	909	1,291	1,206
Electricity ($/kWh)	0.046	0.019	0.018	0.012	0.013
			(Percent change)		
Aluminum	22.0	4.0	7.0	3.9	11.2
Cotton fiber	-14.0	-8.0	101.0	9.0	9.0
Electricity	2.0	3.6	-4.0	19.0	19.0

Source: State Statistical Committee.

Economic Indicators from IMF

Imports by Product, 2000–04

	2000	2001	2002	2003	2004 Prel.
			(In millions of U.S. dollars)		
Total imports, f.o.b	811.2	777.0	824.3	1,003.2	1,247.0
Alumina	199.0	184.0	188.3	235.8	334.2
Natural gas	36.4	27.0	22.4	24.3	33.2
Petroleum products	62.7	73.2	70.2	79.6	101.9
Electricity	203.4	98.3	82.0	62.0	66.3
Grain and flour	44.7	62.2	35.7	61.0	53.0
Other	265.0	332.3	425.7	540.5	658.4
			(Percent change)		
Total imports, f.o.b.	22.4	-4.2	6.1	21.7	24.3
Alumina	54.3	-7.5	2.3	25.2	41.7
Natural gas	1.1	-25.8	-17.0	8.5	36.6
Petroleum products	16.1	16.7	-4.1	13.4	28.0
Electricity	13.6	-51.7	-16.6	-24.4	6.9
Grain and flour	-2.8	39.1	-42.6	70.9	-13.1
Other	21.0	25.4	28.1	27.0	21.8
			(In units indicated)		
Alumina (thousand tons)	546.0	537.1	601.0	615.9	685.1
Natural gas (thousand cubic meters)	728.9	571.8	485.8	531.6	707.0
Petroleum products (thousand tons)	202.2	276.0	278.3	305.1	363.4
Electricity (million kWh)	4,342.4	5,396.4	4,659.4	4,617.6	4,676.3
Grains and Wheat flour (thousand tons)	376.7	499.0	415.6	412.7	286.0
			(Percent change)		
Alumina	22.1	-1.6	11.9	2.5	11.2
Natural gas	-2.8	-21.6	-15.0	9.4	33.0
Petroleum products	-36.4	36.5	0.8	9.6	19.1
Electricity	19.3	24.3	-13.7	-0.9	1.3
Grains and Wheat flour (thousand tons)	15.5	32.5	-16.7	-0.7	-30.7

Source: State Statistical Committee.

ANNEX III: EVOLUTION OF THE TRADE REGIME[41]

Tajikistan's trade regime remains liberal. New customs tariffs have been applied starting on November 1, 2003. All imports from members of the Euro-Asian Economic Community, excluding alumina, are exempt from import duties. The tariff on imported alumina was increased from 2 to 5 percent in November 2003. In addition to import duties, new specific excise taxes were approved on March 31, 2003, and are levied on imports of alcohol (HS 22), tobacco (HS 24), and oil products (HS 27). Other explicit trade restrictions include the licensing of trade in alcohol and tobacco, and other goods restricted for health, security, moral, and cultural reasons. Tajikistan has no export tariff.

Trade Policy Instrument	1995	1996	2001	2004
Tariff rates: Minimum Maximum	 2 percent 5 percent	 10 percent 25 percent	 5 percent 30 percent	 2 percent 15 percent
No. of tariff bands	2	2	6	6
Simple average	...	...	8.0	7.7
Goods subject to specific import tariffs		None	Fruit and vegetable juices, mineral water, soda, beer, wine, spirits, tobacco products	Mineral water, soda, beer, wine, spirits, tobacco products
Import duty exemptions	Associated gas, grain harvesters, alumina, electricity, and goods imported by diplomats	Eliminated	Natural gas, alumina, electricity, and grain combines	Natural gas, electricity, and some products included in tariff groups No. 01, 04, 30, 49, 51, 70, 87, 93, 97
Export taxes: Ad valorem Specific	 67 product categories were subject to export duties at the rates of 1-500 percent On metals	 Abolished, effective March 1, 1996 None	 Sales tax on exports of aluminum and cotton. Export duty on goods produced by joint ventures None	 Sales tax on exports of aluminum and cotton. None
Excise taxes		Some excise rates on imported goods were higher than on domestic goods	No differentiation by the origin of imports or producer	No differentiation by the origin imports or producer
Quantitative restrictions: Import quotas Export quotas	 None Cotton	 None Abolished	 Quotas on exports and imports of ethyl alcohol None	 Quotas on imports of alcohol products and tobacco None
State monopoly on external trade		Monopoly on cotton export lifted	None	None

[41] Source: IMF, all tables included in this Annex are extracted from "Country Report No. 05/131"

Evolution of the Trade Regime

Trade Policy Instrument	1995	1996	2001	2004
State orders	70 percent of the targeted cotton crop	Abolished	None	None
State trading companies	Tajik Oil, Ministry of Bread, Somonion, State Committee for Contracts and Trade			State enterprises and joint venture
Goods subject to licensing: Exports Imports	 100 percent None	 70 percent of the 1995 cotton crop None	 Exports and imports of tobacco products, ethyl alcohol, and alcohol products	 Export and imports of tobacco products, ethyl alcohol, and alcohol products
Price controls	Monitoring of export contracts by the Tajik Commodity Exchange		Floor on the price of vodka and arak	Control of tariffs set by natural monopolies
Barter trade	Most of trade	Prohibited with the exception of the inputs included in list approved by the government	Prohibited, with some exceptions	Prohibited, except for aluminum
Prepayment requirements		Exports of cotton fiber, aluminum, precious metal products, tobacco, leather, fertilizers, and some other products are subject to 100 percent prepayment requirement	Exports of cotton fiber, aluminum, precious metal products, tobacco, leather, fertilizers, and some other products are subject to 100 percent prepayment requirement	Exports of cotton fiber, aluminum, precious metal products, tobacco, leather, fertilizers, and some other products are subject to 100 percent prepayment requirement
Import valuation			Valuation of imports is not compatible with WTO requirements	The new customs Code and customs valuation of imports are compatible with WTO requirements